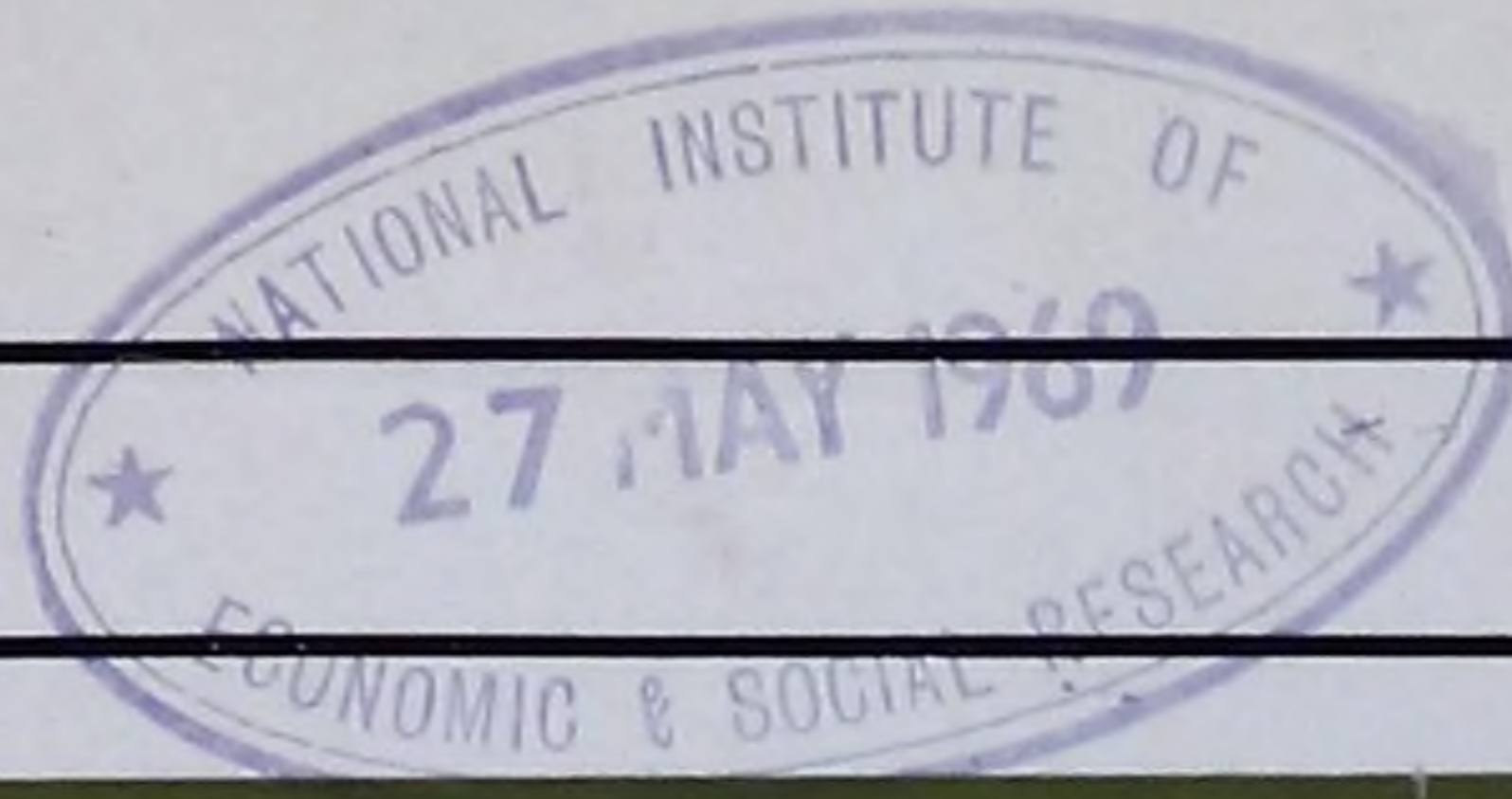


Library

5

CSO

MAY 1969



HMSO 6s 0d net

STATISTICAL NEWS

**Developments
in British Official
Statistics**

Note by the Editor

H. E. Bishop

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.

Policy on *Statistical News* is decided by the Advisory Committee for Policy on Central Statistical Office Publications whose members are

Prof. C. A. Moser	Central Statistical Office (Chairman)
Mr. J. Stafford	Board of Trade
Mr. F. J. Atkinson	H.M. Treasury
Mr. M. Reed	General Register Office
Mr. W. Rudoe	Department of Health and Social Security
Mr. A. R. Thatcher	Department of Employment and Productivity
Mrs. E. H. Boothroyd	Department of Economic Affairs
Mr. P. Redfern	Department of Education and Science
Mr. A. H. Watson	Ministry of Transport
Mr. H. E. Bishop	Central Statistical Office
Mrs. E. J. Donovan	Central Statistical Office
Mr. B. L. Mower	Central Statistical Office (Secretary)

Enquiries about this publication should be addressed to:
The Information Officer,
Central Statistical Office,
Great George Street,
London, S.W.1.

Subscriptions and sales enquiries should be addressed to Her Majesty's Stationery Office at P.O. Box 569, London S.E.1 or any of the addresses listed on back page of cover.

Statistical News No. 5

**Developments
in
British
official
statistics**

LONDON

HER MAJESTY'S STATIONERY OFFICE

Contents

		<i>Page</i>
The Census of Production	H. E. Browning	5.1
International systems of national accounts	R. E. Beales	5.9
The role of population projections in planning activities	Miss J. H. Thompson	5.12
Sickness and injury benefits	F. E. Whitehead	5.14

NOTES ON CURRENT DEVELOPMENTS

	<i>Page</i>		<i>Page</i>
Population and vital statistics		Production and distribution	
1966 Sample Census of Population	5.19	Comprehensive survey of engineering industry	5.26
Population	5.19	Hosiery and knitting	5.27
Population projections	5.19	Northern Ireland census of retail distribution	5.28
Mortality	5.20		
Social conditions		Food and agriculture	
Drug offences and drug addiction	5.20	Food consumption levels	5.28
Public expenditure on social services	5.21	Guide to agricultural and food statistics	5.28
		Agriculture in Northern Ireland	5.29
Housing		Transport	
Recent developments	5.21	Ports: Unit transport	5.29
Housing in Northern Ireland	5.21	Motor vehicle registrations	5.29
		Passenger Transport in Great Britain	5.29
Education		Home finance	
GCE, CSE and school leavers	5.21	Inland Revenue statistics	5.30
Further education	5.22	Coin surveys	5.30
University admissions	5.22	Acquisitions and mergers	5.30
Teachers	5.22		
Education in Northern Ireland	5.23	Prices	
		Wholesale price indices	5.30
Manpower and earnings		National Board for Prices and Incomes	
Projections of the working population	5.23	University teachers	5.31
Seasonally adjusted employment series	5.23	Company bus maintenance workers	5.31
Manpower models	5.23	Car delivery industry	5.31
Manpower Study Group	5.23	London clearing banks	5.31
Employment censuses	5.24	Operatives in construction	5.31
Yearbook of Labour Statistics	5.24		
Employment in food retailing	5.24	International	
Civil service staff wastage	5.25	37th Session of the International Statistical	
National minimum wage	5.25	Institute	5.32
New survey of earnings	5.26		
Regional average earnings	5.26		
Average earnings of manual workers	5.26		

Publications

Food statistics: NEDO guide to major sources	5.32
FES Handbook	5.32

Government Statistical Service

Appointments	5.32
Liaison with industry	5.32

Late items

Reorganisation of industrial statistics	5.34
Agricultural price indices	5.34
Consumers' expenditure	5.35

Index

5.36

... will shortly be completed by HMSO of 129
 ... Centre of these parts covers
 ... methods, as
 ... the remainder consists of standard
 ... relating to each of 128 industries. The
 ... of an Index of Products. Three further parts
 ... containing summary tables arranged
 ... industry, enterprise and regions respec-
 ... Two earlier analyses of census information were
 ... in the *Board of Trade Journal* on 24 Decem-
 ... 1965, a set of preliminary estimates of the principal
 ... for a number of industries or industry
 ... and on 16 February 1968, sets of opening
 ... relating to most industries and many industry
 ... divisions.

This article describes the purposes of the Census of
 Production and the nature of the operations which are
 involved, illustrated mainly by reference to the 1963 and
 the 1968 Census. The 1968 Census is expected to be
 the last of the type in which comprehensive information
 is collected quinquennially. Its place will be taken by a
 new system, referred to in an article by Mr. J. Stafford
 in the first issue of *Statistical News*, in which a set of
 related inquiries will serve all the purposes of the quin-
 quennial census without the delays inherent in a single
 complex operation. Despite the proposed change in the
 method of collecting the data, many of the problems
 which have to be faced in conducting a census of the
 quinquennial type will continue to arise under the new
 system and the procedures described in the following
 paragraphs will continue to have substantial relevance.

Origin, scope and purpose

The first census of production in the United Kingdom
 was taken in 1908 in respect of 1907. That census
 originated in the controversy at the time over tariffs and
 one of its main objectives was to ascertain the quantity
 and value of different kinds of output. Subsequent
 censuses have been taken every few years, the timing
 being disturbed by the two world wars, though in recent
 times they have been carried out every five years. The

Import Trans. Act, 1932 provided for the collection of
 statistics about the industries affected by duties imposed
 under the Act, and these inquiries, similar to the census
 inquiries, were conducted from 1933 to 1938 and main-
 tained the emphasis on particulars of output. In later
 years information about sales or production has been
 increasingly obtained on a monthly or quarterly basis.
 This development was accelerated during the second
 world war and the years of shortage of raw materials
 which followed and, in recent years, has reflected the
 growing needs of both industry and government. The
 aims of the census have therefore shifted towards
 providing bench-marks and information about the
 structure of industry although details of output and
 inputs are still required to provide a basis for current
 inquiries, such as the index numbers of production and
 wholesale prices, for the purpose of constructing input/
 output tables, and for market research.

The geographical scope of post-war censuses has
 extended over the United Kingdom of Great Britain
 and Northern Ireland. The Isle of Man and the Channel
 Islands have not been covered. That part of the census
 covering England, Scotland and Wales has been
 conducted from the Census Office of the Board of
 Trade (now the Business Statistics Office) while the
 Ministry of Commerce of Northern Ireland has carried
 out parallel inquiries, the results of which have been
 incorporated in the United Kingdom reports.

The census relates to the whole of mining, manufac-
 turing, gas, water, electricity and construction.

At the present time the purposes of the census may be
 described under six main headings:

To determine the structure of industry, its size and
 pattern, and the relative importance of different
 activities. The census results contribute for example
 to the estimates of national income and expenditure,
 and are widely used in industry for purposes of
 economic analysis.

To provide the basis for constructing input/output
 tables, described by Mr. L. S. Brown in the Novem-
 ber 1968 issue of *Statistical News*.

To provide a bench-mark from which short-term
 variations in output, etc. can be measured.

To furnish a weighting system for index numbers of
 production and wholesale prices.

¹The development of the census between 1907 and 1968 is described in
 detail in Census in Official Sources No. 9, Census of Production Reports,
 HMSO (Price 5s. 9d. net).

The Census of Production

H. E. Browning, *Chief Statistician, Business Statistics Office*

Publication will shortly be completed by HMSO of 129 parts or booklets of the Report on the Census of Production for 1963. The first of these parts contains the introductory notes explaining methods, terminology and contents; the remainder consists of standardised sets of tables relating to each of 128 industries. Part 130 consists of an Index of Products. Three further parts will be published containing summary tables arranged according to industry, enterprises and regions respectively. Two earlier analyses of census information were published in the *Board of Trade Journal*: on 24 December 1965, a set of preliminary estimates of the principal aggregates for a number of industries or industry groups; and on 16 February 1968, sets of operating ratios relating to most industries and many industry sub-divisions.

This article describes the purposes of the Census of Production and the nature of the operations which are involved, illustrated mainly by reference to the 1963 and the 1968 Censuses. The 1968 Census is expected to be the last of the type in which comprehensive information is collected quinquennially. Its place will be taken by a new system, referred to in an article by Mr. J. Stafford in the first issue of *Statistical News*, in which a set of related inquiries will serve all the purposes of the quinquennial census without the delays inherent in a single complex operation. Despite the proposed change in the method of collecting the data, many of the problems which have to be faced in conducting a census of the quinquennial type will continue to arise under the new system and the procedures described in the following paragraphs will continue to have substantial relevance.

Origin, scope and purpose

The first census of production in the United Kingdom was taken in 1908 in respect of 1907. That census originated in the controversy at the time over tariffs and one of its main objectives was to ascertain the quantity and value of different kinds of output. Subsequent censuses have been taken every few years, the timing being distorted by the two world wars, though in recent times they have been carried out every five years.† The

Import Duties Act, 1932 provided for the collection of statistics about the industries affected by duties imposed under the Act, and these inquiries, similar to the census inquiries, were conducted from 1933 to 1938 and maintained the emphasis on particulars of output. In later years information about sales or production has been increasingly obtained on a monthly or quarterly basis. This development was accelerated during the second world war and the years of shortage of consumer goods which followed and, in recent years, has reflected the growing needs of both industry and government. The aims of the census have therefore shifted towards providing bench-marks and information about the structure of industry although details of outputs and inputs are still required to provide a basis for current indicators, such as the index numbers of production and wholesale prices, for the purpose of constructing input/output tables, and for market research.

The geographical scope of post-war censuses has extended over the United Kingdom of Great Britain and Northern Ireland. The Isle of Man and the Channel Islands have not been covered. That part of the census concerning England, Scotland and Wales has been conducted from the Census Office of the Board of Trade (now the Business Statistics Office) while the Ministry of Commerce of Northern Ireland has carried out parallel inquiries, the results of which have been incorporated in the United Kingdom reports.

The census relates to the whole of mining, manufacturing, gas, water, electricity and construction.

At the present time the purposes of the census may be described under six main headings:

To determine the structure of industry, its size and pattern, and the relative importance of different activities. The census results contribute for example to the estimates of national income and expenditure, and are widely used in industry for purposes of economic analysis.

To provide the basis for constructing input/output tables, described by Mr. L. S. Berman in the November 1968 issue of *Statistical News*.

To provide a bench-mark from which short-term variations in output, etc. can be measured.

To furnish a weighting system for index numbers of production and wholesale prices.

†The development of the census between 1907 and 1960 is described in detail in Guides to Official Sources No. 6: *Census of Production Reports*, (HMSO) (Price 5s. 0d. net).

To up-date register information about the population of businesses so that, for instance, efficient samples may be designed for use where possible. This information will be incorporated in the Central Register of Businesses described by Mr. Berman in the February 1969 issue of *Statistical News*.

To present in reports the kind of data needed by economists, market researchers, regional planners, etc. for industrial and social purposes. Especially important for this purpose, as for others, is the commodity detail of sales and purchases.

Besides these main purposes the census operation has been used from time to time for the collection of additional information needed for government purposes which might otherwise have involved an additional inquiry. For example, in the 1963 census, questions were included for the first time in census forms about certain internal costs of running transport departments, information needed by the Ministry of Transport.

Preparation

When a census is planned there are in the first place inter-departmental discussions to determine the government requirements. These discussions took place early in 1961 for the 1963 census and in 1966 for the 1968 census. The agreed proposals concern the matters which are common to all industries, and are then discussed with the statutory Advisory Committee appointed for the purpose. This Committee includes a number of industrialists, a trade union member, an accountant to represent those in industry largely responsible for the actual completion of the questionnaires, and an economist representing a large class of users of census information. It considers the general design of the inquiry with special reference to the needs of industry, the scope and practicability of the questions proposed, their precise formulation and the definitions and instructions to be used. In giving advice the members are particularly concerned to see that the information asked for can be provided by firms and is likely to be of real value when summarised. The Advisory Committee for 1963 held two meetings in the second half of 1961, and that for 1968 two meetings at the beginning of 1967.

Concurrently discussions take place with the trade associations concerned with any of the industries covered by the census, with the object of settling the commodity headings to be used; for example some 4,500 output headings across the whole of industry and about 2,000 input headings were used in both the 1963 and 1968 censuses. The general aim in this part of the exercise is to ensure that the detail asked for is sufficient to fulfil the requirements outlined above while avoiding undue elaboration and maintaining a reasonable balance from industry to industry. On the input side particular importance is attached to standard headings for impor-

tant items widely used throughout industry so that the pattern of consumption can be traced across all industries.

When the content of the census has been agreed the census forms themselves must be designed. Specimen forms are printed and issued with an explanatory letter in advance of the census operations so that respondents may know what information will be required of them. In many cases there is a separate form for each industry, but some industries overlap each other to such an extent that it is simpler to produce one long form covering a group of industries than separate forms for each. Thus there is one form type for the Mechanical engineering industries, one for the Electrical engineering industries and one for the Clothing industries, etc. In the 1963 Census there were 105 different form types covering 128 census industries. For the 1968 Census the number of industries has been increased to 154 as a result of the recent revision of the Standard Industrial Classification but the number of form types has been reduced to 94. *Notes on Making the Return* are also prepared for each form type.

The drafting of the forms and the notes needs close attention to detail. The wording of headings and notes must as far as possible be simple and unambiguous and must be meaningful and easy to follow by all firms, large and small. Correct inseting of headings and sub-headings is of prime importance and a great deal of thought must go into the heading numbering system since the numbers are used in conjunction with the form type number as codes for processing on the computer. Sales items appear on the forms used for the industry of which they are principal products but they also appear on forms for other industries where they may be produced in significant quantities as subsidiary products. It would not be practicable to attempt to have a specific heading for every commodity purchased or sold, therefore each form contains headings under which firms are asked to write in details of commodities not separately specified. These latter entries can be substantial and the descriptions are not always adequate for coding purposes.

The Register

It is of course essential for the efficient conduct of any statistical inquiry that there should be a register as up-to-date and comprehensive as possible of all establishments engaged in the relevant activities. A standing Census of Production register is maintained for this purpose (unlike the Census of Distribution register which has been freshly compiled for each census by field enumeration). Up to about 50 people have hitherto been permanently engaged in keeping the register up to date. This involves taking account of 'births' and 'deaths', allotting a provisional classifica-

tion to new establishments, maintaining a record of enterprise connections and dealing with a large number of amendments to titles and addresses of firms. Information for this purpose is systematically obtained from the Board of Trade Companies Register, from the Department of Employment and Productivity and from other sources. The Board of Trade register includes only large firms in the construction industry. Because of the very large number of businesses in this industry, only a sample of the smaller firms is approached in the Census of Production. For this purpose, a 1-in-12 sample of small firms is provided by the Ministry of Public Building and Works and taken on to the Census of Production register at the appropriate time.

A Census of Production is based on the establishment as the reporting unit i.e. the individual factory, mine, quarry or works; the establishment is defined in the Standard Industrial Classification (Revised 1968) as 'the smallest unit which can provide the information normally required for an economic census, for example, employment, expenses, turnover, capital formation'. Each establishment on the register is allotted a reference number. Prior to the 1968 Census the numbering was based on a system which allotted a unique 10-digit reference number to a single establishment firm. An establishment of a multiple organisation carried a 5-digit enterprise number followed by a 3-digit establishment number and 2-digits (known as the case number) used to indicate organisational and addressing characteristics. The establishments of an enterprise were serially numbered from 001 and an establishment which changed its ownership took the enterprise code of its new owner. Codes indicating 'local authority', 'government department', 'public ownership', etc. were incorporated in the reference number. An important operational use for the enterprise code is in checking for disclosure i.e. to prevent any risk of disclosing information given by any one firm in published figures. It is also possible to compile 'business unit' figures by using the enterprise code in conjunction with other indicative codes (e.g. industry classification code) which are also held on the register.

One of the main disadvantages of this system was the need for a complete change in the reference number when an establishment changed its ownership or some change arose in the case number. This in turn led to difficulties of matching for checking purposes. Another disadvantage was that the 10-digit reference number was unwieldy and was prone to transcription errors at the desk. To overcome these difficulties a new system has been adopted for the 1968 Census in which each establishment, whether a single establishment firm or a part of a multiple, bears a unique 6-digit establishment number. This number is used for receipting and general processing purposes. The enterprise and case numbers

are retained however as a method of recording inter-firm relationships and are held on a separate look-up file for use as required.

Issue of forms

On 1 October of the census year a brief form asking only for the nature of business and average employment is sent to small firms in most industries, i.e. those firms expected to have fewer than 25 employees. (About 52,000 of these forms were issued for the 1968 census). Firms are asked to return the brief questionnaire only if they employed fewer than 25 persons on average. If it is not returned it is assumed that they employed 25 or more persons and a detailed form is issued in due course. Many non-responders do in fact turn out to be under-25's and complete a special section of the detailed form which duplicates the brief questionnaire. The simple information obtained in this way is used for completing industry estimates on an 'all firms' basis. In a few industries where small firms account for a substantial proportion of the total employment the under-25's are asked to complete a shortened version of the detailed form. (For 1968 the exemption limit of 25 employees is being applied to establishments rather than firms.) In October 1968 an explanatory letter was sent to 34,000 small firms in these industries together with a specimen copy of the shortened version of the form that they would be asked to complete later. These firms were asked to inform the Census Office as soon as possible if they employed 25 or more persons on average or were not engaged in the activities covered by the form.

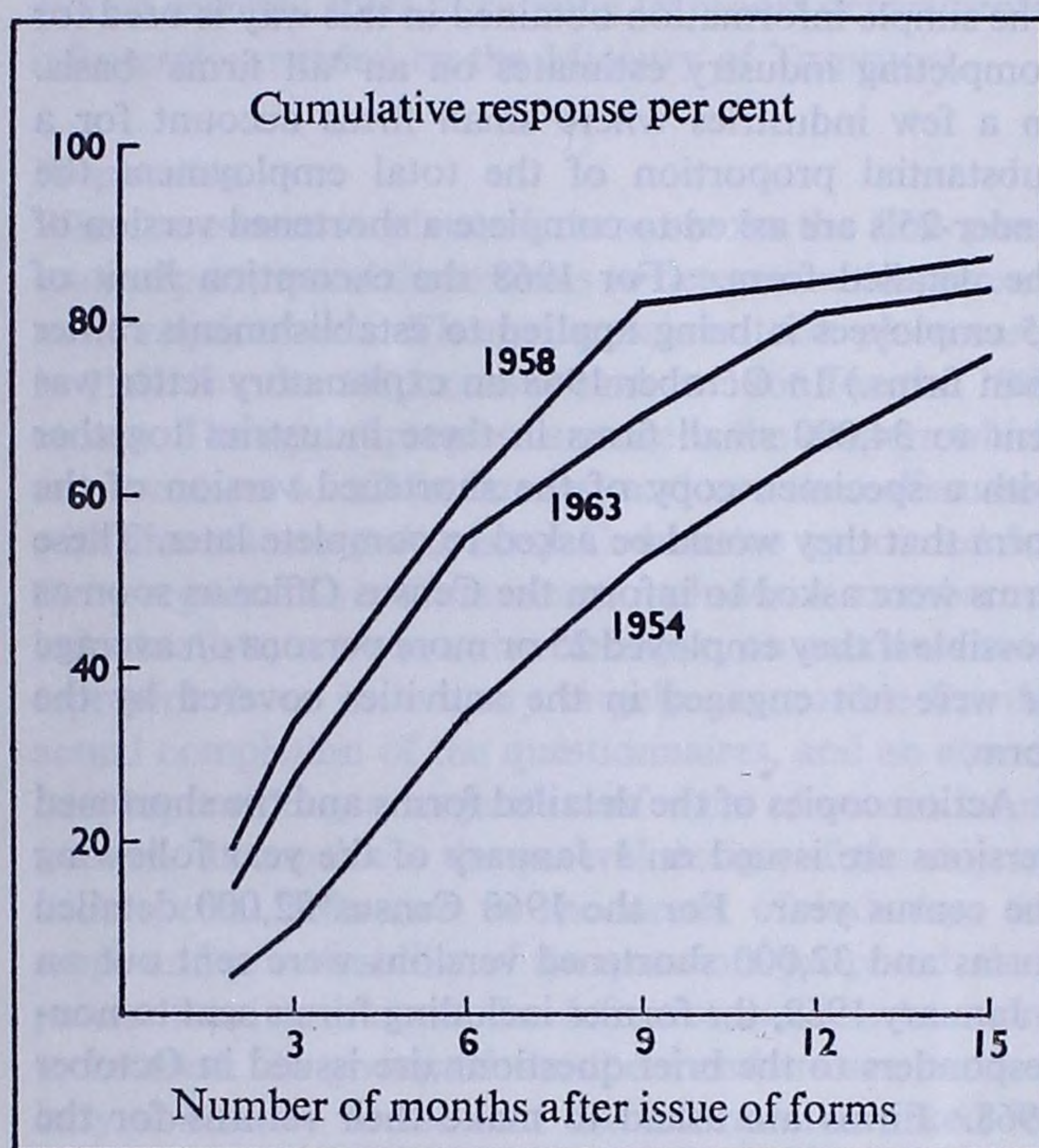
Action copies of the detailed forms and the shortened versions are issued on 1 January of the year following the census year. For the 1968 Census 82,000 detailed forms and 32,000 shortened versions were sent out on 1 January 1969, the former including forms sent to non-responders to the brief questionnaire issued in October 1968. Firms are asked to make their returns for the calendar year but are permitted to make a return for a business year ending on any date from 6 April of the census year to 5 April of the following year. They are asked to return the completed forms within three months from the end of the calendar year or, if they are making a return for a business year ending after 31 December of the census year, within three months of the end of their business year.

The first reaction to the main issue of forms is a flood of correspondence and telephone calls. Most of the letters received are concerned with general questions on completing the form or stating that the firm has gone out of business or asking for permission to make one return covering a number of establishments. However, a fair number are complaints about the cost to industry of completing statistical forms. At the same time com-

pleted forms are beginning to come in and in the first few weeks there is great pressure of work which is however of a relatively simple character and which does much to bring up-to-date the information recorded in the register.

Response

Completed returns begin to flow in fairly rapidly, but the first ones relate to businesses of a simple character, and include a good number of 'nil' returns. Many firms ask their accountants to handle their returns, and this work must take its turn with normal audit and taxation responsibilities. Inevitably there is delay. In the spring first reminders are sent out, and others are sent at carefully considered intervals. Eventually enforcement action under the Statistics of Trade Act, 1947 is taken in a few cases. So far it has never been



possible to get all the necessary returns in until twelve months or more after the issue of forms. The experience of the last three censuses is illustrated in the chart from which it can be seen that the flow of returns is greatest in the first five months after the issue of forms. In 1963 about half the total had come in by the end of that time, but even after twelve months there was still a considerable number of returns outstanding. A good deal of improvement has been achieved since 1954, but it should be noted that for that year detailed returns were required from firms with more than 10 employees. The 1963 experience was rather worse than that for 1958, especially in the second half of the first year. This is attributable to the fact that the 1963 forms, unlike those for 1958, contained detailed questions about goods

purchased, always the most difficult section for firms to complete.

Processing

There may be some misconception that once returns are received the figures merely need to be aggregated and put into a suitable form for publication. In fact this represents a comparatively small fraction of the processing. All but a very few returns are found to be incomplete, or to contain inconsistencies which make them unacceptable. When the initial queries are resolved and appropriate corrections made to the basic data, the requirements of compilation and analysis involve quite complex procedures. Altogether there is a long sequence of processes in handling the information collected. For the 1963 census these can be described as: editing, adequacy checks, commodity coding, classification, credibility checks, imputation, aggregation, disclosure and presentation of results. These processes are discussed in the following paragraphs.

Editing is a matter of seeing that the return can be presented in appropriate form for computer processing. It is mainly a simple process of deleting unwanted information (e.g. where a return includes shillings and pence).

The *adequacy checks* in the 1963 census consisted of a preliminary scrutiny on the computer of the data as returned to ensure that each return hangs together, for example by recording purchases consistent with the sales, or by showing payments for vehicle licences if there are transport employees. In previous censuses this process had been carried out manually, necessary corrections being made (after referring back to firms where necessary) as the scrutiny proceeded. No record had been kept of the extent of these corrections. For 1963, however, the first computer operation resulted in a rejection rate of 87 per cent. Since every rejection involves a clerical operation to get the error or deficiency put right and subsequent data perforation and computer amendment action, this was a clear example of the kind of operation which is best not left completely to a computer. An analysis of the causes of the returns being rejected revealed that the majority fell into a very limited number of types. For 1968 the adequacy checks will be retained as a computer operation, but will be preceded by a desk examination of headings subject to the most common error types.

Commodity coding is of course prepared for in the design of the form. Most headings are pre-coded. However, for many commodity groups residual headings are inserted against which firms are invited to describe for themselves goods which do not readily fall in the specified categories. Since no form can provide specifically for the whole range of goods produced or purchased by all firms operating within an industry,

there are also general residual headings against which firms are asked to describe and evaluate separately any kinds of goods for which the value is £10,000 or more. Many of these items on the sales side are of a kind normally produced in a different industry, and must be coded accordingly. On the purchases side the declared items must be coded according to the industry of origin for the purposes of input/output analysis. The task must be carried out at the desk and calls for considerable expertise on the part of the examiners. To help them a "commodity index" has been maintained over the years which lists and codes many goods not specified on forms but which have been the subject of coding decisions on previous occasions.

After returns are fully completed and coded they are *classified* to industry. Census industries are based on the Standard Industrial Classification. In most cases the census industry corresponds to a Minimum List Heading but in some cases a sub-division of a M.L.H. or a grouping of sub-divisions is used as the basis. For report purposes a finer division of the industry (the 'specialist group') is also used relating to clearly defined sections of the industry, usually based on end-product but sometimes on an intermediate process or on whether the return is for the public or private sector. Classification is perhaps the most complicated of the census processes. Sales items are grouped together according to their industry or specialist group code and the return is classified to the industry or specialist group which accounts for the greatest proportion of total sales. However, a fair number of non-standard rules have to be introduced to take account of such things as integration of activities of more than one industry e.g. blast furnaces in an integrated steelworks, and to meet special requirements where it is considered that classification should be based on structure or activity rather than on end-product. Space is not available to go into a detailed explanation of the classification procedure but a measure of the complexity is that twelve of the fifteen digits making up a commodity sales code are needed for classification purposes.

An additional rule supplementing the actual classification procedure was introduced for the 1958 and 1963 censuses. This rule applied across the whole field of census industries and had the effect of preventing a change of classification from census to census if the sales of principal products of a newly predominant industry were not more than one-third greater than the sales of principal products of the predominant industry in the previous census. This rule will not be applied in the 1968 census partly because the classification will be according to a substantially revised Standard Industrial Classification but mainly because it is considered preferable to have true classification in a census which

will provide the starting point for the new system of industrial statistics.

The *credibility* of the information contained in a return is checked in the main by calculating a series of ratios e.g. wages and salaries per head, gross output per head, etc. and testing these against pre-set limits, different limits being used for different industries.

Imputation procedures are concerned with deficiencies or inaccuracies of the detailed information in returns. The average values of commodities are calculated wherever both quantities and values are returned. Aberrant quantities are corrected (quantities are more likely than values to be wrongly given, and values can be checked by reference to the total for the whole return). In important cases items are queried with firms. For small items, a quantity is imputed to match the value given, but not where imputation might result in misleading figures. Certain summary items of expense, like rates or postage, are also imputed where necessary.

Aggregation of the final figures for the industry report tables involves a good deal of sorting and re-sorting of data, with much cross-analysis. For example, the table showing sales of the principal products of an industry includes any sales of that product shown on a return classified to another industry. Separate aggregates have therefore to be produced for 'carry-in' and 'carry-out' entries. In a perfect world all that now would be required would be the grouping of figures to fit into the report tables (taking account of the need to suppress items because of the risk of disclosure) and the fitting in of figures from the previous census for comparison purposes. However, even at this stage errors come to light which have escaped the net of adequacy and credibility checks. Perhaps the most frequent error is the wrong allocation of commodities either because a firm has returned a sales item at the wrong heading or a 'written in' item has been wrongly coded because of a misleading description. Checks are carried out during credibility testing to attempt to detect output variations compared with previous returns but in many cases this is not practicable because returns have been made for a different reporting unit or the headings themselves cannot be exactly matched with the headings used in the previous census.

The *disclosure* provision of the Statistics of Trade Act 1947 is, generally that 'no individual estimates or returns, and no information relating to an individual undertaking . . . shall, without the previous consent in writing of the person carrying on the undertaking . . . be disclosed'. To comply with this legal requirement it is necessary for every figure published relating to a census to be examined to see that it is free from possible disclosure. This is not merely a matter of counting the entries against a particular heading, for two reasons. First, an entry often relates to a particular unit within a

larger undertaking, so that all entries for the undertaking need to be added together and it is the aggregates for the undertakings which must be examined. Second, one or two undertakings may hold a dominant position even though a number of other enterprises may contribute to a small extent to a particular item.

Where a risk of disclosure is established, the nature of the item is considered. If this relates to 'structure', like the number of employees or the value of stocks, it is normally suppressed without question unless the figures are large. Where the item relates to a commodity purchased or sold the firm concerned is normally approached for agreement to publication. An individual firm can speak with two voices, supporting the restriction on the publication of figures which would reveal its own business, but pressing for publication of information which would improve its market intelligence. Generally speaking firms readily give their assent to the publication of output figures; about 60 firms have in the past given their permission for every 40 that refused. Previous to the 1963 census, refusals were accepted as final. Because of this, details of output amounting to several hundred million pounds were suppressed in census reports.

For the 1963 reporting programme, the first serious attempt to limit this non-publication was undertaken. From the 1958 census results about 100 headings were identified amounting to over £500,000 each for which permission to publish had not been forthcoming. These concerned about 60 enterprises. A special high-level approach to these enterprises was organised, explaining the deficiencies in reporting resulting from the suppression of information and asking for their help. As a result, more than 80 per cent of the output of the firms concerned which had been suppressed in 1958 was freed for publication in the 1963 reports. It should be noted that this in fact freed much more information; for the figures can only be hidden by combining them with other figures which, but for this procedure, could be published separately.

Although the identification of possible disclosure items can be carried out on the computer, the suppression procedures can only be done satisfactorily by hand. Each item must be considered in relation to other items being reported on so that it may be combined with that which is most nearly related, and which is large enough to conceal effectively the sensitive figure. This task calls for considerable expertise and background knowledge of the activity of the industry in question.

Mention should be made of the problem of 'disclosure by difference'. If the actual data is analysed in two ways, e.g. a size distribution by industry and by geographical area, there may be disclosure in particular cells of each analysis. If these cells are suppressed in each analysis independently it may be possible, by

comparing the two sets of figures, to identify a particular establishment in a particular place. To avoid this, and at the same time publish as much useful information as possible, it is necessary to arrange alternative forms of analysis in order of priority. At present the analysis by industry is done in preference to the analysis by region, which merely means that there may be rather more suppressions in regional figures. It should be noted that information given to inquirers after publication must always be checked against already published figures to ensure that disclosure by difference does not occur.

A particular piece of information which would be of considerable commercial importance is the classification of firms by industry. The provisions of the Statistics of Trade Act effectively preclude the publication of classified lists or directories because something would thereby be disclosed about the balance of the activities of individual firms, or the distribution of those activities between individual establishments. It is to overcome this difficulty that a question has been included in the 1968 census of production form designed to elicit agreement to the inclusion of firms' names (but without any of the detailed information included in returns) in a list classified by industry.

Publication of the *results* for 1963 is in three stages, following earlier practice. Provisional figures were published, as mentioned at the beginning of this article, following the initial checks and the first classification runs. Industry reports which present the information for each industry in a standardised set of tables began to appear at the end of 1967 and are now virtually completed. The larger and more complex of these involve not only a bigger volume of processing but are more likely to produce queries and error corrections in the later stages. Hence the industry figures must be complete before the computer data file can be finally frozen. (Incidentally this file occupies 15 reels of magnetic tape each reel containing up to ten million characters). Only then can the whole of the data for all firms be processed to produce summary tables which are fully consistent with the figures in the separate industry reports.

The first part of the whole report, the Introductory Notes, describes the design and content of the inquiry and the methods used, and contains notes on the individual industry tables and explanations of the terms used. It also has a list of industries. A list of tables in the industry reports and in the three sets of Summary Tables yet to be published is given at the end of this article (page 5.7).

Resources

The conduct of a large and complex inquiry like the census of production makes a heavy demand on staff. Over the whole period of the operation about 90 people

are employed on the average, apart from systems analysts, programmers and register staff. In the Census Office it has been possible to keep this figure to a minimum by alternating this census with the census of distribution and other large-scale inquiries, moving staff from one operation to another as circumstances require. Even so there are inevitable peaks in the work as when the bulk of the returns are received in the months following the issue of forms. Any slippage in the planned timetable for processing at any stage not only delays subsequent stages but may affect the phasing of major inquiries. This happened in the 1963 operation when early computer difficulties led to peak staffing requirements on the census of production for that year and on the sample census of distribution for 1966 at the same time. Indeed, the completion of work on the 1963 census has overlapped the first processes for the 1968 census.

Mechanical aids to help the staff in carrying out laborious, and often tedious, processes are essential. Even in ancient times some form of abacus was found useful in conducting investigations of a somewhat similar sort. By the 1930's mechanical processing on punched cards was the established practice in the Census Office, which was always on the lookout for more up-to-date and more efficient means of processing. In 1955 a Hollerith 550 electronic calculator was introduced for the calculation of ratios from information punched on to cards. Then late in 1957 a National/Elliott 405 computer took the place of the calculator for classification and credibility checking. (That machine is currently still in use, but is now helping school-children to familiarise themselves with electronic data processing). With the 405, output of data was on paper tape which was converted to punched cards for tabulation.

Encouraged by the success of these experiments the Census Office launched a fully computerised system for the 1963 census. A LEO III computer was installed for the purpose in September 1963. It was a general purpose computer with a core store on installation of 16,384 words and five magnetic tape decks. Input was by paper tape and output by line printer and there were the usual peripherals. (The size of the installation has since been substantially increased).

Unfortunately there was at the time no advice available in regard to an operation as complex as the census, though relevant experience in other countries was studied and a visit paid to the Census Bureau of the United States. There was little time between installation of the machine and the first operations. Early programs had to be written in inter-code pending the receipt of a high-level language compiler. Even more serious was an under-estimate of the work involved in systems analysis and program writing and testing,

which was a very common experience at that time. The effect of this may be gauged from the fact that the whole census operation has involved the writing of some 450 separate programs, most of which have had to be tested and re-tested time and again before they were fully operational. A delay of only one or two days in arriving at this stage for each program clearly has a formidable cumulative effect. Nevertheless the 1963 experience has shown many ways in which the work can be better organised in regard, on the one hand, to a few processes which are better handled by staff at the desk and on the other to an improved sequence of operations and certain economies in program writing. This knowledge will, it is hoped, yield fruit in conducting the 1968 inquiry.

LIST OF TABLES IN 1963 CENSUS OF PRODUCTION REPORTS

(All tables relate to United Kingdom except where otherwise stated. 'Larger firms' are firms employing 25 or more persons)

INDUSTRY REPORTS

Table No.

1. Industry summary: estimates for all firms 1958 and 1963
2. Analysis of larger firms by sub-divisions within the industry, 1958 and 1963
3. Analysis of larger firms by size of enterprise within the industry, 1963
4. Percentage analysis of employees, by age and sex, all firms, 1963
5. Sales of principal products of the industry by larger firms, including sales by establishments classified to other industries, 1958 and 1963
6. Sales of principal products of the industry by establishments classified to other industries, 1958 and 1963
7. Sales of other than principal products by larger firms in the industry, 1958 and 1963
8. *Production of certain principal products of the industry by larger firms, including production by establishments classified to other industries, 1958 and 1963
9. *Purchases of selected principal products of the industry by larger firms, 1963
10. Purchases by larger firms in the industry, 1954 and 1963
11. Transport costs and employment of larger firms, 1963
12. Payments for certain services, etc. by larger firms, 1963
13. Percentage analysis of twelve-month periods covered by returns from larger firms, 1963
14. *Sales of all parts of machinery and plant by larger firms, 1958 and 1963

*Only for certain industries.

SUMMARY TABLES

Table No.

Volume I – Part 131

1. Summary by industries, 1958 and 1963
2. Capital expenditure and stocks and work in progress. All firms: 1958 and 1963
3. Employment and wages, salaries, etc. All firms: 1958 and 1963
4. Analysis of manufacturing industries by size of establishment within each industry. All firms: 1963
5. Concentration of sales of selected products. Larger firms: 1963
6. Sales of principal products by industry groups. All firms: 1963
7. Purchases of fuel and electricity, and electricity generated and sold by larger firms, 1963
8. Purchases of packaging materials by larger firms, 1963
9. Payments and receipts for certain services, etc. All firms: 1963
10. Transport costs and employment of larger firms, 1963
11. Analysis of selected payments made from net output. All firms: 1963
12. Percentage analysis of twelve-month periods covered by returns from larger firms, 1963.

Volume II – Part 132

13. Analysis by total employment size.
All enterprises with industrial activities in the United Kingdom: 1958 and 1963
14. Analysis by size of net output.
Private sector enterprises employing 100 or more persons: 1958 and 1963
15. Analysis of manufacturing industries by total employment size and main industry group.
Private sector enterprises employing 100 or more persons: 1958 and 1963
16. Analysis of manufacturing industries by main industry group showing activities in other industry groups.
Private sector enterprises employing 100 or more persons: 1958 and 1963
17. Analysis of establishments in manufacturing industries by industry group showing the main industry group of the enterprise to which they belonged.
All establishments of private sector enterprises employing 100 or more persons: 1958 and 1963

Table No.

18. Analysis by total employment size showing percentage of net output in main industry group.
Private sector enterprises employing 100 or more persons: 1958 and 1963
19. Analysis of total employment size showing number of industry groups in which engaged.
Private sector enterprises employing 100 or more persons: 1963
20. Analysis by nationality of enterprise.
All enterprises with industrial activities in the United Kingdom: 1963

Volume III – Part 133

Summary by Country and Standard Region

All firms: 1958 and 1963

21. All manufacturing industries: S.I.C. Orders III to XVI
- 22–35. Manufacturing S.I.C. Orders individually
36. Distribution of employment within each industry
Manufacturing industries: All firms
37. Distribution of net output within each industry
Manufacturing industries: All firms
38. Analysis of capital expenditure into industry groups
Manufacturing industries: All firms

Summary by Manufacturing Industries

All firms: 1958 and 1963

- 39–46. Regions of England individually
47. Summary by industries. Scotland: 1958 and 1963
- 47A. Analysis of capital expenditure. Scotland: 1958 and 1963
48. Summary by industries. Wales: 1958 and 1963
- 48A. Analysis of capital expenditure. Wales: 1958 and 1963

International systems of national accounts

R. E. Beales, *Deputy Director, Central Statistical Office*

The Organisation for European Economic Co-operation issued in 1950 a *Simplified System of National Accounts* and followed this in 1952 with its *Standardised System of National Accounts*. At roughly the same time work in this field was also proceeding in the United Nations Statistical Office under the direction of the Statistical Commission, and the *UN System of National Accounts and Supporting Tables* was published in July 1953. Minor revisions have since been made to both the United Nations and OEEC systems designed mainly to bring them into line with each other and with the Balance of Payments Manual issued by the International Monetary Fund, but in essence these early systems have been the basis for international reporting and publication of national accounting data up to the present time. The international systems set out the principles underlying the construction of national accounts and discuss the main practical problems of definition which arise. For example, the definition of the scope of national income and production; the division of the economy into sectors to show the activities of individuals as consumers, of productive enterprises and of governments; the types of account which should be drawn up; the different forms of transaction which should be shown; and how transactions should be recorded for inclusion in the accounts. A standard set of accounts is given and a set of tables drawn up for general use. During the past three or four years a number of international discussions have taken place both on national accounts as a whole and on particular aspects. These discussions have been world-wide, having taken place not only in the United Nations Statistical Commission but also in Geneva under the auspices of the Conference of European Statisticians, and in similar meetings in Asia, Africa and Latin America. As a result of these discussions the United Nations has now issued a further revised version of its System of National Accounts (SNA) which will also be used for work in this field by OECD.

An expanded system

The new SNA goes much further than its predecessor since, in addition to the traditional national accounts, it sets out an integrated system which includes input/output tables and financial accounts. Provision is also made for a further extension to include balance sheet

data and for linking the national accounts with other data such as labour statistics and income distributions. Work on these further extensions is still proceeding and further international discussions have been arranged on these topics.

The new SNA is a forward looking document as is indicated in the Preface – ‘The new SNA is intended to furnish goals for advancing national accounting and systems of basic statistics in the foreseeable future. It is recognised that it will take a number of countries many years before they can compile all the data of the full system. . . . Expansion in the international reporting of the data of the new SNA will reflect the pace at which the national compilation of the standard accounts and tables progresses’.

The new SNA is not only forward looking, it is also somewhat idealistic in that at a number of points it recommends concepts which, while theoretically attractive, seem unlikely ever to be realisable in practice because of difficulties in data collection. However, in most of these cases more practicable alternatives are also given.

Uses of SNA

The principal uses of SNA are twofold. In the first place, it provides guidance to countries in the development of their own accounts. The new SNA has in fact one chapter devoted entirely to the needs of developing countries, in which priorities are suggested. Secondly, it provides a consistent basis for international reporting. Countries which, for various reasons, do not follow the system precisely in their own national publications, can usually adjust their figures to SNA concepts and definitions so that the figures collected and published by United Nations and OECD are as comparable as possible between one country and another.

This second use is of interest to many people who are not particularly concerned with the theories and concepts of national accounts as such. There is considerable interest – and much ground for argument – in comparisons of United Kingdom figures in a number of fields with those of other countries at a similar stage of development. Discussions on rates of economic growth are based on national accounts data, as are also those on the overall burden of taxation and the respective proportions of direct and indirect taxes. The national

accounts systems also yield data on public expenditure in relation to total national income and the way it is split between different objects, in particular such categories as social security, health and education.

Changes in scope and definitions

When the new SNA becomes the basis for reporting to international agencies – probably in 1970 – some of the data on which comparisons such as those mentioned in the previous paragraph have been based will be changed and others will be improved. The emphasis in the new document is very much towards aggregates expressed at market prices rather than at factor cost, market prices now being used not only for expenditure but also for national income itself. In the case of incomes the emphasis is on data net of depreciation as it was in the previous version. While this is conceptually correct, gross figures might be better for general application since data on depreciation are not generally available at present on a consistent basis. Very few countries have gone as far as the United Kingdom in estimating data on depreciation (or capital consumption) at current replacement cost. Most countries rely either on depreciation allowances made for tax purposes or on those in the accounts of individual enterprises. Neither of these sources produces consistent figures and data on net income may therefore be less reliable than the gross figures in international comparisons. However, the new system will still contain the necessary information both to move from market price to factor cost valuations and to move from net to gross figures of incomes.

In adding net income from abroad to move from domestic to national product, account is now to be taken only of remitted profits of overseas branches and subsidiaries. The retained profits are to be omitted, in contrast with the previous custom whereby the whole of the profits were brought in in arriving at the current figures of income, and retained profits were then treated in the capital account as reinvested abroad. There are a number of other minor points at which the new system is at variance with the present Balance of Payments Manual. Consultations with the International Monetary Fund with a view to possible revisions of the Manual are still in progress.

There are some changes in the new system in the scope of the data relating to taxation and in the split between direct and indirect taxes. Indirect taxes will in future be regarded as payable only by producers and not by consumers. The main figure affected by this change is that for motor vehicle licences. These are now to be treated as direct taxes when payable by private individuals but as indirect taxes when payable on business account. Capital gains taxes are to be aggregated with direct taxes on income (despite the

fact that capital gains themselves are not regarded as income). Death duties and capital levies are still left as capital transfers.

New analyses

The new SNA makes provision for an elaborate classification of government expenditure by purpose and extends this not only to current expenditure on goods and services but also to capital expenditure, current and capital transfers and loans. It is thus very similar to Table 53 of the National Income Blue Book, 1968. Data in this form, when generally available, will facilitate comparisons not only of total public expenditure but also of expenditure in particular fields – health, education, social security – where comparisons have been difficult in the past, because of differences between countries in the way in which these activities have been financed, either by direct expenditure on goods and services or indirectly through transfer payments to individual beneficiaries or by varying combinations of the two methods.

In the previous SNA detailed analysis was mainly by industry groups and only limited provision was made for analysis by institutional sector. In the new SNA, while industry analysis is retained and indeed extended, there are also income and outlay accounts and capital accounts for households (including non-financial unincorporated enterprises), private non-profit institutions, non-financial companies, financial institutions and government, and, for more detailed figures, for subdivisions of these sectors. This again is a development which is to be welcomed from the United Kingdom point of view. The separation of private non-profit institutions from households is an innovation which many countries, including the United Kingdom, will be unable to implement for some time to come. It is clearly a desirable move since these institutions – churches, charities, independent schools, trade unions, sports clubs, etc. – differ in many ways from private households. Their inclusion in the past in a combined sector has affected such analyses as the ratio of tax to income (since many of the institutions are exempt from tax), the pattern of consumers' expenditure and the ratio of savings to income. But the problems of separating these institutions into a separate sector are formidable. For example, in the United Kingdom it would be necessary to obtain separate data on the investment income and financial transactions of all the thousands of charitable trusts of various types and sizes and to estimate all the contributions made by private individuals to these institutions by way of church collections, flag days, fetes and bazaars, etc. as well as their regular contributions or subscriptions to trade unions and to clubs of different types. On the other side of the account, detailed estimates of the

current expenditure of these institutions on different goods and services would be necessary. The statistical resources needed and, still more, the burden on the institutions themselves in supplying information must be set against the advantages to be gained from having a separate sector. The SNA recognises the difficulties to some extent by suggesting that small sports and social clubs with not more than two full-time employees, or the part-time equivalent, should be excluded. But the probability is that a start will be made by collecting data about a limited number of the larger organisations and then extending the coverage of the sector gradually as opportunity occurs.

Implementation of the new system

International discussions will be taking place this summer on the form and scope of the questionnaires to be used for reporting to the United Nations and to OECD under the new system. These discussions will be concerned with reaching a balance between, on the one hand, the amount of detailed data which is desirable for international comparisons and for analytical work, and on the other the extent to which countries can implement the new system and the amount of space which can be made available in the international publications for the additional data. So far as the United Kingdom is concerned, there should be little difficulty in adjusting our own figures to fit the new system except that we shall have to continue for the present to combine the household and private non-profit institutions sectors. There are some minor differences between our own industrial classification and the international classification and also between our classification of consumers' expenditure and that recommended in SNA, but these are not important.

At some stage, consideration will have to be given to the possibility of introducing some changes in our own concepts and presentation in the National Income Blue Book to follow the changes in SNA. However, copies of the new publication have only recently become available and it is at present too early to judge what changes in our own figures might be made.

Reference

A System of National Accounts, Studies in Methods, Series F, No. 2, Rev. 3
United Nations 1968.

The role of population projections in planning activities

Miss J. H. Thompson, *Chief Statistician, General Register Office*

Projections of the population have come to play a fundamental part in setting the background for social and economic policy. People are both producers of national wealth, in what they contribute to the national product in the course of their working lives, and consumers throughout the span of their lives. When looking beyond the immediate future, demographic factors can be seen to imply major shifts over time in the relationship between the role of the population as respectively producers and consumers. Projections are used in a number of fields to point to the magnitude of the problem of balancing resources and requirements. They play a particularly important part in the detailed planning of the social services.

Period of projections

The period of time over which projections are required varies according to specific applications. The total size and growth rate of the population is of very broad concern and interest in relation, for instance, to long-term questions on the physical environment for this country. That growth of population is itself one of the main determinants of economic and social change is clearly seen in the way housing and transport facilities, to take only two examples, have to grow to keep up with the demands of increasing population. But in virtually every field, the age and sex structure of the population, not only its size, is of major importance. This is particularly so in dealing with the medium term and rather more detailed applications of projection data.

Each year therefore the Government Actuary's Department in consultation with the Registrars General (for England and Wales, Scotland and Northern Ireland) prepares population projections of the detailed age and sex structure of the population for a period up to 40 years ahead. The latest projection was published in the *Monthly Digest of Statistics* for April 1969, together with an account of the basic assumptions used in making the projection; the corresponding projection for England and Wales was published in the *Registrar General's Quarterly Return, 4th Quarter 1968*.

Although 40 years ahead is beyond the range of the more detailed planning activities, it can be seen to

be by no means long in relation to the present-day span of human life and the provision which has to be made for this. For instance for young men today aged 25, the projection period only covers their life up to the threshold of their retirement, an age which some four-fifths of them would expect to attain. The estimation of the sum of their insurance contributions set against the benefits they may receive over their working life, and their expectation of receipts by way of pension after retirement, is an actuarial calculation, involving projections of survivorship rates in the population, which is obviously of significance for any insurance scheme, State or private.

Dependent age groups

More generally, it is the evolution over time of the ratio of the dependent age groups in the population to those at work which matters in the planning of a balance between requirements and resources. The dependent age groups are broadly the child and the retirement age groups. Each clearly has its own particular requirements, and time scale of planning problems.

Cyclical changes in the ratio of the dependent to the working population are a very important factor in the problem of resource planning. The basic reasons for these changes are the past cycles in births, and their present and future consequences, and birth cycles projected for the future. It will be seen that birth cycles can be to some extent self-perpetuating, for a wave of births at one point in time implies, other things being equal, a further wave starting perhaps twenty years later as the first begins to produce its own children.

The number of births projected for any future period shows the requirement for maternity services at that point in time; five years further on comes the corresponding requirement for infant education – the school buildings and the teachers – until twenty or so years later follows the requirement for higher education.

Waves of births thus work their way over time through the education system, through the working population and into the retirement age group. But at any one point in time the requirements on the education system are a cross section of waves in births over roughly the preceding twenty years: the requirements

of the retired section of the population are however a reflection of births sixty or more years previously.

A striking illustration of what this means in practice is afforded by the current population structure. The size of the population of working ages is at present largely determined by the low birth rates of the 20's and 30's; the population of child dependants by the much bigger birth cohorts occurring since the mid-1950's, while the population of retirement ages is made up of the survivors of the very large birth cohorts seen around the turn of the century, when births reached a level which has not since been equalled. As a consequence of these factors, and the declining mortality rates, the ratios of both child and retirement age groups to the population of working ages is therefore at present relatively high, though even further increases for both are implied by the projected changes in the age structure of the population.

Regional aspects

Population projections at a national level are important in overall resource planning, but over recent years the increase in planning activities at a regional level has called for new work to be undertaken in making regional and even sub-regional population projections. The age structure of the population is if anything of even more significance at a local level than at a national. For instance some areas of the country have become favoured retirement areas, and social services have to be planned accordingly. The counterpart is that many urban industrial areas have found the age structure of their population biased towards the working ages and hence also towards the dependent child age groups. Regional population projections point the factors in local populations which are of significance for economic planning, for housing policy, and set the background for planning social services.

Time series

It will be seen that to support the basic assumptions underlying the actual projections, a considerable body of statistical evidence has had to be built up not only about the current size and structure of the population – which supplies the starting point for projections into the future – but time series of the various factors underlying past population changes. It is analyses of these time series which provide the essential basis for assessing which have been the most significant trends, and point the way to what seem the most reasonable assumptions about the degree of change which should be expected in future years. Over a long span of years detailed annual coverage of population and vital statistics has been built up which has been supplemented by the periodic Census of Population, providing benchmarks for many of the annual series, as well as offering

cross-analyses of many variables in a way which the annual series cannot provide. Of more recent years, statistics have increasingly been given for regions. The multiplication of work and detail involved in giving regional statistics is however considerable. Not all series are yet available on regional basis though work on expanding the basic data is continuing.

Sources

The basic statistical data on which the population projections for England and Wales rest are to be found annually in the *Registrar General's Statistical Reviews of England and Wales*; Part I gives Medical (Mortality) tables, Part II gives Population tables, covering estimates of the current population and data on births, marriages, fertility and migration. Part III gives a Commentary on aspects of the statistics of particular current concern and present the results of *ad hoc* investigations carried out from time to time. The Quarterly Returns present quarterly data on some topics, and new statistics as they become available. The *Annual Report of the Registrar General for Scotland* presents statistical data and commentary for Scotland.

Sickness and injury benefits

F. E. Whitehead, *Chief Statistician, Department of Health and Social Security*

This article on sickness benefit and industrial injury benefit was written in the first place as a background paper for the Seminar on Official Statistics convened in January 1969 by the British Pharmaceutical Market Research Association and has been amended slightly for publication in *Statistical News*. It continues the series of notes on sources of, and methods of analysing, social security statistics. *Statistical News* No. 4, published in February 1969, contained an article on Supplementary benefits.

Introduction

Under the National Insurance Acts, insured persons are divided into three classes:

- Class 1: employed persons (insured for all benefits);
- Class 2: self-employed persons (insured for all benefits except unemployment benefit); and
- Class 3: non-employed persons (insured for all benefits except unemployment benefit, sickness benefit and maternity allowance).

The National Insurance (Industrial Injuries) Acts cover persons engaged in insurable employment which generally means those workers insured in Class 1 under the main scheme. A few groups not in Class 1 are insured for industrial injury benefits, for example, school children doing paper rounds. Employed married women and certain employed widows who choose not to pay the main scheme contributions remain insurable for industrial injury benefits and must pay the appropriate contributions in respect of their employment. Members of the Forces (who are covered by special provisions) and people working outside Great Britain (except mariners and those persons who are covered by reciprocal agreements with the country in which they are working) are not insured under the industrial injuries scheme.

Subject to satisfaction of the qualifying conditions, sickness benefit under the National Insurance Acts and injury benefit under the National Insurance (Industrial Injuries) Acts are payable in respect of incapacity for work due to sickness or injury. If, however, a claimant qualifies for both flat-rate sickness benefit and injury benefit simultaneously, he is paid whichever benefit is the more favourable; this is normally injury benefit.

The following description of the main conditions which have to be satisfied for the payment of the two

benefits is in very general terms and should not be regarded as a complete statement of the law in any particular case.

Sickness benefit

Sickness benefit is payable in respect of days of incapacity for work forming part of a 'period of interruption of employment' to claimants who satisfy the contribution conditions and who are free from disqualification. The contribution conditions are:

that not less than 26 Class 1 or Class 2 contributions (or a mixture of both) have actually been paid between the date of entry into insurance and the day for which benefit is claimed; and

that not less than 50 Class 1 or Class 2 contributions (or a mixture of both) have been paid or credited in respect of the last complete contribution year before the beginning of the benefit year in which the claim is made. (The insured population is divided into four groups whose annual contribution cards are due for exchange on the first Monday in March, June, September and December respectively. The benefit year starts five months after the end of the contribution year.)

If the first condition is not satisfied, no benefit is payable. If the first condition is satisfied and the number of contributions paid or credited for the relevant contribution year is 26 or more but less than 50, benefit may be payable at a reduced rate.

It is necessary here to explain the term 'period of interruption of employment'. Isolated days of incapacity do not normally attract benefit: two days out of six consecutive working days count as a minimum 'period of interruption of employment'. All periods of interruption of employment separated by not more than 13 weeks are linked and treated as if they were one. Spells of unemployment can be linked to spells of incapacity. The first three days of the period are waiting days for which benefit is payable only if followed by a further nine days of interruption of employment within the period of 13 weeks beginning with the first waiting day.

Incapacity covers illness or bodily or mental disablement and the onus of proving incapacity for work rests on the claimant.

A claim is made by sending in to the local office of the Department of Health and Social Security a national

insurance medical certificate (Form Med. 3) signed by the doctor on which the patient has completed the portion which constitutes the claim for benefit. The claimant continues to submit supporting medical evidence of incapacity throughout the period of illness.

Claims for sickness benefit are decided by independent 'statutory authorities' appointed under the National Insurance Acts for this purpose. The first of these is an Insurance Officer. If the claimant is dissatisfied with the Insurance Officer's decision, an appeal can be made to a local tribunal. There is a final right of appeal to the National Insurance Commissioner.

Control is related to the facts of the individual case. A claimant may be visited by an officer of the Department and/or required to attend for a medical examination by a medical officer of the former Ministry of Health's Regional Medical Staff. Frequent short-term claims and claims for an unusually extended period are subject to special scrutiny.

The current standard weekly flat-rate of sickness benefit for a man or woman (except married women) over 18 years of age is £4 10s. There is an increase of £2 16s. weekly for one adult dependant, and £1 8s. for the first dependent child, 10s. for the second child and 8s. for each other child. Family allowances continue to be paid in addition.

An earnings-related supplement may be paid to employed persons aged 18 or over and under minimum pension age (65 for men, 60 for women) who are entitled to flat-rate sickness benefit, provided they had reckonable earnings of at least £450 in the tax year preceding the earnings-related benefit year which begins on the first Monday in May each year. The supplement is one-third of average weekly earnings in the £9 to £30 range, i.e. a man with reckonable earnings of £30 or more weekly qualifies for £7 supplement. The supplement, which is payable after 12 absolute waiting days for up to 156 days in a period of interruption of employment, is payable in addition to flat-rate benefit including increases for dependants, subject to a maximum total benefit of 85 per cent of average weekly earnings.

Injury benefit

Injury benefit is payable for incapacity for work due to personal injury caused by an industrial accident or due to a prescribed industrial disease (other than the diseases known as pneumoconiosis and byssinosis which attract only the longer-term benefit known as disablement benefit). The period during which injury benefit may be paid is known as the 'injury benefit period' and is limited to 26 weeks from the date of the accident (or the date of development of a prescribed disease) but the period finishes sooner if the incapacity for work ends within the 26 weeks and a claim is made

for disablement benefit. Incapacity for work occurring outside the injury benefit period, even if due to the relevant injury, attracts sickness benefit, provided, of course, that the normal contribution and other conditions for the payment of that benefit are satisfied.

Industrial injury benefit is not dependent upon the satisfaction of contribution conditions, nor are there any age limits below or beyond which benefit is not payable. Claims for injury benefit are normally made, as for sickness benefit, by the submission of a general medical certificate (Med. 3) on which the claimant completes a special part of the claim portion of the form indicating that the incapacity is claimed to be due to an accident whilst working for an employer or to a prescribed industrial disease. The time limits for claiming injury benefit are similar to those for sickness benefit claims.

Before a claim for injury benefit in respect of an accident can be allowed, the 'independent statutory authority' (in the first place the Insurance Officer) must decide whether the claimant has suffered personal injury from an accident arising out of and in the course of his insurable employment. As the acceptance of an industrial accident may have far-reaching consequences, very careful enquiries have to be made of the employer, and possibly elsewhere, before the Insurance Officer reaches his decision. If the evidence is conflicting, he occasionally refers the claim for decision by the local tribunal so that the claimant, the employer and any relevant witnesses can have an opportunity of giving oral evidence and being questioned. If the Insurance Officer disallows the claim, the claimant has a right of appeal to the local tribunal and there is a further right of appeal to the National Insurance Commissioner. In the case of a prescribed disease, the Insurance Officer must decide whether the claimant is suffering from one of the scheduled prescribed diseases, that the claimant has been employed since 5 July 1948 in insurable employment in one of the occupations for which the disease is prescribed and that the disease is due to the nature of the work in insurable employment since 5 July 1948. The Insurance Officer normally has the advice of an examining medical practitioner in deciding the medical issues involved in a claim in respect of a prescribed disease.

The current rate of injury benefit for a man or woman aged 18 or over is £7 5s. and dependants' increases are payable where appropriate at the same rates as for sickness benefit. Earnings-related benefit may be paid in addition if there is an underlying title to sickness benefit.

Statistics

Statistics of insured persons submitting medical evidence of incapacity for work, whether or not benefit is paid,

are obtained in two main ways. Firstly, for work control purposes, local offices of the Department maintain a simple running record of all new claims for sickness or injury benefit during the week. In addition, a count is made once a month of the number of cases where there is a current medical certificate and from these returns an estimate is made of the number of persons incapacitated on the first Tuesday of every month.

More detailed analyses are made in respect of a 5 per cent sample of insured persons who become incapacitated. The sample consists of those persons whose national insurance number ends in the digit 4 or 8 with the suffix B indicating that their contribution year commences on the first Monday in June. When any person in the sample claims either sickness or injury benefit, a special form (Stats 71) is opened and placed with the claim papers which are held by the local office dealing with the claim. An entry is made on the form when incapacity ceases or, if the claim is still current, at the end of the contribution year. All spells of incapacity experienced by the person in the year are recorded on the one form which travels with the claim documents should the insured person move and make further claims at a different local office from the one at which the first claim in the year was made. At the end of the contribution year, the forms are sent to the Department's Central Office at Newcastle for processing. Special checks ensure that a form is received for each person in the sample who has made a claim during the relevant year and that each spell of incapacity experienced by those persons during the year has been recorded.

Details recorded on form Stats 71 include date of birth, sex and (for women) marital status, local office of claim, period of incapacity, cause of incapacity as shown on the last available medical certificate, rates of flat-rate benefit and earnings-related supplement, and whether or not the period of incapacity links with a previous spell of sickness, injury, unemployment or maternity benefit to form one period of interruption of employment.

At Newcastle the details of each spell are coded and punched on to cards for subsequent transfer to magnetic tape for computer processing. Causes of incapacity are coded according to the World Health Organisation's International Statistical Classification of Diseases, Injuries and Causes of Death. Up to and including 1967-1968, the classification used is that issued by the World Health Organisation in 1957; the special list of 50 Causes for Tabulation of Morbidity for Social Security purposes is sub-divided to give figures under about 140 headings. The revised list of 70 Causes based on the recommendations of the Eighth Revision Conference 1965, which was published

in 1967, will probably be used from 1968-1969 onwards. Area analyses, when produced, relate to the standard regions for statistical purposes.

In the statistics of injury benefit, the external cause of injury in accident cases is classified according to the appropriate list in the same publication of the World Health Organisation as is used for classifying causes of incapacity. Industry, which means the industry in which the claimant worked at the time of the accident or when the prescribed disease developed, is classified according to the Standard Industrial Classification published by HMSO.

From the information contained on forms Stats 71, tables are produced showing, among other things, spells commencing and spells terminating in the statistical period (i.e. the contribution year starting on the first Monday in June) analysed by cause, duration and age and the number of persons incapacitated on the last day of the period again analysed by cause, duration and age.

Publication of statistics

Publications which contain statistics as to the number of persons incapacitated by sickness or injury, obtained from the returns referred to above, include the following:

Annual Abstract of Statistics

United Kingdom. Average numbers of persons incapacitated by sickness or industrial injury.

Monthly Digest of Statistics

Great Britain. New claims for sickness or injury benefit. Persons incapacitated by sickness or industrial injury.

Digest of Scottish Statistics

Digest of Welsh Statistics

As in the *Monthly Digest* but for Scotland and Wales respectively.

Registrar General's Quarterly Return

England and Wales. Regional analysis of persons in England and Wales incapacitated by sickness or industrial injury.

Registrar General's Weekly Return

England and Wales.

Registrar General's Weekly Return

Scotland. New claims for sickness and injury benefit.

The annual reports of the Ministry of Social Security have included tables giving the following information for sickness and injury benefits:

New claims analysed by area.

Average weekly intakes of new claims.

Numbers of insured persons incapacitated by sickness or industrial injury on the first Tuesday of a month.

Spells of certified incapacity starting in the statistical period, spells current at some time in the period and total days of incapacity in the period, analysed by

cause of incapacity (Sickness Benefit). Based on the 5 per cent sample of claimants.

Spells of certified incapacity ending in the period and total days of certified incapacity in the period, analysed by cause of incapacity for (i) industrial accidents and (ii) prescribed diseases. Based on the 5 per cent sample of claimants.

More tables based on the 5 per cent sample are given in the *Digests of Statistics analysing Certificates of Incapacity* which are issued periodically by the Department and which, whilst not on sale, can be obtained by research workers and others interested in public health on application to the Statistics Division of the Department. There has been a considerable time-lag in the issue of the *Digests* and the latest available one covers the period 1958-1961 but it is hoped to produce a *Digest* for 1961-1964 shortly followed by a *Digest* for 1964-1966 and then annual issues. An index of tables for the 1958-1961 *Digest*, showing the comprehensive nature of the statistics it contained, may be obtained on request from the Statistics Division of the Department of Health and Social Security, 1-5 Adam Street, London WC 2.

Certain other tables are produced for the use of the Government Actuary with an emphasis on the rate of benefit, the dependency position and the linking of spells within the statistical period. The Government Actuary has a statutory obligation to make a full investigation into the working of the national insurance schemes every five years (known as the Quinquennial Reviews). The latest reports by the Government Actuary are the Third Quinquennial Reviews published by HMSO. The Government Actuary also has to advise on the financial effects of any projected legislation affecting the national insurance schemes.

In addition to the foregoing statistics, which with slight variations are produced regularly, the Department (then the Ministry of Pensions and National Insurance) conducted a special enquiry into the incidence of incapacity for work in 1961-1962. The subsequent Report was published by HMSO in two parts - *Part I, Scope and Characteristics of Employers' Sick Pay Schemes* (July 1964) and *Part II, Incidence of Incapacity for Work in different areas and occupations* (1965).

For a sample of about 620,000 men and 90,000 women, the precise nature of the occupation followed was obtained from their employers. This information was linked with the histories of incapacity for work notified in the course of the year from 5 June 1961 to 2 June 1962. The information obtained provided analyses of the number of persons becoming incapable of work by each of 24 selected causes in each area and in each occupation per 1,000 persons at risk and, for each group, the average number of days of incapacity

in a year. Special, more detailed, analyses were made of the three groups of diseases which cause a great deal of incapacity for work, i.e. bronchitis, arthritis and rheumatism and psychoses and psychoneuroses.

Apart from the main sickness and injury benefit statistics, more detailed statistics are available regarding the prescribed industrial diseases and their incidence in different occupations. Further statistics are produced regarding disablement benefit which is the long-term benefit under the industrial injuries scheme. Disablement benefit is awarded if a medical board finds that there is a loss of mental or physical faculty resulting from the relevant accident or prescribed disease. The assessment is, however, based on the extent of the loss of faculty as compared with a normal person and is not related to incapacity for work.

Limitations and potential of the data

All national insurance statistics produced by the Department are related to the schemes which it administers. Statistics, therefore, cover only the persons included under the legislation governing those schemes and are representative only of such persons. The information analysed is that collected for either administrative or financial reasons.

It follows that the field covered in the sickness benefit statistics is the employed and self-employed population including those unemployed but seeking work and those who have lapsed from the working population only because of prolonged sickness but excluding the following groups:

- (a) men over age 65 and women over age 60 who are retirement pensioners; and all men over age 70 and women over age 65;
- (b) members of H.M. Forces;
- (c) mariners whilst at sea;
- (d) most non-industrial civil servants (who do not normally claim sickness benefit until an illness has lasted six months); and
- (e) married women and certain widows who have chosen not to be insured for sickness benefit (about three-quarters of all married women in employment have chosen not to pay flat-rate contributions).

Groups (b), (c) and (d) are also excluded from the field covered in the injury benefit statistics, together with self-employed persons who are not insured for that benefit.

Short spells of illness lasting less than four days may not be reported to the Department because they would generally count as 'waiting days' for which benefit would not be paid. Some people who suffer no reduction in income while off sick do not claim.

A further drawback is that the tables are, necessarily, produced in arrear. For example, the content

of the 1968-1969 Stats 71 was agreed in early 1968. The information regarding the spells of incapacity suffered by the insured persons in the statistical 5 per cent sample will be recorded during the year June 1968 to May 1969. The completed Stats 71 (approximately 350,000 in number) will be forwarded from the 800 or so local offices to the Central Office at Newcastle in June 1969. The first tables (those needed for the Government Actuary and for the Department's Annual Report) will probably be available in June 1970 and the balance of the tables later in 1971.

Despite these limitations of coverage and timeliness, statistics of certified incapacity are one of the few regular sources of data on the morbidity experience of the working population. However, there are difficulties in interpreting the results. It is important to realise that when a person claims sickness benefit he is claiming because of incapacity for work. Symptoms which may render a miner or agricultural labourer unfit for work are not necessarily those which will incapacitate a shop assistant or an office worker. Different absence rates for age groups and geographical areas reflect not only climatic difference but differences in the occupational and industrial structure of the country. Furthermore, whilst the accuracy of the diagnosis on medical certificates, the raw data for analysis of incapacity by cause, is such that the statistics are probably reliable for main causes, most spells of incapacity are for short periods and doctors completing certificates will have only the patients reported symptoms on which to diagnose cause. It is not, therefore, surprising that so many spells of sickness are attributed to rather vague symptoms.

Nevertheless, the data that exists provides a valuable source that has not yet been fully exploited. Because the 5 per cent sample comprises the same people from year to year, the Stats 71 forms for successive years would, if they could be linked together, provide data for the detailed study of sickness absence for the same people over a number of years. If the unemployment history of this sub-sample could be added to the records, then it would be possible to examine changes in the pattern of 'periods of interruption of employment' over time. This type of analysis has only become possible with the availability of computers and has not yet been attempted.

Notes on current developments

POPULATION AND VITAL STATISTICS

1966 Sample Census of Population

Great Britain

The *Commonwealth Immigrant Tables* contain detailed information on the characteristics (age, sex, marital condition, employment status, occupation, industry and socio-economic group) of persons born in Commonwealth countries. Tabulations of Commonwealth immigrant households analysed by a number of variables such as size, number of rooms, density of occupation, etc. are also included. In particular, Table 17 gives statistics of households by number of children, by age of children, by country of birth of head or spouse for Great Britain, England and Wales, Scotland, regions and conurbations.

These tabulations have distinguished between Commonwealth immigrants born in the Old Commonwealth (Australia, Canada and New Zealand) and those born in the New Commonwealth (Commonwealth minus Old Commonwealth), many of them giving details for individual countries of birth and at region and conurbation level as well as nationally.

Reference

Sample Census, 1966, Great Britain, Commonwealth Immigrant Tables, (HMSO) May 1969.

Scotland

Three supplementary tables on migration between Scottish regions and England and Wales, derived from the results of the 1966 Sample Census and prepared for official use, are now generally available for the cost of copying. They are:

Migrants by sex, marital status and single years of age.

Migrants by economic activity and sex;
employment status and sex;
occupation order and sex;
industry order and sex.

Migrants by socio-economic group, age and sex.

The cost of the three tables for Scotland as a whole is 7s. A leaflet giving fuller details, with regional definitions and costs, is also available from General Register Office for Scotland, Census Branch, 35 Station Road, Corstorphine, Edinburgh 12.

Population

The *Registrar General's Quarterly Return No. 480* contains the estimated mid-1968 home populations, by sex and age in each standard region and conurbation of England and Wales and the mid-1968 estimates of the child populations of counties, county boroughs and London boroughs.

These estimates incorporate, for the first time, adjustments made after evaluation of the results of the 1966 Sample Census and a critical review of the previously used net migration figures. Revised mid-1966 and mid-1967 estimates of the age and sex structure of the home population for standard regions and conurbations are also given.

The return presents for the first time an historical run of population figures for sub-divisions of regions incorporating all revisions to population figures which have been made in the light of the 1961 and 1966 Censuses. The definitions of the sub-divisions in terms of the constituent local authorities are also given.

Home population figures are given on comparable bases for the years 1951, 1961 and 1966 in terms of 1966 boundaries of areas, and for 1967 and 1968 in terms of 1968 boundaries. An analysis of population change between the years given in the table shows natural change, change in armed forces stationed in area and the balance which includes the net change in the civilian population due to the balance of demobilisation as against recruitment in armed forces and civilian net migration. The figures and analysis have been produced in response to demands from those concerned with regional planning activities in particular.

Reference

The Registrar General's Quarterly Return for England and Wales, No. 480, Quarter ended 31 December 1968 (HMSO) May 1969 (Price 3s. 6d.)

Population projections

England and Wales

Quarterly Return No. 480 contains the 1968-based projections, by sex and age, of the total population of England and Wales prepared by the Government Actuary's Department in consultation with the Registrar General.

United Kingdom

The April 1969 issue of the *Monthly Digest of Statistics* contained a table giving United Kingdom estimated total population projections for the years 1969 to 1975, 1980, 1990 and 2000. These projections, prepared by the Government Actuary's Department in consultation with the Registrars General, are based on the population estimates at mid-1968. The assumptions on mortality, births and migration on which the projections are made, are fully described.

Mortality

The *Registrar General's Statistical Review of England and Wales*, Part I, Table 7, lists over 800 causes of death or groups of causes, and gives the numbers of deaths so assigned for each sex in the past eleven years. The numbers given are for deaths at all ages. Table 8 quotes crude death rates and Table 9 the corresponding age standardised mortality rates. Age-specific numbers and rates for an extensive list of causes are given in Tables 17 and 17A for the current year only. Serial age-specific rates for some broad groups of causes are shown in Table 10, but it is impracticable to publish annually a serial table of sex-age-specific death rates for the complete galaxy of causes – over 31,000 series.

Nevertheless it is important to monitor age-specific rates as well as global rates, otherwise important trends could be missed. A disease category might have different significance in youth and old age, for example asthma, where a recent increase in mortality was found predominantly at younger ages. It is also possible for a specific generation to experience a greater than usual incidence of a disease, thus producing a series of 'bulges' in successive age-specific rates as the cohort get older. Carcinoma of the cervix is a recent example of this.

The burden of surveillance can now be transferred to the computer which can produce the age-specific rates and test the series for significant trends. This is being done in the General Register Office for deaths in England and Wales in the five years 1963 to 1967 from the various causes listed in Table 17. Methods of publishing the results are being examined. In the meantime further information can be obtained from Dr. G. B. Hill at the General Register Office, Somerset House, London, W.C.2.

Another source of time series for surveillance is morbidity notification. Computer surveillance of monthly notifications of congenital malformations is an important feature and the methods are being extended to other sources of data. The statistical prob-

lems of dealing with small numbers and seasonal fluctuation are being further explored.

Reference

The Registrar General's Statistical Review of England and Wales for the year 1967 Part 1 Tables, Medical. (HMSO), February 1969 (£2. 2s. 6d.)

SOCIAL CONDITIONS

Drug offences and drug addiction

In June 1967, an improved system of collecting, recording, and processing certain drugs statistics was introduced by the Home Office. The improvements were designed to cater for an increasing flow of data about persons using, misusing or committing offences in respect of controlled dependence-producing drugs and the greater interest being shown in their statistical presentation.

In designing the new system a great deal of attention was given to standardisation of reporting procedures. In the past when control was limited to drugs specified in international treaties and the number of known offences was small, reports were made from police forces in a variety of forms, according to local practice, but usually by formal letter to the Home Office embodying the features considered by the reporting officer to be most relevant. With the extension of control by the Drugs (Prevention of Misuse) Act 1964 to substances such as amphetamines and LSD the numbers of reported offences sharply increased and have gone on rising. A standard reporting document was therefore introduced, for completion by police forces in respect of each offender, defining the information to be provided and designed for ease of handling by a central coding section and transfer to punching documents in coded form for machine processing.

Information on drug addicts (who are not necessarily offenders) is derived from many sources; from treatment centres, hospitals, police forces, courts, penal establishments and from general practitioners who, since February 1968, have been under a statutory duty to notify the Chief Medical Officer of the Home Office of persons found or suspected to be addicted to drugs scheduled under the Dangerous Drugs Act 1965. Subject to confirmatory procedures a standard form for each case is prepared by the Home Office Drugs Branch for subsequent transfer to punching documents in coded form and machine processing.

The completed reporting documents for both drug offenders and addicts are forwarded to the Home Office Statistical Division where, after coding, they are filed in name order in a Dangerous Drugs Index whether or not there is a related criminal history. This Index forms the basis for the production by machine-processing in Statistical Division of statistical tables required by the Home Office Drugs Branch for its own

operational needs and for certain statistics annually reported to the United Nations.

The introduction of standardised reporting procedures and a computer-orientated index system has already shown significant advantages in routine data retrievals, and promises a considerable potential for research in due course.

Public expenditure on social services

The May issue of the *Monthly Digest of Statistics*, to be published on June 11, contains the regular annual statement giving figures of public expenditure on social services and housing. The table covers both current and capital expenditure of the central government (including the National Insurance Funds) and local authorities, and the capital expenditure of public corporations. The series published this year relate to the eight years from 1961/62 to 1968/69. See note in *Statistical News* No. 1, page 1.18.

HOUSING

Recent developments

The supplementary tables of the 12th issue of *Housing Statistics, Great Britain* include information not hitherto published on local authority and new town housing contracts. One table shows the percentages of contracts let by various methods – open and selective competitive tendering, negotiations with individual contractors and ‘package deal’, with separate figures for traditional and industrialised schemes. The table also shows the proportions of contracts following the R.I.B.A. recommended form, the proportion including price fluctuation clauses, and the average size of scheme in each category. Another table shows the extent to which local authorities employ their own architects and quantity surveyors or make use of consultants or the contractors’ employees for traditional and industrialised schemes.

From the first quarter of 1968 dwellings in local authority schemes are classified by number of ‘designed bedspaces’ instead of, as previously, by number of bedrooms. The tables affected are those concerning Parker Morris Standards (Table 14) and Floor Areas and Costs (Tables 18 and 19). A summary of the Parker Morris figures already published for the years 1964–1967 on the bedroom basis is also shown in the supplementary tables.

The issue also includes an analysis of building society option mortgages showing their distribution by amount of mortgage, region, characteristics of the borrower and age and price of the dwelling mortgaged; the proportion of mortgages in each category which are option mortgages is also shown.

Other supplementary tables in this issue bring up to

date information previously published on completions in the new towns, by region and tenure; give the results of the November, 1968 survey of private enterprise house-builders’ activity and expectations; and an analysis of rents and incomes as returned in the Family Expenditure Survey of 1967.

Local Housing Statistics, England and Wales, No. 9 shows housing progress and slum clearance during the year 1968. Supplementary tables cover the sale of council houses during the year and progress of agreed overspill schemes.

References

Housing Statistics, Great Britain (Quarterly) No. 12, (HMSO) March 1969 (Price 12s. 0d. net).

Local Housing Statistics, England and Wales (Quarterly) No. 9, (HMSO) April 1969 (Price 13s. 0d. net).

Housing in Northern Ireland

The Ministry of Development publishes a *Quarterly Housing Return for Northern Ireland* which includes figures of dwellings completed, under construction, approved, demolished, converted and improved, information as to the type of dwellings being built and the number of contracts and tenders being submitted, as well as details of new housing by each local authority, New Town Commissions and the Northern Ireland Housing Trust. This Return has been revised as from 1st January this year and is more comprehensive than its predecessor. It can be obtained through Her Majesty’s Stationery Office, price 3/6d.

The Northern Ireland Housing Trust publishes an Annual Report which sets out the Trust’s own progress each year. This Report can be obtained from the Trust headquarters at 1, College Square East, Belfast, price one shilling.

As part of the Economic Plan for Northern Ireland 1965–70, a target of 64,000 houses in the six-year period was set, rising to an annual output of 12,000 houses. The latter figure has already been achieved and the overall target should also be achieved by the end of the year ending on the 31 March 1969.

EDUCATION

GCE, CSE and school leavers

Statistics of Education 1967, Volume 2: GCE, CSE and school leavers, was expected to be published in May 1969. The volume contains statistics under the following headings, relating to England and Wales:

GCE and CSE Examinations. The first group of tables shows numbers of candidates for the 1967 examinations from schools and further education establishments, with details of subject entries and results obtained.

School leavers during the academic year 1966–67. The information in this set of tables is based mainly on a

10 per cent sample survey of leavers from secondary schools.

The tables show leavers analysed by age and sex; their achievements in GCE and CSE examinations including subject specialisation at 'A' level; and destination on leaving, so far as this is known by the schools. Whereas in earlier volumes the analysis by age has been in terms of age at date of leaving, the new volume gives alternative analyses by age at 1 January 1967 in order to provide figures which can be more easily integrated with other education and manpower statistics. New summary tables give information on the swing away from science at GCE 'A' level, as recorded in the school leavers survey, and on the differences in 'A' level quality between the streams of school leavers going to different destinations. Thus, amongst leavers with 2 or more 'A' level passes going to specified destinations, the percentages whose 'A' level achievement was equivalent to, or better than, 3 Grade C passes (or 2 passes at Grade A and Grade B respectively) were as follows:

<i>Destination</i>	<i>Percentage with Grades CCC (or AB) or better</i>
University to study languages	84
University to study other arts subjects	77
University to study social studies	73
University to study pure science	62
University to study medicine, etc.	55
University to study technology, etc.	44
Further education: full-time degree courses	13
Colleges of education	11
Employment	13

GCE Advanced level results of students in further education. Tables show the individual 'A' level subjects attempted in 1966-67 by students in grant-aided further education establishments, and the contribution of these establishments to the net flow of students with 'A' level qualifications.

Estimated flows of pupils and students. The last group of tables incorporates a revised projection for each year to 1985-86 of the flow, from schools and grant-aided further education establishments, of students with specified GCE qualifications. This flow is given both as numbers (in thousands) and as a percentage of the relevant age-group. Included for the first time are projections of school leavers with 0, 1-2 and 3-4 GCE 'O' level passes.

Further education

Statistics of Education 1967, Volume 3, Further Education, was published in April 1969. It gives statistics of student enrolments in further education establishments in England and Wales in November 1967. In 1967, 3.2

million students were enrolled in grant-aided establishments, an increase of 3.3 per cent over 1966. There were 197,000 full-time students in 1967, an increase of 8 per cent over 1966; 24,800 sandwich course students, an increase of 20 per cent; 741,000 part-time day students, an increase of 4 per cent; and 2,231,000 students on evening only courses, an increase of 3 per cent.

Full-time, sandwich and part-time day students aged 15 to 17 years represented 18.4 per cent of the population of these age groups in 1967 (18.0 per cent in 1966); and 15.5 per cent of these age groups were enrolled on evening only courses (15.9 per cent in 1966). For the 18-20 age group the comparable proportions were 14.3 per cent enrolled on full-time, sandwich and part-time day courses in 1967 (13.5 per cent in 1966) and 11.0 per cent enrolled on evening only courses (11.4 per cent in 1966).

University admissions

UCCA's Sixth Report for 1967-68 (published in March 1969 at 8s. 0d.) gives statistics of applications to enter first degree courses in universities in the United Kingdom in October 1968. Total applications through UCCA at 110,400 were 8.7 per cent higher than a year previously, despite an expected levelling off in the flow of qualified school leavers. Total university admissions, whether or not through UCCA, at 58,500 were 4.0 per cent higher than a year earlier. Within subject groups, admissions to social studies at 12,200 were 1.6 per cent lower than in the previous year, though applications to UCCA at 31,600 were 12.1 per cent higher than in the previous year. By contrast, admissions to science at 15,200 were 2.8 per cent higher than in the previous year, whilst applications to UCCA at 21,200 were 10.6 higher.

Teachers

Statistics of Education 1967, Volume 4, Teachers, was due to be published in March 1969. It gives statistics for England and Wales on teachers in service in maintained and grant-aided schools and colleges and on the training of teachers. It also includes a section on the future demand for, and supply of, teachers in maintained primary and secondary schools in England and Wales; this is an elaboration of the material in *Report on Education No. 51* (December 1968) - see *Statistical News No. 4*, page 4.28.

Although certain summary statistics of teachers in service in maintained schools and establishments are given for dates up to October 1968 on the basis of special returns from employing authorities, most of the statistics of teachers in service in the volume refer to 31 March 1967 and corresponding dates in earlier years. These 31 March statistics are derived from computer maintained records of individual teachers which are

held in connection with the Department's responsibilities for the teachers' salaries and pensions schemes. Information on teachers' appointments and withdrawals from service, etc. are not infrequently notified by employers to the Department a long time after the events in question have occurred, and this has not only delayed the production of statistics but has also led to the preparation of two sets of statistics: provisional and final. The revisions taking place between provisional and final figures particularly affect tables showing entry, re-entry and wastage of teachers. In the present volume, therefore, provisional figures of teachers in service at 31 March 1967 are shown, together with revised figures for 31 March 1966.

Education in Northern Ireland

Volume 7 of the Northern Ireland Ministry of Education publication *Education Statistics* was published in February 1969 and is available at HMSO, price 17/6d.

The new volume contains updated (1967/68) figures relating to those subjects covered in previous volumes, which contained:

- population and numbers in school up to 1990;
- schools, pupils and teachers;
- scholarships and awards;
- teacher training and teachers in full-time service; and
- building and milk and meals.

In addition the results of a survey of primary school premises as at April 1968, conducted by the Ministry in co-operation with the local education authorities, are set out in Section VII (Appendix) of the new volume. This survey was on lines similar to the 1963 survey, the details of which were given in the Ministry's report *Education in Northern Ireland, 1962-63* (Cmd. 463).

MANPOWER AND EARNINGS

Projections of the working population

Revised projections of the working population of Great Britain and of the United Kingdom up to 1981 were published in the March 1969 issue of the *Employment and Productivity Gazette*. These are essentially medium-term projections which assume, throughout the period, a high and constant pressure of demand for labour such as existed in the years 1964 to 1966. They can be regarded, therefore, as providing estimates of labour supply under conditions of near maximum labour demand. The estimates are based on the projections of the total population made by the Government Actuary's Department in 1968, assumptions about activity rates for specific age-sex groups based on past trends and projections of numbers of persons aged 15 and over in full-time education, made by the Education Department. They take account of the planned raising of the school-leaving age.

Seasonally adjusted employment series

New monthly series, in index form, of seasonally adjusted estimates of employees in employment in the Index of Production and manufacturing sectors in Great Britain were published in the April 1969 issue of the *Employment and Productivity Gazette*. The new series will be updated monthly and given in Table 103 of the *Gazette*.

Manpower models

Details have recently become available of the programme for a Conference on Mathematical Models for the Management of Manpower Systems which is to be held in Portugal in September 1969. The Conference is sponsored by the Science Committee of the North Atlantic Treaty Organisation. A wide range of models will be considered in some 25 papers by 40 authors from the NATO countries. The opening paper will be an historical survey by Professor Steven Vajda, presented some twenty-five years after his first paper on this subject was written for the Admiralty. There will be papers on education-system models from France, Germany and Norway; selection and assignment system models from the USA, France and Germany; and a wide range of models dealing with recruitment, wastage, careers and manpower control generally within an enterprise or labour force, including six from the United Kingdom. The Conference Director is Mr. A. R. Smith, Statistics Division, Civil Service Department, UK, and the Administrative Director is Dr. R. Sousa Nunes, Computer Laboratory, University of Oporto. The National Liaison for the United Kingdom is Mr. A. L. Oliver, Statistics Department, Ministry of Defence.

The proceedings of the Conference are to be published in due course by English Universities Press. The proceedings of the 1967 NATO Conference which was held in London (Director: Dr. N. A. B. Wilson) are scheduled to be published by E.U.P. in May 1969. The volume will include papers by some 50 contributors of whom about one-third were from the UK, including three from the Government Statistical Service. The proceedings of an earlier Conference held in Brussels in 1965 (Director: Mr. W. N. Jessop) were published by E.U.P. in 1966 under the title *Manpower Planning*. It is noteworthy that the Directors of all three Conferences have been drawn from the United Kingdom.

Manpower Study Group

On 20 May 1969 Professor C. A. Moser is to address the Manpower Planning Study Group on certain statistical aspects of manpower planning. It will be at one of the monthly meetings of their voluntary association which has by now outgrown the name which it adopted at its inaugural meeting at the LSE

in November 1967. There are now some 300 members drawn from industry, academic and research institutions, consultants and Whitehall. The Operational Research Society provides administrative support. The membership is drawn not only from operational research but from a wide range of other professions, activities and disciplines, the common ground being an active practical interest in manpower management, planning and research. The Group has given rise to a number of specialised study panels and working parties, and to a rapidly growing Northern Manpower Study Group based on the Manchester Business School. Several members of the Government Statistical Service are actively involved in the affairs of the Group. Further information may be obtained from the Membership Secretary, Mr. K. H. Boehm, Careers Research Advisory Council, Bateman St., Cambridge; the Programmes Secretary, Mr. D. T. Bryant, Institute for Operational Research; or the Secretary of the Northern Group, Mrs. E. Mumford, Manchester Business School.

Employment censuses

At present, counts of national insurance contribution cards exchanged provide the main basis for the principal regular series of statistics of employees in the working population and of employees in employment, compiled by Department of Employment and Productivity. The Government's new proposals for Earnings Related Social Security, published in Cmnd. 3883, envisage the withdrawal of contribution cards. As mentioned in para. 7 of Appendix I of that White Paper, a new method of compiling the basic employment statistics will have to be introduced.

An inter-departmental review of alternative sources of information showed that an annual census of employment would be the only viable method of meeting the fundamental requirement for comprehensive annual statistics of employment, classified by industry and geographical area; such statistics need to be available within a few months of the date to which they relate. Returns would be required from all employers but would be kept as short and simple as possible to minimise the form-filling burden and facilitate prompt returns and processing. The Government has arranged for detailed plans to be prepared and, as mentioned in the White Paper, tests on the most suitable methods will be carried out later this year and subsequently. To provide links with the present series of statistics, it will be important to have a full census in at least one year whilst the present methods are still in operation. When they are more advanced, a fuller description of the plans will be given in *Statistical News*.

The censuses will be carried out by the Department of Employment and Productivity. One pre-requisite is

a comprehensive list of names and addresses of employers. The Finance Bill now before Parliament contains a clause which will enable the Inland Revenue to pass on to the Department of Employment and Productivity the names and addresses of all P.A.Y.E. schemes. If this clause becomes law, it will be possible for the Inland Revenue to pass these names and addresses to the Department of Employment and Productivity for use in issuing the employment census forms.

Although a particular P.A.Y.E. scheme may deal only with P.A.Y.E. documents of employees at a particular establishment, it often deals with P.A.Y.E. documents of employees at a number of establishments in one or several areas, possibly in different industries. It will be necessary however to obtain separate particulars for each of the establishments. The information sought will probably be limited to numbers, by sex, of persons currently employed, distinguishing part-time workers, together with the identity, location and nature of business of the establishment. The census will thus provide comprehensive annual statistics of jobs (a person with more than one job being counted more than once). Other additional arrangements, including sample surveys, will be needed to provide such more frequent and more detailed employment statistics as are required.

Yearbook of Labour Statistics

The Department of Employment and Productivity intends to introduce a *Yearbook of Labour Statistics*. The first volume will relate to 1969 and be published in 1970, probably in the autumn. An historical Abstract including data up to 1968 is also to be published in advance of the first volume of this new series, possibly by the end of this year. This will fill the gap in consolidated volumes of labour statistics since the last *Abstract of Labour Statistics* was published in 1936.

The new publications will contain statistics of wage rates, earnings, retail prices, employment, unemployment, unfilled vacancies, placings etc. relating to the United Kingdom, where possible but otherwise Great Britain, including regional statistics.

As a consequence of these developments the quarterly publication *Statistics of Incomes, Prices, Employment and Production* is to be discontinued later this year.

Employment in food retailing

Manpower utilisation in retail grocery and provision shops with particular reference to the effects of conversion to self-service methods is the subject of a recently published report by the Manpower Research Unit. Information for the report was collected in a survey which covered 903 counter-service shops and 895 self-service shops (including supermarkets), in respect of which 1,731 questionnaires were completed

by Employment Exchange managers in the course of visits to the shops. Analyses of this data, included as appendices to the report, have constituted the bases for comparisons between counter-service and self-service, of the numbers of staff, their characteristics and their duties. Other references include qualitative comment on changes in managerial responsibilities arising from changeover to self-service methods, and some details of staff training practices.

Among deductions from the study is the conclusion that the movement towards self-service methods of trading accompanied by a trend to larger establishments will continue to exercise an effect on the labour force in shops. It is forecast that the proportions of young people and unskilled workers will increase; managers will require wider skills, more training and bear greater responsibility, while many shop workers will perform jobs with a lower skill-content and a less varied range of duties; administration, management, office work and transport will occupy a smaller proportion of the labour force; and the opportunities for part-time employment will probably increase.

Reference

Department of Employment and Productivity, *Manpower Studies No. 8, Food Retailing* (HMSO), 1968 (Price 4s net).

Civil service staff wastage

In response to a recommendation in an Estimates Committee Report on Recruitment to the Civil Service (Sixth Report, 1964-5), a survey into the factors which influence wastage (i.e. voluntary resignation) among Civil Service Executive Officers and Clerical Officers was undertaken over the period 1 September 1966 to 31 August 1967. An interim report, covering the first four months' experience was published in Volume 3(2) of the Fulton Report. The final report has now been produced. This will not be published but copies are available from Miss S. Stordy, Statistics Division, Civil Service Department, Whitehall, London, S.W.1. (Telephone 01-839 7733, ext. 1007).

The survey was carried out using a two-part questionnaire. The first part was completed by the individual immediately he had handed in his notice. He was asked firstly to indicate which of a number of listed external factors to the Civil Service had brought about or influenced his decision to leave, and then to give his attitude to various specified aspects of work in the Civil Service. Provision was made for reasons to be added to those already listed on the form. Finally he was asked to state which of all the reasons appearing on the form he regarded as his most important motive for leaving. The second part of the questionnaire was completed separately by Establishment Branches. This provided factual information about the person,

such as age, sex, length of service, overall grading, assessed fitness for promotion.

All Executive Officers leaving voluntarily were included together with 40 per cent of male Clerical Officers and 15 per cent of female Clerical Officers. The sample of Clerical Officers was selected by Departments generally on the basis of the initial letter of their surname.

Although the survey related only to a single year it provided a useful supplement to the straightforward wastage rates which are computed annually. Half the women leaving from these grades did so for family or domestic reasons while among other staff leaving, a considerable proportion (a third of the Executive Officers and a seventh of the Clerical Officers) took up further full-time education, nearly half with the intention of becoming teachers.

On the whole the staff leaving appear to be of slightly lower than average quality and to have worked in the Civil Service for a relatively short period (over half the leavers had served less than 2 years). Despite their decision to leave, about a half were broadly satisfied with working in the Civil Service.

Most of those leaving liked the people with whom they worked and also their conditions of employment (hours, leave, etc.) while they were less happy with the amount of individual career planning and the degree to which the work really used their abilities.

Features apparently relevant to job-satisfaction included whether the work was interesting, the interest of superiors in his progress and whether they were easy or difficult to work for. Other factors were, for Executive Officers, the extent to which the work used the individual's abilities and for Clerical Officers, career prospects and the succession of posts.

This survey was a new development in the provision of statistical information to assist the management of the Civil Service. The Statistics Division of the Civil Service Department plans to extend and develop this type of work in the future.

Reference

The Civil Service, (Fulton Report) Vol. 3(2) *Surveys and Investigations* (HMSO), September 1968 (Price £1 17s. 6d. net).

National minimum wage

The Department of Employment and Productivity published in April the report of an inter-departmental working party of officials which examined the social, industrial and economic consequences of introducing a national minimum wage. The working party had regard to effects on industrial costs, wages and wage-differentials, relationship to the productivity, prices and incomes policy and the relevance to the problems of families with low incomes. The report includes the results of calculations based on various hypothetical

minima, but the working party was not required to advise on the appropriate level of a national minimum wage if such a minimum were introduced.

Reference

Department of Employment and Productivity, *A National Minimum Wage: An Inquiry*, (HMSO) April 1969 (Price 9s. 6d.)

New survey of earnings

Results of the new type of survey of earnings of employees in Great Britain recently conducted by the Department of Employment and Productivity (Statistical News, page 1.23) are now becoming available in instalments. The first set of results is being published in the May 1969 issue of the *Employment and Productivity Gazette*, together with an article which describes the background to the survey. There will be further articles and results in later issues and subsequently a comprehensive report on the survey will be published as a separate publication.

In this survey, details of the earnings in a particular pay period and other information relating to individuals in a random sample of employees was obtained from their employers. It thus covered full-time and part-time employees in all industries, occupations, areas and age-groups. Consequently the survey yields many kinds of analyses of earnings which have not been obtained from the regular surveys of earnings.

The first results relate to the distributions of earnings by occupation, age and region. The analyses show, for each group of employees, the proportion whose earnings fell in each range, the incidence of high and low earnings and the extent of the variation between the higher and lower paid. Subsequent articles will contain similar information about the variations within the major industries and within groups whose wages and salaries are determined by particular collective agreements with large coverage. There will be analyses of the make-up of total pay in terms of basic pay, overtime, bonuses etc.; reasons for loss of pay, such as sickness, absenteeism, holidays; reasons for low pay such as receipt of income in kind or tips, disability; distribution of hourly earnings and the general relationship between earnings and hours worked. The report will bring these articles together and also contain more detailed analyses and results, including information on labour turnover, conditions of service, such as holiday entitlements, derived as by-products of the survey.

The survey results are being appraised by an expert group, including representatives of the Confederation of British Industry, Trades Union Congress and the National Board for Prices and Incomes. This group is also being asked to formulate recommendations on the future use of surveys of this new type and the extent to which, if held regularly, they might replace any of the current regular surveys of earnings.

Regional average earnings

The Department of Employment and Productivity six-monthly earnings enquiries provide regional estimates of the general average weekly and hourly earnings of adult men manual workers working full-time in the industries covered. An article published in the March 1969 issue of the *Employment and Productivity Gazette* examines the extent to which the inter-regional differences in these averages are attributable to differences in regional employment structures. The variations in employment structure are shown to account for only a small part of the differences in average weekly earnings but a somewhat larger part of the differences in average hourly earnings. These enquiries do not cover industries such as agriculture. The article notes however that, in the main agricultural regions, average earnings in the industries covered are relatively low.

Average earnings of manual workers

An article in the April 1969 issue of the *Employment and Productivity Gazette* gives estimates of average weekly earnings of manual workers working on a full-time basis in various industry groups in April of each year from 1956 to 1968. Separate figures are given for men, women, youths and boys, and girls and, for some broad industry groups, they are also shown in index form. Information from several sources relating to different industry groups is brought together and averages obtained by combining the information from these sources are given. The sources of regular information on earnings of manual workers used are the Department of Employment and Productivity for industries, including manufacturing, covered by six-monthly enquiries, the Ministry of Agriculture, Fisheries and Food for agriculture, the National Coal Board for coal-mining and others covering British Rail, London Transport, Inland Waterways, docks and the National Health Service.

PRODUCTION AND DISTRIBUTION

Comprehensive survey of engineering industry

The comprehensive monthly survey covering the mechanical and electrical engineering industries (Order VI of the old (1958) Standard Industrial Classification), known as the KS/Eng enquiry, has been running since the beginning of 1958. The enquiry aims to include all firms, employing 25 or more people, which are classified to the industries concerned, and altogether about 4,500 forms are sent out covering a variety of reporting units from the establishment to the enterprise. Of this total, roughly one quarter – mainly the larger firms – supply figures monthly and the remainder make quarterly returns. Firms are asked to give details of their deliveries during the period and orders on hand

at the end of the period, both in total and for export.

The figures are used as the basis of a number of indicators of trends in the mechanical and electrical engineering industries. Its primary aim is to produce the index of production for the industry each month, both for publication in its own right and for incorporation into the total index for all industries. In addition indices of deliveries, orders on hand and net new orders received are produced each month, divided into home and export markets. The current value figures of deliveries and orders are also produced for use internally as well as by the various NEDO working parties. Apart from the use made by the public sector, the figures are of interest to individual companies and trade associations, and are also sent to international organisations such as the OECD.

When the KS/Eng survey was begun in 1958 it was organised in accordance with the Standard Industrial Classification as revised in that year. The principal products of the mechanical and electrical engineering industries were divided into about 50 product groups corresponding in the main to the principal products of the old (1958) minimum list headings or sub-divisions. The enquiry was, therefore, something of a rarity among official short period production surveys in that it was fully comprehensive, covering all the larger firms and the full range of products of the industry.

The changes in the SIC which have resulted from the 1968 revision have necessarily produced some changes in the current KS/Eng form. The old SIC Order VI has been divided into three new orders – Order VII for mechanical engineering, Order VIII for instrument engineering and Order IX for electrical engineering. The number of minimum list headings (MLH) has been increased from 20 to 25 and the sub-divisions have increased from 29 to 51.

If the previous policy of including all MLH's and sub-divisions on the form had been continued, the new form would have contained about 70 headings. It was, therefore, decided that where there is already a separate, detailed enquiry – as for instance with metal working machine tools or mechanical handling equipment – an aggregate figure only should be requested; where no such detailed enquiry exists, as with industrial plant or electrical machinery, the sub-division detail should continue to be included.

Even with this reduction the number of headings on the form would have exceeded 60, which was thought to be still too many for what is essentially a short-period enquiry where speed of reply is very important. In order to reduce the size and detail of the form and thus to ease the task of firms in studying and completing it, the form was split from January 1969 to produce two forms each containing about 30 headings. In

addition a further attempt is being made to simplify the completion of the form for those firms who specialise in one product only.

From January 1969 each of the 4,500 firms returning forms has been allocated either to mechanical engineering or to instrument and electrical engineering, according to their major products. The mechanical engineering firms now receive a form with headings covering the products appropriate to the new Order VII (MLH's 331–349) whilst the instrument and electrical firms are now sent a form covering only Orders VIII and IX (MLH's 351–369). A few large firms who are important in both mechanical and electrical engineering are required to complete both forms but the number of such firms, at present about 70, is kept to a minimum.

The current demand by both private and public organisations is for more detailed statistics to be provided by Government. The revision of the Standard Industrial Classification reflects this trend with its finer breakdown of industries. This demand, of course, produces a greater burden for those who have to provide the figures, in particular the firms in the industries involved. By this comparatively simple re-organisation of the KS/Eng survey the Ministry of Technology hopes to provide the increased detail and at the same time to reduce the size and content of the forms sent to firms.

Hosiery and knitting

The Government's plans for the new system of industrial and employment statistics were discussed at a meeting sponsored by the Hosiery and Knitwear Industry Economic Development Committee in London on 21 February 1969 at which representatives of the main users and suppliers of statistics for the Hosiery and Knitting Industries were present.

Papers were presented by the Board of Trade, the Department of Employment and Productivity and the Knitting, Lace and Net Industry Training Board. A talk was also given by Mr. Ronald Brech, industrial consultant, on the importance of statistics to industry.

There was lively discussion in which a number of detailed points were raised. These included:

- the need for separate employment figures for warp knitting,
- the difficulty of convincing small firms in the industry of the need for statistical enquiries,
- the burden on firms of making returns, although there were fewer problems with reporting sales than with purchases,
- the need to improve the degree of correlation between the production headings used for the Hosiery and Knitting Industry and those used for related industries, for example, made-up clothing, and the *Overseas Trade Accounts*.

The meeting was chaired by Mr. Naylor of the National Economic Development Office. The following were present: Mr. Mould, the Secretary of the Hosiery and Knitwear Economic Development Committee, Mr. Penrice, Mr. Sorrell, Mr. Crystal and Mr. Selwood, Board of Trade Statistics Division; Mr. Jupp and Mr. Pryke, Board of Trade Industries Division; Mr. Ash and Mr. Stevens, Department of Economic Affairs.

Northern Ireland census of retail distribution

The full report of the Northern Ireland Census of Retail Distribution and Other Services for 1965 is expected to be published within the next few months. This was the first census of distribution to be taken in Northern Ireland. A preliminary report was issued in March 1967 and the figures then published have been revised where necessary.

The final report runs to almost 500 pages and contains particulars relating to 15,600 retail establishments and 6,700 service establishments in the motor, catering, laundering, hairdressing and shoe repairing trades. Total turnover was £359 million and total employment 92,000 persons. Information is included about the number of establishments in each kind of business; their turnover; the employment provided analysed by sex, whether employed full time or part time and whether paid employees or not; the total wages and salaries of paid employees and capital expenditure during the year. The size of establishments is given measured in terms of the number of persons employed and the amount of annual turnover and analyses of the types of organisation as well as of the commodities sold. There is an extensive geographical section with data for each local authority area (county boroughs, municipal boroughs, urban districts and rural districts) and for over 30 towns.

The first step in taking the census was an enumeration of all retail and service establishments, which was undertaken by the Royal Ulster Constabulary during the summer of 1965, working in a closely co-ordinated operation with the staff of the Ministry of Commerce census of distribution office. Further information on the location of establishments was obtained from local authorities, the Northern Ireland Tourist Board and other agencies.

An unusual feature of the census was that the form of return was designed to be suitable for all establishments, large or small, retail or service, multiple or independent. This was a useful simplification because, being a first census, the exact description of all establishments was not available.

The form required traders to analyse, to the best of their ability, the total turnover recorded on each return. Estimated percentages were accepted if more precise information could not be provided. The computer

program was adapted to produce a complete analysis of total turnover irrespective of whether the analyses on the returns were in sterling or in percentages. The analysis of turnover was more difficult for traders than the usual 'ticking list' but it is considered that the resulting tabulations, occupying over 60 pages in the report, provide a reliable picture of the pattern of retail business in Northern Ireland.

The total number of returns received showed a very high level of response, largely due to the adoption of a personal approach. At July 1966 when over half the returns were outstanding, a team of field operators was appointed to encourage traders to complete their returns and assist them if necessary. These visitors operated in all parts of the country and were responsible, directly or indirectly, for the receipt of about 12,000 returns. As a last resort some estimates were made in the census office from the visitors' observations but it is a measure of the success of the field operation that estimates were required in only 125 cases. The powers of compulsion contained in the Statistics of Trade Act (Northern Ireland) 1949 were used sparingly and court proceedings were taken against only four traders.

Extensive use was made of the ICT 1905 computer at the Management Services Branch of the Ministry of Finance, Stormont, to apply consistency checks to each return, to sort the records in accordance with the required analyses and to produce most of the tabulations required for the report.

FOOD AND AGRICULTURE

Food consumption levels

Estimates of food consumption in the United Kingdom are prepared annually by the Ministry of Agriculture, Fisheries and Food and are usually published in June or July of each year. In order to meet requests for more up-to-date statistics a shortened version giving preliminary estimates has been prepared and published in the *Board of Trade Journal*, 14 February 1969. Revised figures with more detailed nutritional analyses will be published in June.

Guide to agricultural and food statistics

In the eleven years since the Interdepartmental Committee on Social and Economic Research issued *Guides to Official Sources: No. 4 Agricultural and Food Statistics*, many series of statistics have been started, and many of the existing series have been extended. They appear in a wide variety of publications. A revised guide, prepared by the Ministry of Agriculture, Fisheries and Food, and issued under the sponsorship of the Central Statistical Office as *Studies in Official Statistics No. 14, Agricultural and Food Statistics: A Guide to Official Sources* shows the wealth and scope of the information now available and

gives precise references as to where it can be found. The new work owes much to its predecessor both in form and content, and as before it includes a section on fisheries statistics.

The *Guide* is concerned mainly with the work of the agricultural departments, but also contains notes on relevant statistics prepared by other Government Departments and other official and semi-official bodies.

Reference

Studies in Official Statistics No. 14, *Agricultural and Food Statistics: A Guide to Official Sources* (HMSO) May 1969 (Price 12s. 6d.).

Agriculture in Northern Ireland

The *Eighth Report on the Agricultural Statistics of Northern Ireland*, shortly to be published, deals with the period 1961 to 1967. This Report, the latest in a series first issued by the Ministry of Agriculture for Northern Ireland in 1925, contains a comprehensive review of statistics on the following aspects of agriculture in Northern Ireland: general conditions affecting the industry; census data on acreage and yields of crops, and numbers of livestock; output, expenditure and net income of farming; the structure of the agricultural industry; labour on farms; prices of agricultural products; and agricultural exports.

A statistical feature of the Report is that it spans the transition from traditional to computerised census analysis, introduced in Northern Ireland in 1966. This innovation enabled a number of statistics, previously derived from sample estimates, to be based on the full census returns and it has of course enabled more extensive and detailed analyses, not previously possible, to be carried out. This has been of particular importance in the analysis of changes in agricultural structure. In common with the Ministry of Agriculture, Fisheries and Food, and Department of Agriculture and Fisheries Scotland, the Ministry of Agriculture, Northern Ireland has adapted the analysis of the agricultural census to meet increasing needs for detailed information relating to the rates of change in farm numbers, farm size, enterprise distribution, and farm employment. An additional benefit of computerisation has been the saving in costs made possible by reducing by half the former clerical staff involved in census operations.

Reference

Eighth Report on the Agricultural Statistics of Northern Ireland 1961-1967 (HMSO), 1969 (to be published).

TRANSPORT

Ports: Unit transport

The National Ports Council has recently published the first set of detailed statistics about the annual flows of unit transport traffic through British ports. This traffic amounted to over 6 million tons in 1967, carried

in 800,000 loaded units, compared with estimated figures of 3½ million tons and 4½ million tons for 1965 and 1966 respectively.

The statistics are derived from records maintained by port authorities supplemented by information from the operators of the services.

The publication provides a breakdown by type of unit (roll on/roll off road vehicle, railway wagon, 'flats' and containers) for both the foreign and the coastwise trades. The important trades with Northern Ireland and with the Irish Republic are treated separately.

It is necessary to present many of the statistics in terms of coastal groups of ports, rather than the forty-five individual reporting ports, in order to avoid disclosing information about individual operators of services.

The publication gives an analysis of the commodities carried by about half the total unit transport traffic. There is information about container traffic, about the wide range of sizes of container in use, and about the variations in the payloads carried in containers. A list is given of the ports in Great Britain having specialised unit transport services and berths in operation at July 1968.

Port Unit Transport Statistics Great Britain 1968 is available from the Council's Headquarters at 17 North Audley Street, London, W1Y 1WE (price 10s.).

Motor vehicle registrations

The Business Monitor Series has been extended by the introduction of a monthly Monitor for motor vehicle registrations (M.1 in the new Miscellaneous Series). The statistics are collected by the Ministry of Transport and the Northern Ireland Ministry of Development and the new Monitor supersedes the series previously published by the Ministry of Transport. Each issue contains the latest registration statistics for cars, commercial vehicles, motorcycles, agricultural tractors, etc. with a breakdown of detail which includes subclasses of vehicles, size and type of fuel used. Quarterly supplements give registrations in individual licensing authority areas. The subscription charged is £5 5s. 0d. per annum: reduced rates are offered for bulk orders.

Orders and enquiries should be addressed to Business Monitor Section, Board of Trade, 20 Great Smith Street, London, S.W.1 (Tel. 01-222 7877, ext. 3537).

Passenger Transport in Great Britain, 1967

Passengers carried on public transport in Great Britain by road and rail during 1967 totalled 12,138 million, a decrease of 416 million or 3.4 per cent compared with 1966. Receipts for these services totalled £611 million, about the same as in 1966.

For the first time for ten years, the number of passengers carried by British Railways increased over the

previous year. There were 837 million passengers in 1967, 2 million more than in 1966. Since 1959 there has been a continuous decrease in the number of people using bus and coach stage services. In 1967, just over 10 thousand million passengers were carried, a decrease of over 400 million compared with 1966.

A series of tables, based on the results of a National Travel Survey covering 12,000 sampled households, yields a considerable amount of new and interesting information on many aspects of travel. For example, about 72 per cent of all mileage travelled in 1965 was by private transport, including 60 per cent by car. Nearly a third of the total mileage travelled was on journeys to work or school and 13 per cent was connected with shopping or similar personal business. Seven per cent of the mileage was travelled in the course of work, and the balance – just under a half – was mainly connected with pleasure and entertainment and personal visits made to relations and friends.

These facts are given in the Ministry of Transport publication *Passenger Transport in Great Britain 1967*, now available from H.M. Stationery Office (price 11s. 6d.).

HOME FINANCE

Inland Revenue statistics

The 111th Report of the Commissioners of Inland Revenue was published at the end of January. In addition to statistics relating to the management of the taxes under the control of the Board of Inland Revenue, the Report includes the results of the 1966–67 Survey of Personal Incomes, giving details of personal income by ranges of income, types of income, family circumstances and the standard regions of the U.K. Estimates of the wealth of individuals for the years 1964 to 1967 by range and type of wealth are given; there is also an analysis of assets by type of holding. The following tables appear for the first time:

Company distributions and annual payments in 1966/67 analysed by trade group (Table 47).

Analysis by trade group of assessments to corporation tax made in 1966/67 (Table 109).

Estimated gross trading income and capital allowances of companies assessed to corporation tax in 1966/67 analysed by trade group (Table 110).

Analysis by range of profit of net trading income of companies assessed to corporation tax for companies whose accounting periods ended in the year to 31 March 1966 (Table 111).

Reference

111th Report of the Commissioners of H.M.'s Inland Revenue for the year ended 31 March 1968 Cmnd. 3879 (HMSO), January 1969 (Price £1 5s. 0d.)

Coin surveys

Estimates of the numbers of coins in circulation have been published annually by the Royal Mint for many years. Early methods of making the calculations were based on summing the numbers of coins issued, less those subsequently withdrawn, with a suitable correction for wastage. Estimates of the wastage rate were obtained by inference, one method being to compare the numbers of coins of different ages found in a sample.

In 1962, the Central Statistical Office was asked for advice and help in setting up and analysing a pilot survey of the above vintage type in order to estimate the number of halfpennies which were in circulation. It was found that the distribution of the ages of halfpennies in the sample was consistent with the numbers of coins originally issued on the assumption of an annual loss of the order of $3\frac{3}{4}$ per cent. This meant, for example, that of the 27 million halfpennies issued in 1948, only 16 million would be expected to survive to 1962. The missing coins were those which had been lost, destroyed or withdrawn by the Mint, or which had found their way abroad or into permanent collections.

In 1963, the survey was extended to include pennies, threepenny pieces and sixpences. A further survey in 1967 covered shillings, florins and halfcrowns, and the same general principle of constant annual wastage rates was found to apply to each type of coin.

With the approach of the changeover to decimal coinage in 1971, it is becoming increasingly important to know how many coins of each denomination are currently in circulation throughout the country. This information is needed for planning the production of the requisite numbers of decimal replacements. In co-operation with the Royal Mint and their advisers on decimalization, the CSO took part in a further vintage survey in 1968. The earlier findings were broadly confirmed but there were some interesting differences. A report on the analysis of these surveys is to appear in *Studies in Official Statistics* (Research Series).

Acquisitions and mergers

The first of a new quarterly series of statistics summarising the total value of acquisitions and mergers among large companies, for the first three quarters of 1968, was published in the *Board of Trade Journal*, 24 January 1969.

PRICES

Wholesale price indices

Many price index numbers for commodities are constructed by the Board of Trade in addition to those published monthly in the *Board of Trade Journal*. Some are published annually and these last appeared

in the *Journal* on 21 February 1969: a list of unpublished index numbers, which are available on request, was given on page 555 of that issue.

The Board also provides a service (for which a fee is normally charged) of constructing index numbers to meet the special requirements of particular users.

Correspondence about this service or about wholesale price index numbers should be addressed to Statistics Division, Board of Trade, Room 620, Sanctuary Buildings, 20 Great Smith Street, London, S.W.1.

NATIONAL BOARD FOR PRICES AND INCOMES

University teachers

The National Board for Prices and Incomes made its first report in December 1968 on the *Pay of University Teachers in Great Britain* under its standing Reference. The reference was concerned both with medical and non-medical teachers. The majority of the statistics used for the report were those of the University Grants Committee but a number of supplementary enquiries were made. One enquiry was to establish the extent to which the relationship between age and salary accounted for differences in pay of teachers between departments or between Universities. Another was into vacancies for medical staff in selected universities.

Reference

Standing Reference on the Pay of University Teachers in Great Britain, National Board for Prices and Incomes, Report No. 98, Cmnd. 3866 (HMSO), December 1968 (Price 6s. 6d.).

Company bus maintenance workers

In December 1968 the National Board for Prices and Incomes reported on the *Pay of Maintenance Workers employed by Bus Companies*. For this Report the NBPI carried out two enquiries, one into the turnover, retention rates and labour shortages of maintenance workers and one into the earnings, hours and length of service of a sample of these workers, varying from one in fifteen workers for the largest companies to complete coverage in the smallest; the pay weeks covered were for the end of September and beginning of October 1968. The enquiry forms were sent out in October to all 56 company bus undertakings who are members of the Conference of Omnibus Companies and the response was almost complete. The analysis of hours and earnings shows their composition and ranges by grade, place of work and size of undertaking.

Reference

Pay of Maintenance Workers employed by Bus Companies, National Board for Prices and Incomes, Report No. 99, Cmnd. 3868 (HMSO), December 1968 (Price 4s. 0d.).

Car delivery industry

The National Board for Prices and Incomes reported in February 1969 on *Pay and Productivity in the Car Delivery Industry*. The reference was confined to firms engaged in the delivery of non-commercial vehicles. The Report gives the results of a sample survey of the pay and, where available, hours of work of operatives in car delivery depots. An initial enquiry determined the size of depot by number of operatives. A subsequent earnings survey was addressed to all the hundred depots engaged in car delivery in Great Britain. The response rate was about 80 per cent or about 90 per cent in terms of operatives. Firms were asked to give details of earnings and such information as they could on hours worked or pay hours for a sample of operatives varying from full coverage for small depots to one in ten in depots with 100 or more operatives. Particulars were obtained for about 500 out of 3,100 operatives in the industry. The analysis shows details and ranges of earnings by method of payment for the main types of drivers and other operatives. There is an appendix on the scope and possibilities for using operational research techniques in the industry.

Reference

Pay and Productivity in the Car Delivery Industry, National Board for Prices and Incomes, Report No. 103, Cmnd 3929 (HMSO) February 1969, (Price 4s. 0d.).

London clearing banks

In February 1969 the National Board for Prices and Incomes reported on *Pay in the London Clearing Banks*. For the purpose of this report the NBPI carried out a survey of the pay and hours of work of all full-time staff in the eleven clearing banks with the exception of non-clerical staff other than messengers. The sample was drawn from lists of staff at the head offices of each bank though the forms were mostly completed in branches. The sample totalled 3,750 or some 2½ per cent of the full-time employees of the industry. Response to the questionnaire was complete. Pay and hours in October 1968 were analysed in detail by grade, age group and sex.

Reference

Pay in the London Clearing Banks, National Board for Prices and Incomes, Report No. 106, Cmnd. 3943 (HMSO), February 1969 (Price 4s. 0d.).

Operatives in construction

It is expected that the Statistical Supplement to Reports No. 91 to 93 by the National Board for Prices and Incomes on *Pay and Conditions in the Building, Civil Engineering and other Construction Industry* will be published at the beginning of April. The Supplement gives a fuller description of the surveys of pay and hours in both private and public sectors of the construction industry (see *Statistical News* No. 4, page

4.35). It will contain 36 tables amplifying those published in the three Reports. Fuller details are given of the composition of hours and earnings (with standard errors of the totals); and ranges of earnings against total hours, of basic rates against basic hours and of bonus payments by section of the industry, occupation, grade, region, type of work and size of firm or organisation. Additional details are also given of the separate surveys of pay and hours of operatives in the Thermal Insulation industry.

INTERNATIONAL

37th Session of the International Statistical Institute

The 37th Session of the International Statistical Institute will be held in London from Thursday 3rd September to Thursday 11th September 1969. The headquarters of the Session will be in the Senate House of the University of London, Malet Street, London W.C.1. Concurrent Sessions will be held in the Senate House and at the adjacent London School of Hygiene and Tropical Medicine.

Information Bulletin Nos. 1 and 2 setting out the provisional scientific programme, the social programme and other information relating to the 37th Session have already been published and Information Bulletin No. 3 will be published in July 1969. Further details relating to the 37th Session can be obtained from the Secretary, Organising Committee, 37th Session of the ISI, 11 Whitehall Court, London, S.W.1.

PUBLICATIONS

Food statistics: NEDO guide to major sources

Food Statistics: A Guide to the Major Official and Unofficial United Kingdom Sources. (53 pages. Available free from National Economic Development Office, Millbank Tower, 21/41 Millbank, London, S.W.1.) This pamphlet is an up-to-date comprehensive survey of statistical information relating to the United Kingdom food manufacturing industry. An earlier description of Food Statistics by W. D. Stedman Jones was included in M. G. Kendall and E. S. Pearson's *Sources and Nature of Statistics of the United Kingdom*, published in 1957 for the Royal Statistical Society by Oliver and Boyd. The new guide has been compiled to provide a simple index of sources together with indications of their coverage and frequency. It lists the publications of both official and unofficial organisations, the main section being the list of sources arranged by broad subject headings. A product index is also included. It complements the new guide to official statistics of food and agriculture which has been prepared by the Ministry of Agriculture, Fisheries and Food (see page 5.28 of this issue of *Statistical News*). It does not cover international sources; some recent examples which include comparisons with other

countries are the *Food Consumption Statistics 1954-1956* (690 pages. OECD. Available from HMSO, price £4 2s.) and the series on the *Production of Fruit and Vegetables in OECD Member Countries*. The major FAO publications are its *Monthly Bulletin of Agricultural Economics and Statistics* (available from HMSO, £2 per annum), *Trade Yearbook* (available from HMSO, £2 8s.) and *Production Yearbook* (available from HMSO, £3 12s.).

FES Handbook

Handbook on the Sample, Fieldwork and Coding Procedures has been produced by the Government Social Survey and is to be published shortly. It deals with those operations which are the responsibility of that Department. The contents include a very full description of the sample design (a summary appeared in *Statistical News*, No. 1), sections on the fieldwork, on response and on accuracy. It also contains copies of the interview questionnaires and the diaries in use during 1968 and 1969, together with the coding frames applied by the Government Social Survey, and notes about individual questions on the schedules.

This Handbook should prove of value to users of the data collected through FES and those interested in the methodology of budget surveys and similar inquiries.

Reference

Family Expenditure Survey. Handbook on the Sample, Fieldwork and Coding Procedures, by W. F. F. Kemsley, Government Social Survey, (HMSO) 1969.

GOVERNMENT STATISTICAL SERVICE

Appointments

HOME OFFICE

Mr. T. S. Lodge, Chief Statistician, Home Office, has been appointed Director of Research and Statistics at Under Secretary level with effect from October 1968.

Liaison with industry

In the early part of the year, senior members of the Government Statistical Service addressed several important business conferences.

London Graduate School of Business Studies

On February 19th, Professor Moser spoke at the Conference on Long-Range Planning about current developments in official statistics. He concluded his talk by inviting the delegates' opinions on some ideas for improving the channels of communication between government statisticians and industry.

His suggestions included the setting-up of specialist panels to discuss topics of current interest; closer contact - through a committee or special meetings - between government statisticians and the suppliers of statistics; 'Regional Statistical Use Officers', located in various parts of the country to help the local business communities find their way around government

statistics; and the setting up, by British businessmen, of a body similar to the U.S. Federal Statistics Users Conference – ‘a very constructive body’ which discusses and presses for changes in official statistics.

British Institute of Management

On February 25th, Professor Moser, L. S. Berman, M. C. Fessey and A. R. Thatcher were the speakers at a conference on Government Statistics for Industry organised by the British Institute of Management.

Professor Moser spoke first of the conflicting pressures on government statisticians from the two sides of industry. Users of statistics constantly press for quicker, more detailed information; whereas the suppliers want the Government to ask fewer questions. While wishing to meet the needs of users – and much of the information collected is primarily for the use of industry rather than the Government – he expressed sympathy for the accountants and company secretaries who have to fill in the returns. He spoke about what the Government has done and could possibly do to make their task easier but suggested that this is also a problem of communication between suppliers and users within industry. Professor Moser expressed the hope that this conference would be the beginning of a series of dialogues between government statisticians and industry and concluded: ‘We have a strong desire to improve the service we give to industry. Equally I have the strong conviction that we can do it only if it is an entirely co-operative job’.

Mr. M. C. Fessey, Director of the Business Statistics Office, also spoke about the problems of suppliers and of his wish to meet them – especially those from smaller firms – to discuss these problems. Speaking of the new quarterly system of reporting, he suggested that this might in some ways be easier for the suppliers than the quinquennial censuses where there was no continuity of experience in the accounting departments.

Mr. A. R. Thatcher, Director of Statistics at the Department of Employment and Productivity, discussed the new survey of earnings designed to produce more detailed information on various categories of employees. The most important new information it will reveal is the make up of pay under the various national agreements, the extent of low pay and the reasons for it. The method used was to take a sample of employees, to identify their employers and to address the detailed questions to each employer concerned. This meant that many employers had to answer questions about only one of their employees.

The results should be published from May onwards and the DEP has appointed an expert group of users to comment on the usefulness of the new survey, and whether it will allow any of the existing surveys to be pruned.

Mr. L. S. Berman, Assistant Director at the Central Statistical Office, delivered a paper on the proposed Central Register of Businesses. This was reproduced in the February issue of *Statistical News*.

British Pharmaceutical Market Research Group

Government statisticians and market researchers from the pharmaceutical industry came together for the first time to discuss common problems at a seminar in Maidstone on 14 January organised by the British Pharmaceutical Market Research Group. This group meets regularly with the object of improving the standards of market research and their aim in arranging the seminar was to investigate the availability and reliability of Government Statistics.

Opening the seminar the chairman of the B.P.M.R.G., Mr. G. E. K. Lineham (Pfizer Limited), paid tribute to Professor Moser, the Director of the Central Statistical Office, whose stated philosophy ‘to be more outgoing and to orientate government statistics to the needs of the user’ had encouraged the Group to embark on this seminar.

Giving the first paper, Mr. L. S. Berman, assistant director of the Central Statistical Office, said that re-organisation of Government statistical work was now under way, particularly with a view to giving more help to commerce and industry.

The main emphasis in Government statistics was to obtain data for ‘macro-economic’ analysis so that national developments could be assessed. These statistics were of interest to business economists and journalists but were of limited use to commerce and industry. In some countries, Canada in particular, the Government placed emphasis on providing statistics for industrial use, and more was now being done along these lines in the U.K.

One of the most ambitious tasks the Government had set itself was the creation of a common or central register. This would be an agreed list, with names and addresses, of business establishments classified according to business activity, location, size and so on. The list would be a data bank held on a computer. It would be kept up-to-date and would be of great commercial value. Firms were being asked in the census of production for 1968 to agree to the inclusion of the names and addresses of their establishments in this central register.

Among other speakers, Mr. A. A. Sorrell, chief statistician, Board of Trade, said a much faster turn-round of information should be possible with the introduction of a new method for the building-up of industrial statistics. This new method would be based on a computer and on up-dating with simpler but more frequent returns from the industry. He called for market researchers and accountants in industry to get

together – the one group wanted more information, the other complained about the work involved.

Mr. D. Evans, chief statistician, Department of Health and Social Security, said there was identity of interest between his Department and the Pharmaceutical industry over a wide area. A flourishing pharmaceutical industry was needed to provide products for the health service and to contribute to exports. The Department recognised need for planning, and more must be done in this direction.

The seminar had come at an opportune moment as the Department was now preparing an annual digest of statistics. The digest would present more conveniently the kind of statistics in the annual report of the Ministry of Health, would show trends more clearly and would contain some additional material. 'We plan to follow up this digest with more detailed publications on various aspects of the health service, including prescription statistics.'

See Mr. Whitehead's article on sickness and injury benefits on page 5.14 of this issue of *Statistical News*.

Plastics Institute

The Plastics Institute held a seminar on Government Information, Services and Finance on 23rd April 1969. Among the speakers was Mr. A. A. Sorrell, Chief Statistician, Board of Trade, who described the range of statistics at present available about the plastics industries and the plans to extend and improve them as part of the Government's re-organization of industrial statistics. He said that, while detailed quarterly figures were published about the production of synthetic resins and plastics materials (MLH 276 of the Standard Industrial Classification), one of the major gaps in industrial statistics was the absence of any short-period information about the output of the plastic goods industry (MLH 496). The Board of Trade was discussing with the industry the nature and the extent of detail of statistics needed by industry and the Government to fill this gap and was anxious to get a quarterly inquiry started as soon as possible.

LATE ITEMS

Reorganisation of industrial statistics

Discussions between the Government Statistical Service and trade associations and other industry interests concerning short-period sales inquiries were referred to in *Statistical News* No. 4, page 4.29. The introduction of these inquiries on a comprehensive and integrated basis is an important aspect of the new system of industrial statistics.

Discussions are taking place industry by industry and, in addition to those listed previously, inquiries in the following industries are now under review:

- Cocoa, Chocolate and Sugar Confectionery (MLH 217)
- Mineral Oil Refining (MLH 351–354)
- Instrument Engineering (MLH 351–354)
- Shipbuilding and Marine Engineering (MLH 370)
- Aerospace Equipment Manufacturing and Repairing (MLH 383)
- Locomotives and Railway Track Equipment (MLH 384)
- Railway Carriages and Wagons and Trams (MLH 385)
- Hosiery and Other Knitted Goods (MLH 417)
- Bricks, Fireclay and Refractory Goods (MLH 461)
- Pottery (MLH 462)
- Cement (MLH 464)
- Shop and Office Fitting (MLH 474)
- Plastic Products (MLH 496)

Agricultural price indices

New indices of agricultural prices for the United Kingdom based on the three harvest years ending June 1965, June 1966 and June 1967 have been prepared by the Ministry of Agriculture, Fisheries and Food with the assistance of the other Agricultural Departments. They will replace the indices based on the three year period 1954/55–1956/57 which are at present shown in the annual volumes of *Agricultural Statistics (United Kingdom)*.

The purpose, background, scope and construction of the index was described in *Economic Trends*, February 1962. There are no fundamental changes, but in the rebased series account has been taken of developments in the agricultural industry. The main changes are:

Farm crops

The prices of field beans as a break-crop are included.

Livestock products and poultry

Eggs: account has been taken of the rise in the 'farm-gate' sales of eggs at the expense of packing station eggs, and two series of egg prices are now included.

Poultry: 'oven-ready' chickens are included.

Labour

An annual index of the average cost per hour of hired men in Great Britain is included.

The present series will be discontinued from June 1969. The new series of index numbers, together with descriptive notes of their construction, will be published in the 1966/67 edition of *Agricultural Statistics*. The monthly tables showing up-to-date indices will

continue to be available on subscription from Statistics Division IIB, Ministry of Agriculture, Fisheries and Food, Tolcarne Drive, Pinner, Middlesex.

Reference
Agricultural Statistics (United Kingdom), 1966/67 (to be published shortly) (HMSO).

Consumers' expenditure

The methods used by the Central Statistical Office in making preliminary quarterly estimates of consumers' expenditure are described in an article in the May 1969 issue of *Economic Trends*. The preliminary estimates for the latest quarter will in future be given in the issue of *Economic Trends* published a month after the end of the quarter.

Alphabetical Index

The index to *Statistical News* is cumulative. Page numbers are prefixed by the issue number e.g. 1.23 signifies issue number 1, page 23.

Generally speaking articles relating to United Kingdom, Great Britain, England Wales or covering several geographical groups will not be indexed under these groups, but topics with a significant regional interest will be indicated e.g. regional earnings. Articles and notes dealing particularly with Scottish statistics will be 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: capital letters are used when referring to articles appearing in *Statistical News*; italics are used for the titles of published books or papers.

- abortions, 4.27
accident statistics, Metropolitan Police area, 4.25
accumulators, new series, 1.27
acquisitions and mergers, 5.30
adoptions, 4.24
Agricultural Statistics, A Century of, 1.28
Agricultural Statistics (United Kingdom), 5.34
agriculture
 labour statistics, 1.29, 3.31
 Northern Ireland, 5.29
 price indices, 5.34
 structure, 1.29, 3.31
Agriculture and Food Statistics, A Guide to Official Sources, 5.28
Allen Committee Report, impact of rates, 1.10
animal feedingstuffs manufacture, 1.28
Ash, R. and Mitchell, H. D., doctor migration, 1.16
awards
 local education authorities, 3.27
 SSRC, 4.40
- Baines, A. H. J., *Century of Agricultural Statistics*, 1.28
balance of payments, seasonal adjustments, 1.31
banks, London clearing, pay, 5.31
Beales, R. E.
 INTERNATIONAL SYSTEMS OF NATIONAL ACCOUNTS, 5.9
 STANDARD INDUSTRIAL CLASSIFICATION, 1968, 3.20
Berman, L. S.
 CENTRAL REGISTER OF BUSINESSES, 4.5
 DEVELOPMENTS IN INPUT-OUTPUT STATISTICS, 3.7
Berman, L. S. and Cassell, F.,
 current price forecasts, 1.31
betting and gaming, 3.33
births by ages of both parents, 1.14
5.36
- Bishop, H. E., SCIENCE STATISTICS: PART I, MANPOWER, 2.4
Brain Drain (Jones Report), 2.9, 2.21
breath tests, 1.18
British government stocks,
 stock exchange turnover, 2.27
British Institute of Management, 5.33
British Official Statistics,
 Royal Statistical Society symposium, 1.33
British Pharmaceutical Market Research Group, 5.33
Brown, A. J., regional problems and policy, 4.39
Brown, C. J. and Napolitan, L., farm classification, 3.30
Brown, R. L. and Durbin, J., regression relationships, 3.33
Browning, H. E., THE CENSUS OF PRODUCTION, 5.1
building regulations
 relaxations, appeals and determinations, 3.26
building society option mortgages, 5.21
bus company maintenance workers, pay, 5.31
Business Statistics Office, 1.4, 1.10, 4.41, 5.33
- cancer, new cases registered, 2.17
capital expenditure, distributive and service trades, 1966, 1.27
capital gains tax assessments, 1.31
capital stock and consumption, 2.27
car delivery industry, pay and production, 5.31
cars, 1966 Census of Population, 4.23
Cassell, F. and Berman, L. S.,
 current price forecasts, 1.31
cattle management and feeding practices 1966/67, 1.29
Census of Distribution 1966, 1.26
Census of Employment, 5.24
Census of Population 1961, 3.23

- Census of Population 1966*
 - Commonwealth Immigrant Tables*, 5.19
 - County Reports*, 1.13
 - Economic Activity Tables*, 1.13, 2.15, 4.23
 - Household Composition Tables*, 4.23
 - Housing Tables*, 4.23
 - Migration Tables*, 3.23, 4.23, 5.19
 - National Summary Tables*, 1.13
 - Workplace/Transport Tables*, 2.15, 3.23, 4.23
- Census of Population 1971, planning, 1.13, 2.15, 3.24, 4.20
- CENSUS PRE-TEST, 1968, 4.20
- CENSUS OF PRODUCTION, 5.1
- Census of Production 1963, 1.26
- CENTRAL REGISTER OF BUSINESSES, 4.5
- CENTRAL STATISTICAL OFFICE,
 - FUTURE ROLE OF, 1.1
- Central Statistical Office
 - ministerial responsibility, 4.41
 - research, 1.5, 1.32, 3.33
 - survey control unit, 3.37
- chemical process plant, 3.30
- CIVIL AVIATION STATISTICS, 3.13
- civil aviation, 2.31, 3.13
- Civil Service
 - Fulton Report*, 3.28
 - manpower, 3.27
 - staff wastage, 5.25
- coin surveys, 5.30
- common register, 1.7, 4.5
- Commonwealth immigrants, 5.19
- Commonwealth and Sterling Area Statistical Abstract*, 4.40
- companies, dividends and interest paid and received 1966/67, 1.31
- Company Manpower Planning*, 4.29
- computer
 - agricultural statistics, 1.28
 - disease coding, 3.25
 - installations for statistics, 3.37
 - patients' records, 2.17
 - table processing system, 2.25
- computer and data systems unit, C.S.O., 1.3
- computers, HMSO Central Computing Bureau, 3.37
- Computers in Offices*, 1.23
- Conference of European Statisticians, 2.29
- congenital malformations, 1.14, 4.27
- constant price estimates, rebasing, 4.34
- construction
 - local authority design work, 4.30
 - operatives, pay and conditions, 4.35, 5.31
 - output and employment census 1967, 1.25
- construction statistics, directory and inventory, 1.25
- consumer price index, 1.32
- consumers' expenditure
 - betting, 3.33
 - preliminary estimates, 5.35
 - wine, 3.32
- container traffic, 5.29
- conurbations
 - housing conditions, 1.17
 - life tables, 4.24
 - population 1966, 1.13
 - population 1967, 1.14
 - population 1968, 4.24
- corporation tax assessments 1966/67, 1.31, 5.30
- Cost of Living Advisory Committee, 1.32
 - Report*, 2.28
- costs
 - labour, 3.30
 - per unit of output, 3.30
 - public expenditure, 2.30
- criminal and penal statistics, 1.18
- criminal statistics, Metropolitan Police area, 4.25
- Cushion, A. A., CENSUS PRE-TEST 1968, 4.20
- Dainton Report*, flow of candidates in
 - science and technology, 1.20, 2.9
- data bank, SSRC, 3.36, 4.40
- death rates, 1.14, 4.24
- decimalisation, 5.30
- demographic and social statistics,
 - integrated system, 2.29
- Department of Economic Affairs, input-output model, 4.31
- design work, local authorities, 4.30
- devaluation of sterling, effect on the balance of payments, 3.32
- developing countries, statistics of education, 2.20
- disabled, survey 1968/69, 2.16
- disease coding, computer, 3.25
- Distribution, Census of, 1966, 1.26
- distributive and service trades, 1966 inquiry, 1.26
- distributors' costs and margins, 4.36
- divorce, 4.24
- doctor migration, 1.16
- doctors, organisation of work in grades of
 - limited tenure, 2.17
- domestic electrical appliances, distributors' costs and margins, 4.36
- drug addiction, 5.20
- drug offences, 1.19, 5.20
- Durbin, J. and Brown, R. L., regression relationships, 3.33
- dwellings
 - local authority costs, 3.25
 - local authority rent, 2.19
 - regional construction costs, 2.19
 - stock, 2.19

- earnings
 - distribution, 1.23
 - factors affecting, 4.39
 - manual workers, 5.26
 - new survey, 1.23, 5.26
 - regional, 1.22, 5.26
 - transition probabilities, 4.29
- Economic Development Committee, Hosiery and Knitwear Industry, 5.27
- economic development, regional, 4.39
- economic growth, research in C.S.O., 1.32
- economic indicators, OECD countries, 2.29
- economic outlook, 1.30
- economic pattern, OECD countries, 1.33
- economic statistics, survey of collections, 4.38
- education
 - developing countries, 2.20
 - finance and awards, 3.27
 - Northern Ireland, 5.23
 - price indices, 1.20
 - projection of flow of students with GCE qualifications, 5.22
 - teacher training costs, 3.26
- Education, Statistics of*, 1.19, 3.27
- educational qualifications and income, survey, 1.20
- Educational Statistics, Scottish*, 3.26
- electors, 4.24
- electricity sales, revised statistical basis, 2.25
- electronic components, passive, new series, 1.27
- electronics industry, 4.40
- Employment & Productivity Gazette*, 2.30
- employment
 - area of, new statistics, 2.23
 - census, 5.24
 - food retailing, 5.24
 - public and private sectors, 3.27
 - seasonally adjusted series, 5.23
- employment agencies, office staff, 4.34
- employment vacancies, seasonally adjusted series, 2.22
- engineering industry, survey, 5.26
- engineering, technological and scientific manpower
 - flow into employment, 3.28
 - pilot survey of functions 1968, 1.21
 - statistical sources, 2.4, 2.21, 3.29
 - triennial survey 1968, 1.21
- engineers
 - incomes, 2.20
 - surveys of professional, 2.20
- Estimates Committee Report, Government Statistical Services*, 1.1, 1.7
- examinations, GCE and CSE, 1967, 5.21
- expenditure, income, saving: current price
 - forecasting, 1.31
- export traffic, inland origin, 4.33
- external assets and liabilities, 3.32
- FAMILY EXPENDITURE SURVEY, REDESIGNING, 1.10
- Family Expenditure Survey
 - handbook, 5.32
 - rents and incomes, 5.21
- Family Expenditure Survey, 1967 Report*, 3.32
- farm classification, 1.29, 3.30
- fertility
 - rates, 4.24
 - remarried women, 1.14
- films and television, overseas investment, 3.32, 4.33
- Financial Statement*, 1.30
- financing accounts, sector, 2.27
- firearm offences, 1.19
- floor space, 4.37
- food and feedingstuffs, proportions imported, 1.30
- food consumption
 - expenditure and average prices, 1.28
 - income elasticities, 1.28
 - preliminary estimates, 5.28
- food prices
 - fortnightly changes, 3.33
 - monthly, 1.32, 3.33
- food retailing, employment, 5.24
- Food Statistics: A Guide to the Major Official and Unofficial United Kingdom Sources*, 5.32
- Food Survey, National*, 4.32
- Food Survey, National: a decennial review, 1.27
- footwear, distributors' costs and margins, 4.36
- forecasting
 - current price, 1.31
 - earnings distributions, 4.29
 - economic, short-term, 4.10
 - housing, 4.27
 - social science, 3.36
- form filling, 3.37, 4.41
- Forster, C. I. K. and Whitting, I. J., AN INTEGRATED MATHEMATICAL MODEL OF THE FUEL ECONOMY, 3.1
- Fowler, R. F., DURATION OF UNEMPLOYMENT, 2.1
- Freeman, C. chemical process plant, 3.30
- fruit and vegetables, wholesale prices, 3.33
- FUEL ECONOMY, AN INTEGRATED MATHEMATICAL MODEL, 3.1
- fuel and power, new statistics, 2.24
- fuel policy
 - statistical work for, 1.24, 3.30, 4.30
 - World Power Conference, 3.30
- Fulton Report on the civil service*, 3.28
- furniture, distributors' costs and margins, 4.36
- further education
 - GCE examination results, 5.22
 - student enrolments, 5.22

garaging, 1966 Census of Population, 4.23
 Gillion, C., wage rates, earnings and wage drift, 4.39
Government Statistical Services, Estimates Committee Report, 1.1, 1.7
 Government statisticians, communication with industry, 5.32
 Government statistics, computer installations, 3.37
 Government Statistics for Industry, Conference, 5.33
 Greater London
 1966 *Abstract of Statistics*, 2.30
 boundary changes, 3.36
 census data, 3.36
 life tables, 4.24
 mortality, 2.15
 taxi cab fares, 4.34
 Greater London Council,
 Research and Intelligence Unit, 2.30, 3.36
 grid referencing, 1.13, 4.8, 4.21
 gross domestic product, constant price estimates, 4.34

Handbook of Statistics 1967 (housing and local government), 3.26
 health
 operational research problems, 1.15
 screening, 3.24
 hearing aids, new series, 1.27
 heating, ventilating and air-conditioning equipment, new series, 1.27
Higher education, Flow of Candidates in Science and Technology, 1.20, 2.9
Highway Statistics, 2.26, 3.31
 historic buildings, repair and upkeep, 3.26, 4.27
 Home Office, statistical work, 1.18
 homicide, 1.19
 hosiery and knitting, 5.27
 hospital in-patient enquiries, 2.17, 4.26
 hospital regions, population 1967, 1.14
 house condition surveys, 2.18, 3.25
 house prices, 2.19
 house purchase loans
 building societies, 4.27
 insurance companies, 2.19, 4.27
 local authorities, 3.26
 option mortgage scheme, 2.19, 5.21
 household composition, 1966 Census tables, 4.23
 household income and expenditure, 3.32
 houses, compulsory purchase orders, 2.19
 houses (council), sale of, 1.18, 5.21

housing
 authorities, alphabetical list, 1.18
 1966 Census tables, 4.23
 comparison of stock and need, 2.19
 cost index, 3.25
 improvements in statistics, 4.27
 Northern Ireland, 5.21
 private enterprise, 1.16, 4.27, 5.21
 private sites, 1.17, 2.19
 public expenditure, 1.18
 regional progress, 2.18
 stock, 1.17, 2.18, 2.19, 4.27
 surveys, 1.17
 temporary, 4.27
 trends, 2.18
 Housing Corporation, 2.19

illegitimate children, generation study, 1.14
 immigrants
 children in schools, 2.19
 Commonwealth, 5.19
 imported and re-exported goods, classification, 4.40
 imports
 food and feedingstuffs, 1.30
 wine, 3.32
 improvement grants, 1.18
 income and qualifications, survey, 1.20
 income elasticities, food consumption, 1.28
 income redistribution, 2.16, 4.25
 Income Surveys, 1.31, 5.30
 incomes
 engineers, 2.20
 scientists, 2.21
 indicators, leading: research in CSO, 1.32
 individualised data system, education, 1.19, 4.28
 Industrial Development Certificates refused, 3.29
 industrial mobility, 3.29
Industrial Production, Index of, 2.30
 INDUSTRIAL STATISTICS, DEVELOPMENT OF, 1.7
 industrial statistics
 re-organisation, 4.29, 5.34
 table processing system, 2.25
 injury benefit, 5.14
 Inland Revenue statistics, 1.30
 innovation in chemical process plant, 3.30
Input-Output Analysis in Education and Manpower Planning, 1.21
 input-output
 analysis 1954, 2.30
 analysis 1963, 2.23
 conference, 4.31
 INPUT-OUTPUT STATISTICS, DEVELOPMENT OF, 3.7
Input-Output Tables for the U.K., 1954, 2.30

- international comparisons
 - food, 5.32
 - iron and steel industry, 1.26
 - OECD countries, 1.33, 2.29
 - public expenditure, 4.37
 - research and development, 3.34
 - social security costs, 1.16
- international medical nomenclature, 1.14
- International Passenger Survey, 2.15
- International Standard Industrial Classification, 3.21
- International Statistical Institute, 37th Session, London 1969, 3.35, 5.32
- INTERNATIONAL SYSTEMS OF NATIONAL ACCOUNTS, 5.9
- investment, overseas, 1.31, 3.32
- invisible earnings, 2.27
- INVISIBLE EARNINGS AND PAYMENTS, 3.15
- iron and steel industry, changes in structure, 1.26

- job evaluation, 4.36
- Jones Report* on the brain drain, 2.9, 2.21

- Kemsley, W. F. F., *REDESIGNING THE FAMILY EXPENDITURE SURVEY*, 1.10
- Kendall, W. L., education in developing countries, 2.20

- labour
 - agricultural statistics, 1.29
 - costs, 3.30
- Labour Statistics, Yearbook*, 5.24
- land, betterment levy, 4.37
- Land Commission, First report, 4.37
- Lea, Lady, local authority design work, 4.30
- levels of living, 3.34
- life tables, 4.24
- local authorities
 - changes, 3.26
 - design work, 4.30
 - loan debt, 2.26, 4.33
 - loan sanctions, 3.26
 - population 1968, 4.24
 - sale of council houses, 1.18, 5.21
 - size, 3.26
- local authority housing
 - contracts, 5.21
 - dwelling costs, 3.25
 - garaging, 4.23
 - rents, NBPI report, 4.34
 - revenue account, 1.17
 - tenants' rents and incomes, 4.35
- local education authorities, new awards, 3.27
- London Graduate School of Business Studies, 5.32
- Long-Range Planning, Conference, 5.32

- manpower
 - civil service, 3.27, 5.25
 - company planning, 4.29
 - models, 1.21, 2.5, 3.27, 5.23
 - planning, 5.23
 - ports, 4.33
 - scientific, 2.4, 3.28
- Manpower Planning Study Group, 5.23
- market research, public sector, 4.40
- marriages, 4.24
- Maurice, Rita (Editor), *National Accounts Statistics, Sources and Methods*, 2.27
- medical nomenclature, 1.14
- medical research, computer for, 2.17
- Mental Disorders, Glossary of*, 1.14
- mergers, 5.30
- Metropolitan Police, 4.25
- Middleton, B. F., *CIVIL AVIATION STATISTICS*, 3.13
- migration
 - 1966 Census tables, 4.23, 5.19
 - doctors, 1.16
 - engineers, technologists and scientists, 2.21
 - population, 1.14, 2.15, 3.23, 4.24
- Mitchell, H. D., and Ash, R., doctor migration, 1.16
- mobility, industrial, 3.29
- models
 - education, 1.21
 - fuel economy, 1.24, 3.1
 - manpower, 1.21, 2.5, 3.27, 5.23
 - production, 4.31
- morbidity
 - coding, 1.14
 - rates, 4.27
- mortality, 1.14, 2.15, 3.24, 5.20
- mortality coding, 1.14
- mortgages, 1.17
- Moser, C. A., *THE FUTURE ROLE OF THE CENTRAL STATISTICAL OFFICE*, 1.1
- motor vehicle
 - licences, 3.31
 - registrations, 5.29
- mushrooms, 4.32

- Napolitan, L. and Brown, C. J., farm classification, 3.30
- National Accounts Statistics: Sources and Methods*, 1.31, 2.27
- national accounts
 - international systems, 5.9
 - OECD countries, 4.37
 - quarterly, 2.27

- National Board for Prices and Incomes
 - bus company maintenance workers, 5.31
 - car delivery industry, 5.31
 - construction operatives, 4.35, 5.31
 - distributors' costs and margins, 4.36
 - job evaluation, 4.36
 - local authority rents, 4.34
 - London clearing banks, 5.31
 - London taxi cab fares, 4.34
 - office staff employment agencies, 4.34
 - payment by results systems, 4.36
 - university teachers, 5.31
- National Food Survey*, 4.32
- National Health Service, Twentieth anniversary
 - conference, 4.26
- natural gas, 2.24
- New Scotland Yard, 4.25
- new town authorities, alphabetical list, 1.18
- new towns
 - housing contracts, 5.21
 - record system, 1.17
- Nicholson, J. L., redistribution of income, 2.16
- North Atlantic Treaty Organisation,
 - Science Committee, 5.23
- Northern Ireland
 - agriculture, 5.29
 - census of retail distribution, 5.28
 - education, 1.20, 5.23
 - housing, 5.21
- NORTHERN IRELAND GOVERNMENT STATISTICS, 2.12
- nutrition surveys, 1.15, 3.24
- OECD countries
 - economic indicators, 2.29
 - economic pattern, 1.33
 - national accounts, 4.37
 - research and development, 3.34, 4.38
- Occupational Changes 1951-61*, 1.21
- occupational pensions scheme, 4.24
- office development, 4.37
- Office Employment, Growth of*, 1.23
- Official Statistics, Studies in, 2.30, 5.28
- option mortgage scheme, house purchase, 2.19, 5.21
- output, constant price estimates, 4.34
- output per head, 3.30
- overseas investment, 1.31, 3.32
- overspill schemes, 3.26, 5.21
- Park, A. T., NORTHERN IRELAND
 - GOVERNMENT STATISTICS, 2.12
- Passenger Transport in Great Britain*, 2.25, 5.29
- payment by results systems, 4.36
- pension schemes, occupational, 4.24
- pensioners, occupational, registered for work, 2.15
- pensions, war, 2.16
- Perks Committee, criminal statistics, 1.18
- planning
 - role of population projections, 5.12
 - town and country, 4.37
- Plastics Institute, 5.34
- Plowden Report*, control of public expenditure, 4.10
- population, 1.13, 4.24
- population
 - census reports – see *Census of Population*
 - changes 1951/68, 5.19
 - changes, 1966/67, 1.14
 - commonwealth and foreign, 4.24
 - estimates, methodology, 1.14
 - mid-1966, 5.19
 - mid-1967, 1.14, 5.19
 - mid-1968, 4.23, 5.19
 - projections, 1.14, 5.12, 5.19
 - regional subdivisions, 5.19
 - working, 5.23
- POPULATION CENSUS PRE-TEST 1968, 4.20
- ports
 - Digest of Port Statistics*, 4.33
 - unit transport, 5.29
- post graduate awards, social science, 4.40
- POST OFFICE, STATISTICAL AND BUSINESS
 - RESEARCH, 4.1
- postal statisticians, international symposium, 4.38
- pound, internal purchasing power, 1.32
- price indices
 - agriculture, 5.34
 - consumers' expenditure, 1.32
 - education, 1.20
 - wholesale, rebased, 4.34
- prices, food, 1.32, 3.33
- printing and publishing, 1.27
- Production, Census of, 1963, 1.26
- production models, 4.31
- productive potential, Treasury model, 2.23
- PUBLIC EXPENDITURE STATISTICS, 4.10
- public expenditure
 - national comparisons, 4.37
 - regional investment in new construction, 3.29
 - social services, 1.18, 5.21
 - unit costs, 2.30
- public sector
 - employment, 3.27
 - market research, 4.40
- pumps, new series, 1.27
- qualified manpower flows, 3.28
- rates
 - rebate, 3.26
 - support, 3.26
- rebasing constant price estimates, 4.34

- Redfern, P.
 education statistics, 1.19
 input-output analysis, 1.21
- Rees, P. M., PUBLIC EXPENDITURE STATISTICS, 4.10
- regional problems and policy, 4.29
- regions
 duration of unemployment, 2.2
 dwelling construction costs, 2.19
 earnings, 1.22, 5.26
 economic development, 4.39
 food consumption, 1.28
 housing progress, 2.18
 housing stock, 4.27
 Inland Revenue statistics, 1.31
 life tables, 4.24
 migration 1966, 3.23
 population 1966, 1.13
 population 1967, 1.14
 population 1968, 4.24
 population change 1966/67, 1.14
 population of subdivisions, 5.19
 population projections to 1981, 1.14
 public investment in new construction, 3.29
- regression, constancy over time, 3.33
- Rent Act 1965, assessment cases, 1.17
- rent, local authority dwellings, 2.19
- rent tribunals, 3.26
- rents and incomes, 5.21
- research
 in C.S.O., 1.5, 1.32, 3.33
 social science, 3.36
- research and development
 expenditure 1966-67, 3.29
 OECD countries, 3.34, 4.38
- retail distribution, Northern Ireland census, 5.28
- retail prices, food, 1.32, 3.33
- retail prices index
 construction of, 2.30
 special groups and regions, 2.28
- retail sales, 1.26
- retail trade inquiry, 1.27
- Road Accidents*, 2.26
- road goods transport, 1967/68 survey, 2.26
- ROLE OF POPULATION PROJECTIONS IN PLANNING
 ACTIVITIES, 5.12
- Royal Statistical Society, symposium on
 British Official Statistics, 1.33
- school population, projection, 2.19
- school leavers
 destinations, 5.21
 examination results, 5.21
 projections, 1.20
- schools
 curriculum and deployment of teachers, 2.19
 pupils and teachers, 2.19
 teachers, future demand and supply, 4.28
- SCIENCE STATISTICS: PART I, MANPOWER, 2.4
- science, swing from, 1.20
- scientists, survey 1968, 2.21
- Scotland
 county population, 1.13
 death rates, 4.24
Economic Activity Tables, 3.23, 4.23
 education, 1.19, 3.26
Household Composition, 4.23
Housing, 4.23
 migration, 1.14, 3.23, 4.23, 5.19
 population 1967, 1.14
 population projections to 1986, 1.14
 special study areas, 4.23
 vital statistics, 3.36
Workplace/Transport Tables, 3.23, 4.23
- seasonal adjustments
 balance of payments, 1.31
 employment, 5.23
 employment vacancies, 2.22
 research in C.S.O., 1.32
 unemployment, 2.22
- sector financing accounts, 2.27
- Shepherd, J. R., productive potential, 2.23
- Shepherd, J. R. and Surrey, M. J. C., short-term
 effect of tax changes, 4.39
- SICKNESS AND INJURY BENEFITS, 5.14
- slum clearance, 5.21
- social indicators, conference, 3.24, 4.40
- social science research, 3.36
- Social Science Research Council
 data bank, 3.36, 4.40
 post graduate awards, 4.40
 publications, 3.36
 research supported, 3.36
- social security costs, international comparison, 1.16
- Social Security, Ministry of
 organisational changes, 1.19
Social Security Statistics, 2.16
- social services, public expenditure, 1.18, 5.21
- social statistics, integrated system, 2.29
- Social Statistics 1967, U.N. Compendium*, 3.34
- Sources and Methods, National Accounts
 Statistics*, 1.31, 2.27
- Stafford, J., THE DEVELOPMENT OF
 INDUSTRIAL STATISTICS, 1.7
- STANDARD INDUSTRIAL CLASSIFICATION, 1968, 3.20
- standard industrial classification, comparison of
 1958 and 1968 revisions, 4.30
- STATISTICAL AND BUSINESS RESEARCH IN THE
 POST OFFICE, 4.1

- Statistical Series Available, List of*, 2.30
Statistics for Town and Country Planning, 4.37
Statistics of Incomes, Prices, Employment and Production, 5.24
Statistics of Science and Technology, 2.4, 3.29
stocks, distributive and service trades, 1966, 1.27
Studies in Official Statistics, 2.30
SUPPLEMENTARY BENEFITS, 4.16
surgical operations, 4.26
Surrey, M. J. C. and Shepherd J. R., short-term effect of tax changes, 4.39
survey control unit, C.S.O., 3.37
Swann Report, flow into employment of scientists, engineers and technologists, 2.9, 3.28
- tax changes, short-term effects, 4.39
taxes and social service benefits, incidence, 2.16
taxicab fares, London, 4.34
teachers
 school, 5.22
 school, future demand and supply, 4.28, 5.22
 training costs, 3.27
textile machinery and accessories, 4.30
Thatcher, A. R., distribution of earnings, 1.23
Thompson, Miss J. H., THE ROLE OF POPULATION PROJECTIONS IN PLANNING ACTIVITIES, 5.12
town development schemes, England, 3.26
Transport for Industry, 4.32
transport, statistical publications, 2.25
Travel Survey, National, 1965, 1.30, 3.32
Trend Report, organisation of civil science, 2.4
- UNEMPLOYMENT, DURATION OF, 2.1
unemployment rates, by local areas, 2.22
unemployment, seasonal adjustments, 2.22
unit transport, 5.29
United Nations
 Compendium of Social Statistics 1967, 3.34
 regional statistical meetings, 3.34
 Statistical Commission, 15th session, 1.33
universities
 applications and admissions, 1.20, 4.28, 5.22
 individualised data system, 4.28
 student progress, 2.20
 students, staff, finance, 2.20, 4.28
 teachers' pay, 5.31
Upton, D. C., input-output statistics, 2.23
- valuation lists, 3.26
vital statistics, 1.13, 3.36, 4.24
wage drift, 4.36
wage, national minimum, 5.25
wage rates, earnings and wage drift, 4.39
Wales, life tables, 4.24
Walton, J. W. S., INVISIBLE EARNINGS AND PAYMENTS, 3.15
wealth, individual, 5.30
Whitehead, F. E.
 SICKNESS AND INJURY BENEFITS, 5.14
 SUPPLEMENTARY BENEFITS, 4.16
Whitting, I. J., and Forster, C.I.K., INTEGRATED MATHEMATICAL MODEL OF THE FUEL ECONOMY, 3.1
wholesale prices
 fruit and vegetables, 3.33
 index numbers, 5.30
 index numbers rebased, 4.34
wholesale trade, 1965, 1966 inquiries, 1.27
wine
 consumption, 3.32
 imports, 3.32
Wood, S., STATISTICAL AND BUSINESS RESEARCH IN THE POST OFFICE, 4.1
working life of males, 2.30
working population, projections, 5.23
workplace/transport, 1966 Census tables, 2.15, 3.23, 4.23
World Power Conference, 3.30
worship, buildings certified for, 4.24

Regular Publications of the Central Statistical Office

Published by Her Majesty's Stationery Office and obtainable from the addresses on the back of the cover or through any bookseller

Prices in brackets include postage

MONTHLY

Monthly Digest of Statistics

8s 6d (9s 8d)

(published about the 9th of month following)

A digest of the main economic and social statistics collected by all Government departments, providing monthly or quarterly series over the last two or three years and annual series for up to six or seven years past.

Financial Statistics

12s 6d (13s 4d)

Published in the third week of the month

A similar statistical digest but devoted to key financial and monetary statistics.

Economic Trends

8s 0d (8s 10d)

Published on the last working day of the month

A selection of charts and tables designed to provide a broad background to trends in the U.K. economy. Also articles commenting on economic statistics, new series and methods of compilation.

QUARTERLY

Statistical News

6s 0d (6s 6d)

Published on the penultimate Thursday of February, May, August and November

Articles and notes designed to keep users of statistics in touch with developments in official statistics.

ANNUAL

Annual Abstract of Statistics

35s (39s 6d)

Published at end of November

Latest issue 1968 – No. 105

A collection of the most important economic and social statistics presented as annual series over the last ten years, and, in many cases, in greater detail than in the *Monthly Digest*.

Abstract of Regional Statistics

12s 0d (12s 10d)

Published August

Latest issue 1968 – No. 4

A collection of the main series that are available on a regional basis.

National Income and Expenditure

(The Blue Book)

8s 6d (9s 6d)

Published August/September each year

Latest issue 1968

Estimates of the national product, income and expenditure over the last eleven years. Main summary tables are extended back to 1946.

United Kingdom Balance of Payments

(The Pink Book)

12s 6d (13s 1d)

Published August/September each year

Latest issue 1968

Estimates of the U.K. balance of payments in detail over the past ten to eleven years. Summary tables back to 1946.

Monthly Digest of Statistics— Definitions and Explanatory Notes

3s 9d (4s 3d)

Published as a supplement to the January issue of the Monthly Digest each year

Detailed definitions of items and units employed in the *Monthly Digest*. (Note: A similar supplement to *Financial Statistics* is published from time to time. Latest issue, April 1969.)

© *Crown copyright* 1969

Published by
HER MAJESTY'S STATIONERY OFFICE

To be purchased from
49 High Holborn, London W.C.1
13A Castle Street, Edinburgh EH2 3AR
109 St. Mary Street, Cardiff CF1 1JW
Brazennose Street, Manchester M60 8AS
50 Fairfax Street, Bristol BS1 3DE
258 Broad Street, Birmingham 1
7 Linenhall Street, Belfast BT2 8AY
or through any bookseller

Price 6s. 0d. net
Annual subscription £1 6s.