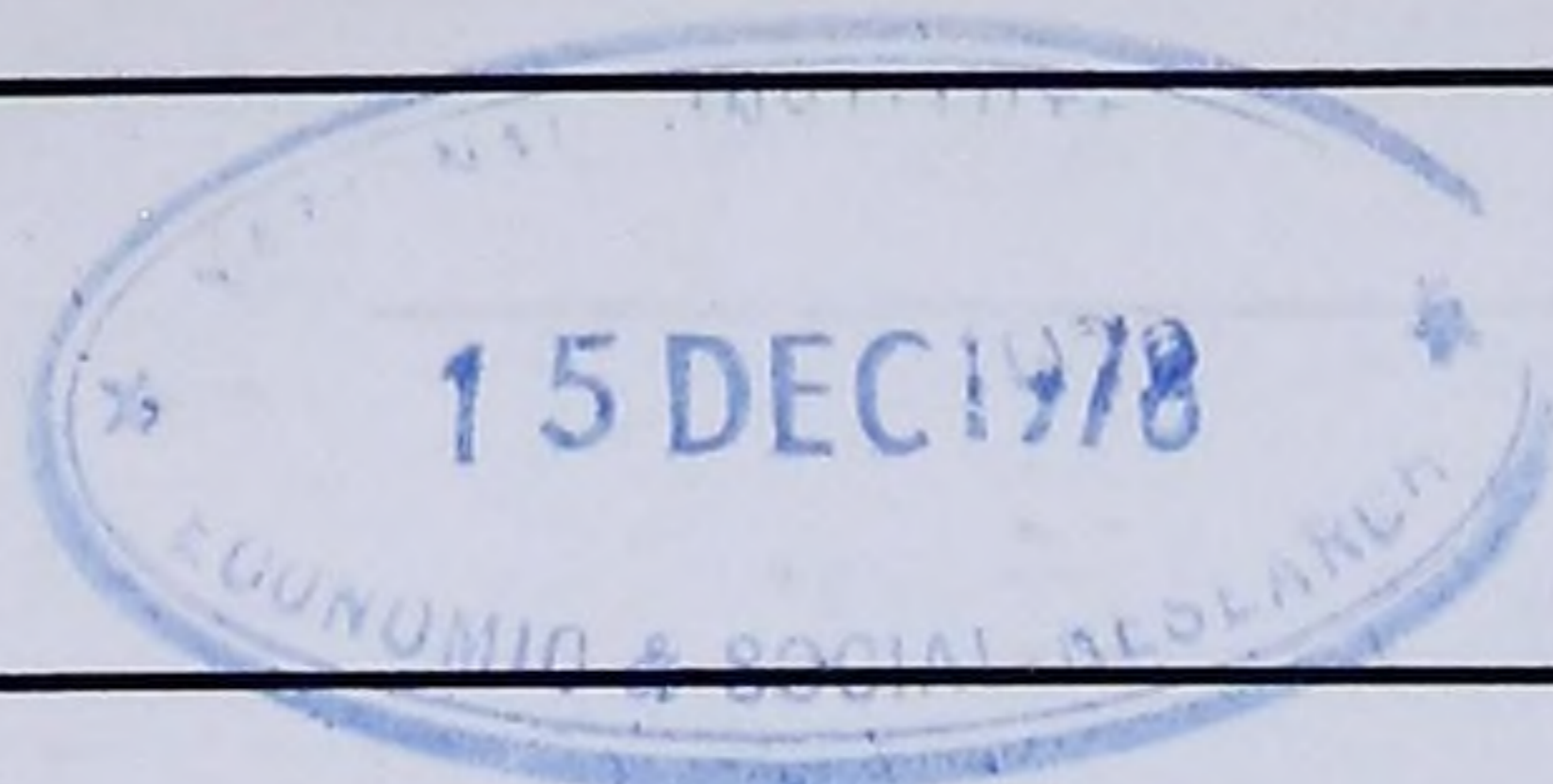


43



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STATISTICAL NEWS

**Developments
in British Official
Statistics**



A publication of the Government Statistical Service

Note by the Editor

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

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

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

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

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NOVEMBER 1978

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No. 43

**Developments
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British
Official
Statistics**

LONDON
HER MAJESTY'S STATIONERY OFFICE

CENTRAL
STATISTICAL
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No. 43

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Articles in recent issues of *Statistical News*

No. 35 November 1976

National and sector balance sheets	D. J. Reid
New system of statistics on homelessness	H. Morrison
Energy balances – some recent developments	W. N. T. Roberts and W. A. Hawkins
National food survey – differential response rates	W. F. F. Kemsley
The EEC's farm accounts network	A. M. Cowland
Sea transport in the balance of payments	A. A. Croxford

No. 36 February 1977

A system of cyclical indicators	P. B. Kenny
Drawing the line in the balance of payments accounts	P. V. Allin
Qualified manpower statistics	Mrs. R. J. Butler
The measurement of student flows: a major phase completed	Mrs. C. Firth
Survey into the capacity of the brickmaking industry	F. Mooney and Mrs. A. Wheatcroft

No. 37 May 1977

Statistics on industrial and commercial companies	Nicholas Rudoe
The development of automatic editing for the next Census of Population	
Publications of the Central Statistical Office	Barry Werner
The national road traffic censuses (Great Britain)	A. A. Sorrell
Officer manpower planning in the Royal Air Force	J. M. Munden
Food and farming 'go metric' – progress report	M. W. Marland
	Note by the Ministry of Agriculture, Fisheries and Food

No. 38 August 1977

The environment in which statistical offices will work in ten years' time	Sir Claus Moser
The survey of short-term export prospects	Stephen Curtis and Roger Beedell
The Statistical Information Service of the Chartered Institute of Public Finance and Accountancy	B. Fieldhouse
Secondary school teachers – a new survey and mathematical model for assessing teacher demand	Brian Longman
Survey into the use of government statistics	Peter Brierley
Census in the South Seas	John Doyle

Articles in recent issues of *Statistical News*

No. 39 November 1977

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

A. J. Fox
Roger Sellwood

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

No. 40 February 1978

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

Brian Baty

Anne Harrison

G. S. Hull and C. R. Cook

E. J. Kafka

J. M. Haslam

Alan McIntyre

F. D. Sando

No. 41 May 1978

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

Central Statistical Office

Dr. Bernard Mitchell

C. C. Greenfield

Miss M. O'Connor

H. D. Mitchell, G. Croft and

E. J. Ainsworth

No. 42 August 1978

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

The Rt. Hon. Edmund Dell, M.P.

Roger Sellwood and Dennis
Roberts

Mrs. Margaret Waite

Mrs. Mary Durant

Central Statistical Office

ARTICLES

		<i>Page</i>
Statistical computing: The COMPSTAT 78 symposium	P. B. Kenny	43.1
NEDO's data bank of OECD trade data and the industrial strategy	D. C. Connell	43.4
Productivity comparisons – Caveat emptor	Matt Semple	43.9
The top 1,500 industrial and commercial companies	S. J. Penneck	43.15

REGULAR FEATURES

Recently available statistical series and publications	43.19
New surveys assessed by the Survey Control Unit	43.21

NOTES ON CURRENT DEVELOPMENTS

	<i>Page</i>		<i>Page</i>
Regional statistics		Reform of wage bargaining system	43.32
<i>Regional statistics</i>	43.24	Incomes policy and wage inflation	43.33
National and Local Government Statistical Liaison Committee	43.24	Top salaries	43.33
Regional civilian labour force projections	43.27	Indices of wage rates	43.33
Sub-national population projections	43.27	<i>New Earnings Survey 1978</i>	43.34
Population projections – England – area – 1975–1991	43.27	Duration of unemployment	43.34
		Youth unemployment	43.34
		Manpower planning	43.34
		Occupational Pensions Schemes	43.34
Population and vital statistics		Agriculture and Food	
1981 census White Paper	43.27	Agriculture censuses	43.35
<i>Population Trends</i>	43.28	Food consumption	43.35
Infant mortality	43.28	Scottish agriculture census	43.36
GRO(s) population and vital statistics	43.29	Experiments on living animals	43.36
Social statistics		Industrial statistics	
<i>Social Trends</i>	43.29	Concentration ratios	43.36
Reviews of UK statistical sources	43.29	Business Monitors	43.37
<i>Scottish Housing Statistics</i>	43.30	1979 Purchases Inquiry	43.37
Prison statistics	43.30	<i>Historical Record of Census of Production, 1907 to 1970</i>	43.39
Drunkenness	43.30	<i>Commercial and industrial floor space statistics, 1974–77</i>	43.39
A recent Social Survey report	43.30		
Health and social services		Energy	
Planning in Social Service departments	43.31	<i>Energy forecasting methodology</i>	43.40
Cigarette smoking	43.32		
Misuse of drugs	43.32	Transport	
Manpower and earnings		Benchmark traffic census	43.40
Incomes policies and differentials	43.32	<i>Offences relating to motor vehicles 1977</i>	43.40

	<i>Page</i>
Prices	
Rebased wholesale prices indices	43.40
Prices and different types of households	43.41

Income and wealth	
The distribution of personal wealth	43.41

Home finance	
<i>National Income and Expenditure 1967-77</i>	43.41
<i>Financial Statistics</i>	43.42
Local Government Financial Statistics	43.42
Rates and rateable values	43.42
Wilson Committee	43.42
Bank of England notes	43.42
Balance sheets of insurance companies	43.42

Overseas finance	
Balance of payments	43.43
The terms of trade	43.43
Export credit	43.43

Other publications	
Time series analysis and forecasting	43.43
Courrier des statistiques	43.43

Conferences and meetings	
Time series meeting	43.44

Government Statistical Service	
Appointments and changes	43.45

Late item	
Construction industry contractors' census 1977	43.44

ALPHABETICAL INDEX

Statistical computing: The COMPSTAT 78 Symposium

P. B. Kenny, *Chief Statistician, Central Statistical Office*

COMPSTAT 78, the third International Symposium on Computational Statistics, was held at the University of Leiden, Netherlands, from 21 to 25 August 1978. It was attended by over 300 statisticians, computer specialists and others from related disciplines; justifying the title 'international', participants came from most countries of Europe, as well as from North America, Japan and Australia.

This Symposium was the latest in a series which have been held every two years. The two previous meetings, in Vienna and Berlin, had been largely concerned with the computational problems of particular statistical techniques. While such matters also took up a large part of the time at Leiden, the innovation was that the presentation of general purpose statistical computing 'packages' was given much greater prominence; with the presence of representatives of the organisations responsible for developing and marketing the packages, the atmosphere was occasionally closer to that of a market-place than that of a scientific conference.

The use of electronic computers in statistics, as in other fields, has increased rapidly over the past twenty years. Many common statistical procedures, such as regression or analysis of variance, involve a complex and tedious sequence of arithmetical operations, and mistakes are easily made in manual calculation. If the operations are expressed as a computer program, the possibility of human error is limited to the incorrect entry of data – leaving aside the question of errors in the program, which we can hope to have eliminated if the program has been used and tested often enough. Many of the more complex procedures, such as multiple regression and factor analysis, have come into much more common use since the introduction of computers; with manual calculation they required such heroic labour that they were rarely attempted.

Over the years, therefore, programs have been developed which make it possible for a statistician or other researcher to apply complex analytical procedures, without first having to learn either the mathematical theory of the methods or the complexities of computer programming. Given access to a computer and a suitable program, all he has to do is to express his data in the form required by the program and wait for the results to appear.

One possible drawback to this approach becomes evident if the researcher needs to use several procedures in analysing the same set of data; unless all the programs are able to accept his data in exactly the same form, he has a tedious and error-prone transcription task. Out of this problem, and the need to give the analyst a means of organising and managing his data, came the idea of a statistical program package; that is, a large program, or a collection of inter-related programs, capable of carrying out any of the analytical procedures likely to be required in a given area of work.

Packages now available make it possible to enter all the data collected in a sample survey, for example, to calculate simple summary statistics such as means and ranges, to form cross-tabulations of different observed characteristics, and then to carry out regressions and tests of significance, all within one integrated system which permits selection of the appropriate analyses using a simple standard command language. In some packages the analyses can be specified by entering commands on a computer terminal, the results being displayed almost immediately at the same terminal.

There are five well-established general-purpose packages among those presented at COMPSTAT 78, as well as numerous less extensive systems. All the packages were originally developed to meet the statistical computing needs of particular universities or research institutions; in some cases they are still supported and marketed by the original parent body, in other cases a separate commercial organisation has been set up. Apart from such organisational differences, the packages differ in the way in which they approach statistical computing and in the facilities they provide. These differences may reflect differences of view as to what the intended user will find acceptable, which in turn may indicate that they are aimed at different markets.

One aspect of divergence has already been mentioned, namely, whether the package consists of one large program or a collection of inter-related programs. Another factor is whether special facilities are provided to allow the package to be used 'interactively', that is to say whether the user can enter at a computer terminal a command specifying an analysis, and then

see the results of that analysis displayed at his terminal before selecting the next analysis. Much discussion of the merits of interactive working has taken place; it seems to be accepted that exploratory analysis using fairly simple techniques can be carried out much more effectively and in a shorter total time using interactive methods, but for lengthy analyses with bulky results there is no advantage of time or convenience to outweigh the higher interactive costs.

At one extreme of the packages presented was BMDP, developed in the Department of Bio-Mathematics, University of California at Los Angeles. This is the latest version of one of the earliest general packages; like its ancestors, it consists of a suite of independent programs, one for each form of analysis, but with a common layout for data input and for the commands which specify the exact analysis required. It is therefore possible to prepare a file of punched cards containing the analyst's complete set of data, and then to submit that same file for analysis using any appropriate program in the suite. The programs are not intended for interactive working; they seem to have been conceived for the analysis of 'designed' experiments, of the kind used in biological experimentation, where the form of analysis is implicit in the experimental design.

At the other extreme is P-STAT, developed at Princeton University. This is a large, integrated program with a full range of analyses, capable of being used interactively or for 'batch' processing. It has a command 'language' which is designed to be convenient for the user at a terminal. Another system of a similar kind is SAS, which originated at the University of North Carolina. Both of these offer a form of data management system, so that data may be input, manipulated, checked, stored and submitted for analysis as required. To offset the greater convenience of such packages, it must be admitted that they probably demand greater resources of computer storage than a system such as BMDP, and the great complexity of possible routes through the programs makes it less likely that all possible paths have been checked for correctness.

Between these extremes lies SPSS, which originated at the National Opinion Research Centre in Chicago. This consists of two related programs, the 'original' SPSS, designed for batch use, and the 'conversational' version SCSS, each of which is an integrated program offering a range of analyses. (The term 'conversational' refers to an interactive system in which the program interrogates the user to discover what analysis he wants done, rather than the user entering a command; in SCSS the experienced user can 'pre-empt' the remorseless questioning by entering in advance the

answers to the next few questions, producing in effect a command system.) The acronym SPSS means Statistical Package for the Social Sciences, and the analyses provided are particularly aimed at social science work, although most common statistical analyses are provided.

The one other major package represented at Leiden, the only one not developed in the United States, is GENSTAT, from the Rothamsted Experimental Station at Harpenden, Herts. This is an integrated package, particularly suited to designed experiments such as complex analysis of variance designs. The control language is designed with batch use in mind, although it might be used interactively on a suitable computer.

There is much common ground between these packages, although as indicated they have their own specialities. (The most conspicuous gaps are in the areas of time-series analysis and econometrics, which seem to be dealt with by other packages not represented at Leiden – apart from a small system from Aarhus University, Denmark, which is not yet being marketed commercially.) As the packages develop they come closer together in many ways; in particular, it is increasingly common for one program to be able to read data files generated by another, so that the user who is determined to have facilities which can only be obtained in two different packages can do so – at a price.

All of these packages are being marketed to some extent commercially, which means that the distributors have undertaken to support them, to attempt to locate and rectify errors, to add further facilities when sufficient demand exists, and so on. Naturally all these activities cost money, and users can expect to pay a rental fee for the programs, which will represent a payment for maintenance and a contribution towards the recovery of development costs. The cost will often depend on the kind of institution renting the package; substantial reductions for academic institutions are common. For non-academic bodies the rental can be several thousand pounds a year for one package, which could be a substantial incentive to identify the package which comes nearest to meeting one's needs and to stick to it.

One aspect of these packages which mainly distinguishes them from those supplied by computer manufacturers has been the attempt to make them 'portable', that is they are able to be used on computers of different makes. The one exception is SAS, which has been designed to run only on IBM machines, or on machines such as Amdahl which are constructed so as to run using IBM programs.

The remainder of the packages have been written wholly or mainly in FORTRAN, which in theory is a standard programming language; in practice there

are minor differences between the versions of FORT-RAN which can be used on computers of different makes, but nevertheless all the packages have been successfully converted to run on many different machines. As a result, it is possible for an organisation with a variety of computers to use a standard package for all its statistical computing. This has considerable advantages in eliminating the need to retrain staff as they move from one computer to another. For an organisation with a large requirement for statistical computing, the availability of one of these packages could be a significant factor in selecting a computer.

One consequence of the increasing use of packages, which was touched on briefly at COMPSTAT 78, is the ease with which they can be mis-used, in the sense that procedures can be used which are quite inappropriate to the data. Some have asked whether packages should do more to warn the user that the results of his analysis may be meaningless. To take a trivial example, if we have formed a two-way table by cross-tabulating two factors, we can test for a significant association between the factors by means of a chi-squared test, provided the entries in the table are the counts of the numbers of cases in each cell. If the table of counts is converted so that each cell is expressed as a percentage of the total, the chi-squared test is meaningless. If the user had formed the table of counts and converted to percentages within a run using an integrated package, it would be possible for the chi-squared procedure to print a warning message.

As an extension of this idea, it has been suggested that a package could 'advise' the user as to what are appropriate (or inappropriate) analyses for his data. At the annual meeting of SPSS users this autumn, one of the sessions will be on the next generation of statistical packages; the idea of an 'intelligent' package, able to accept a description of the data and report on appropriate analyses, will be one of the points for discussion.

The increasing attendance at the COMPSTAT meetings has shown that they fulfil a real need, and they seem likely to continue. Until now they have been organised by an *ad hoc* body called 'The Compstat Society'. In future they will be arranged by the International Association for Statistical Computing, a recently-formed offshoot of the International Statistical Institute. The first meeting under the new body will be in Edinburgh, in the summer of 1980. Perhaps at that meeting we shall hear news of the first 'intelligent' statistical package?

NEDO's data bank of OECD trade data and the Industrial Strategy

D. C. Connell, *Statistician, Formerly National Economic Development Office*

Introduction

The task of developing an Industrial Strategy for the United Kingdom was initiated in November 1975 at a meeting of the National Economic Development Council at Chequers.⁽¹⁾ Its prime objective was to transform the United Kingdom into a high output, high wage economy, a process involving the reversal of the long-term historical deterioration in the UK's industrial performance relative to its principal international competitors. As the machinery for achieving this, some 40 sector working parties (SWPs) have been set up under the aegis of the National Economic Development Council (NEDC), each with responsibility for examining the performance and prospects of sectors of manufacturing industry. A wide range of industries is covered. A list of SWPs now operating is given at the end of the article.

Each SWP is constituted on a tripartite basis, consisting of representatives from the companies and trade unions involved, together with one or more government representatives. The National Economic Development Office (NEDO) provides the secretariat and research services for each committee's work. The operation differs from earlier industrial consultation exercises carried out through the NEDC framework in a number of important ways. In particular:

- (i) the level of disaggregation of the industries covered is much greater than previously, permitting the analysis of problems, which may vary appreciably between sectors, in far more depth.
- (ii) the main orientation is towards supply side problems rather than any form of indicative planning, based on demand assumptions. The role of SWPs is to analyse past performance and propose policies for improving the competitiveness of their industries in the light of future opportunities. The aim is thus that solutions should evolve from below, rather than being imposed from above.

From the start it was clear that an important aspect of the work would be the development of policies to improve the UK's share of overseas markets and, a necessary first step in this process, the analysis of historical export performance. A number of quite comprehensive studies of UK export performance have of course been carried out in the past, both within

NEDO and outside it,^(2,3) but these have generally been at a rather aggregated product level and therefore of limited relevance to individual SWPs. The in depth analysis envisaged for the Industrial Strategy meant that SWPs would want to examine the export performance of their industries in some detail. In the event many SWPs have found it important to study questions of the following kind:

- How has the UK's share of world trade in the sector's products changed over recent years?
- What are its major markets and how does export performance vary among them?
- How does export performance vary between the different products manufactured by the sector?
- Who are the UK's major competitors and how does UK performance compare with theirs in different markets?

Answering questions of this kind for each SWP could involve a very considerable volume of analytical work; the number of SWPs and the detail required clearly precluded an approach based purely on the manual analysis of published data. Instead the approach adopted has been to develop a computerised databank and analysis system designed to provide the information to answer a wide range of analytical questions on export performance, with an emphasis on comparisons between the performance of the United Kingdom and other, similar, industrial economies.

Measures of export performance

The main problem in using international trade statistics lies in choosing the most consistent framework for making the particular comparisons of interest. There are three main indicators that might be used to measure UK export performance in different products and markets. For convenience we consider sales of, say, machine tools to Brazil:

$$(i) \text{ Market Share} \quad - \quad \frac{I_{B,UK}}{P_B - E_B + I_B}$$

$$(ii) \text{ Import Share} \quad - \quad \frac{I_{B,UK}}{I_B}$$

$$(iii) \text{ Export Share} \quad - \quad \frac{E_{UK,B}}{\sum_{i=1}^n E_{i,B}}$$

Where	$I_{B,UK}$	=	Brazil's recorded imports of machine tools from the UK
„	I_B	=	Brazil's total imports of machine tools
„	E_B	=	Brazil's total exports of machine tools
„	P_B	=	Brazil's total production of machine tools
„	$E_{UK,B}$	=	UK's recorded exports of machine tools to Brazil
„	$\sum_{i=1}^n E_{i,B}$	=	the total recorded exports of machine tools to Brazil of the UK and its major industrial competitors. (n exporters in all.)

There are grave statistical problems with the first of these measures, market share, not least the sheer availability of comparable consumption data and differences between the product and industry classifications adopted by most countries for their trade and production statistics. Market shares cannot therefore be generally computed at the level of detail required for the Industrial Strategy. The second measure of performance, import share, also suffers from the use of different conventions by importing countries, even if nominally adopting one of the standard international reporting frameworks. This measure is not therefore appropriate for comparing performance in different markets, a fundamental requirement in this instance. Availability also varies widely and, for some of the non-industrialised countries, the publication of trade data may be subject to long delays.

These problems are much reduced in the third of the measures – export share. All of the UK's major industrial competitors publish quite comprehensive export statistics and each uses a product classification which is, or can be, related to the Standard International Trade Classification (SITC). Although some differences in the precise interpretation of the SITC remain, export share provides a consistent yardstick with which to compare export performance in different markets and examine changes over time. The impact of these problems is thus kept to a minimum. The disadvantage of export share is that it excludes all exporters except those selected for comparison purposes, as Britain's major international competitors, as well as domestic sales by local producers. It is therefore only an imprecise proxy for market share itself. However, in an important sense export share is actually more meaningful than market share as a measure of export performance. Local producers have natural advantages in supplying their domestic market. The Newly Industrialising Countries

(NICs) will often have cost advantages over the more advanced nations – particularly in certain sub-product groups – and it would probably be unrealistic to expect any of the world's advanced industrial economies to be able to counter this kind of competition effectively. By comparing the UK's exports purely with those of its *direct* competitors, each at a roughly similar level of economic development and selling in overseas markets under roughly comparable circumstances, one can thus be said to be using a particularly relevant yardstick of export performance:* that of the share of that part of demand which is commonly supplied by the international trade of close competitors.

The use of export statistics to study export performance also has an important practical advantage, in that data from a limited number of sources (each of the UK's main industrial competitors) can provide a complete breakdown by market. If the analysis were to be based on import statistics, data would be required from all markets to be studied.

NEDO's databank of OECD statistics

Detailed international trade data is compiled by three main agencies – the United Nations (UN), Organisation for Economic Co-operation and Development (OECD) and the Statistical Office of the European Communities (SOEC). Considerations of cost, coverage and ease of data processing led to the decision to base the databank on OECD data. The statistics involved were already available in published form⁽⁴⁾, although in some cases with a delay of over two years. They cover the exports of each of the OECD's 24 member nations, thus including all of the UK's main industrial competitors.

The databank was constructed from a series of magnetic tapes of these data, each tape containing one year's data for several exporting countries, broken down by product and destination. The process of setting up the bank and making it operationally effective involved two distinct stages:

- (i) the processing of the OECD data to produce an efficient data structure
- (ii) the development of a suite of access and analysis programs.

The first stage is clearly related to the use to which the bank was finally to be put – that of serving Sector Working Party analysis requirements. The data originally supplied by the OECD, and covering the exports of member countries from 1970–74, was spread over 25 magnetic tapes. Both quarterly and annual trade

*Where competition from the NICs is developing rapidly, this usually represents a threat to the more advanced industrial economies as a whole. As an issue of industrial policy this cannot of course be ignored, but it is probably best studied using data on the advanced economies' imports, in combination with special research programmes.

flows were represented, trade being recorded in value (US dollars) and volume terms. To produce the kind of analyses of interest to an individual SWP and showing how UK export performance had varied over time would thus have involved reading each of the 25 magnetic tapes in turn. This was clearly impracticable and so the first stage in setting up the bank involved merging the data held on the tapes into a more convenient format. All except annual data were excluded at this stage so that the resulting databank could be stored on one interchangeable magnetic disc-pack. At the end of this process, the data were completely re-ordered by product code and held in the form of time series records, ensuring that all data required for a particular product group was located in one area of the storage medium. This ensured that subsequent analysis could be carried out using the minimum of computer time.

Since the bank was set up towards the end of 1976, two updates have been carried out, so that data is now held for 1970-77*. It covers the exports of each of the OECD countries under roughly 1,300 different product groups, at the five digit level of the SITC,† with a full breakdown by some 170 separate destinations. Value, and in many cases volume data, are held, the latter under a number of different units (tonnes, number, etc.). Altogether roughly twelve million data items are involved.

There is also a subsidiary bank holding import data, although this is restricted to the imports of the United Kingdom, France, Germany, Japan and the USA. A further stage of the work, currently in progress, will involve the addition of data for the period from 1962-69, although the product coverage will be rather less detailed over this period.

Analysis facilities

The purpose of the databank has always been primarily to serve the needs of the Sector Working Parties, the objective being to provide a fast and flexible service tailored to their analytical needs. It was felt important to place considerable emphasis on clarity of presentation, as potential users would include non-statistician members of sector working parties. To achieve these objectives a suite of standard access programs has been developed with a wide range of different analysis options. These include facilities for combining products, exporters and markets, for ranking markets, for example by 'market size', and for computing basic statistics such as growth rates, averages and ratios.

*OECD trade statistics are made available through the databank some six months to a year before they are published by them.

†The first revision of the SITC was in operation during the period currently covered by the bank. Data for 1978 onwards will be recorded according to the SITC (Rev. 2).

(i) Value or volume printouts

These give the exports of each of a selected group of countries in value or volume terms, for any list of countries, or geographic or economic groups of interest to the user. Some 25 country groupings are currently available under the system, although others can readily be added.

(ii) Export share printouts

An important element in the UK's poor economic performance is the steady decline that has taken place in its share of world trade over the last 25 years. SWPs can examine this on an individual product and market basis with the aid of export share analyses. This analysis would show the total exports of the OECD countries to each of the markets listed, together with the shares held by the United Kingdom and principal competitors.

(iii) Average value per ton analysis

Where volume as well as value data exist on the bank, it is possible to make comparisons of the average value per ton of British exports and those of its competitors, again by market if required. The interpretation of such comparisons is complex. Differences can represent price variations as well as non-price factors, including product mix, quality, reliability, delivery, technical sophistication and so on. Despite these difficulties this form of analysis can provide a useful input to SWP discussions in certain cases.

General analytical work

The majority of SWPs have now made use of the databank in one way or another. It cannot of itself, of course, suggest solutions to industrial problems. The identification of opportunities and constraints requires a very much more detailed analysis, often involving organisational, financial and institutional considerations, in addition to product, process and marketing investigations. The purpose of the databank is rather to provide a simple and rapid way of carrying out some of the primary analytical work that SWPs need and to pose some fundamental questions about export performance in the most relevant way.

In addition to studies for individual SWPs the bank has also been used to carry out research of a more general nature. An interesting aspect of this work has been the use of average value per ton comparisons to study differences in non-price competitiveness between British products and those of other industrial countries. A number of SWPs have found evidence of poor UK performance in terms of non-price factors (quality, reliability, marketing, etc.), and this is sup-

ported by a series of unit value comparisons made using the databank.⁽⁵⁾ The argument is that, if the average value per tonne of country A's exports of a particular product group is substantially *higher* than country B's over a prolonged period, this is because the mix of products exported by country A is technologically more sophisticated, of higher quality or generally 'up market' compared with country B. Work using the databank showed that over a wide range of products, particularly in the engineering sector, German and to some extent French, exports tended to earn considerably more, in terms of dollars per ton, than comparable UK exports.

Since this work was published, further analysis has indicated that over mechanical engineering as a whole, there has been a steady divergence between the average value per ton of British and German exports since the end of the 1960s. So that by 1976 UK manufacturers were earning roughly 40 per cent less foreign exchange per ton of exports than their German competitors. There is also some evidence of a divergence compared with French exports over recent years. Over the same period, the UK's share of the main manufacturing countries' exports of mechanical engineering products fell steadily.

One is tempted at first to try to explain this phenomenon in terms of exchange rate movements. However, whilst the appreciation of the Deutschmark compared to sterling would provide a numerical explanation of the divergence, it does not provide an economic one. The ratio of the volume of German exports of mechanical engineering exports to UK exports did not change a great deal over this period and Germany's share of world trade increased slightly in value terms, in contrast to the UK's steady decline. The size of the gap and its persistence indicates that the explanation lies not in price and exchange rate movements, but in various non-price factors. This is a rather disturbing conclusion as the observed divergence suggests that the United Kingdom may have been moving 'down market', in some sense, in relation to its principal competitor in the manufacture of mechanical engineering products.

This analysis does not, of course, indicate what changes are necessary for an improvement in UK performance to be achieved or whether indeed such changes are possible or desirable. It is perhaps plausible that the UK's best industrial policy may be to specialise in lower value per ton products than Germany. The examination of opportunities and constraints can only be effectively tackled at a disaggregated industry level and this forms a major part of many SWPs' work programmes. Unit value comparisons are useful as a background, however, as a means of indicating one characteristic of the gap that has to be filled if the

United Kingdom is to compete directly with many West German manufacturers, and if the broad objectives of the Strategy are to be achieved.

Conclusion

Trade analysis forms an important part of the analytical work of the Industrial Strategy for two reasons:—

- (i) because a failure to compete effectively in overseas markets particularly is seen as an important element in the UK's relative industrial decline.
- (ii) because comparable international data for total supply and demand are not at the level of disaggregation required, so that sectoral comparisons can only be carried out in relation to trade performance.

The OECD trade data described in this paper is the most disaggregated source of statistics available for making comparisons of UK performance against its principal international competitors and the NEDO databank has been widely used by SWPs. It has only been possible in this article to indicate, in broad terms, the types of analytical questions that it can examine.

Access to the bank is open to all government departments and government sponsored agencies. Restrictions placed on use of the data by OECD, unfortunately, mean that it is not possible to offer access to non-government organisations. However, the possibility of wider dissemination of the data in some other way is being examined. Further enquiries regarding bank services should be addressed to:

Statistics Section,
National Economic Development Office,
Millbank Tower,
Millbank,
London, SW1P 4QX.

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Productivity comparisons — caveat emptor

Matt Semple, *Statistician, Central Statistical Office*

Introduction

Productivity is at the hub of economics – a measure of the use of inputs (scarce resources) to produce outputs (thus satisfying human wants). However, a simple ratio of output to input(s) tells us little unless compared with some similar ratio arising from different circumstances. For example, the information that a coal miner produced two tons of coal in his last shift is of little use by itself and needs to be compared with some reference point such as the average output per manshift at face, pit or region; the amount he produced in a previous manshift, or the amount produced by a fellow miner, in identical conditions. Many factors will affect the comparisons and the conclusions which can be drawn from them. When the comparisons are extended and involve aggregation of different jobs, industries, and regions or countries the problems of comparison multiply⁽¹⁾. For reasons of space this article concentrates mainly on a particular set of issues – those involved in making international comparisons of labour productivity at an aggregate (macro) level. It is intended as a guide to some of the pitfalls encountered in productivity comparisons. Using data on labour productivity in European Economic Community (EEC) countries an illustration is given of some allowances that can be made to improve the comparison.

Key questions

Consideration of the problems posed by the following questions will help to identify the main issues:

- (i) What is the *purpose* of the productivity comparison?
- (ii) What *comparison* suits the purpose?
- (iii) What is (or should be) *measured*?
- (iv) What are the difficulties encountered in *ensuring comparability*?

Purpose

Two levels of productivity comparison can be distinguished. Firstly, the *fundamental level* where the comparison is made without regard to the causes of observed differences. Such comparisons range from productivity as a measure of 'relative fruitfulness' of different

economies, relating total output to total population (whether working or supported), to productivity as a measure of the 'relative efficiency' with which resources are used to obtain output. The users of such comparisons range widely, from, for example, shop-floor negotiators to political commentators. Secondly, a more *analytical level* where those who seek an improved understanding of the functioning of economic systems attempt to explain the causes of observed differences in productivity or of changes in productivity over time.

Where, as is usual, observed differences cannot be explained, the productivity measurements themselves can still be of use in analysis. For example, in international comparisons it may not be possible to explain adequately the reasons for inter-industry differences in relative productivity; but observation of such differences should help to explain international differences in price structure and hence in comparative advantage.

What comparison?

We need to be clear about the level of comparison. If 'explanation' is sought the comparison may need to allow for factors which might be expected to cause observed differences in productivity, such as: the quality of the land; quality and stock of indigenous raw materials and capital (both human and fixed); structure and mix of industries; composition of the labour force and its working practices. Every individual will be able to add further possibilities, for example environmental considerations; attitudes to work/leisure; and institutional factors (e.g. trade unions, industrial legislation). Indeed, it is unlikely that all the possible sources of difference will be (i) identified, and (ii) capable of elimination/standardisation. In practice, many are only capable of being cited as qualitative reservations on the compatibility of ratios relating to differing times/industries/countries, etc. Furthermore, there is a danger that any elimination/standardisation exercise could take out sources of variation which, for the particular purpose of the comparison, need to be retained. For example, if the purpose of the comparison is to establish whether the productivity difference observed results from a difference in 'relative efficiency' it would not be appropriate to make allowance, say, for differences resulting from different policies on

pollution or industrial safety, which will be more closely related to the order of priorities within a society of which efficiency in converting inputs into output is but one item.

Whatever the level of the comparison, whether *analytical* or *fundamental* (where the measurements can still be of use in analysis), it is crucial that all comparisons should aim for consistency in such things as definition, coverage, and timing. Without such consistency most comparisons are invalid.

Measurement

The remainder of this article concentrates on measurement rather than explanation. In practice, the following definition of total factor productivity probably represents the best that can be achieved, where we are primarily concerned with measuring the added value expressed in terms of the effort input:

'net output or added value per unit of input used'.

For a *country*, net output or added value is equivalent to gross output less any goods or services imported, less consumption of capital. Unit of input used assumes that the means exist to combine the inputs – for example, a weighted sum of total inputs (land, capital stock, labour services) possibly with weights based on factor shares in income⁽²⁾ or the parameters of a production function.

For a point of time comparison of aggregates it may be possible to obtain reasonable data on this definition. Generally, however, there is insufficient data available about capital consumption on the output side, and about capital and other non-labour inputs so that comparisons of total factor productivity or of capital productivity are few and far between⁽³⁾.

The inability to disaggregate between capital's and labour's contribution to output is a major deficiency in international comparisons which look at labour productivity both at a point in time and over time, even though short-term movements in labour productivity in a given country may be a good proxy for movements in total factor productivity in that country. Bearing this deficiency in mind, the remainder of this article concentrates on the common core of problems encountered in comparisons of labour productivity – net output per unit of labour services – in different countries at a point in time, and in comparisons of changes in labour productivity over time.

The difficulty of compiling appropriate comparable labour productivity ratios is best examined in its two components – the numerator 'output' and the denominator 'labour'. The measurements of value of output, indicators of changes in volume, of prices, and of labour input will all be subject to error. Some will be

broadly quantifiable (sampling errors), but the remainder will be the result of the conceptual and practical problems encountered en route from the recording of individual transactions to publication of aggregated data.

Numerator – Output⁽⁴⁾

Gross domestic product (GDP) in a given period is usually the most readily available measure of a country's net output although the 'gross' in GDP means that depreciation, capital consumption, has not been deducted. Gross national product (GNP) which includes net property income from abroad is less appropriate as a numerator in productivity comparisons.

Output can be valued and measured at factor cost (that is, excluding taxes on expenditure and including subsidies) or at market prices, or close variants of these – producers' and purchasers' values, respectively. It is also necessary to be clear whether or not stock appreciation has been deducted.

The definition, coverage, and valuation of output all pose problems given the heterogeneous mix of goods and services (traded and non-traded) produced in the economy, the mix varying between regions or countries as does the interpretation placed on what is output. Some examples of the types of problem encountered are given below:—

(a) *Coverage* – Should measured output include all goods and services produced? Ideally, perhaps yes, however, in practice, measurements will not be available of services in the home provided by those living there or others for which no payment or expenditure is forthcoming (for example, household chores, the labour element of 'do-it-yourself' tasks) or, unless aggregate output is measured as the sum of expenditures, of production in the so-called 'hidden' or cash economy where no payments are recorded. Even though measurement may not be possible it is important to be aware of the contribution of such factors to differences between countries in measured output as a proportion of total output. In comparisons with less developed economies a problem is the treatment of own-produce consumption, and its absence generally from measured output – an absence that may bulk large in 'subsistence' economies.

(b) *Valuation* – What value should be put on non-traded services? For comparison of levels it is often necessary to use cost of provision, and for changes this or some input-related measure (for example, derivative of employment) – the latter causing particular difficulty in obtaining a non-circular comparison of output per employment unit.

Also, in one country the State may produce a large proportion of such services, whereas another may rely more on the 'extended family' to take care of individuals' welfare needs. In the former, or where the private sector provides services catering for welfare needs, measured output will be, *ceteris paribus*, greater than in the country with more 'extended family' welfare-need provision, although the welfare or total output of individuals will not necessarily be any the less.

Three routes can be used to arrive at the gross domestic product of an economy – measuring and aggregating *products, incomes, and expenditure* (that is, GDP(O), GDP(I) and GDP(E)). In principle, the outcomes should be identical – in practice they seldom, if ever, are, so, estimates for different countries should, if possible, be based on the same route. One of the many difficulties is that the various outputs, receipts, and transactions take place at different times and cannot necessarily be related to the period. Analogous timing difficulties also occur within the individual approaches. For example, within the output measure based on 'products' (GDP(O)), although indicators should measure production, others, e.g. sales/deliveries, often have to be used and some 'stock adjustment' procedure is necessary to relate these to production in the base-period. Within the United Kingdom, GDP(O) is considered to be the most reliable measure of short-term movements in the economy, the average of the three measures being regarded as the best indicator of medium or long-term movements.

Perhaps the major area of difficulty in international comparisons is to take account of different relative prices particularly in comparison of output between countries at a point in time. A common error in such comparisons is to convert the money value of output in one country to the currency of others by using exchange rates. However, exchange rates seldom reflect the relative *internal* purchasing powers of the different currencies, and in recent years several projects have come to fruition measuring purchasing power parities as an alternative to exchange rates.⁽⁵⁾ These parities show the relationships of prices in two or more countries, and are essential to a comparison in real terms between domestic economic flows in each country.

So far, this section has concentrated on problems of valuing output in some base period. For comparisons of growth in output within a country or between countries the main concern is the measurement of the change in the volume of net output. At aggregate level this involves a weighted average of indicators of changes in the volume of net output, the weights usually being the value of net output in the base year. Thus, comparisons between countries can be affected

(i) most obviously, by the different mix of industries and services reflected in the base year weights, (ii) by whose prices base year output is valued at, and (iii) by the extent to which the indicators of changes in the volume of net output are measured in different ways.

Sufficient quantity indicators of change in volume of output are not available to cover the heterogeneous mix of goods and services produced, and even if they were such indicators would not necessarily take account of changes in quality and would be more appropriate for gross output. The alternative is to deflate the value of output by a suitable price index to obtain an indicator of volume change – output at constant prices. Ideally, for net output, this deflation should be applied separately to gross output and all the inputs of materials, and other goods and services used – 'double deflation'. However, this requires more information on prices and transactions than is generally available, and in practice various proxy indicators of changes in the volume of net output are used (gross output, inputs, as well as net output where available).

Also, the measure of change in GDP at constant prices necessarily depends on the year chosen as the base. Relative prices change over time and different relative prices can result in a different measure of the change in gross domestic product.

In practice a compromise is struck between the advantage of measuring changes over a number of years in terms of the prices of the same base year, and the need that the current pattern of relative prices should not vary greatly from that in the base year. The United Kingdom, following internationally recommended practice, 'rebases' every five years, the most recent being the rebasing on 1975 introduced in the *National Income and Expenditure Blue Book 1967–77*,⁽⁶⁾ rebased on 1975 compared with 1970 previously.

Denominator – Labour services

In labour productivity comparisons some estimate of labour services rendered is necessary. The quality of the estimate will depend (i) on the extent of the data available and collected, and (ii) the manipulation of this data into a labour services indicator. Data on numbers can range from number of jobs, number of persons employed, to number of insurance cards held by employers. Data may be available on number of hours worked, or on the number of shifts worked, or the proportion of workers in part-time work. Data may also be available on age/sex/grade/skill-levels/qualifications/ and experience of the work force. In manipulating the data into the best available indicator of labour services rendered, if data on hours worked are not available the best alternative may be to convert

the data on numbers employed into 'full-time equivalents' by suitable adjustment of the numbers in part-time work.

Similar problems of definition, timing, coverage and measurement arise as on output, and the extent to which different factors are (or should be) taken into consideration will depend very much on the purposes of the comparison. For example, should those off work sick or otherwise absent be excluded? On the one hand – no – to the extent that industry supports them, their absence reduces productivity; on the other hand – yes – where the comparison is the relative effectiveness of those at work at a point in time it may be desirable to exclude them.

Ensuring comparability

The previous section dealt with the problems of constructing appropriate ratios of labour productivity and their comparison both at a point in time and over time. These problems can be separated from the problems and difficulties encountered in obtaining the data and making comparisons between the derived ratios for different countries. For example GDP(O) data on a comparable basis may not be available, because most of the data on GDP and changes in GDP published by the Statistical Office of the European Communities (SOEC) and the Organisation for Economic Co-operation and Development (OECD) is based on the expenditure measure – GDP(E). Some of these problems are considered below in the context of pointing out some of the difficulties in ensuring comparability both within and between different sources of published data.

Rule 1: In the compilation of any given ratio of output to labour services try to ensure that the coverage and the period in both numerator and denominator are identical.

For example, if output excludes own consumption from subsistence farming, then it is arguable that labour services should exclude unpaid family workers. If the output of the self-employed, home workers, private domestic servants, or the armed forces is included, then labour services should cover these categories too. If GNP has to be used then ideally labour services abroad generating an inflow of property income should be included *less* any in the home country generating an outward flow. Also if output is measured over a calendar year, labour services rendered should, ideally, be measured over the same time period, although in practice employment is usually measured at a point in time, e.g. mid-year.

Rule 2: Where two ratios are compared (after observing Rule 1) try to ensure that the definitions used, coverage, and the period are compatible.

For example, if levels (or growth rates) of labour productivity in two countries are being compared, then obviously it is likely to be seriously misleading to compare GDP(O) in one country measured at factor cost over an average production year per person employed at a point in time (for example, mid-year), with GNP(I), or GDP(E) at market prices, for another country measured over a fiscal or calendar year per number of full-time equivalents (average per calendar month). A comparison of levels would be further confounded if exchange rates rather than purchasing power parities were used to convert money values to a common currency. Likewise a comparison of growth rates would be confounded (though much less seriously) if the sets of weights used in each country referred to different base-years.

Rule 3: Adopt a healthy scepticism about the statistics available, including those purporting to provide international comparisons.

The quality of the national statistics will always reflect the compromise reached within the country concerned between, on the one hand, the need for accuracy and precision in the figures and the importance attached to them by users, and on the other, both the resources that can be made available for collecting, processing, analysing and publishing the data, and the limitations of the size of the form-filling burden that can reasonably be imposed on industry, etc. Also, the national statistics, as prepared by the individual countries, will reflect differing economic structures and statistical practices, and the measure of output or labour services considered most appropriate locally may differ from that considered most appropriate elsewhere.

The various international statistical agencies (for example, those servicing United Nations (UN), International Labour Office (ILO), OECD, EEC) attempt to compile international comparisons by collecting and publishing estimates on broadly standardised definitions. Such comparisons, whether of levels or growth rates, will vary depending on the agency producing them if the standardisation is not extended between agencies, as well as possibly being different again from the 'national' estimate. The SOEC and OECD definitions of GDP(E) do not correspond exactly, and are different again from 'national' definitions. For example, in the UK national accounts, payments by households for vehicle licences are treated as indirect taxes and therefore as part of GDP(E) at market prices; on international definitions they are regarded as direct taxes which do not form part of GDP. Despite this apparent proliferation of different estimates of levels or growth rates of labour productivity for a given country in a given period, seldom can any of the different estimates

be said to be better or worse than the others. Where international comparisons are being attempted it will generally be advisable to use the data prepared by one of the international agencies (choice depends on which standardised definition best suits the purpose) but no surprise should be engendered should the 'national' estimates show different results.

In most instances the international agencies rely on the national agencies to supply the data required on the standardised definitions. Even in a standardised enquiry such as the EEC Labour Force Survey the survey work and analysis is carried out in each country by or via the national agency. The statistics supplied may only approximate to the international concept, particularly if they are collected or available 'nationally' only on a different basis. Also, there is no guarantee that the international compilers will be aware of, or publish, all the caveats or additional detail which might help the transition from national to international concepts.

A further source of problems relates to date of supply and revisions to data. The data may relate to the same period. However, comparisons may be affected by differences in the date the information was supplied (for example, a relatively timely provisional estimate for one country may be compared with a relatively firm estimate from another country received at a later date). Revisions policy also exerts an effect (for example, one country may make periodic revisions as more reliable data become available, whereas another will place more weight on going firm earlier). An associated problem concerns extraction of back runs of data from publications referring to different time periods. For example, extracting 1966-76 data from a 1977 publication, and then 1955-65 data from the same publication for 1966. The absence of 1955-65 data in the 1977 publication will probably be more because of lack of space than absence of revision, and the two series may well be completely discontinuous.

Summary/conclusion

The table below attempts a comparison of labour productivity at the *fundamental level*, and after the use of purchasing power parities rather than exchange rates, and hours worked rather than numbers employed, it is thought that column (3) provides a better comparison of 'relative efficiency' than column (1). But remember Rule 3. The figures for GDP and employment relate to 1975 and are taken from EEC publications, and GDP is measured at market prices. The purchasing power parities are taken from a recent EEC study (unpublished) which has attempted to overcome some of the problems of studies⁽⁷⁾ relating only to

part of GDP (e.g. personal consumption). Total man-hours worked estimates are derived from the EEC Labour Force Survey. However, although an attempt has been made to obtain consistent data throughout, deficiencies remain. For example, the purchasing power parities are based on price quotations in capital cities only, and the hours worked estimates breach Rule 1 because they relate to the survey period rather than a total for the calendar year.

Labour productivity in the EEC 1975

UK=100

	GDP per civilian employed using exchange rates (1)	GDP per civilian employed using purchasing power parities (2)	GDP per civilian man- hour worked using purchasing power parities (3)
German Federal Republic	182	135	123
Belgium	176	133	125
France	174	133	117
Denmark	164	114	118
Luxembourg	158	125	119
Italy	100	101	94
United Kingdom	100	100	100
Irish Republic	83	85	71

It was not possible to obtain consistent published data for the Netherlands in columns (1) and (2) although it is estimated that the index would comfortably exceed that for West Germany; the appropriate index for the Netherlands in 1975 in column (3) is 143. The major effect of the allowances made is to compress considerably the higher levels of labour productivity relative to the United Kingdom, shown for the first five countries in column (1); most of the compression resulting from the use of purchasing power parities rather than exchange rates to convert GDP to a common currency. With the exception of Denmark, the lowest average number of man-hours worked per civilian employed was in the United Kingdom in 1975, although average hours worked by males was above the EEC average. The apparent conundrum results from the relatively large proportion of the UK work force that is female, and the prevalence of part-time working within this proportion.

Not all the problems outlined in this article apply to every comparison. Many do, however, and 'be prepared' is a salutary warning – awareness of the problems is a considerable part of the battle, enabling the productivity comparer to:

- (i) take advantage of any scope for defining the comparison required, without violating the purpose, so that it is more in accord with the data known to be available.
- (ii) try to obtain consistent data for comparison on the lines required.

(iii) failing (i) or (ii), try to assess how deficient the comparison is (and how significant is the deficiency) in relation to the comparison sought.
Let the buyer beware but never despair!

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The top 1500 industrial and commercial companies

S. J. Penneck, *Statistician, Departments of Industry, Trade and Prices and Consumer Protection*

Introduction

Large companies' annual accounts have been analysed regularly for some 25 years, with results for recent years being published in *Business Monitor M3 - Company Finance*⁽¹⁾. The analysis currently covers some 1,600 large private sector companies - independent companies or company groups whose main activities are in the United Kingdom. The form of the analysis essentially consists of a balance sheet summary, an income and appropriation account, sources and uses of funds table, some supplementary information and various accounting ratios. The published figures give breakdowns for several industry groups and separate figures for overseas controlled companies.

This analysis is now being extended⁽²⁾ to cover a representative sample of industrial and commercial companies of all sizes. The first stage of this extension has been the construction of two sampling frames. The first, which is described in this article, is a list of the largest 1,500 industrial and commercial companies registered in Great Britain; the second is a 1 in 20 sample list of medium and smaller companies. When the second list is completed later this year it will complement the top 1,500, and together they will provide a valuable indication of the size distribution, industry classification and certain other details of British industrial and commercial companies and company groups. Northern Ireland registered companies have been excluded.

Scope of the top 1,500

The 1975 accounts (i.e. those ending between 1 April 1975 and 31 March 1976) of some 4,000 companies were examined to identify the largest 1,500 companies which were:

- i registered in Great Britain.
- ii not consolidated in the accounts of any other GB company. This generally means that subsidiaries of the other GB companies were excluded, while independent companies and direct subsidiaries of overseas companies were included. The ownership pattern of companies can be very complex, and we prefer to consider an inter-related group of companies as a whole rather than each subsidiary separ-

ately. Major financial decisions are usually taken at group level, and subsidiaries' accounts can be confused by intra-group transactions. So consolidated accounts give the best overall view of a company's performance and position, and increase the coverage in terms of activity.

- iii industrial and commercial. Financial companies and non-profit-making bodies were excluded.
- iv not in the process of liquidation and had submitted 1975 accounts.

Sources used

The following sources were used to identify the 4,000 companies from which the top 1,500 were selected:

- i list of 1,100 listed and 500 unlisted companies currently analysed in the M3 analysis of company accounts, including companies considered, but rejected at the last (1974) rebasing.
- ii 'Times 1000' (Times Books).
- iii Stock Exchange Year Book.
- iv 'Britain's Top 1,000 Private companies' (Jordans Dataquest).
- v 'Britain's 1,000 Foreign Owned companies' (Jordans Dataquest).
- vi General Council of British Shipping's List of shipping companies.

The measure of size

Capital employed as given in the companies' 1975 consolidated (group) accounts has been used as the indicator of their size. Capital employed was defined as the sum of:

- Issued Share Capital
 - Reserves
 - Minority interests
 - Deferred tax
 - Long-term loans (including debentures and mortgages)
 - Short-term loans
 - Bank loans and overdrafts
 - Net amount owed to other group members
- Bank loans and overdrafts and short-term loans are included as they form a major part of financing for the smaller companies, which form the second part of the sampling frame.

Capital employed has been chosen as the principal stratification factor for the final selection of companies to be included in the company accounts analysis. It is the best measure of size from the sampling point of view as it directly relates to the balance sheet figures, but suffers at present from the disadvantage of being measured at book values.

The following measures were also examined, but rejected, mainly because they were not sufficiently highly correlated to the financial measures that will ultimately be examined in the company accounts analysis:

i turnover. Under the Companies Acts independent non-holding companies are not required to disclose turnover if it is below £250,000; thus companies with a small turnover could not have been included. Turnover is a generally useful measure, however, and one that is commonly used, so it has been extracted for top 1,500, and the results are in the turnover analysis table (available on request).

ii number of employees. As with turnover, there is a cut-off (of 100 employees) below which disclosure is not required by the Companies Acts. An additional problem is that only the average number of UK employees is required to be given, and there are differences between companies in the treatment of part-time employees.

iii profits. These vary from year to year, and are affected by the stage in the economic cycle that an industry might be. Also they ignore the contribution of the value added by labour.

iv value added. This is a good general measure of size as it includes the contribution of both capital and labour. There are problems of measurement, but the main problem is that value added information was not given by many companies in their 1975 accounts.

All the top 1,500 companies identified were found to have a capital employed of at least £4,085,000.

Information obtained

Capital employed, turnover and industry are perhaps the most interesting characteristics extracted for the top 1,500. In addition the following data were extracted from the companies' 1975 accounts:

whether the company:

i operated mainly or wholly (i.e. 90 per cent or more) in the United Kingdom or overseas

ii had subsidiaries

iii was limited by shares, or guarantee – one guarantee company was found

iv was directly owned by an overseas company

v was registered in England and Wales, or Scotland.

Each company was checked to see if it was listed on

a UK Stock Exchange. Much of this information was needed for the key characteristics necessary to balance the new sample for the company accounts analysis, though some (such as the ownership of subsidiaries) was added following general interest in the subject.

Main difficulties

Two main difficulties were in allocating companies to industries, and deciding whether their activities were mainly overseas or not.

Industry classification

Most companies' accounts give a useful breakdown of activity by industry. Where possible an analysis by capital employed or assets was used, but where this was not given, the company was classified by turnover or profits. Industry classification from financial accounts was not straightforward for three reasons.

First, many of the companies' descriptions of the different classes of their business did not correspond exactly to the industry groups defined in the Standard Industrial Classification. Some descriptions were vague or technical, while others straddled industries. Secondly, some descriptions related to the end use of the product, rather than to the product itself. Thirdly, many of these large companies' activities were diverse, involving more than one industry – both manufacturing and non-manufacturing in some cases. In this exercise we classified a company to an industry only if at least 40 per cent of its activity was in that industry, but this limit was lowered if the remaining activities were widely spread over other industries. Even so, it was necessary to allocate companies with 'mixed activities' to a separate category, though we have divided this into manufacturing and non-manufacturing.

Area of operation

An analysis of turnover by geographical area is required for listed companies under the terms of the Stock Exchange listing agreement. However, some of the large unlisted companies also gave it. Where the information was not given, and it was not clear where the company was likely to be operating, we assumed it operated wholly in the United Kingdom. The extent of overseas operation was based on turnover being generated overseas, not on the level of exports (which is in any case a UK activity).

The results⁽³⁾

Within the top 1,500 there are considerable variations in size between companies – they range from a capital employed of just over £4 million to one of £4,650 million, and from a turnover of less than £1 million to £9,540 million. Although the relationship between

capital employed and turnover is not at all fixed, it does seem that turnover is often twice the level of capital employed. Analysis by capital employed, gives greater prominence to companies with a high capital employed/turnover ratio, such as property companies, and relegates others such as the distribution trades which have a relatively low capital base.

The table below shows the top 1,500 divided into nine size bands according to their capital employed:

Size band	Capital employed £ thousand	Number of companies	Average capital	Total capital employed		Cumulative percentage
			employed per company £ million	£ million	Per cent	
9	more than 657,525	20	1,411	28,225	33	33
8	between 349,563 and 657,525	30	444	13,238	15	48
7	between 162,548 and 349,563	50	239	11,817	14	62
6	between 56,535 and 162,548	150	94	14,144	17	79
5	between 21,585 and 56,535	250	35	8,686	10	89
4	between 12,125 and 21,585	250	16	4,044	5	94
3	between 8,002 and 12,125	250	10	2,405	3	97
2	between 5,696 and 8,002	250	7	1,697	2	99
1	between 4,085 and 5,696	250	5	1,210	1	100
		1,500	57	85,466	100	

The top 20 companies account for one third of the capital employed of the top 1,500, while the largest 100 account for over 60 per cent. These companies are estimated to account for around 30 per cent and 50 per cent respectively of the capital employed of all industrial and commercial companies, though these estimates are approximate and cannot be confirmed until the first stage of the extension to the company accounts analysis referred to earlier, is complete.

Further information

Detailed tables showing the distribution of companies by size for each of 16 industries are available from the author. These tables indicate both the numbers of companies and their capital employed, giving useful measures of industrial concentration among larger companies.

The tables also show, for each of the nine size bands:

- i the number of companies listed on the Stock Exchange, and their capital employed.
- ii the number of companies operating wholly or mainly in the United Kingdom or overseas, and their capital employed.

The size bands were chosen so as to give 250 companies in each, with the exception that the size band for the largest companies was subdivided to give a fuller breakdown. These size bands enable simple comparisons to be made between, say, the top 50 companies and the top 500. The chart on page 18 shows the number of companies in each £1 million capital employed band and is complementary to the table. The most striking aspect is the highly skewed nature of the size distribution.

- iii the number of companies owned directly by overseas companies.

These tables are available from:

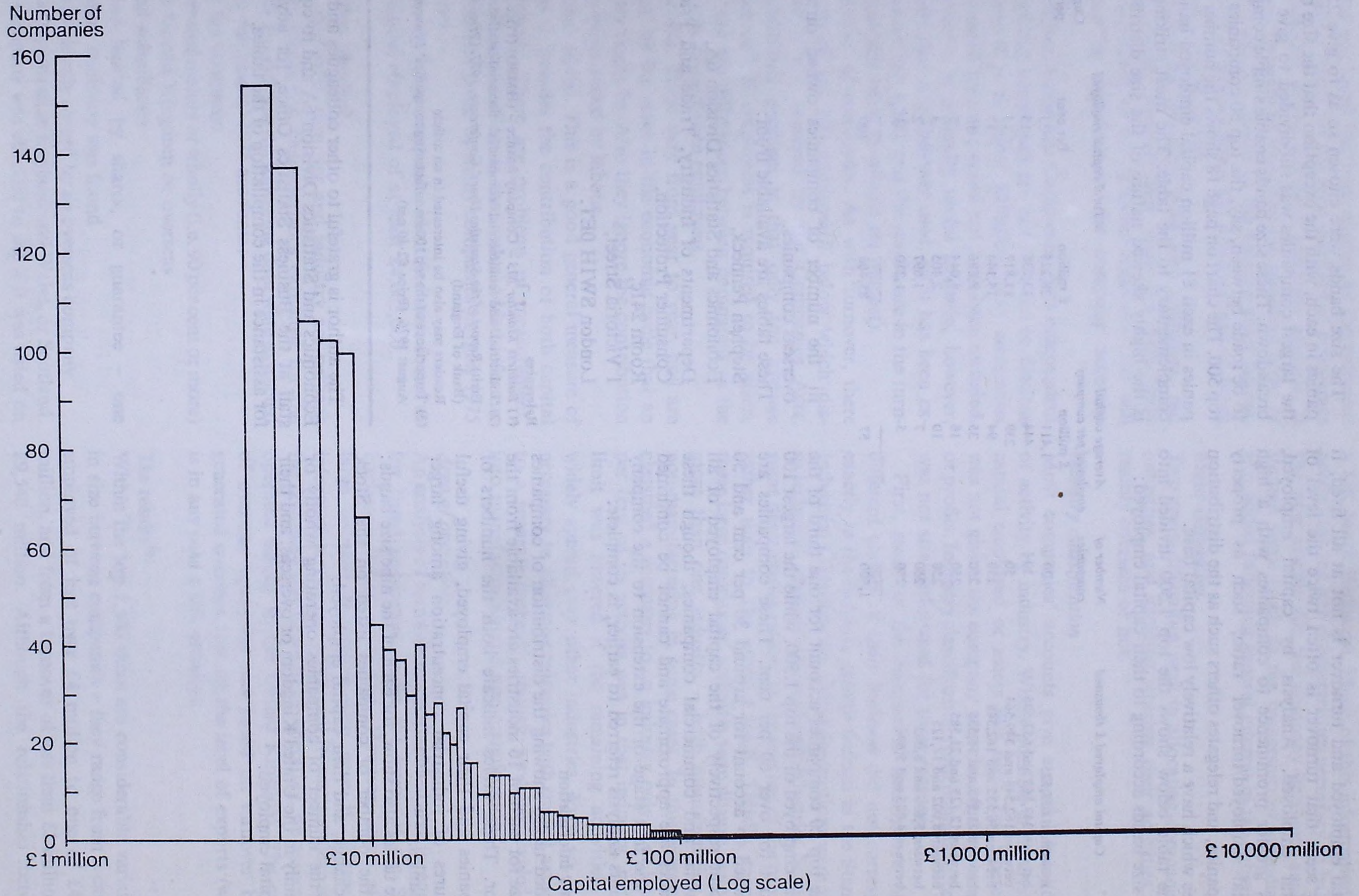
Stephen Penneck,
Economics and Statistics Division 6A,
Departments of Industry, Trade and Prices and
Consumer Protection,
Room 241c,
1 Victoria Street,
London SW1H 0ET.

References

- (1) *Business Monitor M3 - Company finance* - (HMSO) (Price £2.00 net)
- (2) 'Industrial and commercial companies' financial statistics' (M. J. Errit) *Report of the Statistics Users' Conference, 1977*. (Price £4.00 net). (Bank of England)
Readers may also be interested in an article
- (3) 'Importance of the top 100 manufacturing companies' *Economic Trends*, August 1976. (Price £2.40 net)

The author is grateful to other colleagues and staff of Economics and Statistics Division 6A and to computer staff at the Business Statistics Office, for advice and for assistance in the compilation of the tables.

The size distribution of the 'Top 1500' companies



Recently available statistical series and publications

The following publications containing social statistics have recently, or will soon, become available during the October–December quarter of 1978. 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*.

Central Statistical Office

Annual Abstract of Statistics No. 115

Regional Statistics No. 14

Social Trends No. 9

Department of Education and Science

Statistics of Education, Special Series

Volume 5: School Building Surveys 1975 and 1976

Statistics of Education, Volume 4, 1976: Teachers statistics, 1976

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

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

Department of Employment

Department of Employment Gazette, published towards the end of each month, contains indicators on earnings, unemployment and prices. Issues due in the fourth quarter will contain articles on the 1977 Family Expenditure Survey results; and results for first quarter 1978 for all UK households.

Family Expenditure Survey 1977

Department of the Environment

Housing and Construction Statistics, Issue 26: figures for the second quarter 1978

Local Housing Statistics, Issue 46: figures for the second quarter 1978

Department of Health and Social Security

Health and Personal Social Services Statistics, 1977

Home Office

Probation and After Care Statistics, 1977

Offences Related to Motor Vehicles 1977

UK Fire Statistics: Estimates for 1975

Experiments on Living Animals Statistics, 1977

Betting Licensing Statistics 1977–78

Report and Accounts of the Criminal Injuries Compensation Board, 1977

UK Fire Statistics 1977

Inland Revenue

Survey of Personal Incomes 1975–76 and 1976–77

Office of Population Censuses and Surveys

Population Trends No. 14

OPCS Monitors available free from the Office of

Population Censuses and Surveys include:

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

Populations projections: area, 1975–1991

Series PP3 No. 2

Scottish Office

Criminal Statistics, Scotland, 1977

Scottish Health Statistics

Residential Accommodation for Children 1976/77, Scotland

Children in Care or under Supervision, Scotland, 1977

Children's Hearing Statistics, 1977

Health in Brief

Welsh Office

Statistics of Education in Wales 1978

Digest of Welsh Statistics 1978

Welsh Social Trends No. 24 1978

Health and Personal Social Service Statistics for Wales No. 5

In addition to the above, the following analyses in the Department of Health and Social Security statistical

series have recently become available. Extracts and summaries from these will eventually be published in *Social Security Statistics*.

Unemployment benefit

Quarterly analysis of decisions of Insurance Officers, quarter ending 30 June 1978

Monthly analysis of claims by sex and region:

4 weeks ending 29.4.78

5 weeks ending 3.6.78

4 weeks ending 1.7.78

Adjudication

Quarterly analysis of appeals and references to local National Insurance and Industrial Injuries appeal tribunals – quarter ended June 1978

Family Income Supplement

Monthly analysis of numbers and characteristics – June 1978, July 1978, August 1978.

Guardian's allowance/Child's special allowance

Quarterly analysis of children for whom allowance is in payment, quarter ended June 1978

Further information can be obtained from:

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

New surveys assessed by the Survey Control Unit

June to September 1978

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

An introductory note was given in *Statistical News* 36.41

New surveys assessed June – September 1978

Title	Sponsor	Those approached	Approximate number approached	Location	Frequency
Business Surveys					
Trade and Industry subscriber research	COI/DI	Readers	140	GB	AH
Jobcentre advertising research	COI/MSC	Employers/Opinion leaders	2,100	GB	AH
Pesticide usage in beef and dairy cattle and pig enterprises	DAFS	Farmers	5,850	S	AH
Behavioural responses to new productivity-based incentives	DEM	Managers	100	GB	AH
1978 SOEC survey of clothing and footwear prices	DEM	Retailers	40	GB	AH
Developments in industrial democracy in Scotland	DEM	Managers	100	S	AH
Evaluation of the Temporary Employment Subsidy Scheme	DEM	Companies	500	GB	AH
Employers opinions of proposed short-time working scheme	DEM	Employers	250	GB	AH
Mobility among construction operatives: study of Employers' policies	DOE	Employers	200	EW	AH
Employment opportunities in the inner city	DOE	Employers	850	GB	AH
Rochdale industrial improvement area – employers survey	DOE	Employers	100	NW	AH
Commercial application of Queen's Award winning innovations	DOE	Manufacturers	450	GB	AH
Study of land for housebuilding in Greater Manchester	DOE	Construction companies	300	NW	AH
Evaluation of European Components Service – BOTB	DT	Engineering companies	582	UK	AH
Local income from tourist expenditure at Woodspring Establishments	ETB	Hotels	60	SW	AH
Evaluation of ADAS wheat yield leaflets	MAFF	Farmers	750	E	AH
Storage and handling facilities at ports exporting grain	MAFF	Port authorities	40	EW	AH
Agricultural machinery and equipment census	MAFF	Farmers	200,000	EW	I
Performance of combine harvesters	MAFF	Farmers	17	EW	AH
Initial training courses in agriculture in 1978 – employers	MAFF	Farmers	150	EW	AH
Survey of craftsmen in agriculture and horticulture in 1978	MAFF	Farmers	4,000	UK	AH
Wrexham and Deeside manpower study	MSC	Employers	125	W	AH
Work Experience Programme employers survey	MSC	Employers	430	GB	AH
Skill shortages in the engineering industry in the Reading area	MSC/NEDO	Engineering companies	100	SE	AH
Skill shortages in the engineering industry in the Portsmouth area	MSC	Engineering companies	70	SE	AH
Survey of earnings in sheltered workshops	MSC	Employers	200	GB	I
Survey into training for overseas trade	MSC	Exporters	25	SE	AH
Skill shortages in manufacturing firms in the Scottish Central Region	MSCS	Manufacturers	170	S	AH
Indian import maintenance aid foreign content sample scheme	ODM	Exporting companies	350	UK	C
Prices, costs and margins in the distribution of jeans	PC	Retailers/wholesalers/Manufacturers	250	UK	AH
Power tools examination	PC	Manufacturers/Distributors	190	UK	AH
Enquiry into unit trust managers charges	PC	Unit trust companies	18	UK	AH
Local Authority Surveys					
Youth Opportunities Programme publicity development: qualitative research	COI/MSC	Careers officers	18	GB	AH
Youth Opportunities Programme publicity development: quantitative research	COI/MSC	Principal careers Officers	120	GB	AH
Local Authority use of Circular 79/72 (Childrens play space)	DOE	Amenities departments	130	EW	AH
Rent arrears in Scotland	SDD	Housing departments	70	S	AH
Energy conservation in public sector housing	SDD	Chief executives	56	S	Q
Road safety information for elderly pedestrians	TRRL	Education departments	100	GB	AH

New surveys assessed June - September 1978—continued

<i>Title</i>	<i>Sponsor</i>	<i>Those approached</i>	<i>Approximate number approached</i>	<i>Location</i>	<i>Frequency</i>
Other Surveys					
Survey of noise nuisance through party walls	BRE	Households	600	GB	AH
UK exhibition industry descriptive survey	COI	Managers	NK	UK	AH
Evaluation of the motoring economy campaign	COI/DEN	Drivers	3,000	GB	AH
Assessment of energy teaching material for schools	COI/DEN	Teacher	330	E	AH
Energy omnibus: attitude monitor	COI/DEN	Households	1,000	GB	AH
Evaluation of the good neighbour campaign	COI/DHSS	Adults	90	GB	AH
Kidney donor qualitative research - stage 2	COI/DHSS	Adults	77	GB	AH
Awareness of and reactions to PETT magazine 'project' and exhibition 'School Science and Everyday Life'	COI/DI	Youths	760	GB	AH
Consumer safety pack test	COI/DPCP	Teachers	20	GB	AH
Two-wheeler pre-test	COI/DTP	Drivers	200	E	AH
Drink and drive qualitative research	COI/DTP	Drivers	48	E	AH
'Shrinking Woman' animatic commercial - 2nd stage research	COI/DTP	Parents	200	E	AH
Metrication omnibus: autumn 1978	COI/METB	Households	2,000	GB	AH
Attitudes to the RAF amongst Loughborough sixth formers	COI/MOD	Schoolboys	200	EM	AH
RAF apprenticeship enquiries	COI/MOD	Applicants	780	UK	AH
Youth Opportunities Programme leaflet research	COI/MSC	Youths	30	WM	AH
Jobcentre advertising research	COI/MSC	Jobseekers	1,200	GB	AH
Survey of shared and extra-curricular use of schools	DES	Headteachers	3,500	EW	AH
Signing-on: A study of new patients in general practice	DHSS	Patients	90	EM	AH
Employment experiences of epileptic school leavers	DHSS	Disabled School leavers	178	SW	AH
Integrated leisure needs of the handicapped and able-bodied	DHSS	Youths	550	UK	AH
The elderly widowed and their supporters	DHSS	Bereaved	85	E	AH
Teenage mothers and their partners	DHSS	Mothers	NK	SE	AH
The role of the Hakim (healer) in the U.K. Asian community	DHSS	Patients	120	SE	AH
NOP financial survey	DNS	Households	2,100	GB	AH
Darlington 'Quiet Town Experiment' - after survey	DOE	Households	600	N	AH
Rochdale industrial improvement area - householders' survey	DOE	Households	60	NW	AH
Young schoolleavers survey - part of inner cities research programme	DOE	Schoolleavers	150	NW	AH
Study of domestic accidents involving tins and tin-openers	DPCP	Patients	800	EW	AH
Stocksbridge/Penistone by-pass Yorks public exhibition	DTP	Adults	950	YH	AH
Users' opinions of English Tourist Information Centres survey	ETB	Tourists	1,350	E	AH
Islands visitor survey	HIDB	Tourists	1,500	S	AH
Duplicate diet study and blood lead survey in Glasgow	MAFF	Mothers	1,000	S	AH
Duplicate diet study - mercury	MAFF	Adults	1,000	E	AH
Initial training courses in agriculture 1978 - employees	MAFF	Trainees	150	EW	AH
Special measures evaluation - 2nd survey of schoolleavers	MSC	Schoolleavers	1,000	S	AH
Attitudes of the disabled towards employment quota and registration	MSC	Adults	NK	GB	AH
Medical assistants pattern of work and responsibilities in the NHS	OME	Doctors/Dentists	702	GB	AH
Debt recovery in Scotland	OPCS	Debtors	2,500	S	AH
Above tolerable standard housing repairs - social survey	SDD	Households	1,770	S	AH
Rutex: Strathclyde on-bus survey	SDD	Passengers	200	S	AH
Glasgow rail impact study - rail surveys	SDD	Travellers	100,000	S	AH
Glasgow rail impact study - Household survey	SDD	Households	3,000	S	AH
Strathclyde community council survey	SDD	L.A. Councillors and Officials	80	S	AH
Transport provision and job opportunities in Greater Manchester	TRRL	Adults	1,000	NW	AH
A66 (rural section) 'after' study	TRRL	Adults	1,000	NW	AH
Awareness of Gwent Sunday bus service	TRRL	Households	125	W	AH
Study of unemployed people and transport in Greater Manchester	TRRL	Unemployed	200	NW	AH
Wiltshire travel enquiry centres survey - pilot	TRRL	Passengers	NK	SW	AH
Tyne and Wear public transport impact study - pilot bus survey	TRRL	Travellers	3,000	N	AH
Rutex survey - Ripon flexibus non-users survey	TRRL	Travellers	50	YH	AH
Rutex survey - Colsterdale car service study	TRRL	Travellers	40	YH	AH
Newtown household survey	WO	Households	360	W	AH

Abbreviations used

General

ADAS - Agricultural Development and Advisory Service
 BOTB - British Overseas Trade Board
 NHS - National Health Service
 NK - Not known
 PETT - Project Engineering and Technologies for Tomorrow
 RAF - Royal Air Force
 SOEC - Statistical Office of the European Communities

Sponsors

BRE - Building Research Establishment
 COI - Central Office of Information
 DAFS - Department of Agriculture and Fisheries for Scotland
 DEM - Department of Employment
 DEN - Department of Energy
 DES - Department of Education and Science
 DHSS - Department of Health and Social Security

DI - Department of Industry
 DNS - Department for National Savings
 DOE - Department of the Environment
 DPCP - Department of Prices and Consumer Protection
 DT - Department of Trade
 DTP - Department of Transport
 ETB - English Tourist Board
 HIDB - Highlands and Islands Development Board
 MAFF - Ministry of Agriculture, Fisheries and Food
 METB - Metrication Board
 MOD - Ministry of Defence
 MSC - Manpower Services Commission
 MSCS - Manpower Services Commission, Office for Scotland
 NEDO - National Economic Development Office
 ODM - Ministry of Overseas Development
 OME - Office of Manpower Economics
 OPCS - Office of Population Censuses and Surveys
 PC - Price Commission
 SDD - Scottish Development Department

TRRL - Transport and Road Research Laboratory
 WO - Welsh Office

Location

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

Frequency

A - Annual
 AH - Ad Hoc or single time
 C - Continuous collection
 I - Intermittent
 Q - Quarterly

Notes on current developments

REGIONAL STATISTICS

Regional Statistics

The 1979 edition of *Regional Statistics* will be available in the middle of December. It is the chief source which brings together a detailed, quantitative picture of regional variations across a broad range of topics, social, demographic and economic. This publication is intended for regional planners, marketing managers, academics and the many others who have regional interests.

In this edition there is a new EEC section which sets out basic demographic, social and economic statistics for the regions of the nine countries.

The section on employment has been expanded to include expenditure by region on schemes such as the Training Opportunities Scheme and the Temporary Employment Subsidy, together with tables on operatives working short-time, apprentices, Employment Services Agency Survey of Vacancies and Turnover, size analyses of establishments.

The Production Distribution and Investment Section now includes tables on regional openings of manufacturing establishments and on regional labour costs by selected industry groups.

The results of the 1977 National Dwellings and Housing Survey for England with new regional and metropolitan county information on length of residence, migration, household types, socio-economic groups, housing amenities, dwelling types and tenure are there too.

All in all, there are sixteen sections each dealing with an important topic from population and vital statistics to production and to personal incomes.

Regional Profiles bring together information to give a rounded picture of the main economic and social characteristics of each region in the United Kingdom. For the first time commentary draws attention to the more important characteristics in each case.

A short section shows a limited range of statistics for English metropolitan districts and London Boroughs and some of the larger local authority districts in Scotland and Wales. Basic county statistics now include population projections and Housing Investment Programme allocations.

Coloured maps show the boundaries of EEC regions,

UK standard regions, counties and metropolitan districts.

There are commentaries highlighting interesting regional differences contained in the sections.

Reference

Regional Statistics, No. 14, 1979 (HMSO) (Forthcoming)

National and Local Government Statistical Liaison Committee

NLGSLC's current activities

The National and Local Government Statistical Liaison Committee was set up in 1970 with the support of the local authority associations to improve co-operation on statistical matters between central and local government in England and Wales. It provides a forum in which statistical activities can be co-ordinated in order to facilitate a flow of information in both directions, and gaps in available information can be identified and in which common problems such as definitions and classifications can be discussed. Meetings are chaired by the Principal Director of Statistics in DOE. Local authority associations nominate representatives from a variety of disciplines and experience and government departments with relevant statistical interests are represented on the Committee.

The Committee's method of working is normally to consider in general terms a particular statistical problem raised by members and, if appropriate, to set up a joint central/local government working group to carry out an in-depth investigation and report back. Although it has no executive powers, proposals agreed by the Committee are generally supported by local authority associations and central government. Further background on the achievements of the Committee was given in an article published in *Statistical News* No. 29.

The schedule below reports progress on various topics currently receiving the attention of the Committee:

Further copies of the schedule are available from:

Mr. R. H. Jenkinson,
Room S13/15,
Department of the Environment,
2 Marsham Street,
London SW1P 3EB.

NLGSLC'S CURRENT ACTIVITIES

Activity	Progress to date	Next steps	
		For NLGSLC	For others
Ensuring that government needs for data from the 1981 Census are made known to OPCS	Local Authority Side Census Sub-Group set up to liaise with OPCS.	Discuss presentation of results and related matters	OPCS to report progress and respond to any proposals made.
Seeking improvement in population data – estimates and projections – and exploring methodology and data sources.	<p>Estimates</p> <ul style="list-style-type: none"> – Sub-group on Population and Migration (reported 1972) – Sub-group on Local Authority Holdings of Information (reported 1974) – OPCS papers on methodology – Support for Electoral Roll enhancement. <p>Projections</p> <ul style="list-style-type: none"> – Response made to LA worries about status and presentation of OPCS sub-national projections. 	<p>Follow up effect of new methodology and implications of revisions. Review new data held by local and central government, including local voluntary Electoral Roll enhancement exercises and surveys.</p> <p>Continue to press the case for estimates for non-standard and small areas.</p> <p>Consider the effect on the next round of projections of incorporating local authority suggestions.</p>	<p>OPCS to supply written description of new methodology, continuing dialogue on estimates as the situation requires. Electoral Roll Enhancement Steering Group to seek an early start to the exercise.</p> <p>DOE to consider implications for Rate Support Grant.</p> <p>Regional Population Projection Committee to consider response to LA side recommendations. OPCS/DOE to consider more feedback on assumptions to local authorities.</p>
Review of statistical returns to minimise the form-filling burden on local authorities.	<p>Housing (reported 1976 and Panel set up)</p> <p>Planning (reported 1977)</p> <p>Education (to report October 1978)</p> <p>Transport (in progress)</p> <p>Local Government Finance (Grants Working Party responsible, liaising with NLGSLC)</p> <p>Personal Social Services (DHSS Sub-group reported in 1973; reviewed in 1977)</p>	<p>Consider other topics for review and the problems of including administrative returns. Liaison with the Consultative Council on Local Government Finance (and others) on the question of local authority returns.</p> <p>Monitoring progress – consideration of necessary machinery.</p>	<p>Departments to consider further reviews. e.g. Employment Construction Home Office Other</p>
Investigating ways of obtaining income data for small areas.	<p>Sub-group on Income Statistics (reported 1977). Meetings of informal group to follow up recommendations.</p> <p>Research work on an income surrogate – interim report made June 1978.</p>	<p>To further examine and develop the question of obtaining local area income statistics.</p> <p>Consider further reports on the income surrogate.</p>	<p>Inland Revenue to consider the feasibility of an enlarged income survey.</p> <p>DHSS to consider arrangements for providing information on supplementary beneficiaries.</p> <p>DOE to carry out further tests of the income surrogate against available data.</p>
Ensuring close co-operation between central and local government in the housing information field with a view to meeting user requirements in both sectors.	<p>Forms review – Panel set up.</p> <p>New returns considered – Homelessness Housing Investment Programmes Elderly Management and Maintenance.</p> <p>National Dwelling and Housing Survey – close co-operation and support on various aspects of the survey.</p> <p>Household Projections – discussion of proposed research.</p>	<p>Continuous review by Panel with periodic progress reports.</p> <p>Monitor progress.</p> <p>Continue liaison on the survey and its further development.</p> <p>Representation on the research steering group.</p>	<p>DOE to make information available.</p> <p>DOE to disseminate NDHS results.</p> <p>Research group to report back.</p>

NLGSLC'S CURRENT ACTIVITIES—continued

Activity	Progress to date	Next steps	
		For NLGSLC	For others
Seeking improvement in the availability of employment and unemployment statistics for use at the local level.	<p>Sub-group on Employment (reported 1972)</p> <p>Confidentiality – Amendment to the Statistics of Trade Act supported.</p> <p>Unemployment statistics by areas of residence – proposals put forward.</p>	<p>LA side to continue discussions with DE on data requirements and report back.</p>	<p>DE to give further consideration to request for unemployment data by area of residence.</p> <p>Government Statistical Service to consider amending legislation.</p> <p>DE to consider difficulties over boundaries.</p>
Contributing to the development of statistics in the personal social services field.	<p>Sub-group on Personal Social Services (reported 1973).</p> <p>Sub-group on 10 year Development Plans (reported 1975).</p>	<p>Contact to be maintained with DHSS/Local Authority Association Technical Working Group.</p>	<p>DHSS to monitor implementation of sub-group recommendations and feed back information to local authorities.</p> <p>DHSS to make tabulations of Child Benefit records available.</p>
Encouraging the standardisation and use of small area coding in statistical enquiries.	<p>Consideration of papers put to the Committee on Co-ordinate Referencing and Postcoding.</p>	<p>Further discussion of arrangements for using existing facilities.</p> <p>Consider the report of the National Gazetteer Pilot Study.</p>	<p>Central government to set up operational master postcode directory.</p> <p>LA access to a computer directory resulting from Regional Highway Traffic Model work.</p>

Regional civilian labour force projections

Revised civilian labour force projections for the standard planning regions for Great Britain to 1991 have been prepared by the Department of Employment. These projections, together with recently published national projections, replace those published in December 1975 (*Statistical News* 42.26). They take account of 1975 based population projections, and of data on 'activity rates' (the proportion of the population in the labour force) from censuses of population and the EEC Labour Force Survey.

Reference

Department of Employment Gazette, September 1978, (HMSO) (price £1.25 net)

Sub-national population projections

The mid-1975 based sub-national population projections (see *Statistical News* number 41, page 41.30) are being updated in the form of a mid-1977 based round by OPCS. These new projections will take the mid-1977 home population estimates as their starting point and incorporate the latest views on future fertility, mortality and migration available at the time of preparation. It is hoped to produce results for individual London boroughs for the first time, together with the usual projections for each region, county and metropolitan district in England. Abridged results for regions and counties will be released in *OPCS Monitor* PP3 78/1 while those for metropolitan district and London boroughs will probably appear in *OPCS Monitor* PP3 79/1 both available direct from:

Information Branch (Dept SN),
OPCS,
St. Catherines House,
10 Kingsway,
London WC2B 6JP.

More detailed results will be issued in the booklet *Population projections: area, 1977-1991* Series PP3 No. 3 to be published by HMSO during 1979.

Enquiries about these projections to:

01-242 0262 extension 2180.

References

OPCS Monitor (reference PP3 78/1) available direct from OPCS (forthcoming)

OPCS Monitor (reference PP3 79/1) available direct from OPCS (forthcoming)

Population projections: area 1977-1991 Series PP3 No. 3 (HMSO) (forthcoming)

Population projections - England - area - 1975-1991

Published on 1 September 1978 was the recent area population projections 1975-91 for England.

Enquiries on area projections to:

Regional Demography Unit,
OPCS

St. Catherines House,
10 Kingsway,
London WC2B 6JP.
01 242 0262 ext 2171.

Reference

Population Projections area 1975-1991 (Series PP3 No. 2) (HMSO) (Price £2.00 net)

POPULATION AND VITAL STATISTICS

1981 Census preparations

As announced in August, a major test in preparation for the 1981 Census is planned for next April in the London Borough of Haringey. Some 65,000 households will be involved. The aim is to test the effectiveness and acceptability of the questionnaire and to rehearse each stage of the census, with particular emphasis on organisation and on the enumeration procedures. This test will replace the cancelled Test Census that had been planned for the Spring of this year.

Command 7146, *'The 1981 Census of Population'* (July 1978) said in paragraph 23 that before making a final decision on the form of a direct question on ethnic origins the Government would wish to take account of the findings of the Registrar General and of public opinion. A question wording test that included both an ethnic origins question and other questions was conducted in July and August by the Social Survey Division of OPCS. Some 1,500 households whose addresses had been selected in areas known to contain high proportions of the ethnic minorities were approached. The response to the test is now being analysed.

Consultations with census users have continued. Recently a new title within the *OPCS Monitor* series has been introduced to provide information about the 1981 Census, especially the various preparations for the Census in which users collaborate; for example, planning enumeration districts and designing output. Eventually these *Census Monitors* will become a major source of information on the availability of census results.

To date, four *Census Monitors* have been issued: CEN 78/1 (issued March 1978) outlined the scope of the preparations already under way for the 1981 Census and described consultations in progress and being planned. CEN 78/2 (9 May 1978) contained initial proposals for 1981 Small Area Statistics (SAS) - statistics for populations smaller than those in the published volumes and essential for any analysis of local characteristics. CEN 78/3 (25 July 1978) summarised Command 7146, *'The 1981 Census of Population'* and included a list of the topics proposed. CEN 78/4

(also 25 July 1978) described the development of a question on ethnic origin and the need for a new approach to collecting statistics on this subject. Monitors to be published in the Autumn of 1978 will cover the arrangements for consulting users about the design of the main output from the census and revisions of the SAS proposals.

Census Monitors are available free of charge from:

OPCS Information Branch,
(Dept SN),
St. Catherines House,
10 Kingsway,
London WC2B 6JP.

Reference

The 1981 Census of Population, July 1978 (Cmnd. 7146) (HMSO) (Price 40p. net)

Population Trends

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

One-parent families: numbers and characteristics

This article describes the difficulties of estimating numbers of one-parent families in the intercensal period and brings together more recent information on numbers and characteristics of one-parent families including a breakdown on the number of single lone mothers, widowed lone mothers, divorced lone mothers, married (separated) lone mothers, and lone fathers.

Population estimates 1971-77

Population estimates for England and Wales, down to district level, recalculated for mid-71 to mid-77 have recently been published in the OPCS Monitor series. This article explains the reasons for the recalculation, sets out the main features of the results and discusses the issues that arise in making and using, these annual estimates.

Recent trends in sterilisation

Until recently nothing was known at national level about the incidence of sterilisation, the characteristics of those affected, the stages of the childbearing period when sterilisation was most likely to be adopted nor its possible effects on fertility. This article looks at the incidence of sterilisation as shown in a survey on the family planning services carried out in 1975.

Changing circumstances of women 1971-76

The General Household Survey, a continuous multi-purpose survey which is designed to provide a means of monitoring key social statistics, has been in operation

since 1971. This article draws mainly on the 1976 General Household Survey Report to illustrate some aspects of the changing circumstances of women over the period 1971-76.

Births: the weekly cycle

Fewer babies are born at weekends than during the week. This article looks at the number of births in England and Wales over the period 1970-76 and the days of the week on which births occur and concludes that births have become less common at weekends, especially on Sundays, compared with weekdays.

Ethnic origin: the search for a question

The recently published White Paper on the 1981 Census (Cmnd. 7146) announced the Government's proposal to ask a question on race or ethnic origin in the census. This article describes the development of a question on ethnic origin and is based on research undertaken by OPCS Social Survey Division, and was first published as an OPCS Monitor (CEN 78/4).

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

References

Population Trends 13 (HMSO) September 1978 (Price £2.25 net)
Population Trends 14 (HMSO) (forthcoming)

Infant mortality

This paper presents preliminary analyses from a new set of routine statistics and a detailed description of the system that produces them. Each death record of a child under one year of age is linked to its corresponding birth record so that information given at the registration of a child's birth can be obtained. The information obtained includes age of mother, number of previous legitimate children the mother has borne (parity), and legitimacy of child at birth. Linking is successfully accomplished with over 98 per cent of the death records; about half of the remaining records relate to children whose place of birth was not stated or who were stated to be born abroad on their death certificate.

The linking of birth and death records has been done on two previous occasions; the first study concerned infant deaths occurring among children born in 1949 and 1950 and the second, infant deaths occurring between 1 April 1964 and 31 March 1965. In the analysis of the data, comparisons have been made with the latter study.

By 1977 the stillbirth and infant mortality rates had dropped to approximately 40 per cent of their 1950 level. In general, the fall is consistent and uniform, however the postneonatal (deaths between 4 weeks and one year) mortality rate altered very little between

the late 1950s and 1973 and it has fallen rapidly since then. For legitimate stillbirth, perinatal (stillbirths and deaths under one week) and neonatal (deaths under 4 weeks) mortality rates there is a j-shaped curve with increasing parity: the rate being higher for the first born infant, lower for second and third infants and then increasing for the fourth and higher order infants. In general the highest rates are found among high parity, older mothers in Social Classes IV and V and the lowest among mothers of parity 1 or 2 in Social Classes I and II. Comparison of the 1975 and 1976 rates with those of the second study shows that the rates for young high parity mothers have improved least; nevertheless there has been an improvement in all age, parity and Social Class groups. For post neonatal mortality rates, the picture is different. Generally the mortality rate rises with increasing family size and decreases for increasing maternal age, so that within each Social Class grouping, the lowest rates are found among mothers over thirty with no previous children, and highest among high parity young women.

OPCS Occasional Papers are obtainable only from:

OPCS Information Branch (Dept. SN),
St. Catherines House,
10 Kingsway,
London WC2B 6JP.

Reference

Social and Biological Factors in Infant Mortality, 1975-76. OPCS Occasional Paper 12, (Price 60p. net)

GRO (Scotland) – Population and Vital Statistics

The Registrar General's fourth quarterly return for 1977, which included provisional annual tables for 1977, was published in June. The first quarterly return for 1978 was published in September.

The Registrar General's Annual Report for 1977 is expected to be published in December.

References

The Registrar General's fourth quarterly return, 1977 (HMSO) (Price £1.50 net)

The Registrar General's first quarterly return, 1978 (HMSO) (Price £1.50 net)

SOCIAL STATISTICS

Social Trends

The ninth edition of *Social Trends* is due to be published at the end of November. In this edition the Social Trends team in the CSO has aimed to follow certain topics through the chapters of the book. Major topics are elderly people, their living standards and needs; one parent families and how their numbers are growing; the increasing number of women at work, the jobs they do, and the effects on their families; and the minority

ethnic groups in this country and how they live. Other topics focussed on this year include disabled people, the journeys people make and the transport they use, and – with the help of a great deal of new material from the General Household Survey – leisure time and what people do with it.

There will be two articles in the new edition. One of them, by Alan Holmans of the Department of the Environment, is about the growth of owner-occupied and local authority housing in this country, and the similarities and differences between people living in the different sectors. In the other article, Bernard Jones of Lucas Industries writes about the reasons why an industrial company is interested in making forecasts of social changes, and how Lucas Industries has approached making such forecasts.

Librarians will be particularly interested to know that the new edition will contain a cumulative index to the material included in previous editions. The Central Statistical Office has recently been reviewing its publications, and the need for such an index was frequently mentioned by the librarians taking part in studies of users.

This new edition will be *Social Trends* No. 9, 1979 edition, since 1979 will be the year in which it will be in use. Past editions have been labelled with the year ending soon after publication – but this has caused misunderstandings, particularly by booksellers.

Reference

Social Trends No. 9, 1979 Edition (HMSO) (forthcoming)

Reviews of UK Statistical Sources

This series is the successor to that on the *Sources and Nature of the Statistics of the United Kingdom* which was edited by Sir Maurice Kendall. It is sponsored jointly by the Royal Statistical Society and the Social Science Research Council. Eventually it is intended to cover all sources in the economic and social field as comprehensively as possible.

Three new volumes have already appeared in 1978, after a gap of two years since Volume V appeared in 1976.

Details of the first eleven volumes are as follows:

(Originally published by Heinemann Educational Books and now distributed by Pergamon Press).

- Vol. I *Personal Social Services*, by B. P. Davies.
Voluntary Organisations in the Personal Social Service Field, by G. J. Murray.
- Vol. II *Central Government Routine Health Statistics*, by M. R. Alderson.
Social Security Statistics, by F. Whitehead.
- Vol. III *Housing in Great Britain*, by S. Farthing.
Housing in Northern Ireland, by M. Fleming.

Vol. IV *Leisure*, by F. M. M. Lewes and S. R. Parker.
Tourism, by L. J. Lickorish.

Vol. V *General Sources*, by G. Lock.

(Published by Pergamon Press in 1978).

Vol. VI *Wealth*, by A. B. Atkinson and A. J. Harrison.
Incomes, by T. Stark.

Vol. VII *Road Passenger Transport*, by the late D. L. Munby.

Road Goods Transport, by A. H. Watson.

Vol. VIII *Land Use*, by J. T. Coppock.

Town and Country Planning, by L. F. Gebbett.

(Announced by Pergamon Press for publication (late 1978 or early 1979)).

Vol. IX *Health Statistics from Surveys and ad hoc Studies*, by M. R. Alderson and R. Dowie.

Vol. X *Ports and Inland Waterways*, by R. E. Baxter.
Civil Aviation, by C. Phillips.

Vol. XI *Coal*, by D. J. Harris

Gas, by H. Nabb.

Electricity, by D. Nuttall.

The editor of the series would be very grateful to receive comments and suggestions. Please write to:

Professor W. F. Maunder,
Department of Economics,
University of Exeter,
Amory Building,
Rennes Drive,
Exeter EX4 4RJ,
Devon.

Scottish Housing Statistics

The second issue of *Scottish Housing Statistics*, which will be released to the press by HMSO in November, includes, in addition to the regular tables on house-building, improvement and finance, an article on Population and Housing. One section of this article deals with housing for the elderly and the disabled. This gives results from a Scottish Development Department survey of the housing provision for these groups, and includes details of the sheltered housing, amenity housing and housing for the disabled available in Scotland overall and in individual housing authorities.

Reference

Scottish Housing Statistics (HMSO) (forthcoming)

Prison statistics

This year the detailed statistics on prison receptions and numbers in custody, published on 27 July 1978, appeared under the title '*Prison Statistics, England and Wales 1977*' instead of 'Report on the work of the Prison Department: Statistical Tables'.

Prison statistics contains tables and commentary

summarising receptions and the average population in custody over the last ten years and giving greater detail for the latest year. Classifications include the age and sex of the offenders, the nature of their offence, their length of sentence, and the types of institution in which they were held. Information is also given on offences committed in prison and on the reconvictions of people discharged from prisons.

The 1977 statistics show little change from 1976 in the average daily population of male prisoners whereas the average population of female prisoners increased by six per cent; overcrowding continued to be a problem in both male and female establishments. Non-criminal prisoners generally account for less than two per cent of the prison population but the number of receptions has increased markedly since 1974. Results of a special study of reconvictions within two years of release (Chapter 8) show lower reconviction rates for those released on parole than for those who had not been granted parole.

Reference

Prison statistics, England and Wales 1977 (Cmnd. 7286) (HMSO) (Price £2.50 net)

Drunkenness

Offences of Drunkenness 1977, England and Wales, published on 22 August 1978, gives statistics on cautions and findings of guilt for offences of drunkenness, and admissions to detoxification centres as an alternative to prosecution. As in previous years, the return shows the pattern of findings of guilt for offences of drunkenness by the age and sex of the offender, and the police force area in which the offence occurred. As in 1976, other offences dealt with at the same court appearance are discussed, and also the sentences imposed by the courts for drunkenness offences.

For the convenience of readers, the report includes for the first time an appendix summarising offences of driving, etc., after consuming alcohol or taking drugs, which are not classified as offences of drunkenness.

Reference

Offences of Drunkenness 1977, England and Wales, (Cmnd. 7317) (HMSO) (Price 70p. net)

A recent Social Survey report

A survey was carried out in September/October 1976 for the Department of the Environment by the Social Survey Division of OPCS. The purpose of the study was to obtain information about the attitudes of owners, renters and private landlords to the current housing situation and the current housing legislation.

The survey was based on a sample of addresses selected randomly from those wards in England and

Wales in which the majority of private accommodation was rented rather than owner occupied at the time of the 1971 Census. Households living at the selected addresses were interviewed and where the accommodation was rented the landlord was also interviewed.

The views of the landlords of the lettings selected were of particular interest and the report shows that in densely rented areas of England and Wales attitudes to both the present and future housing situation varied considerably according to the type of landlord concerned, the three main types being resident individuals, charities and housing associations and non-resident individuals, companies, non-charitable trusts and executors.

Resident landlords viewed their lettings first and foremost as part of their own home. The lettings of charities and housing associations were viewed mostly as being provided for some special purpose such as the provision of homes for the needy, whereas the lettings of the third group were mostly viewed primarily as a financial investment.

The survey results show how, with these different interests, the landlords' attitudes varied with respect to rent levels, rent registration procedures, other aspects of rent legislation and their future intentions with regard to the property if some of it or all of it became vacant.

Reference

Attitudes to Letting (HMSO) (Price £4.75 net)

HEALTH AND SOCIAL SERVICES

Planning in Social Services Departments

In June 1977 a new system of planning returns for English social services departments was initiated by the Department of Health and Social Security. Local social services authorities were invited to provide, by 1 October 1977, information indicating their intentions with regard to provision of their personal social services and related revenue and capital expenditure.

The subsequent publication, '*Local Authority Personal Social Services Summary of Planning Returns 1976-77 to 1979-80*', shows planned development in services for the main client groups – the elderly, younger physically handicapped, mentally ill, mentally handicapped and children. It covers four financial years; the first being a statement of actual outturn for 1976-77, the second an estimate of (the then) expected provision and expenditure for 1977-78, and the final two being forecasts for 1978-79 and 1979-80.

The Report is in two parts. Part I aggregates the

returns to provide national (English) analyses and a national summary of the narratives provided by the authorities. The tables and the summary of the narratives given in Part I should enable authorities to compare their own intentions with the national aggregate. Part II of the Report aggregates the returns by clusters of authorities, grouped by social, economic and demographic indicators, in accordance with a modification of 'A Classification of the English Personal Social Services Authorities'. The tables and narrative summaries should enable each authority to compare its own intentions with the aggregate of intentions of those authorities with similar needs. Also charts show the degree of variation in local authority expenditure per capita.

The report suggests that, in aggregate, the expected balance of resources between client groups will be generally in line with the national projections in the DHSS Planning Guidelines. Within client groups however there were differences in emphasis. Authorities generally placed less emphasis on the development of residential care for all client groups than the Guidelines, but a significantly greater emphasis on day care for the elderly and on intermediate treatment for children. In addition, the narratives suggested an increasing use of supportive or sheltered housing for the elderly, the mentally handicapped and the mentally ill and the fostering for children. Both the home help and meals services however were seen as developing at a slower rate than proposed in the Guidelines. The number of social workers was expected to increase faster than the Guidelines and social work training, both external and in-service, was seen as expanding. The take-up joint finance (provided by the local National Health Service Area Health Authority) was expected to improve, with a substantial proportion going to the mentally handicapped. The emphasis was expected to be on revenue rather than capital schemes. A number of authorities however expressed reservations about the revenue consequences as joint finance tapered off.

Copies of the report may be obtained free of charge from:

Mr. David Matthews,
Department of Health and Social Security,
42 Weston Street,
London SE1 3QW.
Telephone: 01-407-4411 Ext. 254.

References

Local Authority Personal Social Services Summary of Planning Returns 1976-77 to 79-80, (July 1978)

DHSS Planning Guidelines for 1978/79 (Departmental Circular LAC (78)6 March 1978)

A Classification of the English Personal Social Services authorities (HMSO, 1977) (Price £2.10 net)

Cigarette smoking

The August 1978 edition of *Health Trends* contains an article, 'Trends in cigarette smoking in the United Kingdom'. Its purpose is to assess the extent to which policies being pursued to reduce health problems associated with cigarette smoking are meeting with success.

Various sources of statistics on cigarette smoking are brought together to present a comprehensive picture of both long and short-term trends. The trends presented are, (i) the prevalence of smoking i.e. the proportion of the population who smoke cigarettes; (ii) the consumption of cigarettes per smoker; (iii) the total annual consumption of tobacco in cigarette form; and (iv) the proportion of cigarettes in each tar group.

The article shows that over the last 30 years the proportion of adult male cigarette smokers has declined considerably, particularly in Social Class I, while the proportion of female cigarette smokers has shown relatively little change. In recent years the downward trend for men has been particularly clear and there is some evidence of a fall for women also. However, the consumption of cigarettes per smoker has increased substantially over the last quarter of a century, and particularly for women (from about 50 to 120 cigarettes per week). In terms of the health effects it is encouraging that the average tar yield per cigarette has fallen substantially and in the last ten years the proportion of sales of cigarettes in the two lowest tar groups has increased from 5 to 21 per cent.

Enquiries concerning the article described should be addressed to:

P. J. Capell,
Department of Health and Social Security,
SR2B,
Room 407,
14 Russell Square,
London WC1 5EP.

Reference

Health Trends is a quarterly review for the medical profession issued by the Department of Health and Social Security and the Welsh Office.

Misuse of drugs

1977 Statistics of the misuse of drugs in the United Kingdom, issued by the Home Office in a Press Notice on 14 September 1978, contains statistics of drug offenders covering the years 1973-77, and of drug addicts notified to the Home Office during the years 1970-77.

For each year covered, persons found guilty of offences involving controlled drugs are shown by type of offence, by type of drug and by age. For the year 1977 a cross-classification is given by type of offence and type of drug.

For the years 1970-77, the number of narcotic drug addicts known to the Home Office to be receiving drugs as part of treatment is shown as at 31 December of each year, together with numbers of new addicts and renotified addicts known in earlier years, also persons no longer recorded as addicts, with their reason for removal. The addicts known to the Home Office at the end of each year are shown by age and sex, and by type of drugs prescribed in treatment.

Copies of the Press Notice are available on application to:

Statistical Division 1,
Room 1706,
Home Office,
Tolworth Tower,
Surbiton,
Surrey, KT6 7DS.
(01-399 5191, ext. 468).

MANPOWER AND EARNINGS

Incomes policies and differentials

This article examines the popular belief that recent incomes policies in the United Kingdom have led to a compression of differentials. The evidence presented indicates that differentials have indeed been squeezed during the 1970s but shows that this has not been associated with periods of incomes policy. This is surprising since many of the recent incomes policies have included a flat-rate element which has been deliberately designed to be redistributive. This implies that some evasion of pay units has taken place but it is suggested that this can only be properly examined by looking at evidence of company pay structures. *National Institute Economic Review*, August 1978, Vol. 3/78, (No. 85), pp. 40-48 (English).

Reference

'Incomes policies and differentials' by A. J. H. Dean, *National Institute Economic Review*, August 1978

Reform of wage bargaining system

If there were a return to free collective bargaining, it is most unlikely that the rate of inflation would be brought down further (unless unemployment were pushed up a great deal). The need is for a permanent reform of the wage bargaining system - one which makes more transparent the macro-economic consequences of the sum total of individual wage bargains. The general move in Western Europe is towards some form of social contract, or 'concerted action'. In Britain this could be accompanied by some move towards synchronisation of wage awards (particularly in the public sector) and re-creation of a single body

(rather than the multiplicity of different committees or commissions) to consider the cases which demand special treatment. *National Institute Economic Review*, August 1978, Vol. 3/78, (No. 85), pp. 49–54 (English).

Reference

'The reform of the wage bargaining system' by F. T. Blackaby, *National Institute Economic Review*, August 1978

Incomes policy and wage inflation

This article investigates econometrically the effects of incomes policy, using a behavioural explanation of wage bargaining in which wages adjust to achieve a target rate of growth of real earnings. Over the period 1961–75 there is considerable empirical support for this theory. Some incomes policies have reduced real wage increases during their period of operation, but afterwards real wages have increased faster than they would otherwise have done. These increases closely match the losses incurred during the policy period. Since 1975 there is some tentative evidence that the target growth rate of real net earnings and the speed of adjustment to this target may have changed. *National Institute Economic Review*, August 1978, Vol. 3/78, (No. 85), pp. 31–9 (English).

Reference

'Incomes policy and wage inflation: empirical evidence for the UK 1961–77', by S. G. B. Henry and P. A. Omerod *National Institute Economic Review*, August 1978. Obtainable from: NIESR, 2 Dean Trench Street, SW1P 3HE (Price £3.00 net)

Top salaries

The Second Report on Top Salaries by the Review Body on Top Salaries under the chairmanship of Lord Boyle of Handsworth, was published in June 1978. The groups covered were Chairman and members of the Boards of nationalised industries, the higher judiciary, senior civil servants and senior officers of the armed forces. Their remuneration was last reviewed in 1974.

The Office of Manpower Economics, who provide the Secretariat to the Review Body, carried out two statistical surveys for the purpose of the review and their results are given in appendices to the Report. One was a survey of the salaries and other remuneration of top management in the private and nationalised sectors in September 1974 and September 1977. The survey covered 3,368 posts in 258 organisations in the two sectors in 1977, and for 2,887 of the posts 1974 data was available. Remuneration is analysed by sector and, in most tables, by the net assets of the organisation, usually distinguishing also between Chairman, Deputy Chairman, other main Board members and senior executives. The provisions of superannuation and life assurance arrangements and of fringe benefits in 1977

are analysed in detail for Board members and for senior executives in each sector. Data on increases in pensions over the period 1974–76 are also given. Estimates are provided of the value of these superannuation provisions and fringe benefits as a percentage of salary.

The other survey covered nationalised industries and was designed to determine the degree of overlap within each organisation between the salaries of the top senior executives and those of Board members (excluding Chairmen) in July 1974 and July 1977.

The Report also includes an assessment by the Government Actuary of superannuation benefits in the public and private sectors and a summary of the results of a survey of the earning of barristers, conducted on behalf of the Senate of the Inns of Court and the Bar and designed primarily to provide evidence to the Royal Commission on Legal Services.

Reference

Review Body on Top Salaries, Report No. 10: Second Report on Top Salaries (Cmnd. 7253) June 1978 (HMSO) (Price £3.00 net)

Indices of wage rates

An April 1978 agreement between the Engineering Employers' Federation and the Confederation of Shipbuilding and Engineering Unions, which provides for new levels of national minimum rates of wages for manual workers in the engineering industry, has had a substantial impact on the general and the metals industry group indices of basic wage rates published by the Department of Employment. The rates had remained unchanged from February 1976. The effects of the revised rates were described in an article in the May 1978 issue of the Department's *Gazette*. A previous article in the May 1977 *Gazette* (*Statistical News* 38.36) had drawn attention of the effects to the long standstill in their national wage rates.

The May 1978 article also announced that, because the National Joint Council for the rubber manufacturing industry has ceased to exist, the separate indices of basic wage rates for the residual group of 'Other manufacturing industries' (Order XIX of the Standard Industrial Classification) would be discontinued after June 1978. This has affected the method of compilation of the indices for all manufacturing industries and for all industries and services.

Reference

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

New Earnings Survey 1978

As with previous surveys, the results of the *New Earnings Survey 1978* (*Statistical News* 41.35) will be published in a six-part booklet. The main contents

of the six parts and their probable publication dates will be:

- Part A General results; streamlined analyses of key results by collective agreement, industry, occupation, age and region; descriptions of the survey methods, classifications, terminology, etc. (mid-November 1978).
- Part B Earnings and hours of particular wage-negotiation groups (mid-October 1978).
- Part C Earnings and hours in particular industries (mid-December 1978).
- Part D Earnings and hours in particular occupations (mid-January 1979).
- Part E Earnings and hours in regions, counties and age-groups (mid-February 1979).
- Part F Hours; type of collective agreement; and earnings and hours of part-time women workers (mid-March 1979).

The main general results and streamlined analyses of key results for particular collective agreements, industries, occupations, age-groups and regions were also published in the October 1978 issue of the *Department of Employment Gazette*. These give a wide range of results in a very compact and convenient form, especially for those who may not require the more detailed analyses.

References

New Earnings Survey 1978, a publication in six parts (HMSO) (forthcoming)

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

Duration of unemployment

Duration of unemployment rises and falls with the level of unemployment, but tends to lag behind the unemployment curve as it changes direction. Both the level of unemployment and median duration of the current spell of unemployment were falling in the last six months of 1973. Since then the level of unemployment has increased; the median duration continued to decline until early 1975, but then the trend turned upwards.

An article in the September 1978 issue of the *Department of Employment Gazette* discusses the data on unemployment durations in Great Britain and presents time-series of basic figures, medians and quantiles and seasonally-adjusted values for the period 1962 to 1978. Analyses by region and by age are also given.

Reference

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

Youth unemployment

An article on 'The Young and Out of Work' is contained in the August issue of the *Department of Employment Gazette*. The article reviews a number of reasons that can be advanced to explain changes in youth unemployment and presents the results of a regression analysis of trends in youth unemployment since 1959.

Changes in the registration behaviour of young people have affected trends and in particular it is apparent that changes in school leaving regulations have increased the number of school leavers registering as unemployed independently of other influences. The analysis shows that changes in youth unemployment are related very closely to changes in overall unemployment but have a much wider range of variation. If the unemployment rate for all males rises by one percentage point then the unemployment rate for males under 20 (excluding school leavers) rises by about 1.7 percentage points.

Reference

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

Manpower planning

Recent issues of the *Department of Employment Gazette* have included further articles on manpower planning and related subjects (*Statistical News* 42.26 etc.): in the March 1978 issue on measures to alleviate unemployment in the medium term (early retirement), and on a future for company manpower planning: in the April issue on measures to alleviate unemployment in the medium term (work-sharing): in the May issue on Britain's industrial performance since the war and on employment of the highly qualified 1971-76, and in the June 1978 issue on young people leaving school, and on age qualifications for entry to occupations. Recent United States' legislation on employment, age, and civil rights was reviewed in the July 1978 issue.

Reference

Department of Employment Gazette, March, April, May, June and July 1978 (HMSO) (Price £1.25 net each)

Occupational pension schemes

The fifth survey by the Government Actuary of occupational pensions schemes in the United Kingdom at the end of 1975 was released to the press on 22 September 1978. The survey was carried out by an enquiry addressed to a sample of employers. In the public sector, which contains a relatively small number of employers with separate schemes, all the larger employers (and many of the smaller ones) were approached and responded. A list of employers in the private sector was selected by the Department of Health and Social Security taking a sample of 1 in 4,000 of

employees' national insurance records for the year ending in April 1974, from which the addresses of their employers could be obtained. Firms were thus selected for enquiry with a probability related to the size of their work forces, thus gaining relatively full representation of the large and medium-sized companies while keeping down the total size of the sample. Employers were sent a questionnaire covering the whole of their work force and all their pension schemes, i.e. it was the employer and not the individual employee originally sampled who was treated as the unit of survey.

Besides weighting the replies to take account of the sampling procedure it was also necessary to further weight the replies of those employers who did respond to take account of the assumed characteristics of those who did not. Since response rates varied by size of workforce, estimates of the workforce of non-responding employers were used based on the number of their employees who had been selected, and the number of records they had in file from which the sample was taken (which was effectively the number of tax and national insurance contribution deduction certificates), and for larger organisations, the published number of employees. In addition, a follow-up sample of ten per cent of the non-responders was taken in an attempt to determine whether they had a pension scheme: this showed that a much larger proportion of the original non-responders who only replied after a follow-up request had a scheme, than was indicated by the responders.

The survey includes detailed tables of the different levels and types of benefit paid to the 3.4 million former employees or their dependents and those promised to the 11.5 million current numbers of occupational pension schemes on their retirement or death. An estimate of the items of income and outgo of pension schemes in 1975 is also given, together with tables of the extent of member participation in the management of pension schemes and of benefit preservation on change of employment.

Reference

Occupational Pension Schemes 1975: Fifth Survey by the Government Actuary (HMSO) (Price £2.75 net)

AGRICULTURE AND FOOD

Agricultural censuses and surveys

The June 1978 agricultural census

The provisional results of this Census in England and Wales were published in a Press Notice No. 279 on

21 August 1978. Compared with June 1977 the results showed an unexpectedly large increase in the total area under cereals. Wheat showed a substantial rise with decreases in barley, oats and mixed corn. There were decreases in the areas of potatoes, fodder crops planted by 1 June and maize cut green, but a rise in beans for stockfeeding. The dairy herd was almost unchanged, but the beef herd was down; the number of calves under one year was also down. There were increases in the size of the pig breeding herd and in the number of breeding ewes (including shearlings).

The provisional results for the United Kingdom were published in Statistical Information Notice Stats 272/78 on 27 September 1978.

All the statistical material mentioned above may be obtained from:

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

Food consumption

The latest tables of 'Estimates of Food Supplies Moving into Consumption in the United Kingdom' (CLE), published in the MAFF 'Food Facts' series (No. 7, 20 September 1978), compare the trends in food consumption over the four years 1974-77, and confirm that there were only marginal changes in eating patterns and energy content of the nation's diet over the period. The main differences were in consumption of beverages and alcoholic drinks, which were considerably affected by the hot summer of 1976 and by the high prices of coffee in 1977.

The figures are all national averages of what major foodstuffs are available for consumption in the United Kingdom (there are deductions for exports, non-food uses and waste). Measurement is normally at the first stage of processing and represents disappearance into distribution rather than final consumption, the results being expressed as quantities per head per annum. There are also tables showing nutrient equivalents, and a breakdown of the total energy supply derived from each major food group.

Copies of the issue of 'Food Facts' containing the tables and a commentary may be obtained from:

Statistics Division IIA,
Ministry of Agriculture, Fisheries and Food,
Room 418, Whitehall Place, West Block,
London SW1A 2HH.
Telephone: 01-839 7711, Ext. 479.

Provisional results of the June 1978 Scottish Agricultural Census

Provisional results of the Scottish Agricultural Census held on 1 June 1978 were published as a Scottish Office Press Notice on 13 July 1978 (Press Notice No. 722/78).

The total number of cattle has fallen by 83,000 (3 per cent). A decline of 10,000 (2 per cent) in the number of beef cows is coupled with a fall of 4,000 (7 per cent) in the number of beef heifers in calf. Beef cattle over 2 years old and 1-2 years old respectively have fallen by 5,000 (4 per cent) and 19,000 (3 per cent). Likewise the number of cattle of both beef and dairy types under 1 year old has fallen by 41,000 (5 per cent). Dairy cows remained unchanged, but there has been an increase of 3,000 (4 per cent) in the number of heifers in calf. Other dairy cattle have also increased, by 2,000 (2 per cent). The sheep flock has increased by 84,000 (1 per cent), a 131,000 (4 per cent) increase in the lamb crop being offset by a 52,000 (2 per cent) reduction in ewe numbers. Total pig numbers have fallen by 29,000 (5 per cent) since last June. However, although the breeding herd is somewhat lower, by 1,400 (2 per cent), than last June, it is at a higher level than in August, December or April.

The tillage area has shown no change at 604,000 hectares. There has been a rise of 14,500 hectares (4 per cent) in the barley area, but wheat and oats have continued to contract with falls of 1,000 hectares (5 per cent) and 5,000 hectares (9 per cent) respectively. A decrease of 3,500 hectares (21 per cent) in the ware potato area offset a marginal (1 per cent) increase in the area grown primarily for seed. The turnip and swede area has fallen by 3,500 hectares (7 per cent), and that of other fodder crops by 1,500 hectares (8 per cent). A fall of 6 per cent in the vegetable area brings the total to just under 8,000 hectares but, the soft fruit area has risen by 6 per cent.

The regular labour force has fallen by 1,200 (3 per cent). The reduction is most marked in the female categories, but is shared by all groups except for full-time youths.

Experiments on living animals

Experiments on living animals statistics 1977, is a new Command Paper which presents these statistics in much greater detail than before, following the introduction of a new form of return for 1977. Details are provided of the principal species of animal used, the main purpose of the experiments, the techniques used, and the special legislative or other reason for carrying out the experiments.

Over half of the experiments recorded in 1977 were

performed to select, develop or study the use, hazards or safety of medical, dental or veterinary products or appliances; another quarter were performed to study normal or abnormal body structure or function; a fifth of the experiments had as their legislative reason the Medicines Act 1968, the Health and Safety At Work Act 1974, the Agricultural Poisonous Substances Act 1952, the Food and Drugs Act 1955, or equivalent overseas legislation.

The new publication shows that more than half of the licensees performing experiments under the Cruelty to Animals Act 1876 were at universities, but more than half of the total number of experiments performed under the Act were carried out by licensees employed by commercial concerns.

The historical section shows that the number of experiments commenced each year, after rising continuously from 1946-69, subsequently levelled off at around five and a half million. The number of licensees performing experiments was little changed over the three years 1975-77.

Reference

Experiments on living animals statistics 1977 (Cmnd. 7333) (HMSO) (Price £1.25 net)

INDUSTRIAL STATISTICS

Concentration ratios

Statistics of Product Concentration for United Kingdom Manufacturers has been published in a new Business Monitor PQ 1006. The industrial inquiries carried out by the Business Statistics Office which give a wide range of published summary information of direct use to Government Departments and industry, also provide a wealth of data which can be used for more specialist types of economic analysis. Data collected on the sales of some 4,000 commodities in the quarterly inquiries into manufacturers' sales have recently been used to calculate what are known as concentration ratios. These provide a measure of the degree to which the manufacture of a product is spread across different United Kingdom manufacturers.

Such ratios for some 350 or so groups of products have been published previously as part of the results of the old styled detailed censuses of production, the last of which was for 1968. The BSO has calculated equivalent figures for 1975 which have been published recently in a Business Monitor PQ 1006 together with comparable figures for 1963 and 1968.

Of most general interest is the fact that the overall level of concentration shows a slight tendency to rise through time. This general tendency, however, disguises some quite large rises and falls in concentration for

individual groups. For example between 1968 and 1975 there was a slight decline in concentration in products in the petroleum products industries and an overall increase in concentration in the clothing and textiles industries.

It is planned to publish a further business monitor by mid-1979 showing more up-to-date and more detailed figures. This monitor will contain ratios for some 800 product groups for the years 1975, 1976 and 1977.

Further details can be obtained from:

Mr. O. Black,
Business Statistics Office,
Cardiff Road,
Newport,
Gwent NPT 1XG.
Telephone: Newport 56111 (STD Code 0633)
Ext. 2561.

Reference

Statistics of product concentration for United Kingdom manufacturers. (HMSO) (Price £1.40 net)

Business Monitors – Annual Census of Production 1973 – Summary and Enterprise Tables

Business Monitor PA 1002, the final part of the Report on the Census of Production 1973, has recently become available. As in the 1972 Monitor (PA 1002) there are a number of tables summarising results previously published in the separate industry monitors (PA 101 – PA 603) together with a number of tables analysing census data by enterprise. These tables include, for each industry, as did those for 1972, concentration ratios for the five largest enterprises by employment size. Besides analyses of enterprises by size of employment and net output there are tables summarising data for the 100 largest enterprises in manufacturing industries (Orders III–XIX of the Standard Industrial Classification (revised 1968)) by size of employment, net output and total sales and work done. Additional tables are included on output and costs of foreign enterprises by nationality and order; and employment, net capital expenditure and net output by region and assisted areas.

Reference

Report on the Census of Production 1973 (HMSO) (Price £5.75 net)

Business Monitors – Annual Censuses of Production 1974 and 1975

As the Business Monitors reporting the results of the 1974 and 1975 Censuses of Production become available they will be brought to the attention of the readers of

Statistical News. A list of the first of these Monitors to be published is given below:

<i>Business Monitor Number</i>	<i>Description</i>	<i>Standard Industrial Classification Minimum List Heading</i>
PA 1001	Introductory notes	
PA 219	Animal and poultry foods	219
PA 322	Copper, brass and other copper alloys	322
PA 323	Miscellaneous base metals	323
PA 339.1	Mining machinery	339/1
PA 342	Ordnance and small arms	342
PA 362	Insulated wires and cables	362
PA 366	Electronic computers	366
PA 380	Wheeled factor manufacturing	380
PA 382	Motor cycle, tricycle and pedal cycle manufacturing	382
PA 390	Engineers' small tools and gauges	390
PA 393	Bolts, nuts, screws, rivets, etc.	393
PA 394	Wire and wire manufactures	394
PA 395	Cans and metal boxes	395
PA 399.5	Drop forgings, etc.	399/5
PA 429.1	Asbestos	429/1
PA 431	Leather (tanning and dressing) and fellmongery	431
PA 442	Men's and boys' tailored outerwear	442
PA 449.2	Gloves	449/2
PA 473	Bedding, etc.	473
PA 481	Paper and board	481
PA 483	Manufactured stationery	483
PA 484.2	Miscellaneous manufactures of paper and board	484/2

Copies of these Business Monitors are available on standing order from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH (telephone: 01 928 6977), or through any Government Bookshop. They are not, however, included in the global subscription arrangements of the Business Monitor series.

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

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

1979 Purchases Inquiry

As announced in the August 1977 issue of *Statistical News* (38.37), the Business Statistics Office will be carrying out a further inquiry into industry's purchases of materials and fuel in 1979. Forms for completion will be sent early in 1980 to businesses included in the inquiry. To give advance notice of the details that will be required the BSO sent out specimen copies of the forms and an explanatory leaflet early in September this year. As the leaflet said:

"We are sending the specimen form for the inquiry well in advance – so that you will see at an early stage what information you will be asked for.

We hope that this will help you to plan the extraction of the figures from your records so that filling in the forms will be less troublesome when the time comes. If precise figures are not available, or are difficult to provide, reasonable estimates will be acceptable.

The major purpose of the figures is to compile measures of changes in prices as they affect industry as purchasers of materials and goods. We get a lot of information regularly about the prices of individual materials, components, etc., that are used for subsequent manufacture or processing. To be able to combine all this detailed information so that the impact of price changes on industry's costs can be clearly seen, it is necessary to know how important each item is as an element of total costs.

The Purchases Inquiry provides this essential information. With it the price quotations are built up into index numbers which show how these prices are changing – not only for manufacturing industry as a whole but also for groups and individual industries within it. The basis of the calculation of these index numbers must be brought up to date from time to time.

The purchases' price indices are used very extensively. They show how price changes are affecting industries' costs and thus give early indications of what is likely to happen as these work their way through to prices in the shops and our exports. The Government needs to know this, but there is also much wider interest in these figures. Industry needs a measure of its changing costs.

One example of this is in contracts containing escalation clauses: the Government can provide suitable indices for fairly narrowly defined industries for use in such contracts. Another example is the revaluation of stocks of materials and fuel for inflation accounting: the Government helps by providing indices in the publication *Price Index Numbers for Current Cost Accounting*, published by Her Majesty's Stationery Office, price £3.50.

The results of the Purchases Inquiry are also key information for the construction of 'input-output' tables. To a considerable extent the output of one industry is purchased by another for incorporation in its own products or for further processing. Input-output tables measure this interdependence between industries and tell a great deal about how the economy works. They indicate how changing economic circumstances and government measures are likely to affect particular industries – for example how an interruption in production or a sudden large price rise in one industry is going to affect the rest of the economy.

The government uses them in this way and so do many bodies and commentators, to help understand our complex economic system.

This and much more depend upon our conducting a successful purchases inquiry and for this we need your co-operation. The figures you provide will be put to many important uses. We know that it will be an extra burden on you to have to fill in this form but, without the information, not only the Government but everyone else who follows the economic situation would be a lot less reliably informed about it. We *have* to get the basic figures from businesses – no one else has them – and the sooner you can complete and return your form, the more useful will be the information.

What we have done to reduce the form-filling burden

We are making this inquiry to obtain information that the Government really needs to have. We would like to have these figures more frequently, but we know that supplying them can be particularly difficult for firms. So the inquiry is held only occasionally; the last one was taken in 1974 and the one before that in 1968. We have tried hard to keep the form-filling burden to a minimum.

We wrote to more than 360 trade associations about plans for the 1979 inquiry and asked for their views on the questions to be asked. Then, in June 1978, Les Huckfield, the Parliamentary Under-Secretary of State for Industry, invited representatives of the CBI and of some 60 trade associations, including the main critics, to a meeting to hear their views about the inquiry at first hand and to discuss proposals aimed at minimising its burden.

Mr. Huckfield explained that, although there was considerable variation from industry to industry in the numbers of questions included in the inquiry forms, the average number had been reduced from about 70 in the 1968 inquiry to some 40 in the 1974 inquiry, and would be less than 40 for 1979. Also, since many businesses found particular difficulty in providing purchases information in quantity terms, in many industries the number of questions asking for quantity as well as value information would be much reduced.

At the conclusion of the meeting Mr. Huckfield announced revised arrangements for exempting as many small firms as possible from the inquiry. Under these arrangements, no establishment with fewer than 35 employees will be asked to complete a form and, in the great majority of industries, establishments with fewer than 50 or 100 employees will be exempt. Only some 18,000 establishments will

be asked to participate in the inquiry, as compared with 23,000 in 1974 and 35,000 in 1968."

If you require any further information about the Purchases Inquiry 1979 please telephone, or write to:

The Business Statistics Office,
Cardiff Road,
Newport,
Gwent NPT 1XG.

Telephone: Newport (0633) 56111, extension 2392.

Historical record of the Census of Production 1907 to 1970

The reports of the censuses of production, which the Board of Trade and successor departments have conducted since 1907, together form the most comprehensive set of available statistics on industrial production in the United Kingdom. Data from the first census in 1907 up to the first of the new system of annual censuses for 1970 have been collated into one volume by the Business Statistics Office to form a unique reference work for all those interested in the growth of United Kingdom manufacturing industry since the start of the century.

The aim of the historical record is to classify firms mainly engaged in the same activities as consistently as possible to the same industries throughout the years. The method adopted has been to reclassify industries or parts of industries *en bloc* and bring them into line with the 1968 revision of the Standard Industrial Classification.

The data are published in 11 main tables:

Table 1 Analysis by census industry, 1907 to 1970

Table 2 Standard Industrial Classification Orders in percentage terms of all manufacturing industries, 1907 to 1970

Table 3 Analysis by industry: Import Duty Inquiries, 1933, 1934 and 1937

Table 4 Capital expenditure and stocks and work in progress by census industry, 1948 to 1970

Table 5 Capital expenditure and stocks and work in progress by industry group, 1959 to 1970

Table 6 Analysis of employment, wages and salaries, within industry, 1907 to 1970

Table 7 Analysis by employment size of establishment within industry, 1930 to 1970

Table 8 Country analysis of employment and net output, within industry, 1907 to 1970

Table 9 Sales of selected products by larger establishments, including sales by establishments classified to other industries, 1907 to 1968

Table 10 Analysis by total employment size of enterprise, 1958 to 1970

Table 11 Analysis by net output size of enterprise, 1958 to 1970

Further information about the Historical Record can be obtained from:

The Librarian,
Business Statistics Office,
Newport,
Gwent NPT 1XG.

Telephone: Newport (0633) 56111 ext. 2399.

Reference

Historical Record of the Census of Production 1907 to 1970 (HMSO)
(Price £10.00 net)

Commercial and industrial floorspace

The Department of the Environment will shortly be publishing the sixth issue of its series of commercial and industrial floorspace statistics giving the estimated stock at 1 April 1977 and the changes in floorspace since 1974. The publication updates the results the 1974 Floorspace Census carried out by the Inland Revenue which was reported in '*Statistics for Town and Country Planning Series II Floorspace No. 4*'. For the latest publication a change of title has been introduced in order to reflect the wider use of these statistics.

'*Commercial and Industrial Floorspace Statistics 1974-77*' gives the estimated floorspace stock in seven non-domestic use categories (Industry, Warehouses (covered), Warehouses (open land storage), Shops with living accommodation, Shops and restaurants and Commercial offices) for regions, counties and local authority areas. Apart from Warehouses (open land storage) for which no size grouping is available each of the use categories is analysed by three or four size groups in the regional tables. The publication shows for the same six use categories net and gross changes in floorspace area during 1974 and 1977. Increases in floorspace are shown separately for extensions, new and changes of use, while decreases distinguish between demolition and other reductions. Finally, the booklet includes detailed notes about these statistics and a short commentary on the figures.

Provisional 1978 data will appear in the Central Statistical Office's publication '*Regional Statistics No. 14*'.

Further details about the availability of floorspace figures can be obtained from:

P2/038,
Department of the Environment,
2 Marsham Street,
London SW1.
Telephone: 01-212-8473.

Reference

Commercial and industrial floorspace statistics, 1974-77 (HMSO) (forthcoming)

ENERGY

Energy forecasting methodology

This paper, published on 12 July 1978, is an addition to the Energy Paper Series and gives a detailed account of the methodology used to derive the Department of Energy's projections for the period up to and beyond the year 2,000. As such, it also shows the basis on which the Reference Case projection in the *Green Paper on Energy Policy*, and the charts in *Energy Commission Paper No. 5 on Energy Forecasts*, were constructed.

The main text of the paper is divided into four sections. The first is a general introduction, and discusses the coverage and time scales of the forecast and the units of measurement used. It also outlines the main assumptions that have to be made to derive the forecasts. The second section discusses the selection of different energy supply and demand futures and the problems associated with presenting the results of these projections.

The third section reviews the models and systems used to produce the forecasts, and in particular those relating to energy demand, conservation adjustments, allocation of fuels in end use markets, gas supply, coal-electricity supply, transport requirements and data processing. More detailed descriptions of each of these, along with the energy data used to estimate the sectoral energy demand equations, are provided in technical annexes at the end of the paper.

The final section of the paper considers possible future developments in the forecasting methodology.

Reference

Energy forecasting methodology (Energy paper number 29) (HMSO) (Price £3.25 net)

TRANSPORT

Benchmark traffic census

A new benchmark has been established for the Department of Transport's quarterly and annual series of road vehicle mileages in Great Britain. This is based on a large scale traffic census carried out in 1973 and 1974 and establishes revised absolute levels of traffic with repercussions on other years, although published figures on year to year percentage changes are not significantly affected.

An unpublished report is available describing the methodology of the census and includes a number of tables such as the mean traffic flow on different road classes and by different classes of vehicle, and vehicle mileages travelled in economic planning regions, Scotland and Wales. Copies of the report or further information concerning it can be obtained from:

Statistics Transport and General Division,
Room 1/83,
Department of Transport,
St. Christopher House,
Southwark Street,
London SE1
Telephone: 01-928-7999 Ext. 2189.

Offences relating to motor vehicles 1977

This Home Office publication gives details of written warnings and fixed penalty notices issued and of prosecutions, findings of guilt, sentences and licence disqualifications and endorsements for a wide range of motoring offences in England and Wales.

Also included are the results of roadside breath tests and of subsequent tests of blood or urine. In those cases where a prosecution for driving with alcohol above the prescribed limit led to a finding of guilt, the sentence imposed and the age of the offender are shown.

The 1977 report includes for the first time a commentary on the statistics over the past ten years.

Reference

Offences Relating to Motor Vehicles 1977 (Cmnd. 7349) (HMSO) (Price £1.75 net)

PRICES

Rebased wholesale price indices

An article in *Trade and Industry* of 22 September introduced the rebased wholesale price indices. They are weighted according to the 1974 patterns of sales and purchases because the latest source of detailed information on purchases is the 1974 purchases inquiry. The reference year is 1975 in accordance with national accounts practice and international recommendations.

One of the main results of rebasing has been to reduce the estimate of the rate of inflation at the manufacturer's stage over the twelve months to August 1978. The output index for all manufactured products increased by $8\frac{1}{4}$ per cent on the superseded series and by $7\frac{1}{2}$ per cent on the new series.

Some of the published indices are used by industry for contract price adjustment. Multiplication factors are provided to enable such users to continue the old series on the basis of the percentage monthly changes in the new series.

The article also mentions two developments which are not directly to do with rebasing. First, the indices have been restructured to align them more closely with the product headings in the BSO's quarterly production inquiries and hence with other government statistics. Second, some commodity indices, as well as indices at the broader levels of aggregation, have been published

monthly while the rest were published at four-monthly intervals. As from December 1978, all of the Department of Industry's publishable indices will be published every month.

Reference

Trade and Industry, 22 September 1978 (HMSO) (Price 40p. net)

Prices and different types of household

The results of a study into the impact of rising prices on different types of households were reported in an article in the July 1978 issue of the *Department of Employment Gazette*. The study looked at a wide variety of household types; households of retired persons and of employed persons, those of different family size, those at different income levels and those with the household in different occupational groups. Separate prices indices were calculated for each type of household.

The striking feature which emerged from the results was that, over the period from 1970-76, the impact of rising prices was very much the same on all household types. Over the seven-year period, the movements in the separate household prices indices and the general index for all households did not differ by more than 3 per cent.

Reference

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

INCOME AND WEALTH

The distribution of personal wealth

An article appearing in the November issue of *Economic Trends* provides estimates of the distribution of personal wealth based on balance sheet estimates of the total extent of personal wealth and Inland Revenue estimates of the distribution of wealth identified by the Estate Duty method. It follows on the article on Inland Revenue balance sheet methodology to be published in *Studies in Official Statistics No. 35*, which was reviewed on page 42.28 of *Statistical News*, August 1978.

Adjustments for improvements in Inland Revenue methodology resulting from this programme of work – improvements of multipliers and adjustments for time-lags in assessment – could be applied directly to the Inland Revenue estimates of the distribution of wealth using internal statistics. The adjustments for quality of basic data which only affected certain ranges of wealth were applied *pro-rata* within these ranges. The revaluation of consumer durables was also applied *pro-rata* to identified holdings, whilst that of life insurance policies took into account variations in the ratio between paid up and equity value for different age groups.

The attribution of excluded wealth to ranges was

more difficult. Special Inland Revenue surveys on discretionary trusts and surviving spouse settlements gave distributions by size of trust but it was necessary to supplement these by making assumptions concerning the number of beneficiaries per trust. However, when alternative assumptions were tested it became apparent that the estimates were not excessively sensitive to the assumptions made.

For excluded joint property and excluded small estates no information was available on the distribution of capital within these categories, the only estimates available relating to their total numbers and total capital. However, excluded joint property did not greatly affect the estimates as its average value lay near that of included wealth. For excluded small estates again the results were not very sensitive to assumptions made about the distribution of capital.

The results of this work were embodied in new estimates of the distribution of wealth and of the Gini coefficient which measures inequality. The movements of this series over time were very similar to those in the Series B which had previously been calculated on the extreme assumption that the excluded population had no wealth.

References

Economic Trends, November 1978 (HMSO) (Price £1.95 net)

Studies in Official Statistics No. 35. Personal sector balance sheets and current developments in Inland Revenue estimates of personal wealth. (HMSO) (forthcoming)

Statistical News, August 1978 (HMSO) (Price 80p. net)

HOME FINANCE

National Income and Expenditure 1967-77

National Income and Expenditure 1967-77 (the Blue Book) was issued to the press for release on 19 September 1978 by HMSO.

This year the constant price estimates of expenditure on the gross domestic product have been expressed in terms of average 1975 prices instead of average 1970 prices; and the detailed industrial components of the output measure of gross domestic product have been re-weighted together according to the values of net output in 1975. The detailed re-weighting of both the expenditure and output estimates has only been carried back to the year 1973. Estimates for earlier years have been obtained by re-scaling the 1970 price estimates to 1975 prices without re-weighting.

Quarterly figures for the last ten years consistent with those in the Blue Book were published as usual in the October issue of *Economic Trends*, which also contained tables of percentages derived from the Blue Book relating to the composition of total final expenditure, total domestic income and total personal income. Also given were growth triangles (which show the annual

rate of change between any given pair of years) for gross domestic product at constant factor cost and real personal disposable income in the years 1956-77.

Reference

National Income and Expenditure 1967-77 (HMSO) (Price £4.95 net)

Financial statistics

The July 1978 issue of *Financial Statistics* contained an expanded table incorporating an analysis of assets and liabilities of Trustee savings banks provided from a new statistical enquiry. A revised presentation of the sector analysis of British government securities and Treasury Bills and a new table on Tax instruments was also shown together with revised tables on National Savings.

The August edition included, in the table on taxes received by other departments, figures of receipts in respect of seaward activities i.e. royalties and other receipts. In addition receipts of employer's surcharge on National Insurance are shown.

Figures in the September issue were revised to bring them in line with the National Income Blue Book and the Pink Book for 1978.

The October issue contains a new table on transactions in British government stocks on the Stock Exchange, currently published in the Bank of England Bulletin. A new service is also being introduced from this issue which will enable readers to obtain long runs of data for certain prescribed tables from the CSO computer system. A small charge for this service will be made. Enquiries about this service should be made to:

The Editor,
Financial Statistics,
Central Statistical Office,
Great George Street,
London SW1P 3AQ.
(Telephone: 01-233-8566).

Reference

Financial Statistics (HMSO) (Price £3.20 net)

Local Government Financial Statistics

The 1976/77 edition of *Local Government Financial Statistics in England and Wales* provides full details of 1976/77 revenue and capital accounts for each of the wide range of services provided by authorities, together with superannuation and special fund accounts. Although the main tables relate to the final outturn for 1976/77 which is not available until authorities have completed their annual accounts, additional tables show summaries of local authorities' revenue expenditure estimates in 1977/78 and 1978/79. Further supplementary tables show how local government expenditure

and finance relates to national and public expenditure and some related statistics on unemployment, rate poundages and rateable values.

Reference

Local Government Financial Statistics in England and Wales. (HMSO) (Price £2.25 net)

Rates and rateable values

Details of rate poundages, rate payments and rebates, rate income and products and rateable values for individual authorities in England and Wales, and in aggregate, are shown in *Rates and Rateable Values in England and Wales, 1976/77 to 1978/79*. This edition gives the latest available summary information for each of the three years 1976/77 to 1978/79, and rateable values for 1978 are additionally analysed by broad type of hereditament.

Available on request from:

Department of the Environment,
Room N4/16,
2 Marsham Street,
London SW1P 3EB.

Reference

Rates and Rateable Values in England and Wales 1976/77 to 1978/79

Papers submitted to Wilson Committee

The five papers submitted by the Bank in July to the Committee to Review the Functioning of Financial Institutions (the Wilson Committee) in connection with the second stage of its inquiry are reproduced in the Bank of England's September 1978 Bulletin - Regulation in the City and the Bank of England's role; Supervision of banks and other deposit-taking institutions; Supervision of the markets in money, foreign exchange, currency deposits and gold; Supervision of the securities market: non-statutory aspects; and Surveillance of the commodity markets.

Copies of the Bank's Bulletin and of the papers submitted to the Wilson Committee may be obtained, free of charge, from:

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

Bank of England notes

An article in the Bank of England's September 1978 Bulletin summarises and brings up to date information previously published on the design, printing, distribution and destruction of Bank of England notes and on the size of the note circulation. A statistical appendix explains the more technical issues connected with forecasting the demand for notes.

Balance sheets for insurance companies

An article in the Bank of England September 1978 Bulletin continues the Bank's series of integrated balance sheet and flow accounts for financial institutions.

OVERSEAS FINANCE

Balance of payments

United Kingdom Balance of Payments 1967-77 (the Pink Book)

Detailed figures for each of the last eleven years were published on 1 September in the latest Pink Book. Last year the Pink Book was substantially restructured into separate sections each largely self-contained with related notes and definitions. The arrangement of material in this year's edition is little changed but a new section has been added which examines the direct contribution of the UK Continental Shelf oil and gas programme to the balance of payments from 1973-77. A new table has also been added to section 14 which shows the general government transactions in services and transfers with the institutions of the European Communities.

There have been fairly extensive revisions to the figures previously published. To some extent this has been due to new series, such as the overseas earnings of solicitors and of management consultants, being included for the first time. But mainly the revisions have resulted from later and more complete information or from changes in methods of estimation.

Reference

United Kingdom Balance of Payments 1967-77. (HMSO) (Price £3.95 net)

The terms of trade

A research article in the Bank of England's September 1978 Bulletin prepared mainly by R. A. Allen and R. N. Brown, members of the Bank's Economic Intelligence Department, seeks to identify and analyse some of the effects of variations in the United Kingdom's terms of trade (the ratio of export prices to import prices). The article starts by showing how changes in the prices of traded goods have contributed to changes in the current balance and then looks at the construction of various measures of the terms of trade. Movements in export and import prices and in the terms of trade are analysed, and the importance of relative primary product prices examined. The relationships between changes in the terms of trade and changes in competitiveness and the exchange rate are then briefly considered. The final section sets out some conclusions.

Export credit: foreign currency financing of supplier credits

A short technical note in the Bank of England's September 1978 Bulletin describes the new arrange-

ments for foreign currency financing of supplier credits which were announced on 5 July.

Copies of the Bank's Bulletin and off-prints of the note may be obtained, free of charge, from:

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

OTHER PUBLICATIONS

Time series analysis and forecasting

Time series analysis and forecasting (TSA&F) are areas of rapid growth and increasing interest, yet the spread of new ideas remains relatively sluggish. To improve the situation, a number of projects to help circulate information have been initiated. These include the running of sequences of instructional courses and international conferences, a proposed journal and TSA&F NEWS – a newsletter, which will first appear in January 1979.

This is to start as a quarterly publication and each issue will contain at least 25 pages of typescript, covering useful news about all TSA&F activities – past, present or future. There are to be sections for correspondence, reports on meetings, notices of courses and conferences, a calendar of events, details and reviews of publications, comparative costs and effectiveness of computer packages, news about people and research, listings of jobs vacant and wanted, as well as others. All suggestions concerning possible content and any suitable contributed items will be welcome.

The first year will be free to all subscribers who make their request sufficiently early to:

O. D. Anderson,
TSA&F News,
9 Ingham Grove,
Lenton Gardens,
Nottingham NG7 2LQ.

Contributors and advertisers should send material to reach the above by 1 December, 1978.

'Courrier des Statistiques' – Information on the public statistical system

This quarterly publication is produced by the Institut National de la Statistique et des études économiques (INSEE), Paris. It is broadly the French equivalent of *Statistical News*.

The July 1978 edition has a long article describing the work of the 'Population – ménages' department of INSEE. Other articles include: Statistics at the Ministry of industry, at INED – the National Institute of Demographic Studies, at Statistics Canada, on SIROCO – an

information system on construction. Short notes on other current statistical work and a list of Insée publications, reports on national and international conferences and an article on the use of information from administrative sources, also are included.

Reference

Courrier des statistiques, Institut National de la statistique et des études économiques, Department de la co-ordination statistique et comparable, 18, Boulevard A. Pinard, 75675 Paris, Cedex 14

CONFERENCES AND MEETINGS

International Time Series meeting

An International Time Series meeting will be held at Nottingham University on 26–30 March 1979.

Twenty leading authorities have been invited to give plenary sessions, and acceptances so far have come from:

Professor K. J. Åstrom (Sweden)
Professor F. Eicker (West Germany)
Professor E. J. Hannan (Australia)
Professor T. Kailath (U.S.A.)
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GOVERNMENT STATISTICAL SERVICE

Appointments and changes

Dr. R. H. S. Phillips, Chief Statistician at the Business Statistics Office, retired on 31 August 1978.

Mr. S. L. Edwards, Statistician at the Department of the Environment, SW Regional Office, transferred to the DITPCP on promotion to Chief Statistician on 29 August 1978, to succeed *Dr. Phillips* at the Business Statistics Office.

Mr. R. G. Ward, Statistician at the Departments of Industry, Trade and Prices and Consumer Protection, was promoted to Chief Statistician on 2 October 1978 on transfer to H. M. Treasury. He took up duty in the General Expenditure Group.

Mr. V. C. Stewart, Assistant Secretary, General Register Office, was appointed by the Secretary of State to be Registrar General for Scotland in succession to *Mr. W. Baird*. *Mr. Stewart's* appointment took effect from 4 August 1978.

Mr. I. L. Arnison, Chief Information Officer (B) joined the Central Statistical Office on 18 September 1978 as Head of Publications and Press Section.

LATE ITEM

Construction industry contractors' census 1977

The annual census relating to the output and employment of private contractors in the construction industry in 1977 was released to the press in November 1978.

The report contains four historical tables showing the number of firms, with their employment and output, from 1972–77. Also included are twenty nine detailed tables relating to employment in October 1977 and output in third quarter of 1977. These tables present employment and output analysed by type of work, firms' size, trade and region of registration.

Reference

Private Contractors' Construction Census 1977 (HMSO) (Price £1.25 net)

Alphabetical Index

The index to *Statistical News* covers the last nine issues. Page numbers are prefixed by the issue number, e.g. 35.30 signifies number 35, page 30.

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

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

- accommodation, attitudes to letting of, 39.3 (A), 43.31
- age: effect on differential response in Family Expenditure Survey, 39.7 (A)
- aggregate materials, forecasts of the demand for, 42.30
- agricultural and food statistics
- Statistics for England and Wales
 - 1974, 37.36
 - 1975, 40.43
- agricultural censuses and surveys
- April sample pig enquiry, 38.37, 42.32
 - December census, 37.35, 41.41, 42.32
 - glasshouse and machinery census, 42.32
 - in Scotland, 35.40, 36.35, 37.36, 38.37, 40.43, 41.41, 42.32, 43.36
 - irrigation survey, 42.32
 - June census, 35.39, 36.35, 39.29, 40.43, 41.41, 42.32, 43.35
 - March 1977 orchard fruit survey, 42.32
 - March 1978 sample enquiry, 42.32
 - October census of vegetables and flowers, 37.35, 41.41
 - sample pig enquiry, 35.39
 - September sample livestock enquiry, 36.35
 - spring fruit census, 41.41
- The Changing Structure of Agriculture, 1968-1975*, 39.30
- agricultural labour, 35.38
- agriculture, Welsh statistics, 35.40
- aid to developing countries, 38.40
- airports in England and Wales, 36.34
- animals. experiments on living 43.36
- Annual Abstract of Statistics 1977*
- amendments to, 40.51
- Annual Digest of Port Statistics*, 40.44
- applied statistics courses for developing countries, 36.38
- armed forces pay, 42.28
- army welfare, 41.33
- balance of payments
- accounting, 42.35
 - drawing the line in the accounts, 36.7 (A)
 - exchange rate, 35.43, 37.41
 - 'green pound', 37.40
 - International Monetary Fund Manual, 42.35
 - invisibles account, 40.47
 - sea transport in, 35.27 (A)
 - United Kingdom Balance of Payments 1965-75*, 35.44
 - United Kingdom Balance of Payments 1966-76*, 39.33
 - United Kingdom Balance of Payments 1967-77*, 43.43
- balance sheets, national and sector, 35.1 (A), 40.45
- Bank of England notes, 43.42
- Bank of England Quarterly Bulletin*, 37.39, 38.40, 39.33, 40.47, 41.42, 42.36
- banking statistics, discussed at statistics users' conference, 40.2 (A)
- births, illegitimate, 39.21
- brick making industry, capacity, 36.18 (A)
- British Aid Statistics*, 36.37, 40.48
- British Gas Corporation, 1977 Report, 42.30
- British Industries: A Comparison of Performance, 38.27
- British Labour Statistics: Year Book 1974*, 35.39
- bulletins of educational statistics, 42.38
- Business Monitor series, 36.32, 37.37, 38.38, 39.29, 40.41, 41.37, 43.37
- Business Statistics Office
- use of personalised forms, 40.51
 - report for 1977, 42.37
- capital expenditure, manufacturers', by regions, 36.35
- capital expenditure, quarterly inquiry, 41.15
- catering, annual inquiry, 1977, 35.41
- Census of Distribution, 36.32
- Census of Population,
- automatic editing of, 37.10 (A)
 - census tests, 37.27, 38.34
 - life-tables, article on in *Population Trends*, 40.34

- voluntary tests, 40.34
- small area statistics, 37.29
- Census of Population 1981, 39.21
 - in Scotland, 42.23
 - White Paper, 43.27
- Census of Production
 - annual 1972, 36.32
 - 1973, 36.32, 40.41, 41.37
 - Historical record of, 43.39
 - operating ratios, 41.37
- Census in the South Seas, 38.25 (A)
- Central Statistical Office, publications of, 37.15 (A), 39.36
- Chartered Institute of Public Finance and Accountancy, 38.13 (A)
 - check trading statistics, 40.46
 - Financial, General and Rating Statistics 1978-79*, 42.34
- cigarette smoking, 43.32
- Civil Aviation Authority Statistics*, 36.33
- civil liability, Royal Commission on, 41.34
- Classification of Overseas Trade Statistics, Guide to*, 42.14 (A)
- commercial and industrial floorspace statistics, 43.39
- Committees
 - National and Local Government statistical liaison, 43.24
 - Wilson, 43.42
- Common Customs Tariff, see European Communities
- companies
 - appropriation accounts, 35.43
 - industrial and commercial, 37.1 (A), 43.15 (A)
- company
 - finance, 37.39, 40.45
 - profitability, 42.34
 - shares, ownership of, survey, 39.36
 - structure of financing, 40.45
 - rate of return on capital, 40.46
- computing, see data processing
- concentration ratios, 43.36
- construction industry
 - contractors' census 1976, 39.29, 1977, 43.44
 - demand for aggregate materials, 42.30
 - output and employment, 42.30
 - private contractors' census 1975, 37.38
 - revised statistics for, 38.42
- consumer
 - credit grantors inquiry, 42.34
- contraception, trends in, 41.44, 42.22
- Courrier des statistiques, 43.43
- credit grantors, consumer inquiry to, 42.34
- credit statistics of retail sales, 41.42
- crime, measurement of, 35.34
- 43.46
- criminal statistics
 - offences involving firearms, 36.25
 - offences relating to drunkenness, 40.36, 43.30
 - offences relating to motor vehicles, 40.36
 - regional variations in, 41.21 (A)
 - trial disposal rates, 41.20 (A)
- Criminal Statistics, England and Wales*
 - 1976, 39.25
 - 1977, 42.25
- Crown Court centres, output of, 41.20 (A)
- current cost accounting, 36.35
- cyclical indicators, 36.1(A)
- database, designing for use in compiling national accounts, 40.7(A)
- data processing
 - COMPSTAT 78 symposium, 43.1 (A)
 - CSO computer seminar, 37.42
 - International Association for Statistical Computing, 37.42, 42.36
 - package X, 37.42
- day-care, pre-school children and, 41.33
- deaths
 - Mortality Surveillance, England and Wales 1968-1976 (OPCS)*, 39.22
 - Demographic review 1977*, 42.22
- dentists' remuneration, 42.27
- developing countries and the use of social accounting matrices, 41.10 (A)
- development control, local authorities' development planning decisions, 35.37
- distribution of income
 - and wealth, 41.35
 - Royal Commission, 41.35
- distribution and other services, 39.29, 40.42
- doctors' remuneration, 42.27
- domestic credit expansion and the money supply, 37.39
- drugs, misuse of, 43.32
- drunkenness, 43.30
- Dwelling and Housing Survey, National, 42.3 (A), 42.8 (A)
- earnings
 - agricultural, 35.38
 - change in, 37.33
 - distribution of, 36.30
 - New Earnings Survey 1976*, 36.30, 1977, 37.33, 39.27, 1978, 41.35, 43.34
 - public and private sector, 40.38
 - regional, 36.30
- Economic Trends Annual Supplement 1977*, 40.51
- Economic Trends*, 43.41
- education
 - assessing teacher demand, 38.16 (A)
 - attitudes of school leavers, 35.36
 - future school population, 42.25

- publications of the Department of Education and Science, 37.43
- projected schools' population, 35.36
- scottish statistics, 38.35
- statistical bulletins, 42.38
- statistics users, conference on, 36.28
- EEC, see European Communities
- elderly, the
 - housing for, 39.5 (A)
 - staff in homes for, 39.25
 - survey of characteristics of, 41.33
- employment
 - attitudes to employment service, 42.27
 - by industry, 42.27
 - census of, 41.34
 - of the highly qualified, 42.26
 - labour costs, by industry, 42.27
 - labour force projections, 42.26
 - London weighting indices, 42.27
 - manpower planning, 42.26
 - new estimates of, by industry, 35.37
 - post-war trends by industry, 42.27
 - public and private sectors, 37.33, 40.37
 - self-employment income, 39.28
 - size of business units, 41.34
 - special schemes, 39.26
 - survey in the United Kingdom, 37.44
 - unemployment, rates by age, 39.27
- energy
 - balances, 35.10 (A), 37.35
 - elasticities, 37.35
- Energy forecasting methodology*, 43.40
- Energy Papers*, 37.35
- Energy Statistics, Digest of United Kingdom*, 39.28
- Energy Trends*, 42.29
- engineering
 - improvements to statistics, 37.36
 - sales and orders, 40.42, 41.38
- environment in which statistical offices will work in ten years time, 38.1 (A)
- environment and road traffic, 40.24 (A)
- environmental statistics, digest of, 37.38
- equal pay, 37.33
- estate duty, wealth and, 41.35
- Estimated Wealth of Individuals in the United Kingdom*, 39.28
- European Communities
 - Common Customs Tariff, 42.14 (A)
 - farm accounts network, 35.23 (A)
 - General Industrial Classification of Trade, 42.14 (A)
 - purchasing power, 38.41
 - statistical classification of, 42.14 (A)
 - statistical publications, selected bibliography, 35.45, 36.39
- the 'green pound', 37.40
- exchange rates, 36.38, 37.41
- experiments on living animals, 43.36
- export credit, 40.47, 43.43
- export prospects survey, 37.40, 38.7 (A)
- external assets and liabilities, UK inventory of, 34.43
- Facts from your figures*, new CSO booklet, 41.44
- Family Expenditure Survey*
 - and estimates of the redistribution of income, 39.8 (A)
 - and the retail price indices, 37.34
 - 1975 Report*, 35.33
 - 1976 Report*, 40.38
 - 1977 Report*, 41.32
 - comparison with the national accounts, 38.37
 - response rate, 42.25
- family planning, trends in, 41.44
- fertility
 - report for Scotland, 35.32
 - trends in, 42.22
 - world survey, 42.24
- Financial, General and Rating statistics*, 42.34
- Financial statistics (see statistics users' conference) (also see local government)
- Financial Statistics*
 - Explanatory handbook*, 39.36
 - improvements to, 41.43, 42.33, 43.42
- fire, a new report form, 40.50
- fixed assets
 - improvement to estimates, 35.42
 - stock of, 35.42
- floorspace statistics, 35.37, 43.39
- flow of funds, 36.37
- food
 - and farming (pocket card), 42.31
 - changes in UK consumption of, 42.31
 - consumption, 43.00
 - orchard fruit census 1977, 37.36
 - (see also agricultural and food statistics)
- forecasting methodology, energy, 43.40
- foreign currency contracts, 40.47
- foreign currency debt, repayment of, 40.48
- fuel
 - British Gas Corporation, 1977 Report, 42.30
 - Energy Trends*, 42.29
 - household expenditure on, 41.37
 - industries, metrication in, 42.29
 - industries, statistics of, 42.29
 - natural gas, temperature correction of, 42.29
 - United Kingdom Energy Statistics, Digest of*, 42.29
- gas, natural, temperature correction of, 42.29
- General Household Survey, 39.23, 41.32, 42.10(A), 42.25

- goods vehicles, survey of, 40.18 (A)
- government statistics, survey into use, 38.19 (A)
- government expenditure plans, 40.47
- graduates
 - National Survey of 1970 graduates, 39.27
- 'green pound', 37.40
- grid references, occasional paper on, 37.28
- Gross Domestic Product, annual indicators, 39.32
- Guide to the Classification of Overseas Trade Statistics*, 42.14 (A)
- Guide to Official Statistics*, 35.45
 - new edition of, 41.43
- Health and Safety Statistics 1975*, 39.37
- Health and Social Security, Department of,
 - statistical series from, 36.27, 37.32, 38.30
- homeless, housing for, 39.5 (A)
- homelessness statistics, 35.6 (A)
- hotels, 1977 catering inquiry, 35.41
- house condition surveys, 39.5 (A)
- household composition: effect on differential response in Family Expenditure Survey, 39.9 (A)
- household expenditure on fuels, 41.37
- household, Runcorn census, 37.41
- households. Prices and different types of, 43.41
- Housing, survey, 39.26, 42.3 (A), 42.8 (A)
- Housing and Construction Statistics*, 38.43
- Housing statistics: recent developments, 39.3 (A)
 - Scotland, 41.32
- Housing Statistics, Scottish*, 43.30
- immigration
 - from New Commonwealth, 39.21, 41.29, 42.22
 - immigrants in labour market, 37.32
- imports and exports, transport inland, 41.41
- import penetration, 39.34
- income surrogate for small areas, 37.34
- Income
 - distribution of, 1974/75, 37.34
 - 1975/76, 42.28
 - further study of, 40.38
 - self-employment income, 39.28
 - war-widows' income, survey of, 39.28
- industrial and commercial companies, The top 1,500, 43.15 (A)
- Industrial Classification of Economic Activities within the European Communities, 42.14 (A)
- industrial firms, measuring economic performance of, 41.37
- industrial production, index of, 39.31, 42.33
 - improvements to, 36.31
 - for Scotland, 38.38
- industrial stoppages in manufacturing, 36.29, 37.33
- industry, purchases by, 38.37
- infant feeding, survey of, 41.33
- infant mortality, 43.28
- Inland Revenue**
 - estimates of personal wealth, 42.28
- input-output summary tables
 - 1972, 35.42
 - 1973, 42.32
- Insurance Business Statistics*, 42.34
- insurance companies and pension funds, 40.46
- insurance companies balance sheets, 43.42
- International Association for Statistical Computing, 42.36
- international migration, 41.31
- International Monetary Fund Balance of Payments Manual, 42.35
- International passenger survey, 40.48
- investment currency market, 35.44
- investment intentions, surveys by Department of Industry, 41.15 (A)
- irrigation survey, 42.32
- labour**
 - costs, 41.34, 42.27
 - force projections, 38.36, 42.26
 - regional civilian projections, 43.27
- Labour Statistics Year Book 1974*, 35.39
- landlords, attitudes to letting, 43.31
- List of Principal Statistical Series and Publications*, amendments, 35.48
- local and regional statistics, 36.38
- local government
 - statistical liaison committee, 43.24
- local government financial statistics, 42.33, 43.42
- London weighting, new indices, 38.36, 42.27
- manpower**
 - planning, 36.29, 37.32, 38.36, 39.26, 40.36, 42.26, 43.34
 - qualified scientists and engineers, 40.37
- manufacturing industry**
 - capital expenditure by region, 36.35
 - industrial stoppages in, 36.29
 - price indices for capital expenditure of, 41.39
- market sector analysis for Scotland, 37.37
- marriage and divorce, 40.34, 41.29, 42.22
- marriage, fertility in, 41.30, 42.22
- marriage patterns of immigrant population, 41.29
- materials (aggregate) demand for, 42.30
- medium-term planning in U.K. nationalised industries, 42.36
- mental illness
 - and mental handicap statistics, 35.35, 40.35
- metrication
 - report by the Ministry of Agriculture, Fisheries and Food, 37.24 (A)

- migration
 - international, 42.22
 - within Great Britain, 39.21
- milk, economics of production, 35.40
- Mineral Statistics, United Kingdom*, 42.30
- money and banking, discussed at statistics users' conference, 40.2 (A)
- money supply, 37.39
- mortality
 - infant, 43.28
 - perinatal, 40.34
 - surveillance, 37.29, 39.22
 - trends in, 42.22
- Moser, Sir Claus, an appreciation, 42.1 (A)
- motor trade, inquiry into, 40.43
- motor vehicles
 - census of, 1975, 39.31
 - motor vehicles industry UK, a study of (teaching pack), 42.35
 - offences relating to, 43.40
- Munich centre for advanced training in applied statistics, 36.38

- National debt
 - distribution of, 40.47
 - in relation to national income, 39.33
- National and Local Government Statistical liaison committee, 43.24
- National Dwelling and Housing Survey, 39.26, 42.3 (A), 42.8(A)
- National Food Survey*,
 - differential response rates in, 35.18 (A)
 - reports for 1975, 40.39
- National Health Service, allocation of resources, 37.31
 - misuse of drugs, 43.32
- National Income and Expenditure*
 - 1965-75, 35.42
 - 1966-76, 39.31
 - 1967-77, 43.41
- national income accounts, change in presentation, 37.83
 - designing a database for use in compiling, 40.7 (A)
- National Institute Economic Review*, 36.38, 37.43, 39.37, 40.40, 40.41, 41.44, 42.36
- National Travel Survey, 1972/73*, 35.41
- nationalised industries, medium-term planning in, 42.36
- NEDO's data bank, 43.4 (A)
- New Earnings Survey*
 - 1976, 39.27
 - 1977, 41.35
 - 1978, 41.35, 43.34
- nomenclature of goods for trade statistics (NIMEXE), 42.14 (A)
- North Sea oil and gas, 37.41
- occupational mortality, 39.1 (A)
- occupational pensions schemes, 43.34
- offences relating to motor vehicles, 1977*, 43.40
- Office of Population Censuses and Surveys
 - publications of, 37.29
 - library, 37.30
- Official Journal of the European Communities* (statistical classifications in), 42.14 (A)
- Organisation for Economic Co-operation and Development, trade data and industrial strategy, 43.4 (A)
- output, by industry, 42.27
- output statistics, recent improvements, 36.30, 39.31, 40.44, 41.38
- overseas aid, 38.40, 40.48, 42.35
- overseas trade
 - British ports traffic to 1985, 40.49
 - export performance, import penetration and, 41.43
 - external trade statistics, 40.49
- National Ports Council Bulletin*, 40.49
 - import penetration, 39.34, 41.43
 - Statistics of Trade through United Kingdom Ports*, 35.44
- overseas travel and tourism, 40.48

- Peers' expenses allowances, 38.36
- pensions, occupational schemes, 43.34
- personal income, 38.36, 41.36
- personal saving ratio, 37.39
- personal sector balance sheets, 42.28
- personal social services statistics,
 - classification of, 37.30
- personal wealth
 - distribution of, 43.41
 - estimates of, 42.28
- personalised forms, introduction of, 40.13 (A), 40.51
- planning in social services departments, 43.31
- population
 - and vital statistics, GRO(s), 43.29
 - and the social services, 38.42
 - annual estimates, Scotland, 42.23
 - automatic editing of census, 37.10 (A)
 - census tests, 38.34
 - census use study papers, 41.31
 - 1981 census, White Paper, 43.27
 - distribution, 42.23
 - estimates, new series, 41.29
 - estimates - changes in methodology, 38.35
 - family size of immigrant women, 41.29
 - fertility in marriage, 41.30
 - immigrants, 39.21, 41.29
 - infant mortality, 43.28
 - international migration, 41.31
 - life expectancy, 39.9
 - marriage and divorce, 40.34, 41.30, 42.22

- mortality, 37.29, 39.22, 42.22
- perinatal mortality, 40.34
- projections, 42.23
- projections booklet, 41.29
- projections by regions and counties, 39.23, 41.30
- projections – England – area – 1975–1991, 43.27
- projections, Scotland, 35.32, 39.23, 42.23
- regional mortality, 41.29
- sub-national projections, 43.27
- Trends*, 35.32, 37.29, 38.34, 39.21, 40.34, 41.29, 42.24
43.28
- Port Statistics, Annual Digest*, 40.44
- postcodes, use of in statistical work, 40.16 (A)
- pre-school children, day-care and, 41.33
- Price Indices for Current Cost Accounting*, 36.36
- price indices
 - for capital expenditure in industry, 41.39
 - wholesale, rebased, 43.00
 - by industry, 42.27
- prices and different types of household, 43.41
- prison statistics, 43.30
- private sector, employment in, 37.33
- Production, Census of
 - for 1972, 36.32
 - for 1973, 36.32
 - for 1974, 36.32
 - for 1975, 36.33
 - historical record of, 43.39
- production, measurement of changes in, 41.38, 42.33
- productivity, by industry, 42.27
- productivity comparisons, 43.9 (A)
- profitability, in companies, 42.34
- public expenditure White Paper, 40.47
- public sector
 - debt, 35.43, 38.39
 - employment, 37.33
- purchases by industry, 38.37
- purchases inquiry, 1979, 43.37
- purchasing power in the EEC, 38.41
- qualified manpower
 - based on 1971 census, 35.38
 - national survey of 1970 graduates, 39.27
 - statistics, articles on, 36.12 (A)
- RAF manpower, 37.22 (A)
- rate support grants, 42.33
- rates and rateable values, 43.42
- rating statistics, 42.34
- re-distribution of income, effects of taxes and benefits,
40.38
- Regional Accounts*, 41.44
- regional civilian labour force projections, 43.27
- Regional Statistics, No. 12, 1976*, 36.38
- Regional Statistics, No. 13, 1977*, 39.34
- Regional Statistics, No. 14, 1979*, 43.24
- regions
 - migration between, 34.17 (A)
 - population projections, 39.23
- Rent Acts, review of, 39.4 (A)
- Report, A recent social survey, 43.30
- Research 1975–76*, 37.43
- research and development, 38.39
 - calculating weights for, 37.34
 - developments, 40.38
- retail sales
 - annual inquiry, 1977, 35.41
 - credit statistics, 41.42
- road condition survey, 39.30
- road mileage statistics, 36.33
- road traffic and the environment, 40.24 (A)
- Royal Commission on Civil Liability, 41.34
- Royal Commission on the Distribution of Income and
Wealth, 35.39
- Royal Statistical Society conference, 42.37
- salaries
 - incomes policies and differentials, 43.32
 - incomes policy and wage inflation, 43.32
 - ministers' and MPs', 35.39
 - top, 43.33
- St. Louis models of UK economy, 42.36
- savings, and accumulation of wealth, 41.35
- school building survey, 40.21 (A)
- schools, projected population, 35.36, 42.25
- scientists and engineers, qualified, 40.37
- Scotland
 - agricultural census
 - December, 37.36, 41.41, 42.32
 - June, 35.32, 36.35, 39.30
 - April pig sample census, 38.37
 - August pig sample census, 36.35
 - census, 1971, 39.23
 - educational statistics, 38.35
 - fertility report, 35.32
 - index of industrial production for, 38.38
 - local government districts, classification of, 39.12 (A)
 - market sector analysis, 37.37
 - population projections to 1991, 35.32
 - social work in, 42.25
- Scottish Economic Bulletin*, 37.37
- Scottish Housing Statistics*, 43.30
- Sea Fisheries Statistical Tables, 1975*, 35.40
- sea transport in the balance of payments, 35.27 (A)
- sea transport statistics, 41.39
- secondary school teachers – a new survey and mathe-
matical model for assessing teacher demand, 38.16 (A)

- Sex Discrimination Act*, 37.33
- shareholding in companies, survey of, 39.36, 40.46
- shops enquiry 1977, 41.42
- Small Area Statistics, in areal classification, 41.30
- smoking, cigarette, 43.32
- smoking, knowledge of hazards of, 41.33
- social accounting matrix, nature of, 41.10 (A)
- social accounting matrices and developing countries, 41.10 (A)
- social services departments. Planning in, 43.31
- social sciences, statistical package for, 35.35
- Social Security Statistics*, 38.29
- social statistics
- General Household Survey, 1974, 39.24, 41.32, 42.25
 - National Dwelling and Housing Survey, 39.26, 42.3(A), 42.8(A)
 - misuse of drugs, 43.32
 - recently available series and publications, 38.29
 - Scottish social work, 42.25
- social survey report, A recent, 43.30
- Social Trends*, 35.34, 36.25, 39.23, 40.34, 43.29
- amendments to, 40.35
- South Seas census, 38.25 (A)
- Standard Industrial Classification, 37.37, 42.14 (A)
- statistical computing: COMPSTAT 78 symposium, 43.1 (A)
- Statistical Computing, International Association for, 42.36
- statistical publications of the EEC, selected bibliography, 36.39
- statistical sources, Reviews of UK, 43.29
- Statistics users' conference 1976, 36.28
- Statistics users' conference 1977: financial statistics, 40.1 (A)
- student flows, measurement of, 36.15 (A)
- supplementary benefit take up, 35.35
- Survey Control Unit, CSO, 35.46, 36.41, 37.45, 38.31, 39.19, 40.31, 41.26, 42.19, 42.37, 43.21
- symposium, COMPSTAT 78, 43.1 (A)
- taxes and social security contributions, international comparisons, 35.43
- taxes and benefits, effects on household income 1976, 40.38
- tax changes, effect on revenue, 39.33
- teacher demand, 38.16 (A)
- teaching pack (a study of the UK motor vehicles industry), 42.35
- Teaching Statistics*, 42.35
- time series analysis and forecasting
- Journal of, 43.43
 - meetings at Nottingham University, 42.37, 43.44
- town and country planning floorspace statistics, 35.37
- trade, terms of, 43.43
- traffic and transportation surveys, 37.19 (A)
- traffic census. Benchmark, 43.40
- Transport Statistics Great Britain 1965-1975*, 37.38
- transport, inland, of imports and exports, 41.41
- travel and tourism overseas, 40.48
- Travel Survey, National, 1972/73*, 35.41
- unemployed
- attitudes to Employment service, 42.27
 - characteristics of, 38.35, 40.36
 - the unregistered, 36.29
- unemployment
- and changed relationship between vacancies, 36.29
 - and vacancy statistics, 35.37
 - duration of, 43.34
 - international statistics, 35.37
 - long-term, 42.27
 - rates by age, 39.27
 - young and out of work, 43.34
- unfair dismissal cases
- in 1976, 40.37
- United Kingdom Balance of Payments*
- 1965-75, 35.44
 - 1966-76, 39.33
 - 1967-77, 43.43
- United Kingdom Energy Statistics, Digest of*, 42.29
- United Kingdom external assets and liabilities, an inventory of
- at end-1976, 38.40
 - invisibles account, 40.47
- United Kingdom Mineral Statistics*, 42.30
- United Kingdom statistical sources, Review of, 43.29
- United Nations Standard Industrial Trade Classification (SITC), 42.14 (A)
- University graduates 1970, survey of, 39.27
- value added
- estimates of, from Annual Census of Production, 41.4 (A)
 - methods of estimating, 41.7 (A)
 - operating ratios and company performance, 41.8 (A)
 - seminar on, 41.1(A)
- vehicles,
- offences relating to motor, 43.40
 - survey of small goods vehicles, 40.18 (A)
- wage rates, indices of, 37.33, 38.36, 43.33
- wages
- attitudes to, 40.37
 - reform of bargaining system, 43.32
- Wales, agricultural statistics, 35.40
- war-widows' income, survey of, 39.28
- waste disposal 1974/75 survey, 36.34

wealth, estimates of accumulated and inherited, 41.35
wealth and income distribution, 41.36
wealth personal, Distribution of, 43.41
wealth tables for 1975, 39.28
Wealth of individuals in the United Kingdom, Estimated,
39.28, 41.37
Welsh local government financial statistics, 39.37, 42.34
Welsh Social Trends, 40.35
wheelchair users, survey of characteristics, 41.33
White Paper, 1981 census, 43.27
Wholesale price indices, 43.40
Wilson Committee, 43.42
world fertility survey, 42.24

young people, commentary in *Social Trends*, 39.23
youth unemployment, 43.34

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