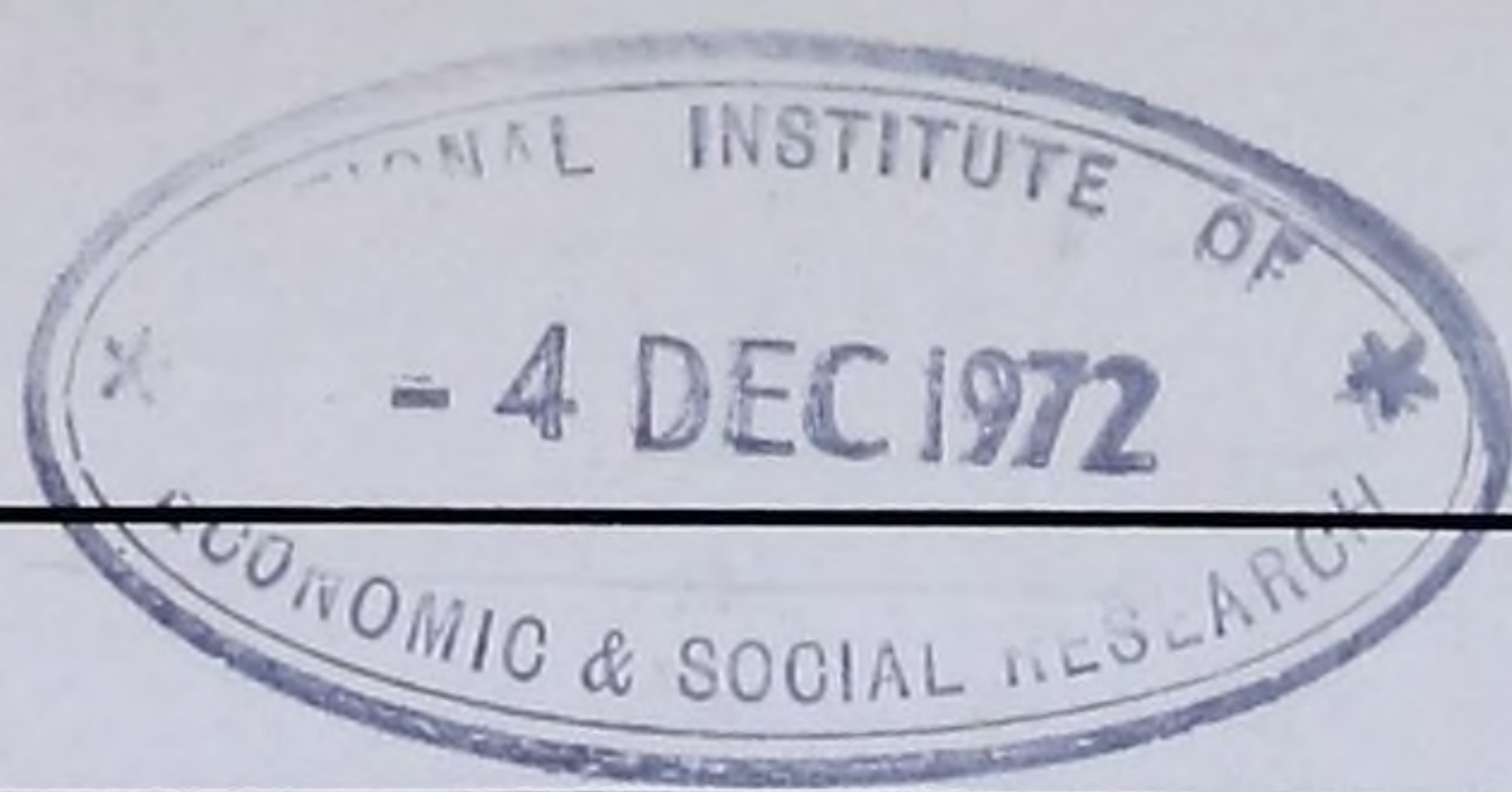


19



LIBRARY
CSO

NOVEMBER 1972

HMSO 30p net

STATISTICAL NEWS

Developments in British Official Statistics

A publication of the Government Statistical Service

Note by the Editor

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

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

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

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

Enquiries about this publication should be addressed to:
The Information Officer,
Central Statistical Office,
Great George Street,
London, SW1P 3AQ.

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

CENTRAL
STATISTICAL
OFFICE

NOVEMBER 1972

Statistical News **No. 19**

**Developments
in
British
official
statistics**

LONDON

HER MAJESTY'S STATIONERY OFFICE

Articles in recent issues of *Statistical News*

No. 13 May 1971

The statistical unit in business inquiries
Statistical surveys conducted by the National Board for Prices
and Incomes
The internal purchasing power of the pound

M. C. Fessey and H. E. Browning

R. F. Burch
Note by the CSO

No. 14 August 1971

Survey of handicapped and impaired in Great Britain - The
selection of the sample

R. M. Blunden

No. 15 November 1971

New statistics and the Index of Industrial Production
The CSO macro-economic data bank
Statistical forms sent to the construction industry

A. A. Sorrell
L. S. Berman
Note by the Department of the
Environment
J. D. Morris

The Inquiry into the Catering Trades for 1969

No. 16 February 1972

Revised figures
Future Censuses of Population
General Household Survey
Manpower planning
Preparing for the Census of Distribution
ISIS - an Integrated Statistical Information System

C. A. Moser
P. Redfern
Louis Moss
J. A. Rowntree
R. W. Makepeace
T. F. Hughes

No. 17 May 1972

The Survey of Personal Incomes
Use of official statistics in firms and Profit from Facts
Post-Census Survey on the Census of Production 1970
Qualified manpower: statistical sources

F. R. L'Aiguille
P. J. Stibbard
S. R. Curtis
E. G. Whybrew

No. 18 August 1972

Taking care of soft figures: reflections on improving the ac-
curacy of the GNP
Food marketing trends in the United Kingdom: some impli-
cations for agriculture
The relative price effect in public expenditure: its nature and
method of calculation
Form-filling: The Report of the Committee of Inquiry on
Small Firms
Developments at Business Statistics Office
Survey of collections of economic statistics in the United
Kingdom

George Jaszi
Dr A. P. Power
P. M. Rees and F. P. Thompson
Note by the Government Statistical
Service
R. F. L. Sims
Note by the Committee of Librarians
and Statisticians

	<i>Page</i>
The statistics of value added tax	M. R. Noyce 19.1
The new system of industrial statistics: statistical and computing aspects of the quarterly inquiries	A. D. Cunningham 19.10
Reshaping of the agricultural census for England and Wales	P. G. Horscroft and C. R. Orton 19.14
The Universities' Statistical Record	A. A. Croxford 19.17

NOTES ON CURRENT DEVELOPMENTS

	<i>Page</i>		<i>Page</i>
Population and vital statistics		Industrial statistics	
Population census tests held in October 1972	19.20	Retail sales index	19.25
Population Projections Booklet	19.20	1968 Census of Production	19.25
1971 Census of Population in Scotland		Reorganisation of industrial statistics	19.26
Preliminary evaluation of coverage	19.21	1968 Census of Production of Northern Ireland	19.27
Customer services	19.22		
Scottish statistics	19.22	Energy	
		Digest of United Kingdom Energy Statistics 1972	19.27
Health and social security		National Coal Board	19.27
Safety and health at work	19.22	Gas Council and Area Gas Boards	19.28
Incapacity statistics	19.22	Electricity Supply Industry Annual Reports	19.28
Census of mentally handicapped patients in hospital	19.23		
Hospital In-patient Enquiry	19.23	Food	
Retirement pension and widows benefit	19.23	Sources of supply	19.29
DHSS Annual Report	19.23	Food consumption levels	19.29
Manpower and earnings		Construction	
British Labour Statistics: Year Book 1970	19.23	Building materials: inquiry into specific minerals extracted in 1972	19.29
New Earnings Survey, 1971	19.24	Industrial building	19.29
Indices of rates of wages and normal hours	19.24		
Equal pay	19.24	Prices	
Unemployment statistics	19.24	Index numbers of wholesale prices - value added tax	19.30
Probation officers and social workers	19.25		
Occupational classification	19.25		

Balance of payments	
The balance of payments in the inter-war period	19.30
National accounts	
Derived statistics of national income and expenditure	19.30
Methodology	
Snapshot moments	19.30
International	
Taxes and social security contributions: international comparisons	19.31
Publications	
Housing and Construction Statistics	19.31
Family Expenditure Survey 1971	19.31
New Business Monitors	19.31
Statistics of trade unions and employers' associations	19.32
National Institute Economic Review	19.32
Annual statistical survey of the electronics industry	19.33
Greater London Council publications	19.33
FITC Statistical Review and Mapbook	19.33
Government Statistical Service	
Reorganisation of the Central Statistical Office	19.34
Business Statistics Office: telex service	19.35
Retirement	19.35
Deaths	19.35
Appointments and changes	19.35
List of principal statistical series and publications: amendment list no. 2	19.37
Alphabetical index	19.41

The statistics of value added tax

M. R. Noyce, *Statistician, HM Customs and Excise*

Value added tax (VAT) is to be introduced in this country on 1 April 1973. At the same time purchase tax and selective employment tax will be abolished. Although, in practice, there are to be some exemptions, in principle the tax will be payable on the value added by all the processes of manufacture and distribution of goods and the supply of services within the United Kingdom. In the course of collecting and supervising the tax, HM Customs and Excise will acquire a large volume of information about the activities of individual businesses which will form a coherent and consistent whole, and should provide a completely new source of economic information.

The legislation concerned with VAT is contained in the 1972 Finance Act, which states that 'a tax, to be known as the value added tax, shall be charged . . . on the supply of goods and services in the United Kingdom (including anything treated as such a supply) and on the importation of goods into the United Kingdom.'

Planning for VAT

The preliminary planning for the value added tax has probably been more extensive than for any other new tax introduced in this country. The organisation which has emerged is centred on a single computer, but the functions of local control and inspection of taxpayers' records are based on local offices. The fact that all returns will be channelled through a single data-processing network means, on the one hand, that the statistical information which they carry will be available as a by-product of the general task of data handling, so that there will be no need for the collection of statistics to depend on a separate reporting system with its attendant difficulties of non-response. On the other hand, throughout the planning of the tax much emphasis has been placed on simplicity and economy of operation, so that there has never been any possibility of obtaining statistical information through the tax other than that which is necessary for its efficient control. Much of the information about the flow of revenue and the attributes of taxable traders will therefore be used for the normal purposes of tax management, but there will also be a need to find out, in the early days of the tax, how the reality matches the model which has been built, often on incomplete and

somewhat out of date information, of the population of taxpayers and its financial characteristics, and thus, whether the policy decisions made with the guidance of the model are themselves serviceable in practice.

In addition, VAT will provide some of the information required for its management in the broader sense, for example, a firm basis for forecasting its future yield and the effect of changes in rates or coverage which may be necessary from time to time as part of the business of government, and for meeting the requirements of public accountability and Parliamentary control.

Beyond all this, there is the possibility that the tax may yield information which is of value outside the taxation field. At the very least it will be necessary to know how the tax falls, and the extent to which various series within the system of national accounts are affected by its imposition. Foreign experience of the use of VAT statistics varies; some European countries make extensive use of them and some virtually none. Denmark, for example, which has a simple but comprehensive VAT and centralised data processing has abandoned some statistical reporting because of the value of VAT statistics as an alternative. In the Netherlands, no use is made of VAT data and the statistical service believes them to be of little value.

Classification and registration of tax payers

There are two essential steps to be taken in organising an 'information potential' from the tax: taxable persons must be properly classified, and arrangements must be made for storage of the information collected on the regular tax returns in such a way that an economic balance is maintained between the costs of data storage and the advantages of a flexible data file. The decisions on these two points are permanent, in the sense that any data lost because of them is beyond recovery at economic cost. In the planning of VAT it was decided at an early stage that taxable traders should be classified both by trade and by legal status. The trade classification which has been designed for VAT is congruent with the Standard Industrial Classification (SIC), but takes account of the demands of tax control. The SIC is most suitable for the classification of establishments in manufacturing industry, but is fairly broad in the distributive and service trades. Indeed a subsidiary 'kind

of business' classification has been devised for use in the Census of Distribution and the VAT will need to develop further the detail here and in the construction industry. VAT will be least at risk in a business which sells to other taxable businesses, as it will be recorded separately on invoices for which both buyers and sellers account. Where a business sells only to consumers, however, VAT will be recorded only on the invoice provided by the seller, and the risk of revenue loss is consequently greater. The VAT trade classification takes account of this situation by specifying trades in the distributive and services sectors in much more detail than the SIC. The considerations which led to this form of classification were administrative, but the outcome will strengthen national statistics of output, which are short of data about the distributive and service trades, an area where comprehensive surveys are difficult and expensive, and therefore infrequent. A copy of those parts of the VAT trade classification where it is substantially more detailed than the SIC is on pages 19.5 to 19.7.

Anyone who, on or after 1 October 1972, is carrying on a business which will have a taxable turnover (including zero rated outputs) of more than £5,000 a year on or after 1 April 1973 will become a taxable person and must notify Customs and Excise. In effect this divides the business population into two mutually exclusive sets one of which will become registered taxable persons and the other businesses which are wholly engaged in activities specified as exempt in Schedule 5 of the Finance Act, e.g. most transactions in land, insurance, banking and finance, betting and gaming, education and health services, burial and cremation, and the postal service of the Post Office. Businesses not wholly engaged in exempt activities will be taxable.

In the six months period before the commencement of the tax, taxable businesses are being registered, and as part of the process of registration are being asked to classify themselves by trade and legal status in accordance with the trade classification which will be supplied to them.

The relationship between taxable businesses and legal entities is not one-to-one; the Finance Act provides both for the registration of two or more companies as members of a group if one controls all of them and for a company organised in divisions to be registered, subject to certain conditions, in the names of its divisions. A company registered abroad, but having a taxable turnover of more than £5,000 in the United Kingdom will be registered in its own name, but may nominate a local agent or manager as responsible for VAT.

As Customs and Excise will be dealing with businesses, rather than establishments, the trade to which each is classified will be that in which the business turnover is the greatest and the nature and output of any subsidiary activity may not be known, and there will be no central record of the locations and outputs of local branches of a large business. There are bound to be some difficulties over classification, but it is to be hoped that the Department will be able to discover and correct any errors which arise from self-classification through the educational visits which all taxpayers are due to receive early in the life of the tax. There is, in addition, an obligation to let Customs and Excise know immediately when a business changes its name, address or trade, goes into liquidation, or merges with another, and it is therefore to be hoped that the VAT register will always be up-to-date and free of dead wood.

The standard taxable period is three months, but a taxable person who declares, either at the time of his registration or later, that he expects his input tax to exceed his output tax regularly (for example, because most of his outputs are zero-rated) may be allowed to submit returns monthly so that he can obtain earlier repayment of tax. In order to spread the flow of returns evenly other taxable persons will at the time of registration be divided into three groups which will submit returns in monthly rotation each return relating to a three months period. The group to which a wholly taxable business belongs will depend on the trade to which it is classified; partially exempt businesses will cover calendar quarters in their returns. The likely outcome is that the majority of traders of a certain trade will be likely to submit their returns in one month of each quarter, but there will be a few who submit returns in each of the other two months. In order to set the rotation system going, some traders will have initial taxable periods which will be longer than normal and the data for the first few months of the tax are therefore not expected to be very useful for economic purposes. Businesses which enter VAT after its commencement will be fitted in by a similar adjustment process.

The VAT return

The return itself is simple. A copy is shown on pages 19.8 and 19.9.

Part A covers the tax due on taxable output and imports of taxable goods, and tax paid on goods and services bought in. In the case of a fully taxable person the tax due to or from the revenue is the difference between tax due on output and imports and tax deductible in respect of inputs.

Part B of the return gives figures for the value of the transactions underlying the tax and details of goods and services sold at the standard rate of tax, exported (at zero rate), and sold otherwise at the zero rate of tax, or under exemption. It will also provide a figure of total taxable purchases, in which purchases of capital goods are included, but not separately specified.

Part C deals with the assessment of taxable persons who are partly exempt. The concept of partial exemption adds considerable complexity to the tax, but fortunately it is not expected to affect a large proportion of taxable persons.

Implications for statistics

The total picture presented from an analysis of VAT returns is not likely to be strictly in accordance with the concepts either of national accounts or of Government business statistics. A person carrying on a business will be classified according to the nature of his principal output, whatever the size of the business. Moreover the time series which emerge from the analysis of results will contain some idiosyncracies which are dictated by the form of the tax. For example, a particular trade, say laundrettes, may be allocated to a specific 'stagger group' which takes the three monthly taxable periods February-April, May-July, etc. and the majority, though possibly not all, taxable laundrettes will submit their returns and pay the VAT due about a month after the end of each taxable period.

For accounting purposes, returns will require to be collated according to the period in which the tax is paid. This set of data will be prompt, as the tax-collection and data-collection periods will coincide.

More interesting from the economic point of view is the collation of sales, purchases and the resultant tax for a specific trading period, but there will clearly be some delay in arriving at a final estimate of the data for such a period, merely because some traders will pay later than others. It may be that accounting data will provide reasonable approximations to the economic data, or that delays will be insignificant, but programming provision has been made for the cross-classification of the two sets of data, so that prompt estimates of turnover in each trading period can easily be made, once the pattern of delay has been established.

Potentialities and limitations of VAT statistics

It will be difficult to fit the data for taxable periods into a common year, calendar or financial; in this respect VAT statistics will be similar to other forms of accounting statistics. Many annual aggregations of company accounts, for example, contain either all those companies whose accounting periods end in a specific financial

year, or even those whose accounts are published in a year. VAT statistics can produce an approximate year by taking the tax-years ending November, December and January together.

Time series of output are not the only form of data which can be derived from VAT. Taxable inputs, for example, include both standard-rated and zero-rated inputs, but do not include purchases of exempt goods and services. These exempt transactions may often not be important when comparing one industry with another but they do embrace such payments as rent, interest and insurance premiums. Moreover, the figures of taxable inputs will include, but not distinguish, purchases on capital account, and those of individual businesses are expected to be highly variable in consequence. It is not beyond the bounds of possibility, however, that changes in the values of industrial purchases, as defined in VAT, may provide a useful set of economic indicators, as they may be expected to react quickly to changes in fixed capital formation and stock-building.

As taxable persons will be classified to local office area, and these areas are defined, there exists a possibility of regional data. As the taxable person may be the headquarters of a large concern with many local sites, this kind of data will have limited value. There is however an obligation in law for taxable persons to notify cessations of business and for new businesses to register as taxable persons if their expected turnover warrants it. These 'births' and 'deaths', together with information about movements and sizes of businesses, should be helpful in identifying the growth and decline of local areas and trades.

VAT figures will be wholly in money terms, and it will therefore not be possible to derive price relationships from them, or to reduce them to constant-price terms without the use of external information. They will, however, be in mutually exclusive groups and in common units (i.e. money) and will therefore be additive over the entire range of economic activity. Moreover, as the output of each firm must be either the input of another or a purchase of a final buyer, the net taxable output, summed over the entire taxpaying population, will also be a defined, measurable and consistent figure, though not one in the conventions of input-output tables or national accounts, where capital formation and stockbuilding are regarded as components of final output, rather than as intermediate purchases.

The rules of registration described above mean that not all VAT taxpayers will be 'establishments' or 'enterprises' in the technical sense of those terms. They will, however, be individuals in a large classified

population which is both well defined and lacking in duplication, and their characteristics are easily assembled into bivariate distributions. Customs will be interested in cross-classifications by industry of numbers in ranges of tax and total or taxable output, but it is equally possible to classify taxpayers by range of taxable output and taxable imports or exports.

Furthermore, it will be possible to compare the activities of individual businesses in successive years, so as to find out the relationship between trade, size and growth of output.

Value added tax is as yet an untried source of statistics, and its compatibility with existing sources is a matter of some doubt. Within the limitations imposed by the law on the tax itself, it should however provide consistent estimates of output over the whole range of industry and commerce, except for the financial sector and some professions and trades which have been exempted mainly on social grounds. It will suffer from the disadvantage that the figures will be wholly in terms of money value, that the timing of results will not be very convenient, that no distinction between capital inputs and inputs on current account is recognised in the tax, and figures of imports will be partial, but quite clearly the data will provide a mine of information which should be exploited for many years to come.

VAT Trade Classification

Trade Code

PRIMARY INDUSTRIES

Group 01 – Agriculture, forestry and fishing

- 0011 Livestock farming (including pigs and poultry)
- 0012 Arable farming
- 0013 Dairying
- 0014 Mixed farming (no more than 50% in any of the above)
- 0015 Breeding of non-food producing animals (including horses)
- 0016 Agricultural contracting
- 0017 Market gardening and fruit farming
- 0018 Flower and seed growing
- 0020 Forestry
- 0030 Fishing

Group 02 – Mining and quarrying

- 1010 Coal mining other than opencast (heading 5030)
- 1020 Stone and slate quarrying and mining
- 1030 Chalk, clay, sand and gravel extraction
- 1040 Petroleum and natural gas
- 1090 Other mining and quarrying

MANUFACTURING INDUSTRIES

Groups 03 to 19 are in substantially the same detail as SIC Orders III to XIX.

CONSTRUCTION

Group 20 – Construction

- 5001 General builders
- 5002 Building and civil engineering contractors
- 5003 Civil engineering contractors
- 5004 Plumbers
- 5005 Joiners and carpenters
- 5006 Painters and decorators
- 5007 Roofing contractors
- 5008 Plastering contractors
- 5009 Glazing contractors
- 5011 Demolition contractors
- 5012 Scaffolding specialists
- 5013 Reinforced concrete specialists
- 5014 Heating and ventilating engineers
- 5015 Electrical contractors
- 5016 Asphalt and tar spraying contractors
- 5017 Plant hirers
- 5018 Flooring contractors
- 5019 Constructional engineers
- 5021 Insulating specialists
- 5022 Suspended ceiling specialists
- 5023 Wall and floor tiling specialists
- 5029 Specialists not elsewhere specified
- 5030 Opencast coal mining

Trade Code

UTILITIES

Group 21 – Gas, electricity and water

- 6010 Gas
- 6020 Electricity
- 6030 Water

TRANSPORT AND COMMUNICATION

Group 22 – Transport and communication

- 7010 Railways
- 7021 Omnibus and tramway services
- 7022 Taxis and private-hire cars
- 7030 Road haulage contracting for general hire or reward
- 7040 Other road haulage
- 7050 Sea transport
- 7060 Port and inland water transport
- 7070 Air transport
- 7080 Postal services and telecommunications
- 7091 Shipping agents and forwarding agents
- 7092 Travel agents
- 7093 Driving instruction
- 7094 Operation of car parks, toll roads and toll bridges
- 7099 Other miscellaneous transport services and storage

DISTRIBUTIVE TRADES

Group 23 – Wholesale distribution

(N.B. Wholesaling of motor vehicles (new and second-hand), including motor cycles and caravans, is allocated to heading 8941 and not to the headings within this group)

Wholesale distribution of:

- 8101 Fresh meat, fish, fruit and vegetables
- 8102 Alcoholic drink (including bottling)
- 8109 Other food and drink
- 8110 Petroleum products
- 8121 Chemists' sundries
- 8122 Clocks and watches
- 8123 Clothing
- 8124 Furs
- 8125 Textiles
- 8126 Footwear
- 8127 Electrical goods
- 8128 Radios, TV sets, tape recorders, tape recordings and gramophone records
- 8129 Jewellery
- 8131 Imitation jewellery
- 8132 Musical instruments

Trade
Code

- 8133 Photographic goods
- 8134 Toys
- 8135 Travel and fancy goods (including shopping bags)
- 8136 Furniture and floor coverings
- 8137 China, glassware, hardware and ironmongery
- 8138 Paper and board products, including reading material
- 8139 Leasing of office furniture, vending machines, juke boxes and gaming machines
- 8149 Other goods

Group 24 – Retail distribution

(N.B. Retailing of motor vehicles (new and second-hand), including motor cycles and caravans, is allocated to heading 8941 and not to the headings within this group)

- 8201 Grocers
- 8202 Dairymen
- 8203 Butchers
- 8204 Fishmongers and poulterers
- 8205 Greengrocers and fruiterers
- 8206 Bread and flour confectioners
- 8207 Off-licences
- 8211 Department stores
- 8212 Variety and other general stores
- 8213 General mail order houses
- 8214 Confectioners, tobacconists and newsagents
- 8215 Footwear shops
- 8216 Men's and boys' wear shops
- 8217 Women's and girls' wear, household textiles and general clothing shops
- 8218 Retail furriers
- 8219 Domestic furniture shops, floor coverings shops, furniture and upholstery repairers
- 8221 Antique dealers, second-hand furniture shops, art dealers, picture framers and dealers in stamps and coins
- 8222 Radio and electrical goods shops (excluding radio and TV rental and relay shops)
- 8223 Radio and TV rental shops
- 8224 Hardware, china, wallpaper and paint shops
- 8225 Cycle and perambulator shops
- 8226 Bookshops and stationers
- 8227 Chemists and photographic shops
- 8228 Opticians
- 8229 Jewellery, watch and clock retailers and repairers
- 8231 Leather goods, sports goods, toys and fancy goods shops
- 8232 Music shops (including gramophone records)

Trade
Code

- 8233 Florists, nurserymen and garden shops
 - 8234 Pet and pet food shops
 - 8239 Other non-food shops
- Group 25 – Dealers
(N.B. Dealing in motor vehicles (new and second-hand, including motor cycles and caravans, is allocated to heading 8941 and not to the headings within this group)
- 8311 Coal and oil merchants (not including bulk oil distributors or petrol filling stations)
 - 8312 Builders' merchants
 - 8313 Corn, seed and agricultural merchants; dealers in livestock
 - 8321 Dealing in industrial materials
 - 8322 Dealing in scrap and other waste materials
 - 8323 Dealing in industrial and agricultural machinery
 - 8324 Leasing industrial and office machinery

SERVICES

Group 26 – Insurance, banking, finance and business services

- 8600 Insurance
- 8610 Banking and bill discounting
- 8621 Stockbrokers
- 8622 Unit and investment trusts
- 8629 Other financial institutions
- 8630 Property owning and managing etc.
- 8640 Advertising and market research
- 8651 Industrial and commercial valuers, auctioneers and transfer agents
- 8652 Chartered or company secretaries (firms acting as)
- 8653 Computer services
- 8654 Contract cleaning
- 8655 Management consultants
- 8656 Staff bureaux and employment agencies
- 8657 Duplicating, calculating and typewriting agencies
- 8659 Other business services

Group 27 – Professional and scientific services

- 8710 Accountancy services
- 8720 Educational services
- 8730 Legal services
- 8741 Hospital and consultant services
- 8742 Local authority health services
- 8743 General medical services
- 8744 Dental services
- 8749 Other medical services
- 8750 Religious organisations

Trade Code		Trade Code	
760	Research and development services	8993	Welfare and charitable services
791	Veterinary services	8994	Public museums, libraries and galleries
792	Surveying (various kinds)	8995	Political parties and associations
793	Architects (private practice)	8996	Services of Commonwealth and foreign governments
794	Draughtsmen (private practice)	8997	Trade associations and unions
795	Consultant engineers	8999	Other services
796	Research chemists, analytical chemists, assayers, non-medical bacteriologists, metallurgists and geologists (private practices)		Group 29 – Public administration and defence
797	Professional and scientific representative bodies	9010	National government service
798	Artists, sculptors, designers, authors, journalists (free-lance) and composers	9060	Local government service
799	Other professional and scientific services		
	Group 28 – Miscellaneous services		
811	Cinemas		
812	Theatres, music halls, etc; radio and television services (excluding relay services), film and recording studios, etc.		
813	Performers and performing groups (drama, music, variety etc.)		
814	Radio and television relay services		
821	Dance halls and dancing schools		
822	Sport		
829	Other recreations		
830	Betting and gaming		
841	Hotels and other residential establishments		
842	Holiday camps, camping and holiday caravan sites		
851	Restaurants, cafes, snack bars etc. selling food for consumption on the premises only		
852	Fish and chip shops, sandwich and snack bars and other establishments selling food partly or wholly for consumption off the premises		
860	Public houses		
870	Clubs (excluding sports clubs and gaming clubs)		
880	Catering contractors		
891	Men's hairdressing and manicure		
892	Women's hairdressing and manicure		
8921	Launderettes		
8922	Laundries		
8923	Hire of towels, linen and industrial clothing		
8930	Dry cleaning, job dyeing, carpet beating etc.		
8941	Distribution, repair and servicing of motor vehicles (including wholesaling, retailing and dealing in motor vehicles and caravans (new and second-hand), tyres, motor accessories and spares)		
8942	Petrol filling stations		
8950	Repair of boots and shoes		
8991	Funeral direction, cemeteries and crematoria		
8992	Photography and photographic processing		



H.M. CUSTOMS AND EXCISE

Return of Value Added Tax

For the period
to

For official use

Registration No.

Period No.

The registered person named here must complete and return the form to VAT Central Unit, H.M. Customs and Excise, Alexander House, 21, Victoria Avenue, Southend-on-Sea X, SS99 1AB.

not later than

A pre-paid addressed envelope is enclosed
Any tax payable must be paid by the same date.

Before completing any item on this form please read the appropriate note; the paragraph numbers in the attached notes correspond to the numbers of the items on the form.

Note: A return which is incomplete or qualified in any way (e.g. marked "Provisional") does not satisfy the legal requirements. Failure to make a return or to pay the full amount of tax payable by the due date is an offence.

PART A. Account of tax payable or repayable

This part must be completed by all registered persons. Please complete all boxes, writing 'NONE' where there is no amount to be entered.

Tax due for this period:	Output tax	1	£	
	Tax on imported goods and goods ex-warehouse	2	£	
Underdeclarations and/or underpayments of tax in respect of previous periods	Notified by Customs and Excise	3	£	
	Other	4	£	
Total tax due:	Sum of boxes 1 to 4	5	£	
Deductible input tax for this period:		6	£	
Overdeclarations and/or overpayments of tax in respect of previous periods:	Notified by Customs and Excise	7	£	
	Other	8	£	
Total tax deductible:	Sum of boxes 6 to 8	9	£	
Net tax payable or repayable				
If the amount in box 5 is greater than that in box 9 tax is payable to Customs and Excise.		Payable to Customs and Excise	<input type="checkbox"/>	10
If the amount in box 9 is greater than that in box 5 tax is repayable by Customs and Excise.		Repayable by Customs and Excise	<input type="checkbox"/>	
(Please tick appropriate box).				

Method of payment to Customs and Excise.

(Please tick appropriate box)

National Giro

Bank Giro

Remittance enclosed

For Official Use

PART B. Value of outputs and inputs (excluding any tax)

This part must be completed by all registered persons. Please complete all the boxes, writing 'NONE' where there is no amount to be entered. Pence should be disregarded.

Outputs:	Outputs chargeable at the standard rate of tax	11	£
	Exports	12	£
	Other zero-rated taxable outputs	13	£
	Total taxable outputs (sum of boxes 11, 12 and 13)	14	£
	Exempt outputs	15	£
	Total outputs (sum of boxes 14 and 15)	16	£
Inputs:	Total taxable inputs including zero-rated inputs	17	£

PART C. Retailers' special schemes

This part must be completed by retailers who use any of the special schemes for the calculation of output tax described in VAT Notice No. 707.

Enter in the box(es):	1 if you have used scheme 1	18	<input type="checkbox"/>
	2, 3 or 4 if you have used any of these schemes		

PART D. Calculation of deductible input tax

This part must be completed by all partly exempt persons but NOT by any other registered persons.

Enter 1, 2 or 3 in this box to show which method you have used	19	<input type="checkbox"/>
Amount of any input tax wholly attributable to taxable supplies	20	£
Amount of input tax partly attributable to taxable supplies	21	£
Percentage used to attribute input tax $\frac{\text{box 14} \times 100}{\text{box 16}} =$	22	
That part of the amount in box 21 which is deductible for the period $\frac{\text{box 21} \times \text{box 22}}{100} =$	23	£
Total deductible input tax for the period (sum of boxes 20 and 23); this total should also be entered at box 6 overleaf	24	£

PART E. Declaration by the signatory

This part must be completed by or on behalf of all registered persons

I
(full name of signatory in BLOCK CAPITALS)

- declare that
- (i) the information given in this return is true and complete in respect of all business or businesses carried on by the registered person except in so far as and that, **except as notified, none of the changes listed in Notice No. 700 has occurred during the period covered by the return.**
 - (ii) the amounts shown as deductible input tax in this return relate to tax which may be deducted by virtue of Section 3 of the Finance Act 1972 and regulations made under that Section, and I claim deduction of input tax accordingly,
 - (iii) where I have used one of the retailers' special schemes I have complied with Notice No. 707.

Signed
(*Proprietor, partner, director, secretary, responsible officer, duly authorised person)

Date.....

*Delete as necessary

BEFORE RETURNING THIS FORM PLEASE DETACH THE NOTES

The new system of industrial statistics: statistical and computing aspects of the quarterly inquiries

A. D. Cunningham, *Statistician, Business Statistics Office*

It is the nature of a project like the Imputation Program that many people in the BSO and outside it have influenced the work, but those others will understand if explicit acknowledgements are confined to Mr R. S. Baser, Mr L. K. Green and, especially, to Miss Jean Newlands.

With minor qualifications all the new quarterly inquiries into product sales and the new series of annual censuses of production are complete censuses. It might therefore be expected that population totals could be obtained by simple addition of the information supplied. The main reason why this simple process cannot be used is that all the data are not available by the time the first results are wanted, despite the efforts of the Business Statistics Office (BSO) to hasten response. For example, with quarterly sales inquiries, the eventual target for publication of results in *Business Monitors* is three months after the end of the period to which the data refers, and by this time, on current patterns of return, only about three-quarters of the data have been received. The obvious procedure is to regard the partial data as a sample of the population. (There is of course the risk of bias in the figures supplied by the early respondents, but the preliminary indications are that this is not serious.) By treating the quarterly inquiries and the annual census as sample inquiries, although censuses by design, it is possible to produce estimates of population totals before all returns have been received. The techniques which have been developed to use the BSO's ICL 1906A computer to do this are described in this article.

Statistical questions

Methods of estimation

The basic statistical ideas of the program are in accordance with well established theory. What is of some interest are the reasons which influenced some of the major design decisions, and how these ideas have been engineered into computer programs, to provide information which in the past has been available only after some research.

The most critical choices are probably those of the statistical estimating procedure to be used, and of any transformation to be applied to the data. It was

thought undesirable to complicate procedures without good reason, and the initial review was limited to four estimators, all simple in the sense that each was a single estimator. Estimators of different types have not been combined together. The possibility of a logarithmic transformation of data was considered, and dismissed because any simple use of logged data gave too much weight to the smaller firms.

The estimators which received consideration were:

- (i) The mean per unit method. If, for example, it is the sales of a given product which is being estimated, the average sales recorded by those who have made returns will be multiplied by the number of firms who are known to make the product.
- (ii) The ratio method, using an auxiliary variable to estimate a ratio which, in the most straightforward case, is then applied to an estimate for the population of this auxiliary variable. (Our actual procedure described later is slightly more complicated.)
- (iii) Two regression estimates. Instead of calculating this ratio between the total of the auxiliary variables, and the corresponding total of the statistic to be estimated, the two can be regressed on each other, by either of two techniques. The regression can then be applied to the figure shown on the return received.

The mean per unit method was dismissed out of hand. The variation in sales between respondents is typically very large compared with the variation of the pattern of sales of an individual contributor over time. The ratio method which is essentially that used in the past was the obvious first choice, using the figures for some previous period as the auxiliary variable for the quarterly inquiries, and employment as the auxiliary variable for the Annual Census. There is a requirement to compute the sampling error of the ratios and the extra work involved in computing the two regression

estimates and their sampling errors is marginal. The conclusion drawn from comparing the results of the different methods is that, at least with the present data complicated by the changes in the population discussed later under the headings of 'births and deaths', the regression estimates are not robust. On the other hand the ratio estimator has proved satisfactory.

The treatment of atypical data

Some data, although genuine, may be quite atypical. Given some prior idea of the likely range of the ratio estimator an acceptable range can be set in advance and ratios falling outside that range can be identified as atypical; such ratios are treated as a separate stratum, and combined with typical data but with much reduced weight. The limits used to define 'atypical' are variable, but are preset on any one run for the whole of one inquiry, whatever the difference in the relative movements of different products due to, say, different seasonalities. It is necessary to ensure that limits are not set in such a way that genuinely typical data is treated as atypical, or vice versa, with the consequence that an inappropriate link would be used to impute for missing data. It would be better to define atypicality in terms of the distribution of the actual data by means of a preliminary computer run on the data, or part of the data. One reason why this is not done at present is that the simple way of doing it would require a major increase in processing time. This problem is still under review.

Adapting the statistical methods for a computer

Principles

What follows describes the way in which the statistical and the computational considerations have affected each other.

For economy of working the computer, it is necessary to minimise the transfer of data between core and backing store. This is helped by expressing standard formulae in recurrence relation form, and having 'one pass algorithms' which require a single pass only through the data to obtain the results, particularly with large quantities of data. There is still much to be done here. (It is not essential at this stage to avoid programs which take a lot of core store, since utilization of the central processor of the computer is low at present.) Extra processing, once data is in core, is relatively cheap. It is thus reasonable to compute variances and sampling errors while the estimates themselves are being produced. An analysis of market concentration and the identification of key respondents were, for the same reason provided as options within the program.

It was decided to aim at a program of the generality sufficient to handle monthly, quarterly and annual data. This seemed both economical in programming effort, and a way of ensuring that a feature which is necessary for one family of data is made available as an option to another. It was important as a device towards harmonization, tending toward a uniform treatment of data whatever its periodicity.

In ADP terms, routes through the present large program are controlled by parameters; the program contains sub-routines and is quite well structured although it is largely in a monolithic format. The next phase of development is to break the program suite down into a number of independent modules capable of being assembled as required to meet the specific needs of different inquiries. This step should bring higher processing efficiency and enhanced ease of maintenance, although little change in the statistical techniques employed.

The central logic of the program

Against this background, it is useful to describe the central logic of the program and to explain why, despite the emphasis on 'one pass algorithms', the program provides for a double pass through the data.

The data is scanned once to obtain all possible fair comparisons or 'matched pairs' of variable and auxiliary variable between the periods being examined. These are accumulated, (after stratification if desired) by region, or by size, or by industry, and as 'typical' and 'atypical'. The comparisons can then be combined over strata, by a procedure that gives weight both to the quantity of data in the comparison, and the size of the sampling error attaching to it. The resulting estimate of the change in sales of a product is then printed out, and can be used as it stands. More commonly it is used, on a second pass through the data, to estimate, or 'impute' for missing data for individual firms. This imputation is done, first forward in time to estimate for firms who have not yet sent in their latest returns, and then backwards to impute for the smaller number of firms who have replied to the current inquiry but not to earlier ones. On this second pass, the data is added into accumulators to produce the required totals, analysed in one way only, by region, by size, or by industry. Thus a two pass process makes it possible to combine subsets - different strata for example - to obtain a single comparison or movement for a product while preserving the ability to produce a breakdown of the data. The second reason for the 'two pass' procedure is the desire to continue to allow atypical data to 'have its own weight' in the population estimate while preventing it having much weight in imputing for missing data. A third reason for the two

pass procedure is that it facilitates 'imputation backwards' to amend estimates for previous periods to take account of information which comes to hand later.

Other features of the program

Births and deaths. A procedure is essential for dealing with 'births and deaths', whether they arise from physical changes like a factory opening or closing, or by organisational changes when a firm changes its reporting arrangements or when pattern of output of a firm changes so that it is necessary to reclassify it to a different industry. A related problem comes when a firm drops, possibly temporarily, production of one commodity. The technique now used is to allow the imputation program to impute for periods when imputation seems valid, and to enter zero value for other periods. This procedure accounts for some of the difficulties experienced with regression methods – an example of the interaction of data management techniques and statistical methods.

Errors procedure. For all figures produced by the imputation program sampling errors are calculated. These provide a guide to the quality of the figure, but it is too early to say anything about their interpretations in terms of confidence limits, given the complications of skew data, and samples frequently small; but some rules of thumb are now tending to emerge. It seems:

- (i) that satisfactory estimate of industry totals can be obtained from about 50 per cent of the data by value,
- (ii) that product detail can be estimated reasonably well with substantially less than 90 per cent of the data by value, and
- (iii) that we will probably settle down to estimating product detail on about 75 per cent coverage, but below 70 per cent estimates will be subject to quite large changes when late questionnaires are received.

The most obvious periods to compare in selecting the variable and its auxiliary variable are immediately adjacent periods, and this choice will ordinarily produce the lowest sampling errors, but it has the consequence that the sampling errors for successive periods are correlated. If different lags or separation between variable and auxiliary variable are used, then independent estimates of adjoining periods of time can be obtained, and may well be superior for some purposes. The current practice with the quarterly inquiries is to match on the previous quarter, monthly inquiries are matched with three months previously, but for inquiries with a marked seasonal pattern, it is under consideration whether ratios could be based on comparison with a year ago. Current practice with the quarterly inquiries is that each quarter the figures for

the latest quarter are calculated and those for the previous four quarters are revised.

Concentration analysis. The programs provide for holding running totals for each product and a running record of the 'n' largest contributors to it providing 'n' is a reasonably small number. Options exist in the program to calculate the first five points on the cumulative distribution curve of annual sales of each commodity both by establishments and by enterprise, and to list the firms concerned; to provide counts of the number of contributors; to compute a measure of entropy in the distribution (which in this context means the weighted average of the logarithms of the shares each firm has of the market for the commodity). The program goes on to derive by an indirect route the variance of a fitted log normal distribution.

Key respondents. If the results of BSO inquiries are to be published on a timely basis it is necessary to plan to estimate for those who do not respond in time. But it is important to get returns covering as much of the field of inquiry as possible and considerable effort is devoted to following up non-respondents to an inquiry by letter, phone and visit. These efforts are concentrated on the most important respondents. The concentration analysis described above has been used to define a 'key respondent' as a respondent who is among the five largest contributors to any one heading. It is the key respondents so defined on whom the BSO concentrate follow-up action when their questionnaires are not received.

Limitations in the current procedures

None of the quarterly inquiries goes to manufacturing firms with less than eleven employees. Many do not go to firms with less than twenty five employees. Estimates of the total employment of these very small firms are available from the Department of Employment. In the annual censuses of production, the figures provided by respondents are grossed up by the computer using techniques similar to those described in this article. Additionally, the published figures for the annual censuses allow for small firms and are estimates for all manufacturing industry. With the quarterly inquiries into product detail this procedure could not be valid. Some products can be made only by large firms, some are made only by small firms. The solution adopted so far has been to publish figures for each product which include estimates for all those firms who have completed at least one quarterly return. Thus the published figures of sales of individual products give consistent estimates of movements over time; but they do not include any allowance for firms which have not been identified as manufacturers of the product. To the extent that sales of United Kingdom production of

individual industries are underestimated in the quarterly inquiries for this reason, there are three possible courses of action:

- (i) to do nothing,
- (ii) to sample the very small firms, to get the pattern of sales of those firms at present omitted from the statistics, or
- (iii) to adopt a more sophisticated grossing up procedure, based on fitting a truncated bivariate lognormal distribution.

Preliminary work toward the implementation of the third possibility is in hand, but will take time. The scope for introducing sampling into the quarterly inquiries for those firms who do now make returns is also under discussion.

Reshaping of the agricultural census for England and Wales

P. G. Horscroft, *Principal*, and C. R. Orton, *Statistician*,
Ministry of Agriculture, Fisheries and Food

Changes envisaged in the agricultural census for England and Wales were the subject of an article in *Statistical News* 6.9⁽¹⁾. Now that these changes are in process of being made – although some have been modified or delayed – it seems an appropriate time to review their effect and to indicate where future developments may lead.

The most significant outcome is that over the five-year period, 1968 to 1973, the number of census forms will have been reduced from about 700,000 to about 350,000 – a 50 per cent reduction – and the number of main annual enquiries from eight to five. Whilst part of this reduction has been caused by the natural fall in the number of holdings, the greater part results from the measures described in this article. Side by side with these measures to rationalize the coverage of the census and to reduce form-filling have gone steps to fill gaps in present statistical knowledge or to collect data on subjects which are becoming more important (e.g. maize growing). Horticulture (which has taken a more prominent place on the June form since 1969), the new concept of total area of agricultural land, tenure and the agricultural labour force are among the new features.

The new style of census

From September 1972 the agricultural census will be organized as follows:

- (i) A June census, with 100 per cent coverage and questions covering all cropping acreages and livestock items, the basic labour items, and all horticultural and glasshouse items (the latter being transferred from the July glasshouse census, which will cease to exist).
- (ii) A December census, based on a stratified sample (of perhaps 45,000 holdings compared with 70,000–80,000 on the existing one-third samples), with questions on all livestock items, an extended range of labour questions (including ages of farmers or workers every three or four years), machinery questions according to a pattern which will repeat itself every few years

(the most important questions will be asked every year, and other questions less often), and all glasshouse items (a special form will be sent to those glasshouse holdings not in the sample). The January glasshouse census will cease to exist.

(iii) Livestock sample enquiries in March and September, based on smaller stratified sample (about 30,000 holdings each). They will have questions on key livestock items only.

(iv) The special poultry returns will be abolished, saving about 10,000 forms per annum. The September and December vegetable censuses were replaced in 1971 by a single census held in mid-October, resulting in a further saving of some 20,000 forms per annum.

Stratification of the sample censuses

These improvements stem from the experiments in the use of stratified samples of holdings carried out in parallel with the usual parish-based sample censuses in 1970. Holdings were classified into twenty seven strata according to their type (based on the Ministry's system of farm classification⁽²⁾) and size, and the sampling fractions were chosen in such a way as to achieve required levels of precision for the more important questions, while keeping the overall sample size as small as possible. In practice this meant that the largest holdings were sampled more frequently than before, but that most holdings were sampled less frequently. These experiments showed that substantial reductions in the number of farms sampled could be achieved without loss of precision in the results, and a scheme for running the quarterly sample census on a stratified basis was drawn up[†]. However, it could not be implemented immediately because the statutory collection of statistics by means of random samples was found to be irreconcilable with the provisions of

[†]This scheme, together with the experiment and its results, is described in detail in an article in the *Journal of the Royal Statistical Society, Series A (General)* see reference⁽³⁾. Offprints are available from the Ministry of Agriculture, Fisheries and Food, Room A622, Government Buildings, Epsom Road, Guildford, Surrey (Price 25p including postage).

the Agriculture Act 1947 relating to the making of regulations. It was therefore decided to amend the enabling Act so that the ministerial powers could be exercised by means of notices served on occupiers without first having to make regulations. These extended powers, however, apply only to the system of collecting statistics and not to the list of subjects about which statistics may be collected, which are still strictly limited by the Act.

The necessary legislation was embodied in section 18 of the Agriculture (Miscellaneous Provisions) Act 1972⁽⁴⁾ and that section became operative on 15 August 1972 under the Agriculture (Miscellaneous Provisions) Act 1972 (Commencement) Order 1972 (No. 1260 C31). Because this disposes of the need for regulations, it also disposes of the need for statutory committees to advise Ministers on the making of regulations. The Act accordingly abolished the Agricultural Statistics Advisory Committees set up under section 77 of the 1947 Act, but non-statutory consultative committees are being appointed in their place to advise on the collection of agricultural statistics.

The purpose of stratification is to lighten the burden of form-filling on farmers in general, and particularly on the occupiers of the smaller holdings. An inevitable corollary is that more frequent returns will be required from occupiers of the very largest holdings. The introduction of stratified sampling, together with the merging of the two vegetable enquiries as from October 1971, will achieve a saving of over 150,000 forms a year, without reducing the quality of the statistical information that is obtained. But there will be other changes, too, arising from changes in the coverage of the census.

The coverage of the census

The exclusion from the census during and since 1968 of 60,000 or so holdings with between one and ten acres of crops and grass and a negligible output (measured in terms of standard labour requirements at under twenty six standard man-days, a standard man-day representing eight hours productive work by an adult male worker under average conditions) was complemented in 1970 by the inclusion in the census of about 2,000 holdings of one acre or less but with a significant agricultural output (i.e. twenty six smds or more). These holdings were mostly practising intensive forms of production in horticulture, pigs and poultry, and it was only for these items that the cropping and stocking figures returned accounted for significant differences in the census.

In June 1973 the process of rationalizing the coverage of the census is to be carried a stage further when the threshold of significance will be raised from

twenty six to forty standard man-days, with the consequent elimination from the census of another three to four thousand holdings. At the same time, however, consideration is being given to means of retrieving any holdings that were excluded as insignificant but have since changed their status by reason of increased activity. This may be achieved by sending a simple enquiry form to a sample of statistically insignificant holdings each June so that over a period of years all are examined. This would also enable a more reliable estimate to be made of agricultural output from these small holdings than is possible at present.

Statistical amalgamation of holdings

The amalgamation of holdings for statistical purposes has also contributed to the reduction in the number of holdings completing census forms. Some 10,000 holdings farmed with other holdings as part of a larger single farm unit and formerly returned separately have, since June 1970, been returned as part of the larger unit. These 'statistical' amalgamations represent a backlog of actual amalgamations, accumulated over a number of years at a time when not all amalgamations taking place were matched by a corresponding integration of census records for statistical purposes. This should be less of a problem in future as more active steps are being taken to ensure a closer correspondence between actual and statistical amalgamations.

New information

The extension of the concept of *total area* to include woodland and other land used for agriculture (under roads, yards, buildings, etc.) as well as crops, grass and rough grazings, brought in an extra 230,000 acres or so not previously recorded in the census. In addition about 150,000 acres previously recorded as crops, grass or rough grazing were returned as woodland or other land. This total of 380,000 acres compares with the 600,000 acres expected on the basis of the 1960 World Census, when, however, a rather wider definition was employed.

The questions on *tenure*, also introduced in June 1969 as a regular feature of the June census, were answered by less than half the occupiers in the initial round, though this was made good by a supplementary question in the following September sample census. Since then the response rate has improved but the questions are still giving rise to more queries than any others on the June census return. The reasons for this are not clear but it is evident that some farmers are reluctant to disclose whether they own or rent their land. The latest figures show that the progressive trend throughout the present century away from tenancy towards owner-occupation has continued during

the sixties but at a slower rate than during the fifties when the trend was most marked. The area of agricultural land owner-occupied rose from 33 per cent at the beginning of the 1939 war to 49 per cent in 1960 and now stands at over 53 per cent. Owner-occupiers now outnumber tenant farmers by about three to two. The figures also show an increase in the average size of both tenanted and owner-occupied holdings over the past ten years or so. An article treating this topic in more detail appeared in *Statistical News* 9.11⁽⁵⁾.

The extension of the *agricultural labour force* questions to include farmers, partners and directors, and all those engaged in managerial, supervisory or secretarial activities on the farm, took effect from June 1970. This inevitably distorted the pattern of the statistical series relating to labour, especially as some of the figures were understated in the first year. The series is now settling down and the number of full-time and part-time farmers, partners and directors (226,000) returned in the June census this year gives a reliable estimate of the numbers of self-employed persons in agriculture and horticulture. The exclusion of wives from the farmers, partners and directors category, even though the wives themselves may be partners or directors, has sometimes given rise to comment. The reason is that it is assumed that all farmers' wives do in effect contribute to the work on the farm and this is taken into account in measuring the total farm labour force.

Conclusion and future developments

The benefits to farmers of having to complete fewer forms are obvious. The Ministry benefits mainly from a smaller volume of paper to process, which has enabled staff and resources either to be saved or deployed on other statistical work to the advantage of the user. None of this would have been possible without the improved service provided by the Ministry's Data Processing Division following the replacement of older machines with more powerful computers. Their systems and programming officers have been closely associated at every stage of the new scheme. One development of particular importance to the selection of samples has been the successful introduction of a system of addressing census questionnaires by computer, in place of conventional addressograph plates and equipment. This has speeded up the addressing process and at the same time has reduced the number of staff engaged on it.

The three most significant events which can be expected to influence the future shape of the agricultural census are the prospective entry of the United Kingdom to the European Communities, local government reorganisation and metrication. The first of

these events will undoubtedly bring about changes in the agricultural census as steps are taken to harmonise the statistical systems of the Community states, but the farmer and the user should notice these changes only very gradually because it is not envisaged that major alterations in this country's well-developed system will be needed. Local government reorganisation, whatever the final pattern of areas and boundaries, will cause a substantial break in the county series of agricultural statistics which in more or less their present form date from 1866, when the first comprehensive annual census of agriculture was taken. It is proposed to publish figures on both the old and new county basis in the year the reorganisation takes place. Metrication of the agricultural census, scheduled for June 1976, will have a considerable impact on farmers as they complete their agricultural returns in the unfamiliar metric measurements, notably the hectare. A sustained effort to encourage the farmer to complete his returns no less accurately than now and to identify the inevitable mistakes will be required if the change-over is to go smoothly.

Agricultural statistics can be no less dynamic and capable of change than the policy making process they serve. The agricultural census is one of the key sources of these statistics. The remodelling which has taken place over the last few years means that the census is now in good shape to meet the problems and challenges that lie ahead in a changing agricultural world.

References

- (1) 'Changes envisaged in the agricultural census for England and Wales' by P. G. Horscroft *Statistical News* No. 6 (HMSO August 1969).
- (2) *Farm Classification in England and Wales, 1969-70* (HMSO) November 1971 (Price 89p net).
- (3) 'The development of stratified sampling methods for the agricultural census of England and Wales' by C. R. Orton, *Journal of the Royal Statistical Society Series A (General) Volume 135*, No. 3 1972.
- (4) Agriculture (Miscellaneous Provisions) Act 1972 (HMSO) August 1972 (Price 29p by post 32½p).
- (5) 'Tenure of agricultural holdings in England and Wales' by C. R. Orton, *Statistical News* No. 9 (HMSO May 1970).

The Universities' Statistical Record

A. A. Croxford, *Statistician, University Grants Committee*

In *Statistical News* 1.19 and 4.28 mention was made of the changeover, in the field of education statistics, to the so-called 'individualised data' system. This article will trace the progress made in this changeover within the university sector.

As a first step it may be useful to restate the reasons for the change. The system which had been in operation at the University Grants Committee (UGC) for fifty years was the familiar method of annual returns: universities were asked to categorise their staff and students and state the aggregate numbers falling into each category. Over the course of time this system has had to expand in two different directions. Firstly an increasing amount of detail has been required, resulting in returns which are both bulky and complicated, and secondly the returns had to be supplemented in order to discern the movements which take place within the education system from one year to the next. These movements – such as the promotion or transfer of academic staff, or the success and failure rates of students, are all-important for the work of projecting the pattern and size of the university system, but are not disclosed by the normal returns. Enquiries into specific aspects of movement had been put into effect piecemeal, covering such items as the recruitment and loss of academic staff, the first employment of graduates, the intake of new undergraduates or the number of degrees awarded in any year. Whilst yielding valuable information this approach did not cover the whole field, and to do so under the existing methods of collecting statistics would have been too great a task.

The new system of information

It was therefore decided that the system should be rationalised and that all these various returns should be replaced by a single computer-held record of individuals, each of whom would be described in a fair degree of detail. Apart from personal details such as sex, date of birth, nationality, etc. the student record would contain a description of the subject studied, the mode of attendance, and such items as the qualification aimed for and obtained. The staff record would contain the same personal details plus a record of the grade, subject taught, and salary and superannuation details. This record would be brought up to date

annually by universities, and would subsequently be available for the production of analyses either of 'stock' (the total position in a given year), or of 'flow' (the movements which had taken place since the previous year).

It is clear that in order to bring a record for an individual up to date, both the record and the new information must be recognisable as referring to the same person – that is to say they must both carry either his name or some unique reference number. This immediately leads to the major problem involved in either introducing or executing this scheme, that of confidentiality. A record which carries a name ceases to be a mere statistic and can instead be construed as a personal report, even though this is not the intention.

Although the problem of confidentiality may perhaps never be entirely solved, a major obstacle was overcome when it was realised that there already existed a computer which operated under the joint control of all universities, in the offices of the Universities' Central Council on Admissions (UCCA). Data stored on this computer could be regarded by universities as being still their own, as opposed to data which might have been sent to a computer operated by, say, the UGC or the Department of Education and Science. The peak of the existing workload of the UCCA computer was six months out of phase with the expected peak of the proposed new central record, and in view of these two factors the agreement was given, in 1968, by all universities in the United Kingdom to the adoption of the new scheme.

Naturally there were provisos made. Many were still concerned with confidentiality of the data, others had reservations about the possible amount of work involved. Three universities selected an option for their *modus operandi*, unfortunately given when the scheme was mooted, which could not in the event yield the required results. This option was that they should maintain their own 'private' central record, but be prepared to produce any tabulations as required. This was in effect scarcely any different from the previous system, and suffered the drawback that the full flow of staff or students would be unobtainable – those who transferred into or out of one of these three universities would be represented by two incomplete records in two different places, rather than by a single

comprehensive record which was the object of the exercise. Fortunately two of the universities concerned quickly changed their choice of option, and the third has recently indicated that it is willing to do so.

Timetable of progress

The timetable for the introduction of the scheme shows the size of the task involved in this reorganisation. In 1969 a start was made with new undergraduates during the current academic year – that is those who entered in Autumn 1968. This involved the setting up of approximately 60,000 records, roughly a third of the total undergraduate population. In 1970 these same records were brought up to date as at December 1969, and thus for the first time gave the ability, albeit limited, to trace the progress of this part of the undergraduate population. At the same time the new entrants in 1969 were added to the records. In 1971 the same procedure was adopted as in 1970: the records of those who were already on the computer were brought up to date, and new entrants in 1970 were added. In addition, however, all postgraduates and staff were added to the record, this being done as a once-for-all operation rather than by the gradual stages which had been necessary in the case of the far more numerous undergraduates.

In 1972 the process of bringing up-to-date resulted in a record which was completely comprehensive with one minor exception – it still excluded those undergraduates who had entered university before 1968 and who had therefore never had the ‘chance’ of being added to the record. A relatively minor take-up exercise brought this group of students into the record, and completeness was achieved. As a result of this the UGC was able, for the first time, to avoid issuing any of its previous tabular returns, and is relying for its December 1971 data entirely on the new system. In order to give some idea of the magnitude of the scheme, it now covers over 300,000 staff and students, about each of whom an average of twelve items of information is added to the record every year.

Problems encountered in the reorganisation

Any major reorganisation of data of this order of magnitude is bound to encounter difficulties, and this section describes the troubles which have arisen and which would be likely to occur in any similar system elsewhere.

The major problem in 1968 has already been described as that of confidentiality, and this is still the case today. In an age of suspicion of computer-held records it is perhaps inevitable that the university world should share this attitude. To demonstrate, and

assure, that no use can be made of the record other than the production of aggregate statistics, a control committee, the ‘Policy Group’, has been set up which has as its Chairman the Chairman of the Committee of Vice-Chancellors. Three other Vice-Chancellors are also members, plus two representatives from the UGC and one from the Department of Education and Science. In addition representatives of the National Union of Students, the Scottish Union of Students, and the Association of University Teachers all attend meetings. One of the first acts of this Group was to rename the scheme ‘the Universities’ Statistical Record’ in order to make it absolutely clear that this was the only purpose of the scheme.

Other decisions of the group have been: to operate the staff record without the use of names, relying solely on reference numbers whose identities are known only to the universities concerned; to limit the retention of names on the student records to a limited period within which a student who leaves might be expected to return; to set out clear limits on access to the tabulated statistics; and to set up a scheme whereby anyone may call for a copy of his computer record. Although this last item is clearly in the right spirit, and accords with the wishes of staff and students, it has paradoxically resulted in the establishment of the very system which is not wanted – namely a method for obtaining details about named individuals from the computer. Naturally this system is under very strict control.

The remaining problems encountered are almost all produced by the generally conflicting interests of the statistical requirements of the scheme and the data-processing operation. Some examples of this follow.

The group of students in whom most interest lies from the statistical point of view consists of those whose movement is in some sense unexpected. That is to say, instead of progressing from one year of a course to the next, at the same university, they either change courses or universities, or leave altogether, or stay in the same year of their course for a second time. The system at present can guarantee to record correctly only those who stay in the same university – if a student leaves entirely it may be some time before a registrar can be sure that the student is not simply ill, and if he transfers to another university it is very likely that he will be given a new reference number and thus start to build up a new and separate record. The problem of linking together such partial records is not insuperable, but its solution may take several years to achieve.

A problem which is in a sense generated by the fact that each record refers to a specific person is that of uncertain data. Under a system of tabular returns most registrars would have no compunction in slotting a few students whose age (say) was uncertain into

whatever seemed the most appropriate grouping in the return. Generally speaking, this is an acceptable practice if the registrar makes his best estimate in each case. When the estimate has to be made individually in respect of specific individuals, however, many registrars are unwilling to commit themselves, particularly when it is known that the individual may see his own record at any time, and consequently the computer file contains a new classification, 'not known', in many of the records, which naturally diminishes their usefulness. As far as can be seen this particular trouble may be expected to diminish as the record-keeping systems at universities fall into line with that of the central record, and the appropriate data is collected from the student himself at the point of enrolment.

Future developments

Plans are already being prepared for two stages of further development, the first of which is about to take place in early 1973. This is the incorporation of the results of the already-existing (but independent) survey of the first employment of graduates. This survey, conducted by university appointments officers, produces individual results, which naturally to a certain extent duplicate the personal and educational details stored on the central record, and which up to 1972 have been processed in anonymous form by the Stationery Office, to be published by the UGC as *The First Employment of University Graduates*. In 1973 this processing will take place on the UCCA computer, making use of the individual information already stored there, and the survey results will subsequently be added to the appropriate student records on the file. This will provide literally the finishing touch to the record of each individual.

Also to be put into effect is the stage that will convert the present records, which are still partially fragmented (for example undergraduate and post-graduate records are not linked together), into a fully-comprehensive system in which each person has only one record, but a complete one. The problems to be solved before this can be achieved are almost all on the systems side, but when this has been done the universities' statistical record will be an extremely useful management information system. It will provide for the basis for cohort studies, full analyses of flows for model-building, comparative wastage rates for different types of student, and staff analyses both for salary negotiation purposes and for the early detection of possible shortages. And of course it will provide far more detailed analyses of the stock at any moment in time than were possible under the old system of tabular returns.

Notes on current developments

POPULATION AND VITAL STATISTICS

Population census tests held in October 1972

The Office of Population Censuses and Surveys conducted voluntary field tests in October in parts of the London Boroughs of Wandsworth and Merton, and parts of Warwick and Royal Leamington Spa; and the General Register Office, Scotland, carried out tests in a number of enumeration areas in Scotland. One objective of these tests was to see if the length of the census form could be reduced by using new sampling methods; another was to improve the arrangements for householders to return their forms to the census authorities.

Sampling in a population census is difficult if the sample selection is in the hands of a very large number of enumerators, and presents serious practical difficulties of instruction and control. For example the use of a short form completed by all the population and a long one completed by a sample (as in the 1961 Census) can lead to a bias in the distribution of forms by enumerators. Methods were tried out in the tests which aimed to overcome this bias and which reduced the amount of information requested from any individual person or household.

In England ten different types of forms were used, each of about the same length and complexity. Forms were distributed in sequence 1,2,3, . . . 9,10, and then repeat. Each form contained a number of basic demographic questions such as sex, date of birth and marital condition. Differences between the form types were in the remaining questions – such as occupation, industry, address one year ago, tenure of accommodation, and number of cars available to the household: only two or three of these questions were asked on each form. The combinations of these questions were varied from one form type to another so as to give, for example, analyses of occupation crossed respectively with industry, address one year ago, tenure of accommodation and number of cars available to the household (as well as with the basic demographic questions). Such analyses have of course then to be based on the sample of the population answering that particular combination of questions. Since all forms were of about the same length the bias which tends to accompany the distribution of forms of very different length would, it was hoped, disappear. Moreover the question-

naire length was reduced to about half that used in the 1971 Census, and yet all the customary analyses of questions could be made.

In Scotland there were essentially three (rather than ten) different forms each with a common base of demographic questions. But two sampling methods for distributing forms (or questions) to householders were tried out, each depending on the date of birth of the head of household. In the first method one of three types of form was issued according to whether the head's date of birth was 1st–10th, 11th–20th or 21st or later in the month. In the second method only one form was issued but this had on it all the questions with an instruction that only one group of the 'variable' questions should be answered, the group applicable to any particular household being determined by the same criterion as in the first method. One of the three types of form used in the first method in Scotland was in part a marking document for direct input to a computer. This was part of a series of tests being conducted into the feasibility of a householder marked document.

Improved facilities for respondents were also tried out. Most householders (81 per cent in a survey conducted after the 1971 Census) find it helpful for the enumerator to collect the form by the well-tried methods used in the past which enable him to do a quick doorstep check that the form is complete and to give any assistance needed; but as an alternative envelopes were freely available when the forms were collected, either for immediate sealing without examination of the form by the enumerator or for posting. To help the public get an immediate answer to any questions they might have a free telephone query answering service operated in England.

The success of a census depends on its acceptance by the public and the tests gave the census organisation an opportunity to get to know the views of the people in the test areas. A two-part questionnaire accompany each form invited comments on any difficulties in completing the test forms and on any other aspects of the test or the census.

Population Projections Booklet

The second booklet on population projections in the annual series begun last year has now been published.

The aim is to make generally available the detailed results of the latest (mid-1971 based) projections together with a description of the methods and particulars of the assumptions used and the reasoning which led to their adoption. As usual the projections were prepared by the Government Actuary after discussion with the three Registrars General on the assumptions to be used. The basic format is unchanged; information is given for England and Wales, Scotland, and Northern Ireland in addition to that for Great Britain and the United Kingdom. (Regional projections are prepared and published separately.)

The mid-1971 based projections are the first to take into account the early results of the 1971 Census, and for this reason alone would have differed from the previous set of projections. Thus there is some discontinuity for England and Wales between the base population used for these latest projections and that used for previous projections. (See *Statistical News* 16.17.) Another consequence of the 1971 Census is that it has led to a revision of the external migration estimates for the recent past and so of the assumption regarding future migration. In addition some of the assumptions made in projecting births in future years have been revised as a result of new evidence about the pattern of family building.

Summaries of the projections were published in the July issue of the *Monthly Digest of Statistics* and in the quarterly publications of the Registrars General. The booklet however gives more detailed information, including about thirty pages of text. For further information, telephone Miss D. Pace at 01-836 2407 Ext. 8258.

References

Population Projections No. 2 1971-2011 Prepared by the Government Actuary. Office of Population Censuses and Surveys (HMSO) November 1972 (Price £1.00 net).

Registrar General's Quarterly Return for England and Wales No. 493 (HMSO) August 1972 (Price 23p).

Quarterly Return of the Registrar General Scotland No. 469 (HMSO) August 1972 (Price 23p).

1971 Census of Population in Scotland

Preliminary evaluation of coverage

A note on a preliminary evaluation on the coverage attained by the Census in Scotland is included in the county report for Dunbarton. It will also be given in the county reports which remain to be published and is reproduced below:

In spite of the publicity that they attract, overt refusals to complete a census form have a negligible effect on coverage. In a score of cases, most of which were successfully prosecuted, refusal was persistent and no form was obtained.

In the 1971 census the possibility of postal return of census forms was emphasised more than in the past; and about 26,000 forms were sent direct to the census office. The enumerators noted which households were expected to submit a postal return and also those whom it had proved impossible to contact and at which forms had been left for postal return. In about 700 instances no postal return was apparently received at the census office, and letters to these households produced around 440 satisfactory replies. The remaining 268 householders (who had moved, died or who simply did not reply) represent a possible loss of coverage, although some of them would have been absent on census night and thus under no obligation to return a census form.

Three office and field checks were planned to evaluate the coverage achieved. The first was a general exercise designed to reveal any gross coverage error: the other two were directed to particular points where past experience showed that error was likely.

1. *Re-enumeration check* An independent re-enumeration of households and persons in 185 pre-determined areas of about 20 households was carried out within two weeks of census day. The small scale of this check allows coverage to be estimated only within the following limits for Scotland with regard to persons and households present:

The census count of households was from 0 to 5,000 high (due mainly to absent households returned as present)

The census count of persons was within $\pm 6,000$ of the correct figure (due mainly to the net effect of changes between present and absent persons).

2. *Check on vacant houses and absent households* A 1 per cent sample of these were revisited within two months of census day, and six households containing ten persons were found who had been omitted from the census. There was also some net re-allocation of vacant household spaces, 10 per cent of which should have been enumerated as 'occupier absent'.

3. *Check of visitors at their stated usual residence* A 3 per cent sample was drawn of persons who were not usually resident at the address of enumeration. The census forms returned from their stated address of usual residence (if in Scotland) were examined and 8 per cent were found to be returned as present there also. This is equivalent to the double counting of 8,000 persons in Scotland. Since under half of the visitors were enumerated in private households, this can lead to a substantial double counting of persons enumerated in schools, hospitals etc. as also being present at home.

Visitors re-counted as also present at usual residence

Year of Birth	Enumerated in household		Enumerated elsewhere	
	% of visitors	% of household population	% of visitors	% of non-household population
1956 & later	9.4	0.04	15.7	5.8
1906-1955	7.0	0.06	7.8	2.4
1905 & earlier	7.7	0.10	5.8	1.3
TOTAL	7.5	0.06	8.6	2.5
Male	8.2	0.06	8.9	2.6
Female	6.9	0.06	8.3	2.5

4. *Conclusion* A more detailed account of the coverage and quality of the 1971 census will be published in due course in the General Report. The provisional results quoted above indicate that there was no serious deficiency in coverage, and that on balance there may be a very slight over-count.

Customer services

A monthly *Publication Bulletin* on the 1971 Census reports, including unpublished extensions of the tables, is being issued. Copies may be obtained from:

Customer Services,
GRO for Scotland,
Ladywell Road,
Edinburgh,
EH12 7TF.

Scottish statistics

The Registrar General's annual report for 1971 will be published next month. The second quarterly report for 1972 will also be published in December. In addition to the usual quarterly tables it will contain Scottish and regional migration estimates for the second half of 1971 and regional population estimates by sex and age for mid-1971 and their projections to 1991.

HEALTH AND SOCIAL SECURITY

Statistics relating to safety and health at work

A research review has been published of the currently available statistics relating to safety and health at work. This review was carried out by the Institute for Operational Research (a unit of the Tavistock Institute of Human Relations) at the invitation of the Committee of Inquiry on Safety and Health at Work, under the chairmanship of Lord Robens. It recommends that the system of reporting industrial injuries should be redesigned to meet two basic needs; first, to provide

precise and accurate information on particular safety problems so that industry can measure its own performance, detect trends and decide where particular accident prevention measures will be needed; secondly, to provide the safety inspectorates with wide-ranging statistical information to enable them to plan their day to day work.

The study recommends the extension of injury reporting to cover all employees and the use of a single report form for the initial notification of an injury to both the inspectorate and the Department of Health and Social Security. This should cover all injuries involving more than three days absence from work but there should be a selective follow-up of certain specific injuries. Statistics on the extent of risk of serious injury should be collected and statistics on the incidence and frequency of injury should be published. The possibility of collecting additional information on causes of accidents should be examined. The study concluded that statistics on industrial diseases have only limited value.

The Robens Committee in its report recommended that the existing safety and health inspectorates for factories, mines, agriculture, explosives, nuclear installations and alkali works should be unified under a new independent Authority; also that this Authority should review the basis and purposes of existing safety and health statistics with a view to simplifying them and that a common report form should be provided so that the employer need only report the accident once.

References

- A Study of the Statistics relating to Safety and Health at Work* (HMSO) August 1972 (Price 31½p).
- Report of the Committee on Safety and Health at Work 1970-72* Cmnd 5034, (HMSO) July 1972 (Price £1.30 by post £1.38).

Incapacity statistics

The method by which statistics of certified incapacity for work are obtained by the Department of Health and Social Security from claims to sickness and injury benefits under the National Insurance Acts was described in *Statistical News* 5.14. The latest issue in the Department's series of *Digests of Statistics analysing Certificates of Incapacity* covers the period June 1968 to May 1969. It has been distributed free to those persons known to be interested. A limited number of copies are still available and, while stocks last, a copy can be obtained on request from the Department, Branch SR3 at 10 John Adam Street, London WC2N 6HD (Tel: 01-930 9066 Ext. 167).

The next Digest in the series will cover the period June 1969 to May 1970 and is likely to be available early in 1973.

Census of mentally handicapped patients in hospital

In order to obtain up to date information about the mentally handicapped in hospital, the Department of Health and Social Security conducted a national census at the end of 1970 of all such patients in England and Wales. The last census had been made at the end of 1963. Hospitals were asked to complete a questionnaire either for each or for a sample of their patients and in this they co-operated fully so that returns were received from every hospital. A wide range of particulars were collected for the patients, included among which were their sex and age, the length of time spent in hospital, the level of intelligence, the physical, sensory and behaviour incapacities from which they suffered, the education and training which they were receiving, their employment inside and outside the hospital and the frequency with which they were visited.

The census provides the fullest national picture yet obtained of the mentally handicapped in hospital and will contribute to the discussion on the future of the services for them.

Reference

Statistical and Research Report Series: No. 3 *Census of mentally handicapped patients in hospital in England and Wales* (HMSO) September 1972 (Price 90p net).

Hospital In-patient Enquiry

Two further volumes in the series of reports on the Hospital In-patient Enquiry (see *Statistical News* 17.20) – the Preliminary Tables for 1970 and the main Report for that year – have now been published. Practical difficulties in collecting and processing almost a half million detailed records from hospitals throughout England and Wales have in the past resulted in a considerable gap between the appearance of such reports and the periods to which they related (although unpublished data are available somewhat earlier). The recent publications show a marked improvement in this respect, the corresponding volumes for 1969 having been published only in March and August of this year. It is hoped to reduce the delay still further by producing the 1971 reports early next year.

References

Report on Hospital In-patient Enquiry for the year 1970 Preliminary Tables (HMSO) September 1972 (Price 34p).
Report on Hospital In-patient Enquiry for the year 1970 Part I Tables (HMSO) November 1972 (Price £2.50).

Retirement pension and widow's benefit

Statistical News 8.23 carried a note about the general availability of statistics on the numbers of retirement pensioners and widow beneficiaries under the National Insurance Acts. *The Abstract of Statistics for Retire-*

ment Pensions and Widows' Benefits for the year ending 31 December 1968, referred to in that note, was the last prepared. Since then the system of producing pensions statistics from the regular analysis of standing samples of retirement pensioners and of widow beneficiaries has been badly affected by ADP difficulties with the result that similar abstracts for 1969 and 1970 were not issued. The Department did, however, carry out a special analysis of a sample of retirement pensioners and widow beneficiaries at the end of 1971. An abstract giving the results of this enquiry is available on application to the Chief Statistician, Branch SR3, Department of Health and Social Security, 10 John Adam Street, London WC2N 6HD (Tel: 01-930 9066 Ext. 167). There are 19 summary tables in the abstract and, apart from giving information broadly comparable with the earlier abstracts, they contain detailed information on the number of persons receiving non-contributory pensions and sliding scale widows' benefits, which were introduced in 1970 and 1971.

DHSS Annual Report

The Annual Report of the Department of Health and Social Security for 1971 deals with the work of the Department in the fields of health and welfare and of social security. It contains leading statistics about, for example, the executive council services, local authority services, hospital and specialist services, national insurance and industrial injuries, supplementary benefits, family allowances and war pensions.

The Report also contains statistics about the new social security benefits, Family Income Supplement, Attendance Allowances and Invalidity Benefit.

If further information is required it can be obtained from the Chief Statistician, Branch SR3, Department of Health and Social Security, 10 John Adam St, London, WC2N 6HD (Tel: 01-930 9066 Ext. 167).

Reference

Department of Health and Social Security Annual Report 1971. Cmnd 5019 (HMSO) July 1972 (Price £2.85 by post £2.98).

MANPOWER AND EARNINGS

British Labour Statistics: Year Book 1970

All the main statistics for 1970 produced in the Department of Employment are brought together in the *British Labour Statistics: Year Book 1970* recently published. The series of Year Books, from 1969 onwards, together with the *Historical Abstract 1886-1968* constitute a convenient source of reference for British labour statistics. The latest volume includes over 360 pages of tables covering wage rates, earnings, hours of work, retail prices, employment, unemploy-

ment, vacancies, family expenditure, industrial disputes, membership of trade unions, industrial accidents, labour costs and output per person employed. Where appropriate, time series are given for up to ten years. Later figures are to be found in the Department's *Gazette* and will in due course be incorporated in subsequent year books.

Reference

British Labour Statistics: Year Book 1970 (HMSO) October 1972 (Price £7.20).

New Earnings Survey 1971

The comprehensive report by the Department of Employment on the *New Earnings Survey, 1971*, has now been published. In addition to the results published in the Department's *Gazette* from November 1971 to February 1972 (*Statistical News* 16.21), the report includes numerous other analyses of earnings of employees in Great Britain in April 1971 and of other information obtained in the survey. Results of the corresponding 1972 survey are now becoming available and being published in the Department's *Gazette*. For further information telephone: 01-92 28500 Ext. 216.

Reference

New Earnings Survey, 1971 (HMSO) October 1972 (Price £3.00).

Indices of rates of wages and normal hours

The monthly indices of basic weekly and hourly rates of wages and of normal weekly hours of manual workers compiled by the Department of Employment have been rebased. The industry group weights used in compiling the indices have also been up-dated. The weights now reflect wages bills and employment in April 1970, and the new comparison base date is 31 July 1972. The new series were introduced in an article in the Department's *Gazette* in September 1972. This article outlined how the new weighting patterns have been obtained and how the new series of indices may be linked on to the old series based on January 1956.

Reference

Department of Employment Gazette September 1972 (HMSO, Price 52½p).

Equal pay

The Office of Manpower Economics made its first Report on Equal Pay on 1 August 1972. The report describes the progress made so far in the implementation of the Equal Pay Act 1970, for which full implementation is required by the end of December 1975. An appendix

to the report analyses in various ways a register of industry collective agreements and wages regulation orders, which is maintained by the Department of Employment. This register contains two forms of coding which are used in the analysis; one of these classifies the agreements and orders as at January 1970 according to the experience and type of discrimination between men's and women's rates of pay or minima; the other classifies those that had discrimination at January 1970 according to different forms of progress at any particular date in eliminating discrimination or in narrowing (or widening) the differentials. The report compares selected rates of pay and the lowest rates specified for men and women between end-March 1970 and end-March 1972. The report also gives information on progress towards equal pay in 142 mainly large companies and the results of a survey of some 200 small companies. Extracts from published statistics of the relative employment and pay of men and women are given and an appendix on overseas experience of equal pay.

Reference

First Report on the Implementation of the Equal Pay Act 1970 (HMSO) August 1972 (Price 90p).

Unemployment statistics

Students aged 18 and over who are registered at employment exchanges for temporary vocational employment are included in the statistics of registered unemployed. Separate monthly count figures for this group are available from July 1971, when some 24,500 were registered; estimates have been made for earlier years. These have been given separately in the national and regional analyses in the *Department of Employment Gazette* each month from August 1972 (Tables 104 to 106). These tables also include revised seasonally adjusted series. These relate to the numbers of persons, excluding adult students as well as school leavers, registered as wholly unemployed. The increased numbers of adult students registered in recent years had tended to obscure the underlying movements in the various seasonally adjusted series of the wholly unemployed excluding only school leavers. The version of the X-11 variant of the United States Bureau of the Census seasonal adjustment method II used previously for series other than the national totals (*Statistical News* 17.24) is used for all series.

For further information telephone: 01-930 6200 Ext. 21.

Reference

Department of Employment Gazette August 1972 page 717 (HMSO, price 52½p).

Probation officers and social workers

The *Report of the Butterworth Enquiry into the Work and Pay of Probation Officers and Social Workers* was published in August 1972. The report covers officers of the probation service and local authority social services in England and Wales and Scotland and those on social work in National Health Service hospitals. The secretariat was provided by the Office of Manpower Economics. The results are given of a comprehensive survey of manpower statistics, not previously available to the Home Office or Department of Health and Social Security. Appendices also give details of a survey that was carried out into probation officers' and social workers' attitudes to aspects of their jobs and of a survey of leavers during 1971 from the different services.

The survey of probation officers' and social workers' attitudes used a relatively new and experimental technique of asking the recipients of the questionnaire to assess the degrees of importance attached to each aspect of their overall work satisfaction as well as the degrees of satisfaction with each. Seventeen aspects of the job were listed and respondents were asked to select one of five degrees both of satisfaction and of importance attached to each aspect. These degrees were analysed as percentages 'scores' out of 100, representing maximum satisfaction or importance. The analysis compared the different degrees of satisfaction and importance attached to each aspect by male and female probation officers, male and female Local Authority social workers, and female social workers in National Health Service hospitals. Summary comparisons of the different attitudes were also made by location, age, length of service, marital status and qualifications.

Reference

Report of the Butterworth Inquiry into the Work and Pay of Probation Officers and Social Workers Cmnd. 5076 (HMSO) August 1972 (Price 73p).

Occupational classification

In consultation with other government departments and other organisations concerned with occupational statistics, the Department of Employment has prepared a list of key occupations for statistical purposes (KOS) see *Statistical News* 18.27. The list will be used as a base for occupational statistics compiled by government departments. It is hoped that it will be adopted more widely so that, where practicable, statistics becoming available from different sources will relate to listed occupations or groups of these occupations. The list was included in an article in the September

1972 issue of the Department's *Gazette*. It is also to be found in Volume I of the recently published *Classification of Occupations and Directory of Occupational Titles* (CODOT).

References

Department of Employment Gazette September 1972 (HMSO, Price 52½p).
Classifications of Occupations and Directory of Occupational Titles 3 volumes (HMSO) September 1972 (price £7.00).

INDUSTRIAL STATISTICS

Retail sales index

The monthly index of retail sales has now been rebased on the final results of the 1966 Census of Distribution. An article describing the rebasing process in some detail was published in *Trade and Industry* on 5 October 1972, which also contains seasonally adjusted value and volume series on the new basis for the main aggregates of retail trade. Unadjusted index numbers for the value of sales by individual kinds of business are published in the Service and Distributive series of the *Business Monitor* (references SD1, SD2, SD3 and SD4). The issues of these Monitors for August 1972 contain the rebased index numbers for January 1966 onwards.

For the main aggregates of trade, the differences between the two series are small in relation to the estimated growth in value since 1966 and have, in general, built up gradually over time. There have been a number of slightly more marked changes in the index numbers of the value of sales for particular kinds of business. These stem largely from the use of a more up-to-date structure for the calculations, re-classification of contributors and the incorporation of some late or revised returns from contributors.

1968 Census of Production

Tables providing lists of the separate parts of the Report on the Census of Production for 1968 which had been published and were available from Her Majesty's Stationery Office were given in *Statistical News*, November 1971 (15.17), February 1972 (16.22), May 1972 (17.25) and August 1972 (18.28). The following table provides a list of the further parts which have now been published.

Available parts of the Report on the Census of Production for 1968:

Report Part No.	Description	Standard Industrial Classification Minimum List Heading
14	Fruit and vegetable products	218
16	Vegetable and animal oils and fats	221
17	Margarine	229 (1)
20	Soft drinks	232
21	Spirit distilling and compounding	239 (1)
32	Paint	274
36	Fertilizers	278
38	Formulated adhesives, gelatine, etc.	279 (2)
46	Iron castings, etc.	313
59	Printing, bookbinding and paper goods making machinery	339 (2)
61	Space heating, ventilating and air-conditioning equipment	339 (4)
66	General mechanical engineering	349
71	Electrical machinery	361
74	Radio and electronic components	364
78	Electrical appliances primarily for domestic use	368
80	Shipbuilding and marine engineering	370
84	Aerospace equipment manufacturing and repairing	383
88	Hand tools and implements	391
97	Miscellaneous metal goods	399 (2) (3) (4) (8) (9) (10) (11) (12)
104	Hosiery and other knitted goods	417
110	Textile finishing	423
117	Men's and boys' tailored outerwear	442
118	Women's and girl's tailored outerwear	443
119	Overalls and men's shirts, underwear, etc.	444
127	Glass	463
130	Miscellaneous building materials and mineral products	469 (2)
131	Timber	471
135	Wooden containers and baskets	475
136	Miscellaneous wood and cork manufactures	479
140	Manufactured stationery	483
141	Miscellaneous manufactures of paper and board	484
144	Rubber	491
146	Brushes and brooms	493
149	Plastics products	496
150	Miscellaneous manufacturing industries	499

Reorganisation of industrial statistics

The new system of quarterly sales enquiries which has been fully reported in earlier issues of *Statistical News* will be extended in the fourth quarter of 1972 with the introduction of twelve new enquiries. This brings the total number of enquiries operative in the system to 131. The 12 industries are:

- †Toilet Preparations – MLH 273
- †Synthetic Resins and Plastics Materials – MLH 276/1
- Synthetic Rubber – MLH 276/2
- *Formulated Adhesives, Gelatine, etc. – MLH 279/2
- Aluminium and Aluminium Alloys – MLH 321
- Copper, Brass and Other Copper Alloys – MLH 322
- Other Base Metals – MLH 323

- †Engineers' Small Tools and Gauges – MLH 390
- Bolts, Nuts, Screws, Rivets, etc. – MLH 393
- Drop Forgings, etc. – MLH 399/5
- †Metal Hollow-ware – MLHs 399/6 and 399/7
- Asbestos – MLH 429/1

In each of the above industries the enquiry will cover all establishments with 25 or more employees. The results will be published on a regular basis, subject to safeguards on confidentiality in the Business Monitor series in due course.

The following short period enquiries will continue:
Toilet Preparations – MLH 273

Monthly total turnover enquiry
Synthetic Rubber – MLH 276/2

Monthly enquiry into production, stocks and consumption of synthetic rubber

Aluminium and Aluminium Alloys – MLH 321

Returns by members to the Aluminium Federation

Copper, Brass and Other Copper Alloys – MLH 322

Returns by members to the World Bureau of Metal Statistics

Other Base Metals – MLH 323

Returns by members to the World Bureau of Metal Statistics

Bolts, Nuts, Screws, Rivets, etc – MLH 393

Returns by members to the British Bolt Nut Screw and Rivet Federation

Drop Forgings, etc. – MLH 399/5

Returns by members to the National Association of Drop Forgers and Stampers

New monthly total turnover enquiries will replace existing monthly enquiries into production and stocks of synthetic resins (MLH 276/1) and sales and stocks of asbestos (MLH 429/1) (from January 1973).

Further information on government enquiries listed above can be obtained from:

Department of Trade and Industry,
Economics and Statistics Division 3,
Dean Bradley House,
52 Horseferry Road,
London SW1P 2AG.

Tel. 01-799 5688:

Ext. 107 for enquiries into MLHs 273, 276/1, 276/2 and 279/2;

Ext. 332 for MLHs 321, 322 and 323;

Ext. 101 for MLHs 390, 393, 399/5, 399/6 and 399/7; and

Ext. 110 for MLH 429/1.

†These enquiries will replace existing quarterly enquiries into sales of toilet preparations (MLH 273); sales, production and stocks of synthetic resins (MLH 276/1) (this enquiry will be discontinued after the fourth quarter 1972); deliveries of engineers' tools (MLH 390); sales of hollow-ware (MLHs 399/6 and 399/7).

*It is understood that returns by members to the Adhesive Manufacturers' Association will cease on the introduction of the new quarterly enquiry.

1968 Census of Production of Northern Ireland

Publication of the separate volumes of the 1968 Report on the Census of Production of Northern Ireland has begun and the following are now available from Her Majesty's Stationery Office:

- Vol. 2 Food, drink, tobacco and engineering
- Vol. 3 Textiles and clothing
- Vol. 4 Mineral products; timber and furniture; paper, printing and publishing; other manufacturing trades; construction; gas, electricity and water.

Volume 1, which is the General Report and Summary will be published shortly.

As in Great Britain, this will be the last of the detailed quinquennial censuses and is being replaced by the new quarterly industry enquiries.

An annual Census of Production has been taken every year in Northern Ireland since 1949. The Report on the Census of Production of Northern Ireland 1969 and the similar Report for 1970 will also be published shortly.

Reference

Report on the Census of Production of Northern Ireland 1968 (HMSO Belfast) 1972 (Prices Volume 2, 70p net, Volume 3, 95p net, Volume 4, 95p net).

ENERGY

Digest of United Kingdom Energy Statistics 1972

Expenditure on energy in the United Kingdom during 1971 totalled £5,575 million, equivalent to £100 for every man, woman and child. Of a total energy consumption in the year of 323 million tons coal equivalent, oil accounted for the largest share, meeting 45.6 per cent of demand compared with 42.9 per cent supplied by coal. Natural gas increased its share to 8 per cent. Nearly 11 per cent of the electricity available from the public supply system came from nuclear power stations.

These are a few of the facts presented in the 1972 edition of the *Digest of United Kingdom Energy Statistics* prepared by the Department of Trade and Industry. The Digest continues the series produced by the Ministry of Technology and the Ministry of Power in earlier years. It contains 181 pages, with 121 tables of statistical information supplemented with maps and charts.

The first section of the Digest covers general energy statistics and includes tables showing consumption of each fuel in normal units of measurement, in coal equivalent and in terms of the thermal content of fuels as supplied to consumers. Other sections deal with

the various fuels separately and with coal and oil consumption by the larger industrial undertakings, fuel imports and exports, prices and values of fuels, finance, capital expenditure, purchases and value of output of the main fuel industries and production of certain minerals other than coal.

A new feature in this year's Digest is the Financial Section (Tables 96-98) which presents key financial statistics of the nationalised fuel and power industries in a common form. In the Prices and Values section new charts have been introduced to illustrate the movements in the index of retail prices for fuel and light and in the prices of fuels used by industry. In the Foreign Trade section, a new table gives details of coal imports in 1971, the first year in which large quantities have been imported since 1958.

In the Energy and Coal sections some of the short-term statistics given in previous years have been omitted as, since January of this year, more up-to-date information has been published by the Central Statistical Office in the *Monthly Digest of Statistics*. Similarly, the regional statistics, formerly included in the Industrial Returns section, may be found in the *Abstract of Regional Statistics* to be published later this year by the Central Statistical Office. Information on series which no longer appear in the Digest is available on application to the Department of Trade and Industry. Telephone enquiries - 01-222 7000 Ext. 1348.

Reference

Digest of United Kingdom Energy Statistics, 1972 (HMSO) August 1972 (Price £3.50).

National Coal Board

The *Annual Report of the National Coal Board* for the financial year 1971/72 was published in two volumes by HMSO in September 1972. Volume I reports on the financial results and prospects, and describes significant aspects of all principal headings of deep-mined coal, opencast coal, ancillaries, marketing of solid fuel, the Board as employer, management services and research and development. It includes charts of the most commonly used coal industry statistics for the years 1951 to 1971/72.

Volume II contains accounts and statistical tables including details for wholly-owned subsidiaries, and loans and directions from the Department of Trade and Industry. The main body of this volume is divided between:

- (a) *Financial tables*: profit and loss accounts for collieries (on a national and area basis), opencast and coke ovens - income and expenditure, assets, cash flow and major capital schemes.

(b) *Statistical tables* (national and area): production, mechanisation, disposals, stocks and consumption; manpower – age distribution, recruitment and wastage, deployment, accidents and earnings.

Summary tables for a selection of both financial results and statistics are also included for the period 1947 to 1971/72.

Reference

National Coal Board Report and Accounts 1971-72 (HMSO) September 1972 (Price Volume 1 – Report 57p net; Volume II – *Accounts and Statistical Tables* £1.15 net).

Gas Council and Area Gas Boards

The twenty-third report of the Gas Council and each of the twelve Area Gas Boards were published in October. The Gas Council report summarises the progress of the whole industry and includes a statistical appendix which compares the main activities for each Board. A survey of the year under review – April 1971 to March, 1972 – forms the opening chapter in which reference is made to financial results and to the forthcoming reorganisation of the Industry consequent on the Gas Act, 1972. Subsequent chapters deal with the various fields of operation – gas supplies and distribution, economic planning, finance, marketing and public relations, personnel, research and development.

Throughout the chapters of the Gas Council Report statistics are given which indicate the main features of progress during the year. In the gas supplies chapter, for instance, the increasing dependence upon natural gas is indicated, supported by a map of the national transmission system, together with the reduction in gas making plant capacity. Marketing activities are illustrated by statistics of sales of gas and gas appliances and reference to the conversion to natural gas of appliances owned by more than six million customers. Numbers of customers and numbers of persons employed are also given. The principal statistics are complementary to the revenue accounts in the finance chapter which are also supplemented by schedules for each of the main activities. The supporting statements to the balance sheets analyse capital investment on fixed assets in the year and the net balances of additions (since vesting day) less displacements and depreciation.

Each Area Board's report is similar in form to the Gas Council report with the emphasis being on aspects of local significance. A report of the Gas Consultative Council is appended to each Board report.

References

Gas Council Annual Report and Accounts 1971-2 (HMSO) October 1972 (Price £1.30 net).

Area Gas Board Annual Reports and Accounts 1971-2 (HMSO) October 1972 (Twelve volumes, prices vary between 52p and 73p).

Electricity Supply Industry Annual Reports

Annual Reports

The 1971-72 Annual Reports of the Electricity Council, Central Electricity Generating Board (CEGB) and the twelve Area Electricity Boards in England and Wales were published in September. For Scotland, separate reports for the South of Scotland Electricity Board and the North of Scotland Hydro-Electric Board were published in June and July respectively.

The Electricity Council Report

This summarises the progress of the whole industry in England and Wales and presents the main statistics contained in the annual report of the Boards. A consolidated revenue account and balance sheet for the industry is given together with over twenty five supporting statements. These include details of unit sales and revenue from each main class of consumer, charges against revenue analysed by function e.g. generation, distribution, consumer service, investment, depreciation and financing. As well as following the general rule of comparing current with previous year's figures, some appendices provide comparable data going back over ten years. Figures showing number of consumers, average revenue per unit, electricity generated, fuel used in power stations, generating capacity and transmission circuit miles are presented in this way. Other figures in the appendices give the number of employees of various classifications and the number of accidents to employees during the financial year.

The CEGB Report

In addition to the annual accounts and supporting statements, this report includes several appendices giving data on the generating plant installed in each of the five CEGB regions and its electrical output during the year. Technical details of the new plant brought into operation during the year and under construction at the end of the year are also given. More detailed statistics are published separately in the Board's *Statistical Yearbook*.

Area Board Reports

Each report contains the annual accounts of the Electricity Board and statistics of purchases of electricity from the CEGB, inter-Board transfers, peak demand and unit sales to consumer classes. Also included are details of the distribution systems at various voltage levels and appliance sales through Board shops.

Further information about the contents of the

Annual Reports can be obtained from Mr G. G. Petersen, Commercial Department, Electricity Council, 30 Millbank, London SW1P 4RD (Tel: 01-834 2333).

References

Area Electricity Board Annual Reports and Accounts 1971-72 (HMSO) September 1972 (twelve volumes, prices vary between 47p and 60p).

South of Scotland Electricity Board Annual Report and Accounts 1971-72 (HMSO) June 1972 (Price 68p).

North of Scotland Hydro-Electric Board Annual Report and Accounts 1971-72 (HMSO) July 1972 (Price 73p).

Electricity Council Annual Report and Accounts 1971-72 (HMSO) September 1972 (Price £1.85).

Central Electricity Generating Board Annual Report and Accounts 1971-72 (HMSO) September 1972 (Price 90p).

FOOD

Sources of supply

Detailed information relating to the main sources from which supplies of food and feedingstuffs in the United Kingdom are derived are presented annually in the Ministry of Agriculture, Fisheries and Food series of *Food Facts* releases. Quantities imported, including details of the main countries of consignment, are shown together with home production, and each is expressed as a percentage of total new supplies.

The latest information, which was published in *Food Facts* No. 27 on 11 August 1972, covers the periods 1964-66, 1970 and 1971. Additionally, it shows the volume of imports from the European Economic Community. Copies are available from the Ministry's Press Office at Whitehall Place West, London SW1A 2HH (Tel: 01-839 7711 Ext. 202), as well as statements for earlier periods, including comparison with pre-war supplies.

Food consumption levels

Revised estimates of food consumption in the United Kingdom, together with detailed nutritional analyses for the period 1968 to 1971, were published in *Trade and Industry* 20 July 1972.

The estimates relate to total supplies of food moving into consumption (after deductions for exports, non-food uses and waste) divided by the estimated population to give average consumption per head. They are the only available figures for the total food consumption of the population as a whole, and enable the overall food position to be compared over different periods of time.

The tables include estimates of the consumption of alcoholic drinks, based on statistics collected by HM Customs and Excise of the quantities of spirits, beer and wines retained for use in the United Kingdom.

CONSTRUCTION

Building materials: inquiry into specific minerals extracted in 1972

The Department of the Environment is to conduct an

inquiry during January 1973 in respect of 1972 into the extraction of specific types of minerals used in construction work. The inquiry will supplement existing inquiries into the production of sand and gravel, silica sands and slate conducted by the Department. The minerals to be included after consultation with the relevant trade associations are limestone, igneous rock, sandstone and quartzite, chalk and dolomite. With the exception of dolomite, end uses of minerals raised will be requested. All known extractors of these minerals will be included in the inquiry.

The purpose of the inquiry is to permit the forecasting of future requirements for these minerals at both national and regional levels. The results of the inquiry will also be of use to local planning authorities and the planning branches of the Department in assessing whether sufficient land is available for allocation to mineral extraction. The results will be published in *Housing and Construction Statistics* in a form that will not permit the disclosure of the extraction of any single operator. Details will also be produced in the form of a production leaflet similar to that presently published for sand and gravel.

This inquiry will be replaced in respect of 1973 by an annual inquiry into the extraction of all minerals (excluding fuel, and those minerals for which the Department already collects production data) to be conducted by the Business Statistics Office. This latter inquiry will incorporate at least in part the Department of Trade and Industry's annual inquiry into 'Output, employment, explosives, plant and accidents.'

Industrial building

It was announced in March 1972 (see *Trade and Industry* for 30 March 1972, page 559) that industrial development certificates would no longer be needed in the Development and Special Development Areas, which together cover the whole of the North Region of England, nearly the whole of Scotland, most of Wales and parts of the North West and South West Regions of England. It was also announced that the exemption limits, up to which certificates are not usually needed, were to be raised in the rest of the country. These changes became effective in July 1972. In view of the consequent more limited coverage of the statistics of industrial building, these statistics are not being published after those for the second quarter 1972 but, as announced in *Trade and Industry* for 27 April 1972, page 158, will continue to be available in terms of the more limited coverage. Enquiries should be made to the Department of Trade and Industry, EcS1C, Room 815, Millbank Tower, London SW1P 4QU (Telephone 01-834 2255 Extension 178).

PRICES

Index numbers of wholesale prices – value added tax

The regular monthly published series of wholesale price index numbers is to be compiled exclusive of value added tax (VAT).

This will be in keeping with the present treatment of purchase tax which is excluded. It is expected that users will find VAT-exclusive index numbers more appropriate for most purposes, including their use in cost variation clauses in contracts.

Other tax changes to be made at the same time as VAT is introduced may give rise to difficulties in interpreting the movements of input and output price index numbers during the transitional period; attention will be drawn by the Department of Trade and Industry to major discontinuities that could arise from possible reduction in excise duties on tobacco, etc.

Except when the VAT rates change, VAT-inclusive index numbers, covering commodities all of which are at the same VAT rate, would have the same percentage movement as VAT-exclusive index numbers. Those covering commodities at different VAT rates would not have exactly the same percentage movement, because their relative weights would be based on tax-inclusive instead of tax-exclusive values.

BALANCE OF PAYMENTS

The balance of payments in the inter-war period

The Bank of England have compiled a review of the balance of payments statistics collected in the inter-war period. It is published in the September 1972 issue of the Bank's Bulletin.

The sources and methods used to produce the figures are discussed with reference to some of the economic events of the period and to occasions when better information might have modified the direction or timing of changes in monetary policy.

Tables accompanying the review provide details of the balance of payments figures published before 1939. It is hoped, in a subsequent issue of the Bulletin, to revise these original estimates to take account of the information from official sources and from academic research which has become available since 1939.

Offprints of the Bank's article and copies of the Bank's Bulletin may be obtained from the Economic Intelligence Department, Bank of England, EC2R 8AH.

NATIONAL ACCOUNTS

Derived statistics of national income and expenditure

Economic Trends for October each year contains additional tables providing percentages derived from the figures published in the National Income and Expenditure Blue Book. The time-table for producing the Blue Book does not allow time for the inclusion there of these derived figures but, as they are of general interest and widely used, the figures are made available in this way.

The derived percentages given include those for the composition of total final expenditure, total domestic income and total personal income; also given are growth triangles (which show the annual rates of change between any given part of years) for gross domestic product at constant factor cost in the years 1950 to 1971. Similar growth triangles are available on request from Mr K. J. Newman, Central Statistical Office (Telephone 01-930 5422 Ext. 638) for the main components of final expenditure at constant prices (consumers' expenditure, public authorities' current expenditure on goods and services, gross domestic fixed capital formation, exports and imports of goods and services, and total final expenditure) and for personal disposable income revalued at constant prices.

References

National Income and Expenditure 1972 (HMSO) September 1972 (Price 85p).
Economic Trends (HMSO) monthly (Price 63p net).

METHODOLOGY

Snapshot moments and their interpolation in complex system models

A complex system developing continuously through time can often be studied by analysing the system at certain moments. These must be related to one another and to the rest of time through assumptions on how the system changes in the intervening periods.

In particular the daily operations of a seasonal industry throughout the year can be represented by a detailed analysis of a small number of 'snapshot' days, and interpolation between them to give other days. Likewise the development of the industry over a period of years can often be adequately represented by studies of several 'snapshot' years.

The justification and implementation of this approach are given in a paper, by Dr G. R. Hext, which has been published in the June 1972 issue of *Operational Research Quarterly*. The need for the study arose while Dr Hext and his colleagues were working on models of the gas and electricity industries at the Department of

Trade and Industry, and the paper is illustrated by a very simple model of the gas industry. However, the implementation is given in considerable detail so that the approach can be applied to complex linear systems, and others beside.

Copies of his paper may be obtained from the author, Dr G. R. Hext, Central Statistical Office, Great George Street, London SW1P 3AQ (Tel: 01-930 5422 Ext. 579).

Reference

Operational Research Quarterly Volume 23 No. 2, pp. 177 to 194 (Pergamon Press, 1972).

INTERNATIONAL

Taxes and social security contributions: international comparisons

An article published in the October 1972 issue of *Economic Trends* by the Central Statistical Office shows a comparison of taxation in fourteen of the world's leading industrial countries for the years 1968-1970. The tables are based on international returns made to and published by OECD in *National Accounts 1960-70* and show for each country total taxes and social security contributions as a percentage of gross national product and, for the latest year, an analysis by type of tax. Similar articles covering earlier periods have appeared in the May 1969, August 1970, and May 1971 issues of *Economic Trends*.

Reference

Economic Trends (HMSO) monthly (Price 63p net).

PUBLICATIONS

Housing and Construction Statistics

The new quarterly *Housing and Construction Statistics* announced in *Statistical News* 17.30, has now been published, together with the *Notes and Definitions Supplement*.

The regular tables in this and subsequent issues include sections on housing and other building costs and prices, the value of contractor's output and new orders, local authority design work, employment, housebuilding performance, local authority housing, improvement grants, slum clearance, housing finance, rent regulation and building materials.

Each issue will contain additional or more detailed information in supplementary tables, most of which will appear annually. In the first issue these include figures which supplement the regular tables on the cost of construction and the value of output and new orders. Figures of output, new orders and employment are given for Northern Ireland and for local authority direct labour organisations. Supplementary tables on

housing include the latest estimates of the stock of dwellings in Great Britain by region, by tenure and by age. Annual figures are included of local authorities' housing completions by type of authority and details of industrialised systems used, and the half-yearly table of local authority rents is brought up to date. Some of the principal results of the 1971 House Condition Survey of England and Wales are presented (see *Statistical News* 18.26).

Supplementary tables in later issues will include most of the information from those tables, regular or supplementary, in the two former publications which have been omitted from the quarterly series in the new publication. Telephone 01-839 7848 Ext. 345 for further information.

References

Housing and Construction Statistics 1 (HMSO) September 1972 (Price 75p net).

Notes and Definitions Supplement to the above (HMSO) September 1972 (Price 25p net).

(Annual subscription including Supplement and postage £3.55).

Family Expenditure Survey 1971

The *Family Expenditure Survey Report for 1971* was published in September. It follows the general pattern of the reports in recent years but includes several new tables. These are expenditure analyses for households of which the head is self-employed, for men and for women living alone distinguishing those above pensionable age, and for those households which have and those which do not have the use of a car. For the first time, regional expenditure and income figures are given for a single year; in recent years only two-year averages have been given.

Reference

Family Expenditure Survey Report for 1971 (HMSO) September 1972 (£2.40).

New Business Monitors

Seven new Business Monitors have recently been published in the Production series. Six of these present the results of new quarterly inquiries into manufacturers' sales, while the seventh (reference P113) presents the results, in index number form, of the new monthly inquiry into sales and orders by firms classified to the mechanical, instrument and electrical engineering industries (Orders VII, VIII and IX of the Standard Industrial Classification - Revised 1968). All seven inquiries are being conducted by the Business Statistics Office as part of the new system of industrial statistics. Note: P113 was shown in error as a new issue in *Statistical News* 17.29.

The full list of new titles is:

- P23 Office machinery
- P64 Metal-working machine tools
- P113 Engineering (volume indices of sales and orders)
- P117 Production of man-made fibres
- P131 Canvas goods and sacks and other made-up textiles
- P134 Scales and weighing machinery and portable power tools
- P135 Food and drink processing machinery and packaging and bottling machinery.

The first two Business Monitors listed above replace three existing Business Monitors, the new P64 covering both the previous quarterly issue with the same reference and P76 (Numerically-controlled metal-working machine tools) which was discontinued after the publication of the issue relating to the third quarter of 1971. The monthly edition of P64 will continue to be published. The former quarterly inquiries into office machinery, metal-working machine tools and numerically-controlled metal-working machine tools were continued into the fourth quarter of 1971 in order to provide an overlap with the new inquiries and the results of both inquiries are shown in the issues relating to that quarter.

For the last four new Business Monitors listed above, the value of sales is being collected and published on a quarterly basis for the first time.

In addition to sales data, Business Monitors P23, P64 (quarterly issue), P131 and P134 contain statistics on imports and exports; and the P64 (quarterly issue) also includes statistics on orders with those for the export market shown separately. Business Monitor P117 contains employment figures and index numbers of production and wholesale prices for man-made fibres.

Each title can be obtained by subscription from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH at £1 per annum for P64 and P113 and at 37½p per annum for the remainder.

Existing subscribers to P23, P64 and P76 will receive copies of the appropriate new Business Monitors for the duration of their current subscriptions.

Statistics of trade unions and employers' associations

In his first report published in July, the Chief Registrar of Trade Unions and Employers' Associations details changes resulting from the reorganisation of the system of registration, including the implications for statistical data.

The Chief Registrar of Friendly Societies' final report on Trade Unions, published on 25 October 1971, contained a historical account of the development of

the previous system of registration under the Trade Union Act of 1871. In the first Report made under the Industrial Relations Act 1971, it is accepted that little of the valuable statistical basis of reports under the previous legislation could be available for 1971. The new Act did not empower the Chief Registrar to ask organisations on provisional registration during the last three months of 1971 to provide annual returns for 1971. Statistical material for 1972 will be available in 1973, and it is intended that future Reports will be published in October of each year.

Since the legal definition of a 'trade union' was changed by the Industrial Relations Act, continuity and comparability with the statistics formerly published by the Registry of Friendly Societies will not be possible. Details of the number of organisations on the registers at 31 March 1972 are given in the first of the new Reports and, in future years, similar detail will be given as at 31 December. In addition it is intended to give particulars of complaints dealt with during the year. A general statistical summary covering all registered trade unions and employers' associations will be provided, including totals of membership and funds and a statement of total income and expenditure.

Reference

Report of the Chief Registrar of Trade Unions and Employers' Associations for the year 1971 (HMSO) July 1972 (Price 50p net).

National Institute Economic Review

In addition to its regular survey of recent trends and current prospects in the UK and world economies, the August issue of the *National Institute Economic Review* contains articles on the flow of building societies' funds and on relative labour costs in industrial countries. (Copies of the *Review* can be obtained from 2 Dean Trench Street, Smith Square, London SW1P 3HE.)

'Building societies' behaviour, 1955-1970', by C. St. J. O'Herlihy and J. E. Spencer, presents a set of structural equations which describe the determination of the major financial flows involved in the building societies' balance sheets (new deposits and withdrawals and mortgage advances and repayments) and of the two key interest rates over which the societies have control (the rate of interest offered on shares and deposits, and the mortgage rate). The results, which appear good by the usual statistical criteria, indicate the desirability of considering deposits and withdrawals separately rather than on the net basis implied in the more common capital stock approach. They also suggest that lags in adjustment to changes in the determining factors are quite long and that mortgage rationing has had an important influence on the amount of funds advanced.

'Labour costs and international competitiveness', by G. F. Ray, compares hourly labour costs in 1970 in eighteen sectors of manufacturing industry in the United States, Canada, Japan, and fifteen Western European countries. It shows British costs to have been consistently among the lowest (at 1970 rates of exchange), as hourly wages and earnings were only about average by European standards, whereas social charges were exceptionally small. Even in terms of national currencies wage earnings rose rather more slowly during the 1960's in Great Britain than in other Western European countries, and the disparity was increased by the decline in the international value of the pound. The slow rise in productivity has meant even so that wage costs per unit of output have increased relatively quickly in the United Kingdom, and the adverse effects on competitiveness have contributed to the fall in the United Kingdom's share of world exports.

Annual statistical survey of the electronics industry

The annual statistical survey prepared by the National Economic Development Office for the Economic Development Committee for the Electronics Industry provides a comprehensive collection of recent statistics on the United Kingdom electronics industry. It contains sections on:

Telecommunication equipment

Computers

Components

Consumer goods

Capital equipment

and gives information on:

Production and sales

Overseas trade

Employment

Earnings

Scientific research and development

Investment

The 1972 edition published in September includes data up to and including 1971, and gives a complete guide to sources of further information.

Reference

Annual statistical survey of the electronics industry (HMSO) September 1972 (Price 60p including postage).

Greater London Council publications

Writing in the June Quarterly Bulletin of the Intelligence Unit, Greater London Council, W. Young of the Strategy Branch of the Department of Planning and Transportation describes how a linear programming model can be applied to the problems of planning.

His article 'Planning - a linear programming model' begins by identifying the activities involved in planning. It then describes the Greater London Council model,

its uses, and possible improvements to it. This article is followed by an Appendix entitled 'Modelling a hypothetical region'. In this illustration the characteristics of a planning region are supplied and the way the data are used in the model is described. In a second article Miss E. Haran and Paul Sedgwick of the London Borough of Southwark describe the Central London Land Use System (Cluster) which has been adopted by the planners of seven London Boroughs. This system is concerned primarily with land use as it affects employment and is intended to assist planners by keeping records up to date and making readily available accurate data on these subjects for areas of any size.

Research Memorandum 350, Surveys of Personal Income in London is produced by the Department of Planning and Transportation and written by R. U. Redpath, M. G. Powell and Mrs. S. Kingaby. The report discusses the four main sources of government statistics on incomes in the Greater London Council Area. Present coverage of these sources is compared with their planned future coverage and also with that of proposed new surveys.

References

GLC Intelligence Unit *Quarterly Bulletin* No. 19 June 1972. Obtainable from the Information Centre, The County Hall, London, SE1 7PB (price 50p postage extra).

Research Memorandum 350 Surveys of Personal Income in London. Available from Room 512A, County Hall, London SE1 7PB free of charge.

FITC Statistical Review and Mapbook

The Foundry Industry Training Committee has published its fourth *Statistical Review* for 1970-71. The *Review* contains details of the manpower structure of the industry, labour turnover, training (including off-the-job training), further education, instructors and training officers, and the age and length of service of employees in key occupations. Most of the above information is analysed by size of establishment and region.

As a supplement to the *Statistical Review* the Committee has also published *Mapbook 1971*. This shows the location of the industry geographically and according to Department of Employment employment exchanges. The number of establishments or employees at a location is represented by a symbol within an outline map. Included are maps showing the location of different types of foundries, (e.g. iron foundries), master patternshops, establishments which have opened and closed, the location of establishments with employees in key occupations, and the location of establishments supporting off-the-job training. Copies of either publication can be obtained from the Information Officer, Foundry Industry Training Committee, 50/54 Charlotte Street, London W1P 2EL.

GOVERNMENT STATISTICAL SERVICE

Reorganisation of the Central Statistical Office

Following new appointments at Deputy Director and Assistant Director level, the organisation of the Central Statistical Office has been rearranged from October 1972. The Office will be divided into five divisions. The Deputy Director (*Mr. A. J. Boreham*) will share with the Director (*Professor C. A. Moser*) responsibility for all parts of the Office and will have one division reporting to him direct. The remaining four divisions will report to the Assistant Directors, whilst the International Section reports direct to the Director.

The CSO has two kinds of function. On the one hand it produces major macro-economic statistics, including national accounts, balance of payments statistics, financial statistics, index of production, input-output analysis and so forth. It is also deeply involved in social statistics. On the other hand, the CSO is responsible for the management and co-ordination of the Government Statistical Service (GSS) as a whole and this is done through Committees and central management units concerned with GSS staffing, programme development, survey control, classifications, international relations, computers, research and special studies, and publications and information. In many cases the two kinds of function of course inter-relate closely.

The main feature of the new organisation is that the responsibilities of the divisions are functionally more homogeneous than in the previous structure. It also reflects certain additional responsibilities on the CSO, some of which will come from United Kingdom accession to the European Communities. (The work that this will cause will be substantial both for statistical series compiled by the CSO and in the guidance and assistance required by the rest of the GSS.) Some of the former responsibilities of the Treasury on input-output have been transferred to the CSO and, on 1 April 1973, the CSO will take over operational and financial responsibility for the Treasury computer, the activities of which will be jointly supervised by a CSO/Treasury steering group.

The duties and senior staffing of each division are as follows:

i. National Income and Expenditure Division

This division reports to *Mr J. W. S. Walton*, Assistant Director, and will have three Chief Statisticians (of whom *Mr J. Hibbert* and *Mr R. W. Green* are already in post). It is responsible for national and public sector accounts, consumers' expenditure, consumer prices, capital formation and stocks, balance of payments and financial statistics.

ii. National Output, Employment and Prices Division

This division reports to *Mr A. A. Sorrell*, Assistant Director, and has three Chief Statisticians, namely *Mr R. M. Norton*, *Mr G. A. Dean* and *Dr S. Rosenbaum*. It is responsible for index of production, output estimates of gross domestic product, business statistics, input-output (including the former Treasury responsibilities), and statistics of research and development, employment and prices (excluding consumer prices). This division will also be responsible for relations with the Business Statistics Office and *Mr Sorrell* will be responsible for internal management of the CSO.

iii. Management and Co-ordination Division, European Communities

This division reports to *Mr S. F. James*, Assistant Director, and will have three Chief Statisticians (of whom *Mr D. Harris* and *Mr W. B. Wakefield* are already in post). It is responsible for Statistician Group management, programme development, planning, survey control, classifications, regional statistics, distribution of income, research and special studies, and academic liaison. It will have the central responsibility for looking after the implications of membership of the European Communities for the work of the GSS. Two former senior members of the GSS (*Mr R. E. Beales* and *Mr J. Stafford*) will be attached to this division as part-time consultants.

iv. Development, Computers and Communications Division

This division reports to *Mr O. Nankivell*, Assistant Director, and includes *Dr J. Harding*, Senior Principal Scientific Officer, head of the Computer and Data Systems Unit. The CSO's Publications Unit and Press and Information Service belong to this division. However, the particular emphasis in this, to a large extent, new division will be on development work and includes responsibility for technical and methodological developments for statistics in the CSO, and for its present work programmes on leading indicators, revisions, variability, and timeliness.

v. Social Statistics Division

This division reports direct to *Mr A. J. Boreham*, Deputy Director, and has two Chief Statisticians, *Mr R. E. Fry* and *Mrs M. Nissel*. It is responsible for the co-ordination and development of social statistics, for the publication *Social Trends* and work on social indicators.

Business Statistics Office: telex service

A telex service has now been introduced at the Business Statistics Office, Cardiff Road, Newport, Monmouthshire, NPT 1XG. The telex number is 497121.

Retirement

Mr J. Stafford, CB

At the end of September 1972 Mr J. Stafford retired from the post of Director of Statistics in the Department of Trade and Industry (formerly Board of Trade) which he had held since 1948.

Mr Stafford was a graduate of Manchester University where he served as Assistant Lecturer in Economics (1930) and Lecturer in Economics (1934). He joined the Central Statistical Office in 1941 and was Acting Director in 1946 when Harry (later Sir Harry) Cameron, the then Director, was seconded to the United Nations Statistical Office.

The Board of Trade, later the Department of Trade and Industry, with its industrial, trade and economic responsibilities, has played a large part in the collection of statistics and in developing the framework of industrial and commerce information. In his twenty four years as Director Mr Stafford has taken a major role in organising the transition between a statistical system which largely reflected the operation of war-time controls and today's framework which serves as a basis for the national accounts, for economic reporting in many spheres and for the market intelligence of industry and business. Before the setting-up of a separate group of economists within the Board of Trade – and to a large extent even after that time – Mr Stafford was also in effect the economic adviser to a succession of Presidents and Permanent Secretaries.

In the early 1950's came the present system of wholesale price statistics which replaced the earlier pre-war approach; this broke new ground in the way in which the weighting for the index numbers was derived from the Census of Production, and it provided essential deflators for the construction of the constant price series of the national accounts – which are the series we have in mind when we talk every day about the 'level of activity' and the growth of the economy.

Another major development was the establishment of a comprehensive system of statistics in the distribution and service field. The first step was the taking, in 1951, of the first Census of Distribution. The monthly retail trade statistics which, established pre-war in a limited field, had been taken over by the Board of Trade in 1946, were put on a proper statistical foundation to represent the whole of retail trade and to make use of the benchmark data provided by the first Census of Distribution; these were followed by statistics of the

hire purchase business of retailers and of finance houses.

In the industrial field the Census of Production was being re-established after the war years, the first post war census covering the year 1948. There were continued improvements to the short-term production enquiries with major new quarterly inquiries covering industry's capital expenditure and stocks. The investment intentions inquiry in which companies regularly provide forecasts of their expected capital expenditure was launched in 1955.

The 1960's saw the consolidation and improvement of the earlier work and its extension in related fields. The needs, however, of industry and Government for up-to-date statistical information continued to grow and following the report from the Estimates Committee on the Government Statistical Services (*Fourth Report from the Estimates Committee, Session 1966-67*, December 1966) a new approach to the system of industrial statistics was worked out. Subsequently there was the development of a new Business Statistics Office out of the existing Board of Trade Census Office. The new system, which is still being perfected, was described by Mr Stafford in the first issue of *Statistical News* 1.7.

Mr Stafford was a major participant in statistical discussion and policy making through the various committees etc. which link the statistician group in the Government service. He was also, through his attendance at international conferences of statistical bodies, recognised throughout the world as a master of his craft.

Mr Stafford's retirement will not be quite complete for he will be acting as a part-time consultant in the CSO, concentrating principally on survey control.

Deaths

Readers will learn with regret of the death of *Mr R. L. Brown*, Chief Statistician on 9 August 1972. Mr Brown headed the Research and Special Studies Unit in the Central Statistical Office.

It is also with regret that the death on 27 August 1972 is recorded of *Mr W. D. Stedman-Jones*, former Chief Statistician and Consultant, Central Statistical Office.

Appointments and changes

CENTRAL STATISTICAL OFFICE

Mr O. Nankivell, Deputy Director (Statistics) Economic Assessment Division, HM Treasury, transferred to an Assistant Director (Under Secretary) post in the Central Statistical Office on 2 October 1972.

Mr A. A. Sorrell, Chief Statistician, was appointed Assistant Director (Under Secretary) on 2 October 1972.

Mr J. W. S. Walton, Chief Statistician, was appointed Assistant Director (Under Secretary) on 2 October 1972.

Mr G. A. Dean, Chief Statistician, HM Treasury, has transferred to a post at the same level in the Central Statistical Office.

Mr R. M. Norton, Statistician, Department of Trade and Industry has been promoted to a Chief Statistician post in the Central Statistical Office.

DEPARTMENT OF TRADE AND INDUSTRY

Mr D. C. Upton, Chief Statistician, HM Treasury has been transferred to a post at the same level in the Department of Trade and Industry (EcS 2C).

Mr J. M. Simmonds, Statistician, Head of Branch D (EcS 3), has been promoted Chief Statistician and is in charge of Distribution Statistics, Business Statistics Office, Newport in place of *Mr H. E. Browning* who has retired.

HOME OFFICE

As the result of reorganisation in the Home Office, a new Statistical Department has been formed.

Mr T. S. Lodge, CBE, Director of Research and Statistics, will continue as Director of Research.

Miss S. V. Cunliffe, Head of the Home Office Research Unit, was appointed Director of Statistics (Assistant Under Secretary of State) on 21 August 1972.

Dr C. M. Glennie has been promoted to an additional Chief Statistician post in the Statistical Department.

OFFICE OF POPULATION CENSUSES AND SURVEYS

Mr M. Reed, CB has retired as Director and Registrar-General and has been succeeded by *Mr G. Paine*, Director of Statistics and Intelligence, Board of Inland Revenue on promotion to Deputy Secretary.

Mr N. H. W. Davis, Statistician has been promoted to a new Chief Statistician post in the Population Statistics Division.

Mr J. L. Nicholson

Mr Nicholson, Chief Economic Adviser to the Department of Health and Social Security, has been appointed to an Associate Professorship in Quantitative Economics at Brunel University. This is a part-time appointment which will involve the equivalent of half a day a week during term time.

List of principal statistical series and publications

Amendment list no. 2

Introductory note

It was stated in the CSO's new guide, the *List of principal statistical series and publications* (HMSO) May 1972 (price 47p) that amendments and additions to the list would be summarised regularly in *Statistical News* so that users could keep their copies up to date. The second list of amendments, covering the period from June to September is given below. The first list of amendments appeared in the August 1972 issue of *Statistical News*; a limited number of offprints are available and copies can be obtained from the Publications Unit, Central Statistical Office, Telephone 01-930 5422, Ext. 504.

Amendments to Part I. List of principal series

	Page	
Social Statistics		
5. Housing	5	
Note: The former publications, <i>Housing Statistics, Great Britain</i> and the <i>Monthly Bulletin of Construction Statistics</i> , have been replaced by a new quarterly publication, <i>Housing and Construction Statistics</i> . Consequential amendments to the <i>List</i> are given below.		
(a) New houses started, under construction and completed		
Delete (in headings and notes) <i>Housing Statistics, Great Britain</i> ; substitute <i>Housing and Construction Statistics</i> . Add to note after quarterly entry: 'A table of housing and construction 'activity indicators' (such as housing starts and completions), quarterly series in index number form with a common base year, now appears in <i>Housing and Construction Statistics</i> '		
(b) Stock of dwellings		
(c) Improvement grants approved		
(d) Slum clearance		
(e) Loans for house purchase		
Delete <i>Housing Statistics, Great Britain</i> : Substitute <i>Housing and Construction Statistics</i>		
Labour		
1. Employment		
(c) Series for individual industries		
Add in heading 'and quarterly' after monthly. Delete <i>Monthly Bulletin of Construction Statistics</i> : Substitute <i>Housing and Construction Statistics</i> .		7
2. Unemployment and vacancies		
(a) Unemployment		
Penultimate line of notes: add after 'school leavers', 'and adult students'.		
3. Hours worked; industrial stoppages	8	
(c) Hours worked		
Last line of notes under annual heading: Delete '(1968 and 1970)' (from the 1970 survey, an annual volume is being published).		
4. Wages and earnings		
(e) New earnings survey		
Amend end of last sentence of notes to read 'volumes entitled <i>New Earnings Survey</i> '.		
Production Industries	10	
1. The Census of Production and indexes of industrial production		
(a) Census of Production		
Second paragraph of the notes, add 'The 1968 report is being issued in four volumes'.		
2. Production of individual industries		
(a) Short-term series		
In heading and second paragraph of notes, delete <i>Monthly Bulletin of Construction Statistics</i> : substitute <i>Housing and Construction Statistics</i> . Amend beginning of second paragraph to read 'Quarterly figures'		
(b) Annual series		
Heading and second line of notes: amend <i>Digest of Energy Statistics</i> to read <i>Digest of United Kingdom Energy Statistics</i>		11

3. Construction Statistics

(a) Value of output and production indices

Amend title to read 'Value and indices of output'. Delete *Monthly Bulletin of Construction Statistics*: Substitute *Housing and Construction Statistics*. At the beginning of the note delete the bracket before the words in Great Britain. Insert bracket before the word 'and'. After the word 'and' insert the words 'annual value in' so that sentence reads 'The quarterly value of work done in Great Britain (and annual value in Northern Ireland separately) by contractors . . .'. Delete the third sentence. Amend the start of the next sentence to read 'Output indices by type of work at constant prices, seasonally adjusted . . .'. Amend the penultimate sentence to read 'Results are published annually in *Housing and Construction Statistics*'. Amend the end of the last sentence to read 'regional analyses are also published'.

4. Orders on hand

(b) Construction

In the heading, amend 'monthly and quarterly' to 'read 'quarterly and annual'. Delete *Monthly Bulletin of Construction Statistics*; Substitute *Housing and Construction Statistics*. In the first sentence of the notes, amend '(monthly)' to read '(quarterly)'; amend '(quarterly)' to read '(annually)'. Amend the second sentence to read, 'Quarterly figures for Great Britain are also given by region and indices are given at constant prices, seasonally adjusted'.

Distribution and Other Services

2. Retail sales and turnover

(a) Retail trade

In the second sentence of the note, after '(1966) census of distribution and' insert 'were rebased on the final results in October 1972. They' so that entry reads 'The estimates project in index number form the results of the latest (1966) census of distribution and were rebased on the final results in October 1972. They are shown separately for . . .'

Prices

1. Wholesale and retail prices

(a) Index numbers of wholesale prices

In the final paragraph of the note delete *Monthly Bulletin of Construction Statistics*. Substitute *Housing and Construction Statistics*. Amend 'monthly index numbers' to read 'quarterly index numbers'.

(d) Index of new house prices

Delete *Monthly Bulletin of Construction Statistics*. Substitute *Housing and Construction Statistics*.

National Income and Expenditure

2. Current expenditure

(c) Family expenditure surveys

Third line of notes, delete '(for two-year periods)'. Fifth line: delete 'N. Ireland Government'; substitute 'Economic section of the Ministry of Finance.'

3. Fixed investment

(b) Fixed capital expenditure in manufacturing industry

In the first sentence of the note, after the words 'panel of' insert 'predominantly'.

(c) Fixed capital expenditure in the shipping, distribution and service industries.

In the first sentence of the second paragraph of the note after 'results are' insert 'usually' so that entry reads:— 'Annual figures are collected from a larger sample of firms and results are usually published in *Trade and Industry* each year around April'.

(d) Industrial building

Delete entry. (Series discontinued; see note on page 19.29 of this issue of *Statistical News*).

4. Stocks

(e) Commodity stocks

In the second sentence of the notes delete 'Monthly'. Substitute 'Quarterly'. Delete *Monthly Bulletin of Construction Statistics*. Substitute *Housing and Construction Statistics*. Alter final title to read '*Digest of United Kingdom Energy Statistics*'.

5. Investment intentions

(a) Manufacturing, shipping, distribution and other service industries.

In the first line of the note delete 'sample' and substitute 'panel' so that the phrase reads 'much the same panel of companies as . . .'. In the third line of note delete 'twelve' and substitute 'fourteen'. Amend the end of the line to read '. . . in question, two main'. In the fourth line of note delete 'the summer and at the end of' so that the entry reads:— 'a preliminary inquiry about fourteen months before the beginning of the year in question, two main inquiries in the preceding year, and the final inquiry in the summer of the year concerned'. In the final sentence insert 'Estimates of' before 'percentage . . .'

(b) Building: local authority design work.

Delete *Monthly Bulletin of Construction Statistics*. Substitute *Housing and Construction Statistics*.

Financial and Business Statistics

4. Banking

(e) Bank advances

23

At the end of the note insert: 'Seasonally adjusted figures of quarterly changes in advances to each industry group appear in *Financial Statistics* and the *Bank of England Bulletin*'.

Amendments to Part II. List of Publications**Page 28****Agricultural Statistics, Scotland**

Delete 90p (1970). Substitute £1.10 (1971)

Annual Statistical Survey of the Electronics Industry

Delete (2) Free. Substitute 50p (August 1972)

Annual Statistics for the Corporation

Delete (1970). Substitute (1971)

Page 29**British Labour Statistics: Year Book**

Delete £6.50 (1969). Substitute £7.20 (1970)

Business Monitors: Production series**Chemicals and Allied Industries**

P 58 Delete Pesticides and allied products. Substitute Formulated pesticides etc.

Mechanical Engineering

Amend title of P 47 to read Construction and earth moving equipment. Delete entries for monitors

P 70 Cranes, P 3 Industrial trucks and tractors, P 76 Numerically controlled metal-working machine tools.

Amend title of P 13 to read Industrial engines

Amend title of P 27 to read Mechanical handling equipment

Add following new series:

P 135 Food and drink processing and packaging and bottling machinery

Quarterly

P 134 Scales and weighing machinery and portable power tools

Quarterly

Page 30**Vehicles**

P 30 Add to title 'caravans and freight containers'.

Textiles

Add following new series:

P 131 Canvas goods, sacks and other made-up textiles

Quarterly

P 117 Production of man-made fibres

Quarterly

Page 31**Children in care in England and Wales**

Delete 15p (March 1970). Substitute 16p (March 1971). Delete Home Office. Substitute Department of Health and Social Security

Criminal Statistics, England and Wales

Delete £1.90 (1970). Substitute £2.05 (1971)

Department of Health and Social Security Annual Report

Delete £2.80 (1970). Substitute £2.85 (1971)

Digest of Energy Statistics

Amend title to read *Digest of United Kingdom Energy Statistics*

Delete £3 (1971). Substitute £3.50 (1972)

Page 32**Digest of Welsh Statistics**

Delete £1.10 (1970). Substitute £1.95 (1971)

Education Statistics for the United Kingdom

Delete £1.50 (1969). Substitute £1.75 (1970)

Family Expenditure Survey, Report

Delete £2.30 (1970). Substitute £2.40 (1971)

Health Services in Scotland, Reports

Delete 95p (1970). Substitute £1.20 (1971)

Housing statistics, Great Britain

Delete Title and price. Substitute *Housing and Construction Statistics* 75p.
Add further page references 7, 10, 11, 15, 17, 18.

Insurance Business Statistics

Delete £13 (Sept 1966–Aug 1968). Substitute £15 (Sept 1968–Aug 1969)
Delete Biennial. Substitute Annual

Judicial Statistics, Scotland, Civil Judicial Statistics

Delete 30p (1970). Substitute 32p (1971)

Page 33

Local Housing Statistics, England and Wales

Delete 85p. Substitute (Priced individually)

Monthly Bulletin of Construction Statistics

Delete entry

National Income and Expenditure

Delete 75p (1971). Substitute 85p (1972)

New earnings survey

Delete £2.80 (1970). Substitute £3.00 (1971)

Offences of drunkenness

Delete 12½p (1970). Substitute 8p (1971)

Offences relating to motor vehicles, return

Delete 90p (1970). Substitute 61p (1971)

Output and Utilization of Farm Produce in the United Kingdom

Delete 17p (1964/65 to 1969/70). Substitute 50p (1964/65 to 1970/71)

Post Office Report and Accounts

Delete 1970–71. Substitute 1971–72

Prisons in Scotland, Report

Delete 54p (1970). Substitute 61p (1971)

Quarterly Return, The Registrar General's (Northern Ireland)

Delete 17½p. Substitute 18½p

Page 34

Report of the Chief Registrar of Friendly Societies

Part 2 Building Societies

Delete 50p. Substitute 60p (1971)

Part 3 Industrial and Provident Societies

Delete 45p. Substitute 54p (1971)

Report on Hospital in-patient enquiry

Part I Delete £2.10 (1968). Substitute £2.50 (1969)

Preliminary Tables

Delete 42p (1969). Substitute 34p (1970)

Report on the administration of Home Office services, Northern Ireland

Delete 75p (1969). Substitute 85p (1970)

Report on the Census of Production (Northern Ireland)

After '1968 Vol 2 (Food, drink and tobacco, engineering) 70p', add Vol 3 (Textiles and clothing) 95p.

Report on the work of the Prison Department

Delete 65p (1970). Substitute 73p (1971)

Scottish Economic Bulletin

Delete 30p. Substitute 39p

Scottish Educational Statistics

Delete £2.40 (1970). Substitute £2.85 (1971)

Scottish Health Statistics

Delete £5.50 (1969). Substitute £2.00 (1970)

Page 35

Statistics of Education

Volume 1 Schools

Delete £1.70 (1970). Substitute £1.75 (1971)

United Kingdom Balance of Payments

Delete (1971). Substitute (1972).

Alphabetical Index

The index to *Statistical News* covers the last nine issues. Page numbers are prefixed by the issue number e.g. 11.31 signifies issue number 11, page 31.

Generally speaking articles relating to 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.

- abortions, 13.26, 17.21
- accidents, road, 12.24
- acquisitions and mergers, 14.16
- actuarial services, official, new organisation, 11.38
- agricultural census, England and Wales, reshaping the, 19.14 (A)
- agricultural industry *Annual Review*, 13.23
- agricultural property
 - capital investment, 11.31
 - expenses, 11.31
 - outgoings, 11.31
- agricultural wages, 11.32
- agriculture
 - aerial spraying, 16.25
 - egg yield survey, 14.13
 - Farm Classification in England and Wales*, 16.25
 - farm finance, 14.12
 - food marketing trends in the UK, 18.7 (A)
 - harmonised accounts for net output and farming
 - net income, 13.23, 15.19
 - measuring self-sufficiency for food and drink, 16.25
 - new statistics, 13.23
 - Northern Ireland, 12.24
 - output estimates, 12.23, 15.19
 - Scotland, 17.27
 - statistics of wages and earnings, 11.32
 - use of contracts, 16.26
- aid to developing countries, 11.7 (A), 12.27, 14.15, 16.27
- air transport growth, 13.23
- airline financial statistics, 12.25
- Annual Abstract of Statistics*, 13.29
- average earnings, index of, 15.16
- baking industry, pay, 11.35
- balance of payments
 - current balance, 11.4 (A)
 - effect of changes in exchange rates, 16.27
 - in inter-war period, 19.30
 - invisible earnings, 11.4 (A)
 - new presentation, 11.34
 - official borrowing, 13.24
 - official lending, 13.24
 - overseas sterling area, 11.35, 17.27
 - seasonal adjustments, 11.35
 - total currency flow, 11.4 (A)
 - UK external assets and liabilities, 14.13
 - visible balance, 12.26
- Bank of England Statistical Abstract*, 12.29
- births
 - by parents' birthplace, 12.17
 - in England and Wales, 13.18
- Bolton Report, 11.16 (A), 17.32, 18.16 (A)
- Britain and International Tourism*, 17.30
- British Aid Statistics*, 11.7 (A), 16.27
- British Labour Statistics:*
 - Year Book 1969*, 16.20
 - Year Book 1970*, 19.23
- building
 - industrial, 19.29
 - materials, 19.29
- Business Monitor series, 11.28, 12.21, 12.29, 13.28, 14.15, 15.22, 16.31, 17.29, 18.30, 19.31
- Business Statistics
 - Office, 11.37, 11.38, 13.1 (A), 13.30, 14.18, 15.23, 18.19 (A)
 - telex service, 19.35
- Users Conference, 12.31, 18.35

- cancer incidence, 17.20
- capital consumption estimates, 15.21
- car ownership, growth, 13.30
- car registrations, seasonal adjustment, 11.34
- catering trades, 1969 enquiry, 15.8(A)
- Census of Distribution**
 - for 1966, 14.11, 19.25
 - for 1971, 12.22, 15.19, 16.11(A)
- Census of employment, 13.21, 17.24
- Census of Population**
 - census tests, 19.20
 - future, 16.4 (A)
- Census of Population 1966*
 - Economic Activity Sub-Regional Tables*, 11.24, 12.17
 - Scientific and Technological Qualifications Tables*, 13.18
- Census of Population 1971**
 - adjustment for underenumeration, 16.17
 - county reports, 16.16, 17.19
 - data collections and processing methods, 12.13(A), 16.16
 - England and Wales, Preliminary Report*, 14.3
 - qualified manpower survey, 18.25
 - Scotland, Preliminary Report*, 13.19, 14.3, 16.17, 17.19
 - Scotland, preliminary evaluation of coverage, 19.21
 - voluntary incomes survey, 18.24
- Census of Production**
 - for 1968, 13.31, 15.17, 16.22, 17.25, 18.28, 19.25
 - for 1970, 14.8, 16.22
 - post-census survey 1970, 17.7(A)
- Census of Production of Northern Ireland, 1968, 19.27
- central government current expenditure, commodity analysis, 15.22
- Central Statistical Office**
 - automatic data processing (ADP), 11.38, 15.4 (A)
 - macro-economic data bank, 15.4 (A)
 - reorganisation of, 19.34
- Cheshire, Abstract of Statistics, 17.32
- civil aviation, 13.23
- Civil Service**
 - management studies, 13.27
 - manpower planning, 16.9(A)
 - sickness absence survey, 11.10 (A), 13.27, 18.25
 - staff records, 13.21, 13.27
 - statistics, 12.31, 13.27, 16.9(A)
 - structure, 13.27
- CODOT, 18.27, 19.25
- Commonwealth immigrants, 12.17
- computers
 - BSO, Newport, 11.38
 - Civil Service staff records, 13.21, 13.27
 - facilities in HM Treasury, 11.1 (A)
 - Integrated Statistical Information System (ISIS) 16.14(A)
 - seminar on population data and use of, 16.30
- Conference of African Statisticians, 16.29
- Conference of Asian Statisticians, 12.27
- Conference of Commonwealth Statisticians, 12.16
- Conference of European Statisticians, 14.14
- confidentiality, 13.30
- constant price estimates, rebasing, 16.33
- construction industry**
 - CITB annual levy enquiry, 16.26
 - review of statistics, 14.10, 15.6 (A)
- Consumer Price Index, 13.14 (A)
- contract cleaning workers, 13.25
- costs, labour, 12.20, 15.17, 16.21
- Council of Europe**
 - meeting on demographic projections, 13.26
 - Second Population Conference, 13.25
- criminal statistics, offences involving firearms, 13.27
- Customs and Excise *Annual Report*, 12.28, 16.32
- data bank
 - CSO, 15.4(A), 17.31
 - ICC, 15.22
- deaths
 - by deceased's birthplace, 12.17
 - by occupation, 16.17
 - classification by cause, 13.18
- Distribution, Census of**
 - for 1966, 14.11, 19.25
 - for 1971, 12.22, 15.19, 16.11(A)
- doctors and dentists, remuneration, 18.31
- earnings
 - agricultural workers, 11.32
 - dental profession, 18.31
 - fire service, 16.22
 - medical profession, 18.31
 - new survey, 12.18, 12.19, 16.21, 19.24
 - probation officers and social workers, 19.25
 - qualified manpower, 12.19
 - regional, 11.26, 15.17
 - surveys of earnings, 1972, 16.21
 - year-to-year variations, 17.25
- Economic Activity Sub-regional Tables*, 11.24, 12.17
- economic statistics**
 - New Contributions*, 17.28
 - survey of collections, 18.21 (A), 18.34
 - resources in, 18.34

- Economic Statistics Collections*, 12.30, 18.21 (A), 18.34
Economic Trends, changes in content, 12.26, 13.24, 15.21
- education
 curricula in secondary schools, 14.6
 Northern Ireland, 13.20, 14.6, 16.32, 17.30
 planning models, 11.36
 teacher deployment, 14.6
- Education, Statistics of*, 12.29
Special Series No. 4, 14.6
- Educational Statistics, Scottish*, 11.25, 15.12, 17.34, 18.31
- electoral register, sampling from, 18.25
- electricity supply industry
 annual reports, 11.29, 19.28
 publications, 11.29
 sales, 11.30
 standard statistical review periods, 14.10
- electronics, industry, annual statistical survey, 19.33
- employment
 census, 13.21, 17.24
 labour turnover, 18.27
 statisticians in, 18.34
 sub-regional, 11.26
- employment vacancies, seasonally adjusted series, 17.24
- Energy Statistics, Digest of*, 15.18, 19.27
- engineering
 industries, sales and orders, monthly inquiry, 17.26
 qualified manpower, 14.6
- equal pay, 19.24
- European Economic Community, London visit of Officials of the Statistical Office, 16.29
- exports
 new system for recording, 15.20
 preliminary estimates, 12.26
- FITC
Statistical Review, 15.24, 19.33
Mapbook, 19.33
- Facts in Focus*, 17.28
- Family Expenditure Survey
 1970 preliminary figures, 13.28
- Family Expenditure Survey*
1968 Report, 15.14
1969 Report, 15.14
1970 Report, 14.16, 15.14
1971 Report, 19.31
- family income supplement, 15.14, 17.21
- Family Intentions*, 16.18
- farm classification, 16.25
- farms
 finance, 14.12
 rents, 11.30, 17.27
 Scottish, 17.27
- finance houses, 12.29, 13.28
- Financial Statistics*
 changes in content, 12.27, 16.29, 17.27
 firearms in crime, 13.27
 fire service, inquiry into work of, 16.22
 Fletton brick industry, pay, 11.35
 floorspace, 17.24, 18.26
 flow of funds accounting, 18.33
- food
 cost of processing and distributing, 16.25
 marketing trends in the UK, 18.7 (A)
 sources of supply, 19.29
- food and agriculture, self sufficiency, 16.25
- food and feeding stuffs, sources of supply, 19.29
- food consumption
 levels in the United Kingdom, 11.30, 13.23, 14.12, 19.29
 preliminary estimates, 17.27
- Food Facts*, 19.29
- Food Survey, National*, 12.22, 16.24
- forecasting
 car ownership, 13.30
 computerised industrial, 16.24
 colliery profitability, 11.13 (A)
 economic, 11.1 (A)
 floorspace, 11.38
 retail expenditure, 11.38
- form filling
 burden on small firms, 11.16 (A), 17.32, 18.16 (A)
 reduction in, 12.31, 13.22
- garages, 13.24
- gas industry statistics, 11.28, 19.28
- General Household Survey, 16.7 (A)
- Government Actuary's Department, 11.38
- Government Economic Service
Occasional Papers, 17.30
- Government Statistical Service
 burden of form-filling on small firms, 11.16 (A), 17.32, 18.16 (A)
 information for politicians, 12.9 (A)
 reorganisation of Central Statistical Office, 19.34
 reorganisation in the Department of Trade and Industry, 14.17
 reorganisation of Ministry of Health and Social Services, Northern Ireland, 16.33
 Statistical Liaison Committee, 13.30
 transfer of statistical responsibilities, 12.32
- Government Statistics for Industry*, 15.23
- Greater London Council
Quarterly Bulletin, 11.38, 15.24, 17.31, 18.33, 19.33
Research Reports, 13.29, 13.30, 15.24, 19.33

- Greater London Council area,
 employment, 11.38
 land use, 18.33, 19.33
 population, 11.38
 road accident statistics, computerised system, 18.33
 social statistics, 17.31
 standard statistical sectors, 15.25
 surveys of personal income, 19.33
 town planning, 17.32, 19.33
 gross domestic product, preliminary estimates,
 output based, 18.30
- hairdressers, ending of monthly turnover inquiry, 16.35
Handicapped and Impaired in Great Britain, 14.1 (A),
 14.4
- Health and Social Security, Department of
Annual Report for 1970, 15.13
Annual Report for 1971, 19.23
 incapacity statistics, 19.22
 retirement pension and widows benefits, 19.23
 social security research, 12.18, 17.21
Health Statistics for England and Wales,
Annual Digest, 12.29, 13.26
- health visitors, 15.24
Highway Statistics, 16.27
Horticulture in Britain, 12.24
 hospital building, 13.26
 hospital in-patient enquiry, 17.20, 19.23
 hours of work, overtime and shiftworking, 13.24
 house condition surveys, 18.26, 19.31
 households, projected numbers, 11.24, 13.20, 17.19
- housing
 improvement grants, 11.25
 Northern Ireland, 17.23
 private enterprise, 11.25, 16.26
 progress, 11.25
 slum clearance, 11.25
 surveys, 15.20, 17.23, 18.26, 19.31
Housing and Construction Statistics, 17.30, 19.29, 19.31
- incapacity
 certificates of, 12.17, 15.13, 15.14, 19.22
 estimates of, 15.13, 18.25
 regional statistics, 13.19
- incomes, voluntary survey, 1971 census, 18.24
 Income Surveys, 16.32, 17.1(A)
 income taxes outside the United Kingdom, 17.31
 industrial building, 19.29
 industrial production, index for Wales, 11.28
Industrial Production, Index of, 15.1 (A)
 historical series, 18.27
- industrial statistics
 development of, 13.1 (A)
 quarterly sales enquiries, 11.27, 19.10 (A)
 regional talks on new system, 16.23
 re-organisation, 11.27, 12.20, 13.22, 14.8,
 15.1 (A), 15.17, 16.22, 17.26, 18.28, 19.26
 statistical and computing aspects of quarterly sales
 enquiry, 19.10 (A)
 world, UN report, 13.30
- Infofair, 16.35
 Inland Revenue statistics, 12.28, 16.32
- input-output
 analysis 1963, 11.27
 analysis 1968, 11.27
 comparable tables for 1954 and 1963, 14.8
 development of, 12.1 (A)
- Insurance Business Statistics*, 14.16
- Integrated Statistical Information System (ISIS),
 16.14 (A)
- international comparisons
 sickness absence, 18.25
 taxes and social security contributions, 19.31
- International Computing Centre, 15.22
- International Standard Industrial Classification, 15.23,
 15.24
- investment
 overseas, 11.7 (A)
 plant and machinery, 15.22
- invisible earnings, monthly assessment, 11.4 (A)
- Journal of the Royal Statistical Society*, 12.31, 17.31
- KOS, 18.27, 19.25
- labour
 costs, 12.20, 15.17, 16.21
 regional projections of supply, 17.24
 statistics, historical, 13.26
 turnover, 18.27
- Labour Statistics*
Year Book 1969, 16.20
Year Book 1970, 19.23
- landlords, survey of, 13.19
- laundries and dry cleaners, ending of monthly turnover
 inquiry, 16.35
- laundry and dry cleaning workers, pay, 13.25
- library and information service, census of staff, 17.25
- List of Principal Statistical Series*
and Publications, 17.28
 amendments, 18.37, 19.37
- low income families, 15.14, 18.25
- low-paid workers, circumstances of, 13.25

- manpower
 - civil service, 16.9 (A)
 - fire service, 16.22
 - librarians, census of, 17.25
 - models, 11.36
 - planning, 16.9 (A)
 - probation officers and social workers, 19.25
 - qualified, Census 1966, 13.21, 15.16
 - qualified, earnings of, 12.19
 - qualified, follow-up survey, 1971 Census, 18.25
 - qualified, statistical sources, 17.11(A)
 - scientific and technological, 14.6
 - statisticians in employment, 18.34
- manufacturing industry, new monthly index of wages and salaries, 14.7
- marketing, food, trends in the UK, 18.7 (A)
- medical statistics
 - cancer incidence, 17.20
 - hospital in-patient enquiry, 17.20, 19.23
 - medical tables, 17.21
- mentally handicapped patients in hospital, census of, 19.23
- methodology
 - measuring reliability, 18.30
 - relative price effect, 18.12 (A)
 - seasonal adjustments, 11.34, 11.35, 13.24, 14.7, 17.24
 - snapshot moments, 19.30
 - statistical surveys, 13.6 (A)
 - variability problems, 18.30
- migration
 - International Passenger Survey, 15.12
 - population, 15.12
- models
 - education and training, 11.36
 - manpower, 11.36
- money stock (supply) 12.26, 16.29, 17.27
- Monthly Digest of Statistics*, 12.29, 13.29
- mortality by occupation, 16.17
- motor industry statistics, 13.28
- motor vehicles, new style registration form, 18.29
- national accounts
 - constant price estimates rebasing on 1970, 16.33
 - improving the accuracy of GNP, 18.1 (A)
- national and sector balance sheets, 14.14
- National Board for Prices and Incomes
 - bread prices, 11.35
 - coal prices, 11.35
 - contract cleaning workers, 13.25
 - Fletton brick industry, pay, 11.35
 - garages, 13.24
 - hours of work, overtime and shiftworking, 13.24
 - laundry and dry cleaning workers, pay, 13.25
 - low-paid workers, circumstances of, 13.25
 - NHS ancillary workers' pay, 13.25
 - solicitors, remuneration of, 13.25
 - statistical surveys, methodology, 13.6 (A)
 - water supply industry, pay, 11.35
- National Coal Board
 - Annual Report*, 11.28, 19.27
 - colliery profitability, 11.13 (A)
- National Food Survey*, 12.22, 16.24
- National Health Service, ancillary workers' pay, 13.25
- National Income and Expenditure, 1971*, 15.21
- National Income and Expenditure, percentages derived from, 15.21, 19.30
- National Institute Economic Review*, 11.37, 12.30, 14.17, 16.32, 18.32, 19.32
- New Earnings Survey 1970*, 12.18, 15.16
- New Earnings Survey 1971*, 12.19, 16.21, 19.24
- North Atlantic Treaty Organisation
 - Advanced Study Institute, 11.36
 - Manpower Conference, 11.36
- Northern Ireland
 - agriculture, 12.24
 - Census of Production for 1968, 19.27
 - education, 13.20, 14.6, 16.32, 17.30
 - family expenditure survey, 12.28
 - housing, 17.23
 - reorganisation of Ministry of Health and Social Services, 16.33
 - survey of general practice, 18.31
 - survey of labour costs, 12.20
- OECD countries
 - aid statistics, 12.27, 14.15
 - financial statistics, 14.16
- occupational pension schemes, 15.15
- occupations, classification of, 12.17, 18.27, 19.25
- official statistics
 - economic statistics, 17.31
 - guide to, 14.15, 17.28, 18.37
 - use of, in firms, 17.5 (A), 17.7 (A)
- Organisation of Professional Users of Statistics, 17.32
- output
 - based gdp preliminary estimates, 18.30
 - measurement, 18.32
 - measurement for public services, 16.20
 - per head, 12.5 (A)
 - service sector changes, 18.32
 - use of net output statistics, 12.5 (A)
- overseas aid, 11.7 (A), 14.15, 16.27
- overseas sterling area, 11.35, 12.27, 17.27
- overseas trade, published sources, 13.28
- Overseas Trade Statistics of the United Kingdom*, 13.29
- overseas travel, 13.28

Parliament, Members' salaries review, 16.21

pensions

- invalidity, 16.19
- occupational, 15.15
- retirement, 19.23
- war, 12.18
- widows, 19.23

planning

- in London, 17.32, 19.33
- long range, 16.24

politicians, official statistics for, 12.9 (A)

population

- Census data collection 1971, 12.13 (A)
- census reports – see *Census of Population*
- census tests, October 1972, 19.20
- changes, 11.24
- future Censuses of Population, 16.4 (A)
- mid-1971, 16.17
- mid-1971 projections, 18.24, 19.20
- projections, 11.24, 14.3, 14.4
- Projections Booklet*, 19.20
- regional sub-divisions, 11.24
- seminar on data and use of computers, 16.30

ports, unit transport, 12.25

pound, internal purchasing power of, 13.14 (A)

price indices

- regional, retail, 15.21
- wholesale, and value added tax, 19.30

prices

- bread, 11.35
- coal, 11.35
- grain, 11.33
- seasonal variations in retail prices, 16.28

prices and earnings 1951–69

- econometric assessment, 13.21

Principal Statistical Series and Publications, List of, 17.28

- amendments, 18.37, 19.37

probation officers and social workers, work and pay, 19.25

Production, Census of

- for 1968, 13.31, 15.17, 16.22, 17.25, 18.28, 19.25
- for 1970, 14.8, 16.22
- post-census survey 1970, 17.7(A)

Profit from Facts, 15.23, 17.5(A)

public expenditure

- plans, 13.29
- relative price effect in, 18.12 (A)

public services, research project on output measurement for, 16.20

qualified manpower

- Census 1966, 13.21, 15.16
- earnings survey, 12.19
- follow-up survey, 1971 census, 18.25
- statistical sources, 17.11(A)

rebasings

- constant price estimates in 1970, 16.33
- indices of rates of wages and normal hours, 19.24
- retail sales index, 19.25

refuse disposal, 14.5

Regional Statistics, Abstract of, 16.31

regions

- earnings, 11.26, 15.17
- Economic Activity Tables*, 11.24, 12.17
- employee activity rates, 13.21
- employment by sub-divisions, 11.26
- house condition surveys, 17.23
- incapacity statistics, 13.19
- labour supply projections, 17.24
- population changes, 11.24
- population projections, 11.24
- retail prices indices, 15.21

relative price effect, in public expenditure, 18.12 (A)

Rent Acts, report of Francis Committee, 13.19

rent tribunal cases, 13.19

rents, farms, 11.30, 17.27

Report on Overseas Trade, end of publication, 13.28

research and development expenditure, 12.22

reserve ratios, 16.29

retail prices index

- measure of internal purchasing power, 13.14 (A)
- seasonal variations, 16.28

retail prices indices, regional, 15.21

retail sales, index, rebasing, 19.25

retirement pension, 19.23

Review Body on doctors' and dentists' remuneration, 18.31

Review Body on Top Salaries

interim report, 18.31

Ministers of the Crown and Members of Parliament, 16.21

revised figures (policy), 16.1 (A)

Road Accidents, 12.24

computerised system of London statistics, 18.33

road goods transport, 1967/68 survey, 16.26

road traffic censuses, 15.20

Safety and health at work, 19.22

salaries

index of, 17.25

Members of Parliament, 16.21

review body on top, interim report, 18.31

sample surveys in local authority areas, 15.15

sampling from electoral register, 18.25

sampling methods, as used in survey of handicapped, 14.1 (A)

schools, pupils' curricula, 14.6

science, qualified manpower, 14.6

Scotland

- Annual Report of Registrar General*, 12.17, 13.19, 15.12, 16.18, 19.22
- births, by parents' country of birth, 15.12, 16.18, 17.20
- Census, 1971, 13.19, 14.3, 16.17, 17.19, 18.25, 19.21
- changes in rural employment, 17.27
- deaths by cause, 14.4
- deaths by deceased's country of birth, 17.20
- education, 11.25
- Educational Statistics*, 11.25, 15.12, 17.34, 18.31
- farm rents and land values, 17.27
- life tables, 13.19
- local elections, 11.24, 15.12
- mid-1971 estimates, 16.18
- migration, 11.24, 12.17, 13.19, 15.12, 16.18, 17.20, 18.25, 19.22
- mobility of farm workers, 17.27
- occupational mortality, 11.24
- population, 1969, 13.19
- population, 1971 estimates, 17.20
- population projections to 2001, 14.4
- population projections to 2011, 18.25
- preliminary envaluation of coverage, 1971 Census, 19.21
- regional population estimates mid-1971 and projections to 1991, 19.22
- school-leavers survey, 11.25
- secondary schools – staffing survey, 17.34
- teachers, 11.25
- Scottish Abstract of Statistics*, 14.16
- Scottish Economic Bulletin*, 14.16
- Scottish Statistics, Digest of*, 14.16
- seasonal adjustments
 - balance of payments, 11.35
 - car registrations, 11.34
 - employment vacancies, 17.24
 - overseas trade figures, 13.24
 - unemployment, 14.7, 17.24, 19.24
- seasonal variations, retail price index, 16.28
- service output changes, 18.32
- service trades, ending of monthly turnover inquiries, 16.35
- shipping movements, 12.25
- sick pay schemes, 15.15
- sickness, invalidity and injury
 - absence, international comparisons, 18.25
 - attendance allowance, 16.19, 17.22
 - benefits, 15.13, 16.19
 - Civil Service absence survey, 11.10 (A), 13.27, 18.25
 - claims for benefits, 15.13
 - estimates of numbers incapacitated, 15.13, 18.25
 - survey into sickness and disability, 17.21
- slum clearance, 11.25
- Social Science Research Council
 - Social Statistics Users Conference, 16.34
 - Statistics Users Conference, 12.31, 14.18
- social security
 - attendance allowance, 16.19, 17.22
 - hostels, lodging houses, and their users, 17.22
 - homeless single persons, 17.22
 - invalidity benefit, 16.19
 - research, 12.18, 17.21
 - reception centre users, 16.20
 - statistical and research report series, 17.22
- Social Statistics Users Conference, 16.34
- Social Trends*, 12.28, 16.30
- solicitors, remuneration of, 13.25
- Standard Industrial Classification, 15.24
- standard statistical sectors for Greater London, 15.25
- Statistical Series and Publications, List of Principal*, 17.28
 - amendments, 18.37, 19.37
- statistical sources, 12.30, 17.11(A)
- statistical surveys, methodology, 13.6 (A)
- statisticians in employment, 18.34
- statistics library, Warwick University, 18.35
- Statistics of Science and Technology*, 11.37
- Statistics Users
 - Business, Conference, 18.35
 - Conference, 12.31, 14.18
 - Organisation of Professional, 17.32
 - Social, Conference, 16.34
- sub-regions, economic activity tables, 12.17
- supplementary benefits
 - reception centre users, 16.20
 - sick and disabled men receiving, 17.21
 - unemployed, 17.22
- taxes and social security contributions, international comparisons, 19.31
- taxes and subsidies, 11.35
- teachers deployment in secondary schools, 14.6
- Technological Manpower, Studies in, 14.6
- technology, qualified manpower, 14.6
- tenants, survey of, 13.19
- Tourism, Britain and International*, 17.30
- Trade and Industry*, 13.29
- Trade Unions and Employers Associations, Report of the Chief Registrar of*, 19.32
- transport, statistical publications, 12.25
- UNCTAD, insurance statistics, 12.27
- unemployment
 - coloured workers, 15.16
 - seasonal adjustments, 14.7, 15.16, 17.24, 19.24
 - statistics, 19.24
 - supplementary benefits for, 17.22

unit transport, 12.25
United Kingdom in Figures, 18.30
 United Nations
 Growth of World Industry, 13.30
 Statistical Commission, 16th Session, 11.36
 United States
 improving the accuracy of GNP, 18.1 (A)
 strengthening Federal statistics, 11.35
 Universities, Statistical Record, 19.17 (A)
 University, Warwick Statistics library, 18.35

value added tax (VAT), 19.1 (A)
 index numbers of wholesale prices, 19.30
 vital statistics, 12.17, 13.18, 15.12

wages, indices of rates of, and normal hours, rebasing,
 19.24
 wages and salaries
 Blue Book estimates, 14.14
 index of average earnings, 15.16
 index of salaries, 17.25
 new monthly series for manufacturing sector, 14.7
 Wales
 index of production, 11.28
 Warwick University, statistics library, 18.35
 water supply industry, pay, 11.35
 wholesale prices
 index numbers, value added tax, 19.30
 widows benefits, 19.23
 working population, projections, 15.16

CENTRAL STATISTICAL OFFICE

List of Principal Statistical Series and Publications

STUDIES IN OFFICIAL STATISTICS NO. 20

—an important new reference book for all statistics users

This concise guide from the Central Statistical Office provides users with basic information about *what* is available and *where* to find it.

Principal statistical series produced in the United Kingdom—social, economic and financial—are listed by broad subject area. Entries for each series indicate the details available, periodicity and sources of publication. Special reference is made to series where regional analyses are available. Particular subjects can easily be found through a comprehensive index.

In addition, the publications in which the principal statistical series appear are listed alphabetically with details of price and frequency.

All main government statistics—and some important semi-official series—are covered in this handy new book.

Price 47p (by post 52½p)

obtainable from

Her Majesty's Stationery Office

at the addresses on cover page iv or through booksellers

HER MAJESTY'S STATIONERY OFFICE

Government Bookshops

49 High Holborn, London WC1V 6HB
13A Castle Street, Edinburgh EH2 3AR
109 St. Mary Street, Cardiff CF1 1JW
Brazenose Street, Manchester M60 8AS
50 Fairfax Street, Bristol BS1 3DE
258 Broad Street, Birmingham B1 2HE
80 Chichester Street, Belfast BT1 4JY

*Government publications are also available
through booksellers*

30p net
Annual subscription £1.30