



16



LIBRARY
CSO

FEBRUARY 1972

HMSO 30p net

STATISTICAL NEWS

Developments in British Official Statistics

A publication of the Government Statistical Service

Note by the Editor

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

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

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

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

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

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

CENTRAL
STATISTICAL
OFFICE

FEBRUARY 1972

Statistical News **No. 16**

**Developments
in
British
official
statistics**

LONDON
HER MAJESTY'S STATIONERY OFFICE

M. C. Feary and H. E. Browning
A. R. ...
D. B. Manning
A. R. ...
G. ...
J. ...
W. J. Kendall
J. A. ...
W. H. ...
Note by the CSO
A. A. ...
G. E. ...
G. E. ... and A. A. ...
M. C. Feary and H. E. Browning
R. F. ...
Note by the CSO
L. S. ...
Note by the Department of the
Environment
J. D. ...

Articles in recent issues of *Statistical News*

No. 10 August 1970

Confidentiality of business statistics
An historical abstract of labour statistics
The 1966 ten per cent Sample Census – Why there
was no preliminary report
Government spending on research and development
in private industry
Compose yourself

M. C. Fessey and H. E. Browning
A. R. Thatcher

Percy Gray and Frances Gee

D. B. Manwaring
A. R. Clark

No. 11 November 1970

Treasury computer facilities for economic forecasting
Towards a better understanding of the balance of payments figures
Statistics of British aid
Civil Service sickness absence survey
The effect of variations in output on colliery profitability
The burden of form-filling on small firms

G. Kunzle
J. Hibbert
W. L. Kendall
J. A. Rowntree
W. H. Oakland
Note by the CSO

No. 12 February 1971

Further developments in input-output statistics
Some pitfalls in the use of net output statistics
Statistics for politicians
1971 Population Census

L. S. Berman
A. A. Sorrell
G. F. Lock
G. F. P. Boston and A. A. Cushion

No. 13 May 1971

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

M. C. Fessey and H. E. Browning
R. F. Burch
Note by the CSO

No. 14 August 1971

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

R. M. Blunden

No. 15 November 1971

New statistics and the Index of Industrial Production
The CSO macro-economic data bank
Statistical forms sent to the construction industry
The Inquiry into the Catering Trades for 1969

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

	<i>Page</i>
Revised figures	C. A. Moser 16.1
Future Censuses of Population	P. Redfern 16.4
General Household Survey	Louis Moss 16.7
Manpower planning	J. A. Rowntree 16.9
Preparing for the Census of Distribution	R. W. Makepeace 16.11
ISIS – an Integrated Statistical Information System	T. F. Hughes 16.14

NOTES ON CURRENT DEVELOPMENTS

	<i>Page</i>		<i>Page</i>
Population and vital statistics		Food and agriculture	
1971 Census of Population – England and Wales	16.16	National Food Survey	16.24
1971 Census in Scotland	16.17	Measuring self-sufficiency for food and drink	16.25
Mid-1971 population estimates	16.17	The cost of processing and distributing food	16.25
Mortality by occupation	16.17	Farm Classification in England and Wales	16.25
Family Intentions Survey	16.18	Survey of aerial spraying	16.25
Scottish statistics	16.18	The use of contracts	16.26
Social services		Construction	
Invalidity benefit	16.19	Private enterprise housing	16.26
Attendance allowance	16.19	CITB annual levy inquiry	16.26
Reception centre users	16.20	Transport	
Research project on output measurement for public services	16.20	Survey of transport of goods by road 1967/68	16.26
Manpower and earnings		Highway Statistics	16.27
British Labour Statistics: Year Book 1969	16.20	Overseas finance	
Survey of labour costs in 1968	16.21	Effect on balance of payments statistics of changes in exchange rates	16.27
New Earnings Survey 1971	16.21	British Aid Statistics	16.27
Surveys of Earnings 1972	16.21	Prices	
Members of Parliament	16.21	Seasonal variations in retail prices	16.28
Fire Service	16.22	Home finance	
Industrial statistics		Reserve ratios	16.29
1968 Census of Production	16.22	Money supply	16.29
1970 Census of Production	16.22		
Reorganisation of industrial statistics	16.22		
Regional talks on the new system of industrial statistics	16.23		
Industrial forecasting	16.24		

	<i>Page</i>
International	
Business statistics	16.29
Statistical Office of the European Communities	16.29
Conference of African Statisticians	16.29
Seminar on population data and use of computers	16.30

Publications	
Social Trends	16.30
Abstract of Regional Statistics 1971	16.31
New Business Monitors	16.31
Survey of Personal Incomes 1969-70	16.32
Inland Revenue Statistics	16.32
Customs and Excise	16.32
Education Statistics (Northern Ireland)	16.32
National Institute: Economic Review	16.32
Occasional Paper	16.33

Government Statistical Service	
Rebasing on 1970	16.33
Northern Ireland government statistics:	
Reorganisation of Ministry of Health and Social Services	16.33
Social statistics	16.34
Infofair	16.35
Appointments	16.35

Late Item	
Service trades	16.35

Index	16.36
--------------	-------

Revised figures

C. A. Moser, *Director of the Central Statistical Office*

Based upon an article which first appeared in the *Financial Times* in October 1971

Revisions to economic statistics are never long out of the news. This is not surprising as economic statistics are, by their nature, subject to frequent revision. It is the price to be paid for getting out first estimates as quickly as possible and for seeking to improve their accuracy as soon as more information becomes available. Normally, this does not seriously affect the overall pattern of the figures but just occasionally circumstances combine to produce a really large revision which may change the economic picture. This inevitably leads to comment – sometimes hostile – about the revisions; and although this may sometimes be justified, it quite often springs from an incomplete understanding of the nature of statistical estimates. Statisticians are as sensitive to criticism as anyone else and mildly resent suggestions that they can't get their sums right first time. The problem of revisions is far more complex than this and I want to try to clear up some misconceptions and to indicate our current thinking on the subject.

Most people who follow economic developments are aware that statistics are subject to revision. But occasionally one still comes across someone who directly, or in a letter to the Press, expresses genuine surprise that, for example, our current balance of payments surplus or deficit for a particular year is no longer exactly £549 million as he had read in a reputable journal only six months before. Indeed political legerdemain might be implied. That may be thought to represent a very unsophisticated level of understanding; but it does exist and it provides the natural starting point for a discussion about revisions.

Very few economic statistics can be said to represent the 'fact' of the situation in terms of accounting accuracy. We do not have and would not want to have at our disposal a complete record of the transactions of every firm in the country or of those of our 55 million fellow citizens. Nor do we necessarily have good sample surveys covering every important aspect of economic activity, though the coverage of our data is being constantly improved. What are produced, are the statisticians' best possible estimates of what is happening, or has happened, based upon the information *that is available to them at the time*. And this is the crux of the matter. In nearly all cases, the informa-

tion will increase and change, sometimes several years after the first estimate is made. If we are to meet our obligation to produce the best possible estimate at any given time, then clearly revisions must be made in the light of this further and more complete information. We are never anxious to do this. It makes life more difficult for users and does not help to generate public confidence in official statistics. But, as I hope this article will show, it is unavoidable. What is a desirable aim however is that the level of the revisions and their timing should follow some clearly defined guidelines and that users should be aware of the limitations of the figures. First, how and why do revisions come about?

The causes of revisions to statistical series might, for convenience, be divided into short and longer term, although the division is not really as clear cut as that. The 'short-term' revisions relate to the *completeness* of the information, and it is useful to consider a particular example – the monthly Index of Industrial Production – to illustrate this. For many industries, monthly returns, often providing quite broad information, are collected from a relatively small sample of firms, and, if a publication deadline is to be met, there must be a cut-off point; if, as is usual at that stage, the response is incomplete, the first estimate will be subject to revision as the late monthly returns come in. Second, the monthly enquiries are backed up in many cases by a much more thoroughgoing quarterly survey which provides a more complete coverage and which will, therefore, almost inevitably lead to further revisions to the monthly figures. This pattern cannot be avoided; it would not be right for us to burden all firms with providing all the figures we would like as frequently as every month. For some industries we in fact have very little monthly information.

Similar revisions occur as quarterly data are replaced by annual. To take one example from our balance of payments statistics: The Department of Trade and Industry conduct a quarterly enquiry into firms' direct investment overseas and their earnings from existing investment; an annual enquiry is also carried out, with a considerably larger sample, producing better – and thus often revised – figures.

Here it is relevant to mention the related problem of the accuracy of these 'final' estimates. Much of our

day-to-day work is concerned with very gradual improvements to the component parts of the big statistical aggregates, like the national accounts. Ironically, the more we improve the accuracy of the final figures the greater revisions there may be – other things being equal – to the preliminary estimates. Of course other things do not have to be equal – the preliminary estimates can be improved too – but there are likely to be transitional periods where this is the case. It may well happen with the monthly Index of Industrial Production where, from now on and for some time to come, we shall be introducing the very much improved series of quarterly output statistics.

It is useful to look separately at these ‘short-term’ revisions because the statistician has a choice here which is not the case with other types of revision. The earlier he chooses to produce the first estimate, the less complete and reliable will be the information available (although, of course, this would be greatly helped if the speed of response from industry were generally improved) and – again other things being equal – the greater, on average, will be the subsequent revisions. Similarly, the more frequent the estimates – monthly rather than quarterly, quarterly rather than annual – the smaller will be the amount of information for the first estimate and, again, the greater the revisions. It does not follow that all efforts to improve timeliness need lead to less accurate figures. There are many ways in which this can be tackled – such as streamlining internal procedures, making more use of computers, employing more sophisticated statistical techniques to forecast from partial data – without necessarily impairing the precision. But sooner or later one must reach the point where one can speed up further only by putting out less complete and thus less reliable figures. And here the statistician has the very real choice between on the one hand faster figures and more revisions and on the other less up-to-date figures and fewer revisions. Clearly there are limits here – it is no use publishing figures very early if they are too unreliable for analysis or interpretation – but still the statistician will be criticised either way. However, a choice must be made. In my set of priorities, greater speed comes top, and we now issue, for example, very quick preliminary figures for consumers’ expenditure and are trying to improve timeliness right across the board. This will mean more revisions, but in my view the price is worth paying.

What other forms of revision have in common is that they affect not just the recent figures but the whole series back for a year or several years. They may be of a regular kind. For most seasonally adjusted series the seasonal factors generally have to be revised once a year to take account of the gradual changes in seasonal patterns. This is not always very straightforward.

For example, the pattern of consumers’ expenditure on cars is affected by extraneous factors such as changes in purchase tax and hire purchase arrangements and, on one particular occasion, a change in the month in which the new registration letter is introduced. Again, composite indices – such as industrial production – are built up by ‘weighting’ the detailed figures according to the structure of – in this case – industrial output as measured by a periodic census. When a new census is taken and the structure is seen to have altered, clearly the ‘weights’ of the index must be altered accordingly with consequent revisions throughout the series. The availability of comprehensive data from a census also provides a benchmark from which estimates for more recent years, perhaps derived by extrapolation from annual samples, may be updated. This happens with annual estimates of wages and salaries in manufacturing industries which are not really firm until final census of production results are available.

Revisions may also occur irregularly and for special reasons. Deficiencies may be discovered in the basic source material – I should think that everyone has heard of the under-recording of exports – and when such things occur, happily very rarely, they must be put right. Another irregular cause of revisions occurs when a new, superior source of information becomes available. Thus, in measuring changes in the production of most plastic goods in the Index of Industrial Production we have, for many years, had to make do with estimates of the industry’s purchases of plastic materials. Well, this is better than nothing but it suffers from obvious limitations. A new series that measures directly the sales of plastic goods will soon become available and we shall substitute it for the old one. The Index will be improved thereafter, but the immediate effect will be . . . more revisions.

So, economic statistics represent, for the most part, the best estimates that can be made of the facts of the situation on the information available at the time; and they will nearly always be subject to revision as more and better information becomes available. There are, therefore, always limitations on the extent to which a series can, and should be used, particularly if it is measuring very small changes over a short period and one of the statistician’s main tasks is to inform and educate users in these limitations.

More positively, however, we hope to be able to do more to help users by devising a clear set of guidelines for handling revisions, but the way ahead is not easy and there are no quick and simple solutions. There is, for example, the question of the timing and frequency of revisions. On the one hand it is desirable to try to produce the ‘best’ figure at any given time by continually revising as new data come to hand and as new series become available; taken to its limit, this could

involve issuing revised figures every day in some cases. Against this, one obviously does not want to irritate users with constant changes and discontinuities. Should revisions therefore be made at fixed time intervals?

Alternatively, should revisions be made whenever the change amounts to more than a certain percentage? It can be very annoying to see series revised for trivial amounts that are well within the margin of error of the estimate. In trying to find an acceptable rule, however, one runs into problems with the big economic aggregates like the national accounts. These estimates are built up, bit by bit, from information obtained from different statistical enquiries, the results of which may be published independently of the total national accounts. A revision to one of these series – let us say the capital expenditure of the iron and steel industry – may be important in relation to that industry and will have to be published. In terms of total GNP it may be trivial; but to keep the figures consistent this must be revised too, albeit by an apparently insignificant amount. There is the question too of how far back we should revise. Occasionally, for example, there is a change in classification which will necessitate revisions to a particular series. A decision must be taken on how far back we are obliged to carry the revisions in order to provide an uninterrupted series for users.

More difficult still is to determine what are tolerable limits for the size of the revisions; and consideration of this must be linked with the more complex problem of the margin of error of the 'final' estimate. The main problem is that economic statistics are put to many and varied uses and a certain margin of error may be acceptable for one purpose but not for another.

We are now looking at all of these aspects and, in seeking criteria, we shall certainly consider experience in other countries. Attempts to work out guidelines for the release of principal economic indicators are at present being made by government statisticians in the United States. They have three main objectives. The first is to ensure that revisions to preliminary estimates are not unacceptably high in relation to the actual month-to-month or quarter-to-quarter changes in the final estimates. The second aims to achieve an acceptable standard of accuracy for the final estimates in relation to the underlying movement. If any series does not match up to these criteria, a decision would be required on whether to spend money to improve it (and incidentally add to the burden of form filling) or whether to discontinue it. The third objective is to reduce the number of revisions by regulating the number of estimates that can be issued for a particular series within a given period of time. We have already had discussions with our friends in Washington about this and we shall watch closely to see how these develop-

ments work out in practice.

As I have made clear, we shall always and inevitably have revisions to contend with and this must be more widely recognised and understood. But a clear, consistent and generally acceptable basis for dealing with them should help to make life less difficult for all users and it is our intention to progress towards this end.

Future Censuses of Population

P. Redfern, Deputy Director, Office of Population Censuses and Surveys

This is an edited version of a paper read at the SSRC Statistics Users Conference (see page 16.34)

Census day 1971 has passed but those concerned with planning and running the census are now thinking about the next one. Shall we have some kind of mid-term census in 1976, as we had in 1966, or shall we wait until the decennial 1981 Census? Should we run a census addressed to all the population or addressed to a sample of the population? What should be the question content? What new technologies, e.g. of machine reading, can be applied?

Some people might ask: how will the fuss over the 1971 Census affect policy on censuses in the future? The storm which at times seemed to swirl round our heads did not, I believe, accurately reflect the feeling of the great bulk of public opinion which accepted the need for census data and co-operated well in providing them. In a survey carried out in June 1971, a (*quasi*-) random sample of persons aged 16 and over gave the responses shown in brackets to the question—

Would you say that the Census was:

- i absolutely essential? (38 per cent)
- ii fairly essential? (45 per cent)
- iii not essential? (15 per cent)
- iv don't know? (2 per cent)

This is *not* to say that there are no dangers in collecting personal information through the census, or that there are no lessons to be learnt from 1971. We must try to take account of 1971 experience whilst keeping the furore in its proper perspective.

There are four main criteria in deciding on census strategy. They are: what statistical information is needed, what pieces of mechanics are available to meet those needs, what is the cost of collecting information by different means (and how do those costs compare with the benefits of having the information), and how acceptable are the procedures to the public who are asked to give the information. Something can be said about each of these criteria.

Traditionally the purpose of the census is to count heads so that we can say the enumerated population of Reading at 25 April 1971 was 132,023 (the provisional figure). But for many purposes of government and for population projections we need to know the demographic characteristics — particularly age, sex and marital status. For over a century the census has also covered

a range of other descriptive information about persons, including place of birth, economic activity and housing in varying detail. More recent topics are change of address over a specified period and higher education qualifications. Some of the needs are for national and perhaps regional statistics, e.g. figures of qualified manpower. But increasingly needs are expressed for data on very small areas containing a hundred or so households for the purposes of local planning.

These needs will not be listed or evaluated here. But in a situation where there is a requirement both to restrain public expenditure and to limit the demands made on the public for information, we must justify both any decision to carry out a census at all and the inclusion in it of each topic. Is it in this connection possible to put a value — in money terms — on the information to be derived from a census which may be set against the cost of running a census? In other words can a kind of cost-benefit exercise be done in relation to the census as a whole or in relation to particular, perhaps marginal, questions in it? Such an exercise would certainly be difficult and would involve heroic assumptions. At best it would only provide a pointer so that final decisions would have to be taken on other and more subjective grounds. At all events I see a real need to find out more about the use to which census data are put.

The census no longer has a monopoly as a means of collecting statistical information about the population and its characteristics. It follows that we should apply the census technique in those areas in which it provides better results than other techniques. Let me first define what I mean by the census technique: basically it is to *require* the individual or householder to complete a questionnaire, with or without the assistance of the 'enumerator'. I use the word 'require' because, at any rate in the context of making a head count, legal powers to secure a return seem inevitable.

The first alternative technique is the voluntary interview survey as developed over the past 30 years not least by our own Government Social Survey, now a division within OPCS. The distinctive feature, apart from the voluntary setting within which the interview takes place, is that a skilled interviewer can cover a topic in depth. Whereas census questions should

ideally be few, simple and non-controversial – post-enumeration surveys taken after past censuses have demonstrated the level of error which is introduced if complex questions are attempted – the survey interviewer can ask a lot of questions; she can cover complex questions; and she can tackle questions which on grounds of public acceptability would be impossible in a census. A good example of a question which is both technically complex and sensitive for a good many people is income, but this has been successfully included in the long-standing Family Expenditure Survey. Interview surveys may also include questions on current attitudes and future intentions which would not be acceptable as census questions. The disadvantages of the interview survey are that it is more costly per household than the census approach, practical considerations limit the scale of operations in terms of numbers of households covered and, of course, there is the problem of non-response to grapple with.

The interview survey is no substitute for the census if one needs a head count of population. For that one must mount a census covering, preferably, 100 per cent of the population, though possibly a sizeable sample census would yield head counts for the larger areas, given that a reliable sampling frame of addresses was available. The census approach is also the right one for other topics requiring wide coverage in terms of number of households, provided – and this is an important proviso – the questions are few and simple. An obvious example is data for small areas on housing and transport, given that the needs relate in principle to all small areas and not a few areas in particular cities. Information on minority groups in the population is also likely to require census-scale coverage. But there are almost certainly topics which have in the past been tackled through the census which could more effectively be dealt with by interview survey methods: a gain in quality and depth of data must be set against a loss of coverage (numbers of households) and a possible bias due to non-response. Social and occupational mobility is an example of a topic which seems best tackled by interview methods.

A third method of developing statistics about persons and households is worth mentioning because it has been used extensively in some countries though only to a limited extent in this country. Essentially the method is to link together facts about an individual which have been collected in different topic areas or at different points of time. By repeating this procedure for all individuals in the population in question, or for a sample of them, one could establish new statistical relationships not discernible from the original facts taken in isolation. The ‘individualised data’ system for student and teacher statistics is an example within Government. Cohort studies, as in the Douglas 1946-

based cohort and the later Butler-Kelmer Pringle 1958-based cohort, both outside Government, are a special kind of record linkage exercise.

A number of countries have applied the method to population statistics by maintaining what is sometimes called a population register – that is, basically, a regularly up-dated list of the people resident in the country with some classificational detail (sex, date of birth and marital status at least) and information on area of residence to enable up-to-date local population counts to be maintained. Sweden, the Netherlands, and West Germany are countries which have a system of this kind. This approach, when fully developed, provides an efficient tool for the statistical study of the inter-relationship between the many social and economic factors affecting society and the study of changes through time. By squeezing more out of the data collected, such systems reduce the call on the public for new facts or the repeated collection of old facts. On the other hand there are both technical problems and political factors affecting the development of these methods. The technical problems concern the methods of establishing accurate linkage and of ensuring that records are kept up-to-date. The political factors are concerned with the need to introduce safeguards to protect personal information.

The experience of other countries has shown that the development of methods along these lines does not remove the need for Censuses of Population, though it does modify the scope of the questions in the census.

An important aspect of the collection of population information is the frequency with which material can be made available. With a decennial census, the most recently published data could be up to 12 years out of date (allowing two years for processing and publishing); with a quinquennial census the maximum lag would be reduced to 7 years. This is no longer adequate in a good many cases.

There are various ways of bridging the gap between one census and the next apart from the conduct of special purpose surveys. Some countries conduct regular general purpose sample surveys. In Canada a sample of some 30,000 households (0.6 per cent of all households) are visited each month by interviewers from ‘Statistics Canada’ as part of the multi-purpose Labour Force Survey. In the United States Current Population Survey a sample of 50,000 households (0.08 per cent of all households) are interviewed each month. In West Germany a sample of 1 per cent of households are interviewed annually each April, supplemented by a further 0.1 per cent at each of three other times in the year: they describe this as a ‘micro-census’.

In Britain we have a continuous multi-purpose survey on a rather smaller scale – the General House-

hold Survey (GHS) which was first put into the field in autumn 1970 and which covers some 15,000 households, or rather less than 0.1 per cent of all households, each year. It deals with a range of social and economic topics in a good deal of depth. If we were to mount a continuous household interview survey with a rather more limited set of questions, it would be possible to envisage a much wider coverage than GHS – up to, say, 1 per cent of households annually, which is a figure comparable to the sample sizes achieved in the US and West Germany.

The trouble is that there are a number of topics which cannot possibly be tackled by an interview survey on this relatively small scale: the most important of these topics is total population. For a variety of administrative and planning functions we need to have annual population figures for each local authority area. Up to the present an attempt has been made to meet this need by annually updating the most recent census figures for each local authority area. Births and deaths in each area present no problem because we have detailed statistics from the registration system. The lacuna concerns figures for the net movement of population into and out of each area. Currently we have some limited regular data relevant to these flows, for example, from electoral registrations and returns on housing from the local authorities. But this material is inadequate, as witness the fact that by the end of the decade 1961–71 OPCS were making population estimates for a number of big cities which were more than 5 per cent, and in one or two cases nearly 10 per cent, too high. To get the accurate population totals we need, including the basic analyses by sex and age, would require a 100 per cent census (or failing that a very large sample) more frequently than decennially; or it would require some kind of population register.

One general point of logistics is worth making here. The desirability of having regular information on some topics, and not just decennial statistics, has been emphasised. On the other side of the coin, machinery which is geared to producing a regular flow of information is likely to operate more efficiently and/or at less cost than machinery which, like a decennial census, is brought into intermittent life with temporarily recruited personnel.

It should be apparent that public acceptability is an important aspect of any package of proposals which may emerge. Government statisticians have always been keenly aware of the need to ask acceptable questions, and not too many of them, and of the need to safeguard the privacy of individual responses. They are not any less keenly aware after 1971.

To sum up, the census of population will be looked at in the future in a rather wider setting than in the past: that is to say we shall need to consider its poten-

tialities in relation to the potentialities of other mechanisms for collecting information. As a result the questions in the census itself may become fewer and simpler, complex and more controversial questions being transferred to voluntary interview surveys. There may be a movement towards providing more frequent statistics either by holding censuses (or sample censuses) in between the usual decennial ones, or by running a fairly large-scale continuous household interview survey, or both.

I have tried to review the various options open to us in the future. Nothing in this paper should be construed as a statement of policy. In fact discussions are still taking place both amongst ourselves and our colleagues in the General Register Office, Scotland and with the other departments and interests concerned. Decisions on any future Census of Population will, as in the past, be taken by Ministers who in turn will need to pilot the proposals through the Parliamentary procedures laid down under the Census Act.

General Household Survey

Louis Moss, *Social Survey Division, Office of Population Censuses and Surveys*

The General Household Survey has now been in the field for a year and it is therefore possible to give an early, and of course only interim, report on progress so far.

The General Household Survey, at present, collects information by interview methods on behalf of eight Government departments. Its purpose is different from that of most other multi-purpose surveys now being run around the world. Their primary objective is the collection of labour force data and especially publishable employment and unemployment rates from month to month. This major consideration dictates the necessary sample size which is very large in most countries and, in turn, this affects the design of the sample, the nature of the contact with members of the public and the interviewing force required. Most of the interviews in these surveys are very short, perhaps under 10–15 minutes in most countries. In some cases a high proportion of contacts is made over the telephone, or by proxy.

The General Household Survey interview on the other hand runs to an average of roughly one hour per household, involves contacts with all adult members of the household and requires a great deal of evening interviewing work in order to collect information from those members of the household who are full time workers.

Sample

The survey is based on the sample design originally produced for the Family Expenditure Survey. The set sample for 1971 was 14,560 addresses. It is a three-stage stratified rotating design in which the first stage sampling units are administrative areas in Great Britain arranged in a sampling frame and stratified by three factors: a regional factor which relates to eight standard regions in England, the Greater London Council area, two strata in Wales and four strata in Scotland; a second stratification factor gives administrative areas in provincial conurbations, urban areas not in provincial conurbations, semi-rural areas which are rural districts, either with a population density of 0.25 or more persons per acre or contiguous with urban areas of 25,000 persons or more, and rural areas, which are all other rural districts; the third stratifica-

tion factor is an economic indicator related to rateable value.

The selection of areas from this sampling frame is made with probability proportionate to size; the measure of size being the latest population estimates available at the time the frame was drawn up, namely the mid-1968 estimates. In order to facilitate the selection, the sampling frame has been divided into 168 strata of approximately equal size. From each stratum one area is selected at a time. Each selection of 168 areas is made using random numbers.

The first stage sampling units are rotated as follows. Each area is used four times at intervals of three months, and then replaced with a new selection from the same stratum. In any one period of three months a set of 168 areas is used; in the next three months three-fourths of these areas are used again, but the remainder, namely 42, are new areas used for the first time. Each selection is made independently of all preceding selections, using random numbers, so that the sampling is with replacement. Each set of 168 is divided into three groups of 56 allocated at random to the three months in a calendar quarter.

A second stage is introduced into the sampling, and for this purpose each selected first stage sampling unit is divided into second stage units. In urban areas these units are wards, and in rural districts groups of parishes. Four such units are then chosen with probability proportionate to size from each administrative area, using a fixed interval from a random start, the measure of size being the electorate at the time of selection. The four selected secondary units are allocated at random to the four times the administrative area appears in the sample. Third stage units are addresses selected from the current Electoral Register, and these are converted into households at the interviewing stage. A defined procedure exists for dealing with addresses containing more than one household.

Scope and content

The main function of the survey is to provide departments with information which they find is necessary for their purposes and which can be collected in an interview (or if necessary a series of interviews) with members of a household. To be successful such

interviews must integrate rather different topics and interests into a coherent whole so that interviewers can maintain the interest and active co-operation of all eligible members of selected households. Over the last year the interviews have sought information about: family composition, past changes of address over the last 5 years including reasons for changes, descriptive housing information relating to cost, tenure, amenities and certain consumer durables, employment information with details of movement into and out of the labour force, long distance journeys, educational data including qualifications attained, data related to illness and contacts with any section of the medical services or selected local authority health and welfare services, and income. The detailed subjects referred to above have been elaborated with the co-operation of the responsible policy departments and are designed with their specific purposes in mind.

Some of these topics will be covered continually but others will change from time to time in line with the changing policy interest of the departments concerned. Whilst an acceptable and manageable interview must be maintained, a certain flexibility of content is possible, and some topics will be run for limited periods of time only, others may be run at intervals to monitor slow change over time and the main core continuing topics will eventually provide series of indicators over substantial periods.

As a result of the wide range of topics covered there are special features of this survey to which attention should be drawn. First, inter-relationships can be sought between all the subject areas covered. Second, a wide range of special populations can be identified which can be followed up through supplementary enquiries carried out subsequently. For example, people who have been in hospital over a specified period of time have been interviewed subsequent to the General Household Survey interview in order to collect information about experience in hospitals for purposes of a DHSS Working Party. Since the original interview will have been carried out by interviewers of the Social Survey Division of OPCS and the actual documents concerned will have remained in the Division's possession, it is possible to call back and ask respondents if they are willing to take part in a supplementary study. This possible use of the GHS as a sampling frame for special populations to be interviewed by GHS interviewers obviates the confidentiality problems which in some cases frustrate possible research.

There are limitations, of course, on the purposes which could be served in this way because of the sample size used at present for the GHS. This, as noted above, is just under 15,000 households per annum, from which a total annual sample can be derived as well as four

quarterly samples each of which is nationally representative. But there appear to be many special populations from which, from one or two years' fieldwork, reasonable numbers could be reached in this way. As well as the data from the supplementary interview the full range of General Household Survey data is also available from the original interviews for purposes of analysis on such Supplementary Studies.

Multi-purpose surveys in many other countries are used, too, as sampling frames for special populations which are interviewed, separately in supplementary, follow up surveys.

Response

Detailed pilot studies were carried out to test the methodology employed and the results so far achieved have been in line with the results of that preliminary work.

As with all Social Survey work this is a completely voluntary survey and the response obtained depends entirely on the success of Social Survey field staff in gaining co-operation on a somewhat elaborate interview schedule and with a sample design which requires much special effort. Over the last 12 months an acceptable response rate has been maintained, some co-operation having been obtained from over 86 per cent of all households contacted. However, not all households give all the information requested but acceptable information covering the greater part of the data required is being obtained from between 81 per cent and 83 per cent of all households contacted. It is hoped, eventually, by means of appropriate interviewer control techniques and also improvements in the design of the interview to increase its acceptability and interest for the general population, so that a somewhat higher response rate can be achieved.

Tabulations have already been produced and distributed to customer departments for the first three separate quarters and preparations are being made for tabulations based on the larger numbers which will become available from the total annual sample. These tabulations enable departments to make their own appraisal of the data and further judgements on how the survey can be used to help develop departmental research and statistics work.

It is hoped that a more detailed account of the Survey including descriptive examples of a wide range of results can be produced later this year.

Manpower planning

J. A. Rowntree, *Chief Statistician, Civil Service Department*

The February 1970 issue of *Statistical News* described the statistical work of the Civil Service Department. The former sub-divisions have been replaced by two divisions, Statistics 1 headed by a Chief Statistician responsible for professional statistical work and Statistics 2 headed by an Assistant Secretary responsible for the provision of data and the development of the new data system called PRISM. Later notes in *Statistical News* 10.19 and 13.21 have mentioned changes on the PRISM work. The purpose of this note is to bring the story up-to-date on the manpower planning front.

The work on manpower planning has two main aspects. One is work for those concerned with central personnel management and the other is an information and consultancy role for departments other than the Civil Service Department in respect of their responsibilities for manpower management. Over the past two years much of the detailed effort has been directed to studies connected with the new structures which have been introduced to form for example the new Administration Group. Projects in this area have included the analysis of the career prospects for the streams of entrants and promotees passing through the Administration Group, and the development, in association with the University of Kent, of a model which was used to make preliminary forecasts over a 10-year period of a number of the new wider groups – again including for example the Administration Group. This work has since been developed and refined.

Various modelling approaches have been used. Orthodox steady-state models are used for a quick first appreciation of the long-term effects of different policies and options. The model mentioned above in connection with the ten year forecasting exercise (which has been called the Kent Model) has been used for a variety of exercises. Essentially this is a renewal type of model which is 'driven' by wastage and other movements from the higher grades in a hierarchical system. The resulting vacancies are filled either from a lower

grade (using pre-determined promotion strategy) or by recruitment – the proportion from each source also being pre-determined. An alternative model (developed in association with Mr R Morgan of the University of Cambridge and hence known, not very originally perhaps, as the Cambridge Model) uses the current age by grade structure of a group of staff to estimate current promotion policies and then by further manipulation estimates the effect of alternative promotion policies. This model can also be used to help provide a recruitment strategy. A description of the latter approach will be included in the published proceedings of the NATO Conference on Manpower Planning models which was held at Cambridge in September 1971. (The proceedings are expected to be published later in 1972).

As well as this work directly serving current personnel management planning, the division is engaged on presentation and lecturing work in respect of manpower planning. The overall aim of this work is to spread knowledge of the ideas and potential contribution of manpower planning throughout the Civil Service. So far this has been effected partly by participation in Civil Service College courses at Assistant Secretary, Principal, and, shortly, SEO level. These courses have been either directed towards specific topics such as Personnel Management or Long-Range Forecasting or have been more general courses such as the Senior Management Courses at Assistant Secretary level.

In addition there have been a number of 1 day presentations on manpower planning to Establishment Officers and others working in this area. These presentations introduced the concept of manpower planning partly by lectures and a case study and partly by computer based exercises. In these exercises those attending, working in syndicates, devise recruitment and promotion policies to meet given future situations. Having laid the foundations the aim is to carry the building further. With this in mind two courses are

now being planned. The first will be a three day appreciation course for those at Assistant Secretary or Principal level who will have to use the results of statistical manpower planning. A longer course is being planned for those who will actually have to carry through the analyses and forecasts. In some departments at least members of the Statistician Group are likely to be involved. The operational strategy underlying this approach is that much of the manpower planning in the Civil Service Department will be concerned with overall plans for the Civil Service as a whole, with providing a framework for departmental plans and with continuing to refine and develop the necessary mathematical models and other techniques.

A number of departments are already actively involved in this work and a number of exercises are now in hand in association with the Civil Service Department. An inter-departmental steering group chaired by the Civil Service Department, has the function of co-ordinating manpower planning work throughout the Civil Service and also provides a forum for the exchange of experience and information in the manpower planning area.

Statistics 1 Division of the Civil Service Department is keeping in touch with developments outside the Civil Service both formally, through its strong links with the Institute of Manpower Studies and the Manpower Society, and informally through personal contacts with individuals working in manpower planning in both the public and private sectors. This is an area where the close link between statistical and administrative work is being advanced in an aspect of management of considerable and growing importance.

Preparing for the Census of Distribution for 1971

R. W. Makepeace, *Principal, Business Statistics Office*

Shopping is something that everybody must do and spending in shops accounts for about half of all consumer expenditure. It is one of the most important economic factors, needing to be monitored from month to month, and information is regularly collected from a panel of firms. The effectiveness and reliability of limited inquiries of this kind can only be assessed from a more detailed knowledge of retailing activity in general, so that a general census is necessary from time to time. Beyond this need, the structure of retailing needs to be kept under review in regard to the kind of organisations that are engaged, the methods of trading adopted, and the commodity-mix in different kinds of shops. The latter information is of particular interest to market researchers, while for local planning purposes details of neighbourhood shopping facilities are in much demand. Census results are also increasingly used by retailers themselves in assessing their own progress and in planning future developments.

To meet these various needs full censuses of retailing have been carried out twice before in this country, in respect of 1950 and 1961, with sample inquiries in 1957 and 1966. In mid-1969 preparations began for taking a third full census in respect of the year 1971 for Great Britain (Northern Ireland has since also arranged for a comparable inquiry covering the same period), its proposed scope to be similar to that of the preceding censuses. It would therefore cover the retail trades as defined by minimum list headings 820 and 821 of the Standard Industrial Classification (Revised 1968), and also hairdressing, laundering and dry cleaning (including towel and other linen hire), pawnbroking, footwear repairing, the installation, maintenance, hiring out and repair of consumer goods, and radio and television relay services.

In February 1970 the then President of the Board of Trade appointed an Advisory Committee under the chairmanship of Mr J. Stafford, Director of Statistics, to advise on the preparation of forms and other matters concerned with the census. The Committee held its first meeting in February 1970 followed by several more at roughly monthly intervals at which the proposals on scope, method and questions to be asked

were discussed and agreed. During the course of these discussions it was proposed and agreed that check trading should be included as an activity to be covered by the census.

Dispersal of the Business Statistics Office from Eastcote to Newport (Mon), to be carried out over a period of 4 years, had started at the beginning of 1969 and a small planning section for the census was set up at Newport in July of that year with a nucleus of experienced executives augmented by locally recruited clerical staff. The detailed work needed for building up the census register was got under way shortly afterwards starting with the compilation of the register of main multiple organisations from information provided by the sample census taken for 1966. Also from this source came information about the large independents to whom, along with the main multiples, specimen forms were to be sent in the autumn of 1970.

By May 1970 planning was well in hand, many of the forms and letters were in their first drafts and work proceeded on establishing the register. Where necessary especially with the service trades, approaches were made to the Trade Associations concerned for lists of their members. Work also proceeded as quickly as possible on the completion of the specimen forms and on the preparation of a publicity booklet (designed in conjunction with Information Division of the DTI and Central Office of Information) which was to accompany them.

On 20 November 1970 the specimen forms were duly sent to co-operative societies, known large multiples and the large single shop traders, of whom the first two groups were asked to provide a full list of their branches. In December specimen forms were sent to the larger laundries who were also asked for details of their branches. No record is maintained of retail shops which are in business. For a census of shopping activities it is therefore necessary to enumerate all shops by a physical count carried out by a field staff of enumerators. Dockets suitable both for use by the enumerators in the field and as punching dockets for taking the register on to the computer were designed and printed in time for distribution to the enumerators

early in 1971. An important part of enumeration was that enumerators would allocate grid references to premises based on 100 metre squares, so that these could be used to facilitate the identification of shopping centres and for the extraction of special area analyses by computer.

Work was also going ahead on the identification of the shopping centres and it was agreed that (except for the Greater London Council area) the delineation of boundaries should be by reference to shopping centre plans produced by a London firm specialising in this type of work. The use of the maps, on which 100 metre grid lines had been accurately superimposed for our purpose, *plus* the grid referencing of shops carried out by the enumerators, eliminated the need for setting the boundaries by a field exercise using BSO staff. The GLC area presented special problems and a decision was made to accept shopping centre boundaries defined by the London boroughs themselves. We are grateful for the considerable amount of work carried out by them on the enumeration of the shopping centres with which they were concerned.

By the end of 1970 staff were fully engaged in producing 'matching' dockets from the lists of branches received from multiples, co-operative societies and laundries, although the initial response was somewhat disappointing. Plans were disrupted however by the postal strike since this started just as we were about to send out reminders. Some firms helped by sending branch lists via their local branches in Newport. The postal strike also presented difficulties in the distribution of the enumeration dockets. They had to be delivered by the printer to Newport and stored in the office ready for immediate despatch if the strike ended in time but had to be kept readily available for re-packing and addressing if planned alternative methods for their distribution had to be used. The problem here, not fully anticipated, was the weight of the dockets which amounted to roughly 7 tons and it was necessary to spread the weight load of the packages over several floors of the main building. Contingency plans were about to be implemented when the postal strike ended and the Post Office made immediate arrangements to collect and despatch the dockets.

Now that channels of communication were again available we were able to send out urgent reminders for branch lists. We were also able to send out letters to local authorities asking for names and addresses of market and itinerant traders. We eventually had practically 100 per cent response to this request and were very grateful for the co-operation of all those concerned.

Early in May 1971 the enumeration dockets started to arrive. They were handled by 14 teams on a geographical basis, the work consisting of sorting to

streets within local authority, editing for computer take-on and coding to a broad kind of business from a description given by the enumerator. One objective of the desk scrutiny was to weed out dockets relating to businesses clearly out of scope of the census. In all some 833,000 enumeration dockets were received, and some 223,000 were, on initial examination, put out of scope. The next stage was to eliminate enumeration dockets relating to branches of multiples by matching them against the dockets previously prepared from the branch lists. In so far as it was possible local authority areas were dealt with in their entirety, e.g. no part of Bristol was dealt with until all the enumeration dockets for the city had been received. It was appreciated that this would probably lead to the processing of some of the larger towns being held up but the advantages of the tight control afforded by this procedure was thought to outweigh any other considerations. The dockets remaining after the elimination of 'out-of-scopes' and dockets relating to branches of multiples were taken on to the computer to form an interim register to be used for the addressing of letters giving traders advance warning of the census.

The interim register was known to contain addresses of some 100,000 shops belonging to small multiples, and to some large multiples who had failed to respond to the earlier request for lists of branches. Since, as in previous censuses, returns were to be collected on an 'organisation' basis further steps had to be taken to identify these branches before the register could be used for the mailing of forms. A short questionnaire was therefore incorporated in the warning letters asking traders with more than one shop to list their branches and return the questionnaire without delay so that steps could be taken to prevent forms being sent to each of their shops and to ensure that the correct type of form was sent to the head office address. Enclosed with each letter was a list of the questions which would be asked on the census form.

The whole exercise of examining and editing dockets, 'matching' them, coding them to a broad kind of business, taking them on to the computer, despatching some 523,000 warning letters and dealing with returned questionnaires had to proceed according to a very tight schedule sandwiched between receiving the first dockets in May and the closing of the register in the first week in November for addressing and enveloping the forms for despatch in January. July therefore marked the beginning of a period of intense activity in dealing with replies to the warning letters, continuing with the processing of enumeration dockets and carrying out the necessary amendments to the register.

Meanwhile, elsewhere in the section, work continued on the preparation of the statutory forms, on the finalisation of specifications for computer proces-

sing including receipting procedures and on the preparation of desk instructions.

Thirteen form types are being used in the census not counting a small print of a special Welsh version of the form for independent traders which will not be generally issued but held against possible demand.

The final agreed list of the forms was:

- CD/601 Co-operative Societies
- CD/602 Multiple retailers with 2 or more branches
- CD/603 Single shop retailers
- CD/604 Check traders
- CD/605 Market and street traders
- CD/606 Automatic vending machine operators
- CD/607 Mail order businesses
- CD/611 Laundries, laundrettes and dry cleaners
- CD/612 Multiple hairdressers
- CD/613 Hairdressers
- CD/614 Multiple footwear repairers
- CD/615 Footwear repairers
- CD/616 Radio and television relay.

The printing of addressed labels by the computer duly started in the second week in November, the first to come off being those for the large number of single shop forms which were enveloped mechanically on a six hopper machine.

The labels for the multiple shop form types were then produced. Hand packing of multiple shop forms was necessary because the number of copies needed of some parts of the appropriate form depended upon the number of branches in the organisation to which the form was being sent. Enclosed with each form was an explanatory leaflet in the form of a scaled-down version of the booklet sent to large traders in November 1970.

Special arrangements were made with the Post Office for a nation-wide distribution of the forms on 20 January 1972. This date had been fixed quite early in the planning stages so as to avoid the congestion during the Christmas and New Year periods of peak pressure on the postal services. In the event it also fitted in with the move of the Census of Distribution Section from Chartist Tower to the new BSO building in Cardiff Road, Newport during the week commencing 10 January 1972. The staff were therefore settled in their permanent location before the forms were issued. Just in time, seeing that the address and telephone number of the new building is given on all the forms and covering letters!

Following the despatch of forms further publicity for the census is being mounted by means of advertisements in the trade press and meetings with Chambers of Trade in different parts of the country. This is aimed at encouraging traders to send their returns in promptly and to take an interest in the census results. If response is reasonably satisfactory it is expected that

provisional results will become available at the end of 1972 and that the final reports will follow in the course of 1973 and 1974. Before that, however, a preliminary report on the numbers and kinds of shops as recorded by the enumerators is to be published in the spring of 1972.

ISIS - an Integrated Statistical Information System

T. F. Hughes, *Computer and Data Systems Unit, Central Statistical Office*

Introduction and background

The seventh session of the Conference of European Statisticians Working Party on Electronic Data Processing, held at Bucharest during September/October 1968 noted that computer languages for statistical applications and computer programs for the production of statistical tabulations were multiplying rapidly. This was considered to be so wasteful of scarce programming resources as to make the development of an internationally acceptable language for statistical application desirable. The Working Party therefore recommended that arrangements should be made for the preparation of a report on tabulation programs and on the feasibility of defining and implementing an international programming language for statistical purposes. This report entitled 'Systems and Languages for the establishment of Statistical files and the compilation of Statistical tables' was subsequently prepared by Mr I. Filotti of the Romanian Statistical Office Computing Centre, and published during July 1969. The report covered the theoretical problems of providing a statistical language and noted that the present proliferation of specialised tabulating languages was an extraordinary phenomenon. It gave alternative solutions to technical questions; made suggestions for further international co-operation; and pointed out that an international language would have three distinct advantages:

- a. It would equip users with a powerful instrument for statistical processing.
- b. It would provide software designers with a language having a potential market large enough to induce them to write the necessary compilers.
- c. It would appeal to reason, in that if implemented it would help to minimise repetition of programming effort.

In February 1970 a group of consultants⁽¹⁾ met at

the Computing Research Centre (CRC), Bratislava, Czechoslovakia, to consider and to discuss the Filotti report, to formulate the objectives and to define the tasks required for the production of a statistical language. The group considered the language requirements from the view points of an Integrated Statistical Information System (acronym ISIS) which could be divided into five broad operations, namely:

- a. The creation of files
- b. The creation of tables
- c. Statistical analysis
- d. Presentation of results
- e. A supervisory system for controlling the above four operations

The group also recommended that since the Computing Research Centre was currently working on the theoretical aspects of integrated statistical systems, it should prepare proposals for a comprehensive project based on these five operations.

In its first report the group of consultants emphasised that the main objective of the ISIS projects was to hasten, through international co-operation, the utilization of modern concepts and technology in processing of the statistical data. It was recognised that the project was ambitious but the potential advantages to national statistical offices were such as to make the task both desirable and worthwhile. The group also attached importance to the continuation of exchanges of information on national work and suggested that the possibility of securing the co-operation of interested international organisations should be explored.

By October 1970, exchanges of information concerning general and specific tasks connected with ISIS had taken place between the Computing Research Centre and twenty member nations of the Economic Commission for Europe. Contacts had also been established with the Statistical Computing Service of the European Community. By May 1971, proposals for an Integrated Statistical Information System (ISIS) had been prepared and discussed in detail by the group of consultants, again meeting at Bratislava.

(1) This group includes members from the Canadian, Bulgarian, Hungarian, Romanian, Swedish, United Kingdom and Yugoslavian statistical offices, together with representatives from the United States Bureau of Labour Statistics, and from the Statistical Office of the European Communities.

The general proposals for ISIS

In order to ensure the independence of the functional sections of an information system, which in turn would allow for future expansion, and ease its implementation internationally, a modular approach was considered necessary. As recommended by the group of consultants in 1970, the operations of ISIS fall into five modules, now re-arranged as:

- a. Input module
 - b. Data base management module
 - c. Applications module – Creation of tables, statistical analysis, etc.
 - d. Output module – Presentation of results
 - e. Command module – Control
- } Creation
} of files

The input module will provide for data definitions, their error control, and their physical entry into the system. The data base management module will provide for the actual creation of files, for their storage, their retrieval, and their updating. The application module will provide a package of programs covering such tasks as statistical analysis and the generation of statistical tables and their manipulations etc. The output module will have the prime objective of arranging data with headings and stubs, etc. for presentation in a form convenient for the user; and the command module will control the activities of other modules, will translate a user language, and will provide for inter-modular communication.

Three objectives need to be achieved by the ISIS software in order to make the system useful and acceptable to national statistical offices. Primarily there must be portability, meaning that the system must be comparatively easy to transfer from one software and hardware environment to another, i.e. the amount of work in connection with a system transfer should be considerably less than with a creation and implementation of entirely new systems. Secondly, since national statistical offices have differing requirements which are liable to change, the system must be adaptable to changing user requirements i.e. it must be possible to adjust and to adapt the system easily and rapidly. The system must therefore be open ended, incorporating a mechanism enabling it to be altered and supplemented whilst preserving its overall structure, and retaining its capability to be further modified. Thirdly, the system must facilitate the fullest possible exploitation of the software of particular computers on which the system is to be implemented. The most promising way towards achieving these objectives would be to ensure that the software system was homogeneous with uniform philosophy and architecture. The homogeneity of the system will of course depend on the provision of a compact internal

language ⁽²⁾ which would be an integrating element of of the system. In order to maximise portability the internal and the external user language would have to be machine independent. Finally, the modular approach which would aid the detailed design of the system will also contribute to eventual versatility.

Progress on ISIS

Much of the research carried out at the Computing Research Centre and at National Statistical Offices on statistical information systems (including that of the CSO Computer and Data Systems Unit) has of course been found relevant to the ISIS Project and has formed the basis of work already completed. This work, which includes the systems design of ISIS, and indeed the implementation of some of the modules, has been in progress since early 1971. By November 1971, preliminary versions of a table generator, a table manipulator, and a data-base management module for tree-structured files ⁽³⁾ had already been completed. Work on the Command module which includes the definition of the user and the internal language has also progressed to the stage where a decision is imminent on the computer language to be used for programming ISIS (i.e. the host language).

Although the ISIS project is primarily under the control of the Computing Research Centre, established at Bratislava in accordance with an agreement between the Czechoslovakia Government and the United Nations Development Programme, progress on the project is reviewed periodically by a group of international advisers ⁽⁴⁾ to the Computing Research Centre. This group is part of a larger group of consultants which meets annually to discuss the ISIS project from the point of view of international co-operation and which reports to the Working Party on Electronic Data Processing. The next meeting of this Working Party should take place during March 1972 when it is to be hoped that a time table covering the future developments of ISIS will be presented.

⁽²⁾ The language for defining instructions utilised within the computer for operating the system into which the English-like user language would be translated by the computer.

⁽³⁾ i.e. files in which data within records are stored in such a manner as to allow a hierarchical linkage.

⁽⁴⁾ see footnote (1)

Notes on current developments

POPULATION AND VITAL STATISTICS

1971 Census of Population – England and Wales

The 1971 Census was carried out to the accompaniment of an unprecedented amount of publicity and discussion largely concerned with the confidentiality of returns. A major consequence was that some 177,000 census forms from households present on census day were returned direct to the Titchfield processing office, 43,000 being received on one day, 29th April. This direct return of forms led to confusion with the normal enumeration procedure for absent households and there was doubt whether appropriate returns had been received from some 51,000 households, a revision of the figure given in the Preliminary Report (published August 1971). All these households have now been written to and some 3,200 have also been interviewed. Rather more than half of the 54,000 households were, in fact present on census day and some 12,000 completed forms have been received and classificatory details have been obtained on others. The results of these checks have been used to adjust the census results.

Largely due to the extra work resulting from direct return, the programme of analysis of the census is running some two months behind schedule. However, the first county leaflet of the advance analysis was ready before the end of 1971 and it is hoped to publish all counties during March, April and May, 1972. The advance analysis is produced from the enumerator-marked documents (see *Statistical News* 12.13); it shows total population by age, sex, marital status and economic activity, and will include figures for each local authority area above 15,000 population. Statistical tests have been made on the results, including comparisons with the final census figures for the first county processed by the more traditional methods (Dorset). These tests show that while some errors have occurred in transcribing the information from census forms to marked documents, especially in relation to economic activity, the results are generally of an acceptable quality. However, the information on household size shows a high level of error as some enumerators marked each person as the first person in the household and this analysis will not be published. Preliminary assessment of the transcription of country of birth material also shows errors but it may be possible to publish these figures at national level.

The main processing of the data to be analysed on a complete (i.e. 100 per cent) basis is in hand and final figures for the first county were produced before the end of 1971. It is hoped to publish this series of County Reports between April and December 1972. The tables will give figures for counties, local authority areas and wards, as well as for new towns and conurbation centres. Each County Report will be in three parts and the analyses will include:

- Part I Population by age, sex, marital status, country of birth and economic activity.
- Part II Households by size, type of housing space occupied and density of occupation.
- Part III Households by tenure and amenities of housing occupied, and statistics of occupied and vacant dwellings.

In these reports, each number in the last column of figures will be rounded to either 0 or 5 and consequently the numbers 0, 1 and 2 will be rounded to zero which will be indicated by an asterisk. This is to ensure the highest level of confidentiality. Preliminary assessment of the census results suggests that coverage is well up to the average achieved in previous censuses though quality of data may be slightly worse than usual.

Further early analyses of census data are planned from a 1 per cent sample of forms. These have all been coded and validation is being carried out. Tables will be published in the summer of 1972 showing age, sex, marital condition, birthplace and parents' birthplaces and economic activity. Reports on the final analyses of census data will follow and these will cover demographic characteristics, household composition, fertility, country of birth and parents' country of birth, housing, migration, economic activity including industry and occupation, workplace and transport to work, and qualified manpower. It is planned to produce some statistics for the new local authority areas which will come into being in 1974 when the areas are finally determined; and also tables of population with their more important characteristics for Parliamentary Constituencies both as they existed in 1971 and as altered by the Boundary Commissions.

Reference

Census 1971, England and Wales, Preliminary Report (HMSO) August 1971 (Price 60p)

1971 Census in Scotland

It is hoped to publish the second preliminary report for Scotland shortly. This will consist of a table of the population classified by sex, year of birth and whether economically active (working or seeking work) which will be produced for each city, county, large burgh and some of the larger districts of counties. The second preliminary report is based on computer-read documents marked by the field enumeration force, rated where necessary to the population totals of the first preliminary report, and it will therefore not be completely compatible with the figures published later this year in the county reports.

Mid-1971 population estimates for England and Wales

Estimates of the population of England and Wales, conurbations and every local authority area at 30 June, 1971, together with an outline of the methods used in arriving at the estimates, are published in *The Registrar General's Annual Estimates of the Population of England and Wales and of Local Authority Areas, 1971*.

These are the first of the Annual Estimates to take account of the preliminary results of the Census of Population taken on 25/26 April 1971. Adjustments have been made for estimated underenumeration in the Census and for late receipt of census returns. The Census counts for each area were further adjusted to convert them from the basis of the area in which a person was enumerated to the basis of the area in which he usually resided. The resulting figures were then carried forward to 30 June 1971 by adding an estimate of the change in population between Census date and mid-year.

The estimates are provisional until firmer and fuller data become available from the Census. The figures are not comparable with the annual estimates previously published for the period 1962-70, which were linked to the 1961 Census. In particular, they cannot be related to the published mid-1970 estimates to obtain a measure of population change between mid-1970 and mid-1971, although they can be compared with the estimates for mid-1961 to show broad changes over the decade.

The population changes for regions and conurbations in the decade 1961-71 are as follows:

Standard region and conurbation	Provisional estimate of the home population mid-1971 thousands	Change 1961-71	
		thousands	per cent
North	3,301	55	+1.7
Tyneside	804	-49	-5.7
Yorkshire and Humberside	4,809	178	+3.8
West Yorkshire	1,736	36	+2.1
North West	6,739	193	+3.0
South East Lancashire ...	2,394	-25	-1.0
Merseyside	1,263	-117	-8.5
East Midlands	3,391	283	+9.1
West Midlands	5,119	358	+7.5
West Midlands	2,369	-1	-0.0
East Anglia	1,681	192	+12.9
South East	17,259	914	+5.6
Greater London Area ...	7,418	-559	-7.0
Outer Metropolitan Area	5,344	+841	+18.7
Remainder	4,497	+632	+16.4
South West	3,792	356	+10.4
Wales	2,725	90	+3.4
England and Wales	48,815	2,619	+5.7

Mortality by occupation

This recently published analysis continues the series of investigations into mortality by occupation which have been made at decennial intervals since 1851. Each supplement has been related to population in a census year, so that mortality rates for the different occupations can be calculated.

The deaths registered in 1959-1963 have been analysed according to the occupations of the deceased (except for married women), and death rates have been calculated on the basis of the populations (by occupations) derived from the 1961 Census. Most of the analysis is concerned with deaths at ages 15-64. The usual analysis of infant mortality has been omitted because it has been covered in a separate study.

Since married women share their husband's environment in most respects except occupation, analysis of their mortality is grouped according to the occupations of their husbands, as in the previous reports. It may thus be seen whether their mortality is less, relatively, than that of their husbands in which case it may be justifiable to infer that the excess of mortality among the men is associated with their occupations. The tables show the deaths from various diseases registered in the five-year period for men, married women and single women, analysed by social class, twenty-seven occupation orders (these are aggregates of occupation units) and selected occupation units (these number just over 200 in all and conform as far as possible with the International Standard Classification of Occupations recommended by the International Labour Office).

Reference

The Registrar General's Annual Estimates of the Population of England and Wales and of Local Authority Areas, 1971 (HMSO) December 1971 (Price 20p)

The volume includes a commentary on the interpretation of the data with examples of changes in patterns of disease between this and the previous analyses. The commentary discusses changes in the classification of occupations between this and the previous analysis, particularly in its effect on categories such as the social classes; it points to the difficulties in comparing, from census to census the mortality gradients between classes.

The commentary points out that the reduction of mortality in the middle-aged in the ten-year period between this and the previous analysis is most marked in professional persons such as clergy, lawyers and teachers and that the mortality at these ages is made up largely of heart disease, strokes and cancer.

There are separate tables for the analyses of deaths from cancer, from maternal causes, from accidents, and from respiratory and cardio vascular diseases for the various geographic regions.

References

- The Registrar General's Decennial Supplement, England and Wales, 1961, Occupational Mortality Tables* (HMSO) December 1971 (Price £4.90)
Studies on Medical and Population Subjects No. 19, Regional and Social Factors in Infant Mortality (HMSO) July 1966 (Price 42½p)

Family Intentions Survey

The report of a study on married women's expectations of family building and on their actual child-bearing experience was published in November 1971. The results have been analysed in relation to selected demographic, social and economic characteristics of the families concerned. The evidence was collected by interviews with a sample of 6,306 married women (married once only and aged under 45 at the time of interview), carried out in 1967 by the Government Social Survey on behalf of the General Register Office (at that time separate Departments but since merged in the Office of Population Censuses and Surveys).

This is the first time an official enquiry of this kind into attitudes to child-bearing and expectations of future births has been carried out in this country, and the results must be regarded as experimental, especially until such time as they can be compared with actual birth trends in order to see how closely these have matched expectations. A very high level of response was achieved in what was a voluntary survey.

A main aim of the survey was to obtain information that would improve the reliability of medium and longer term projections of future population, which are needed for many planning activities. As the fluctuations in the forward projections made in the last two decades have demonstrated, the greatest element of uncertainty in the calculations concerns the

assumptions about the future fertility of the population and the factors underlying this. The study was launched against the background of the sharp increase in births from 1955 to 1964, and the subsequent decline which began in 1965. It was hoped that the study would yield information which would help in disentangling the effects of any changes which might be occurring in ultimate family size (the total number of children a woman has borne by the end of her child-bearing life) from changes in the spacing of births.

A second aim underlying the survey was connected with the fact that the more widespread knowledge of contraceptive practice and the availability of more effective methods had made preference in family size an increasingly important component in patterns of family building. The study therefore examined what factors couples take into consideration when deciding on their preferred family size; whether these preferences change as couples progress through their lives; and what social and economic characteristics are associated with different family size preferences.

After an introductory chapter the report discusses the ideal, expected, and actual family size of the respondents, and examines actual and expected patterns of family building. The limitations – both involuntary and voluntary – on a couple's ability to have children are then considered; much of this section consists of an analysis of contraceptive practice. Chapter five returns to actual family building and attempts to pick out the main differences in material, cultural, and attitudinal characteristics between two and three child families for respondents who were likely to have completed their families. Next an attempt is made to project final family size for those whose families were possibly not completed, using discriminant analysis, and this is compared with the expected family size stated by the respondents. The 'summary and conclusions' chapter is followed by various technical appendices.

Reference

- Family Intentions* by Myra Woolf, Social Survey Division, Office of Population Censuses and Surveys (HMSO) November 1971 (Price £1.70)

Scottish statistics

The Registrar General's annual report for 1970 was published in December. The divorce section has been extended and a new table on births classified by the parents' countries of birth was provided. The Registrar General's third quarterly return for 1971, to be published this month, contains tables on overseas migration for the first half of 1971 derived from the

international passenger survey and mid-1971 estimates of the Scots population by age and sex in addition to the usual quarterly tables.

Reference

Annual Report of the Registrar General for Scotland 1970 Part I Mortality Statistics (Price £3.90 by post £4.14)
Part 2 Population and Vital Statistics (Price £1.45 by post £1.53) (HMSO) December 1971

SOCIAL SERVICES

Invalidity benefit

The National Insurance Act 1971 provides that, when a claimant to sickness benefit who is under pensionable age (65 for a man and 60 for a woman) has had entitlement to the benefit for 168 days in a period of interruption of employment, the benefit is replaced by an invalidity pension of £6.00 per week, together with an invalidity allowance of £1.00, £0.60 or £0.30 per week if the claimant was under age 35, age 35 to 44 or aged 45 to 59/64 on the first day of incapacity in the period. At the same time, increases for dependent children are raised to the weekly rates payable with widow's allowance (£2.95 for the first or only child, £2.05 for the second child and £1.95 for other children) and any increase for a wife, or a housekeeper residing with the claimant and having care of his child(ren), becomes subject to a modified earnings rule. In certain circumstances, the new increases for dependants can be paid to claimants to injury benefit.

Invalidity pension payable after pensionable age is restricted to the weekly amount of flat-rate retirement pension that would have been payable had the claimant retired from work at that age but invalidity allowance continues at the previous rate and is also payable on retirement whether this occurs at pensionable age or later.

Some 400,000 persons became entitled to invalidity pension on 23 September 1971. Statistics of invalidity beneficiaries will be obtained from the standing 2½ per cent sample of insured persons used for statistics of sickness and injury benefits (*Statistical News* 5.14 and 10.18) and published in the Department's Digest of Statistics analysing certificates of incapacity from 1971/72.

Attendance allowance

The National Insurance (Old Persons' and Widows' Pensions and Attendance Allowance) Act 1970 provides that a person shall be entitled to an attendance

allowance of £4.80 per week if he is so severely disabled physically or mentally that he requires from another person (a) frequent attention throughout the day and prolonged or repeated attention during the night in connection with his bodily functions or (b) continual supervision in order to avoid substantial danger to himself or others. One of these conditions must be satisfied for a period of at least 6 months before title can arise and, where the need for attention is established, the allowance which can be paid in addition to sickness or invalidity benefit is payable subject to satisfaction of conditions regarding residence and presence in UK. The allowance can be paid in respect of a child aged 2 but under age 16 if the child requires attention and supervision substantially in excess of that normally required by a child of the same age and sex. Attendance allowance became payable on 6 December 1971.

In an answer to a parliamentary question on 21 December (Hansard Col 1287), the Secretary of State for Social Services provided the following information about the numbers claiming attendance allowance in the various regions of Great Britain up to 14 December 1971 and the numbers found to satisfy the medical conditions.

Region	Number of claims received up to 14 December approximately	Number of applicants who, at the initial stage, were found to satisfy the medical conditions
Northern	7,500	3,800
Yorkshire and Humberside	10,200	4,700
East Midlands and East Anglia	11,000	6,400
London North	9,500	4,000
London South	12,600	6,200
London West	10,000	4,400
South Western	8,500	3,400
West Midlands	9,000	3,800
North Western (Manchester)	8,500	3,700
North Western (Merseyside)	8,600	4,100
Scotland	10,000	4,000
Wales	9,600	3,500
TOTALS	115,000	52,000*

*There is inevitably some time lag between the medical conditions being found to be satisfied and an award actually being made to a claimant.

Arrangements have been made for statistics to be produced periodically on a 100 per cent basis. It will be possible to analyse those receiving the allowance by sex, age, cause of disability, duration of disability etc.

Further details about the statistics that will be available on those receiving the attendance allowance can be obtained from the Chief Statistician (Social Security), Department of Health and Social Security, 10 John Adam Street, London, WC2N 6AB.

Reception centre users

A general purpose survey of men and women who use the Supplementary Benefit Commission's reception centres was carried out by the Department in December 1970 as part of the continuing quinquennial reviews of centre users, first initiated in 1950 by the National Assistance Board. A brief description of the survey with some preliminary results appeared in the 1970 Annual Report of the Department (Appendix IV). The survey was designed to measure social attributes of the men and women and included a medical examination of a sample of the men. There are 17 reception centres of which that at Camberwell is by far the largest accounting for about half of the available accommodation. The preliminary tables include an age analysis of men using the centres during the survey week, an analysis of the main reason for the users unsettled way of life, an analysis of male users by age and length of unsettled way of life, an analysis of male users by age and frequency of use of reception centres, lodging houses, private lodgings, and sleeping rough.

The survey broadly confirms the results of earlier surveys, that to a very considerable extent the majority of men who use reception centres have characteristics which are disabling both in terms of employability and social integration. An institutional setting is a recurring feature of many of the men, whether reception centres, hostels, prison, HM Forces, mental or other hospitals. The staff in reception centres were shewn to have considerable success at identifying the particular handicaps or impairments of the men who stay in centres for other than a very short period. The survey did not attempt to assess the extent to which the mental and physical handicaps of the men were responsive to remedial treatment but research is in hand elsewhere on this. A fuller report will be published in due course.

Research project on output measurement for public services

Recent attempts to improve the information available to those responsible for various social services have highlighted the lack of appropriate criteria for assessing their success in meeting their desired ends. These criteria of effectiveness, or measures of output as they are sometimes called, are needed both for the monitoring of performance and for analytical studies designed to appraise alternative future courses of action.

By and large it is unfortunately true that those responsible for the actual operations of these services rarely have the time to extend our knowledge in this difficult territory, and have to rely on measures that

are already to hand. Even more unfortunately, it sometimes happens that inappropriate measures are used quite unwittingly so that there is a two-fold task which needs to be done:

- (a) to collect together, classify, and appraise critically the measures that are currently being used; and
- (b) to try to devise new or improved measures which remove the worst features of present practice.

It is with these tasks in mind that a research project has been set up at the Institute of Social and Economic Research of the University of York, jointly supported by several Central Government Departments, led by the Department of Health and Social Security, and by the Institute of Municipal Treasurers and Accountants. The study will embrace both central and local government services, and it is hoped to secure the collaboration of a wide range of professional skills.

It has been decided to start in the field of personal health and social services, and to pay special regard to the problems encountered in assessing success in the care of the elderly, but it is envisaged that as the work proceeds over its three year span (January 1972 to December 1974) research effort will be shifted to other target groups and will also extend to other groups of services.

It would be foolish to entertain exaggerated expectations of what a few fallible mortals can achieve in a short space of time on problems which have baffled mankind for generations, but it is reasonable to hope that by working consistently and in a sustained way, with co-operation from practitioners and research workers in the relevant fields, it may be possible to concentrate our knowledge and to chart the way ahead more clearly than hitherto.

It is quite possible that a great deal of work may be going on in government departments, local authorities and research organisations about which little is generally known, and which might contribute usefully to this research. If any-one has any such ideas or information to communicate, this would be welcomed by the research team (Mr. K. G. Wright, or Professor Alan Williams, at the Institute of Social and Economic Research, University of York, York, YO1 5DD).

MANPOWER AND EARNINGS

British Labour Statistics: Year Book 1969

The 1969 Year Book of Labour Statistics recently published by the Department of Employment is the first of a new series following the *Historical Abstract 1886-1968* (*Statistical News* 13.26) under the programme

described in the article in *Statistical News* 10.7. Taken together, they provide a convenient standard source of reference.

The year book brings together all the main statistics produced in the Department for 1969 and, where appropriate, includes time series for up to ten years. Information which became available after the date of original publication in the Department's *Gazette* is incorporated. Regional analyses of many items are included and also some material provided by other government departments and by the Government of Northern Ireland. The volume includes over 300 pages of tables covering wage rates, earnings, hours of work, retail prices, employment, unemployment, vacancies, family expenditure, industrial disputes, membership of trade unions, industrial accidents, labour costs and output per person employed.

Later figures on these subjects are to be found in the Department's *Gazette* and these will be included in subsequent year books.

References

British Labour Statistics: Year Book 1969 (HMSO) December 1971 (Price £6.50)

British Labour Statistics: Historical Abstract 1886-1968 (HMSO) June 1971 (Price £7.00)

Survey of labour costs in 1968

The comprehensive booklet of results of the Department of Employment's survey of employers' total labour costs in 1968 was published in December 1971. The contents of the booklet were outlined in *Statistical News* 15.17.

Reference

Labour Costs in Great Britain in 1968 (HMSO) December 1971 (Price £1.50)

New Earnings Survey 1971

Results of this sample survey (*Statistical News* 12.19) of the earnings and hours of employees in employment in all occupations in all industries in Great Britain in April 1971 have been published in instalments in the *Department of Employment Gazette* from November 1971 onwards. They are based on returns relating to 170,000 employees, including 120,000 for whom returns were also obtained in the 1970 survey. By matching the 1970 and 1971 returns, it has been possible, for the first time, to measure changes in average earnings for unchanged groups of workers in the various industries and occupations and affected by 90 major collective wage agreements and statutory wages regulation orders. In this way the effects of changes in the composition of the survey sample due to labour turnover are eliminated.

Surveys of Earnings 1972

Since 1970, the programme of surveys of earnings carried out by the Department of Employment has been streamlined. A general review of these surveys is being held this year in consultation with the Confederation of British Industry, the Trades Union Congress and others, as foreshadowed in *Statistical News* 10.24. Pending the outcome of this review, the 1971 programme will be repeated in 1972, comprising:—

the New Earnings Survey (April), again using a short questionnaire;

the annual survey (October) covering manual workers in manufacturing and certain other industries;

the corresponding survey (April) in 12 small industries only;

surveys of earnings of manual men, by occupation, in the engineering group of industries (June) and the chemical and shipbuilding industries (January and June); and

the small scale monthly survey used to compile the index of earnings.

Members of Parliament

The Office of Manpower Economics (OME) provides the secretariat for the Review Body on Top Salaries, which under the Chairmanship of Lord Boyle of Handsworth made its first Report in December 1971 on Ministers of the Crown and Members of Parliament.

The Report contains the result of a survey of the circumstances of Members of Parliament and of their views on their remuneration, which was conducted by OME in July 1971. It was addressed to all Members and received an 84 per cent response. Analyses are provided of age, length of service, place of residence, hours spent on various Parliamentary duties and outside occupations with earnings from these, analyses of expenses not deductible for tax and views on various aspects of their remuneration and reimbursement of expenses. The Report also contains the results of a detailed analysis of Members' expenses deductible for tax, carried out by the Inland Revenue Department at the request of OME. Finally, the results are shown of a survey, based on a representative sample of about 2,000 electors, of public attitudes to and knowledge of Ministers' and Members' pay, hours of work and expenses.

Reference

Review Body on Top Salaries, First Report *Ministers of the Crown and Members of Parliament*. Cmnd. 4836 (HMSO) December 1971 Price (73p)

Fire Service

The Report of the Committee chaired by Sir Charles Cunningham into the work of the Fire Service was published in November 1971. The Office of Manpower Economics provided the secretariat to the Committee. The Report contains the results of a sample survey of the hours and earnings of the 28,000 full-time firemen in all brigades in Great Britain. Sample surveys were also made among recruits and voluntary leavers on reasons for joining or leaving the fire service. The results are also given of two feasibility studies into the use of job evaluation, both for internal comparisons and also to test the possibility of using job evaluation to establish relativities with jobs elsewhere.

Reference

Report of the Cunningham Inquiry into the Work of the Fire Service. Cmnd. 4807 (HMSO) November 1971 (Price 90p)

INDUSTRIAL STATISTICS

1968 Census of Production

It was announced in *Statistical News* 15.17, November 1971, that publication of the separate parts of the Report on the Census of Production for 1968 had begun and a list was given of the first parts which had been published and were available from Her Majesty's Stationery Office. The following table provides a list of the further parts which have now been published.

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

Report Part No.	Description	Standard Industrial Classification Minimum List Heading
10	Bacon curing, meat and fish products.	214
37	Polishes.	279(1)
41	Printing Ink.	279(5)
51	Metal-working machine tools.	332
62	Food and drink processing machinery.	339(7)
67	Photographic and document copying equipment.	351
75	Broadcast receiving and sound reproducing equipment.	365
126	Pottery.	462
132	Furniture and upholstery.	472
147	Toys, games, children's carriages and sports equipment.	494

1970 Census of Production

Trade and Industry for 23 December 1971 contains preliminary estimates of the principal results of the first of the new series of annual censuses of production. The Census for 1970 was conducted by the Business Statistics Office and the tables give comparative data

(where available) from the Censuses of Production for 1963 and 1968. The census provides a measure of net output and aggregated figures of sales, purchases, employment, etc. and is part of the new integrated system of industrial statistics being introduced by the Government Statistical Service. The complete system was described by Mr J Stafford in 'The development of industrial statistics', *Statistical News* No. 1, May 1968.

A further article in *Trade and Industry* for 27 January 1972 highlights the more significant changes in the pattern of industries between 1968 and 1970.

Inquiries about the 1970 Census of Production should be made to the Business Statistics Office, Cardiff Road, Newport, Mon. NPT 1XG. Telephone: 0633-52151, Ext. 234.

Reorganisation of industrial statistics

New quarterly sales enquiries will be launched in the first quarter of 1972 in the following fourteen industries:

*†Agricultural Machinery (except tractors)—MLH 331

*Pumps, Valves and Compressors—MLH 333

*Industrial Engines—MLH 334

*Mechanical Handling Equipment—MLH 337

*Refrigerating Machinery (except domestic type refrigerators)—MLH 339/3 and

Space-heating, Ventilating and Air-conditioning Equipment—MLH 339/4 (as single enquiry)

Scales and Weighing Machinery—MLH 339/5 and

Portable Power Tools—MLH 339/6 (as single enquiry)

Food and Drink Processing Machinery—MLH 339/7 and

Packaging and Bottling Machinery—MLH 339/8 (as single enquiry)

Other Machinery except Electrical Machinery—MLH 339/9

Industrial (including Process) Plant and Steelwork—MLH 341 (excluding Process Plant Engineering Contractors—MLH 341/3.)

Precision Chains—MLH 349/2 and

Other Mechanical Engineering—MLH 349/3 (27 single enquiry)

*These enquiries replace the existing quarterly enquiries into deliveries of agricultural machinery (MLH 331); pumps (MLH 333/1); internal combustion engines (MLH 334/1); cranes powered industrial trucks and tractors including manually propelled trucks, mechanical handling plant equipment (MLH 337); deliveries of refrigerating machinery (MLH 339/3).

†This enquiry replaces the existing monthly enquiry into agricultural machinery deliveries (MLH 331)

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

As far as we are aware the following short period enquiries by trade associations will continue:

Mechanical Handling Equipment—MLH 337

Monthly return of orders and despatches by the British Industrial Truck Association

Quarterly return of orders and despatches by the Electrical Vehicle Association

Return by the Federation of Manufacturers of Construction Equipment and Cranes

Space-heating Ventilating and Air-conditioning Equipment—MLH 339/4

Return by the Heating Ventilating and Air-conditioning Manufacturers' Association.

Industrial (including Process) Plant and Steelwork—MLH 341

Return of orders by the Association of Shell Boilermakers

Annual return of sales by the British Water and Effluent Treatment Plant Association

Quarterly return of orders and deliveries by the Ironmaking and Steelmaking Plant Contractors' Association

Four-monthly returns of orders received by the constituent associations of the Metallurgical Plant-makers' Federation.

Return of orders by the British Chemical Engineering Contractors Association

Quarterly return of deliveries and orders by the British Constructional Steelwork Association Limited

Quarterly return of orders and deliveries by the Tank and Industrial Plant Association.

Further information on the government enquiries listed above can be obtained from the Department of Trade and Industry, Economics and Statistics Division 3A, Dean Bradley House, Horseferry Road, London SW1P 2AG. Telephone: 01-799 5688 Ext. 46.

Regional talks on the new system of industrial statistics

Statisticians in the Business Statistics Office and in the Economics and Statistics Division of the Department of Trade and Industry have recently completed a series of talks to Regional Offices throughout Great Britain. These talks were attended by the Industrial Liaison Officers for the Regions together with staff from the Regional Offices of the Department of Trade and Industry and the Department of Employment.

Industrial Liaison Officers hold a unique position *vis-a-vis* industry in that they are concerned with a wide range of problems arising in small and medium-sized firms. Through these talks it was therefore possible for members of the Government Statistical Service to participate in an exchange of views about the adequacy of Government statistics for an important sector of firms in industry.

Method

In each presentation speakers gave a general talk on the new system of industrial statistics ⁽¹⁾ with illustrative examples of discussions with industry, the resulting inquiry forms and the new Business Monitors. Discussion took place on the problems of response and on the uses which are and could be made of information deriving from the new system of industrial statistics, particularly by the smaller firms ⁽²⁾. In some cases the statistician responsible for statistics of the predominant industry in the region attended to answer questions of a detailed and local interest nature, (e.g. in the case of the Leeds Regional Office talk the statistician responsible for statistics of the textile industry was present because of the particular interest in statistics relating to the woollen industry).

Details of the talks

A lively exchange of views took place in each of the talks and there was considerable interest in all aspects of the new system. The major point of interest to the Regional Offices was the broad regional information which will be available at industry level on an annual basis beginning with the results of the 1970 annual Census of Production. The widening of the scope of the Business Monitor series to include as much information about an industry as can be readily assembled was welcomed as a useful step to improve the accessibility of Government statistics. The major purpose of the publication is to present results of the quarterly product sales inquiry for each industry but import and export statistics, employment information and, where possible, information on wholesale prices is also being included as results of the new inquiries are published.

Some criticism centred on the fact that detailed commodity and export figures by region would not be available from the new system. It was accepted, however, that because of the risk of disclosure and the increasing tendency for large firms to provide returns covering more than one region it would be possible to provide meaningful detailed commodity figures for the whole of the United Kingdom only. In itself this is a marked improvement compared with what has been available hitherto.

Some regional representatives present at the talks

suggested that, from their detailed knowledge of local industries and conditions, the Regional Offices could provide a useful support service to the Business Statistics Office in terms of, for example, resolution of difficulties by visiting firms and providing industry with information on the uses which can be made of the figures provided to the Business Statistics Office.

Conclusions

The Industrial Liaison Officers welcomed the opportunity afforded by these talks to examine Government statistics on industry and expressed particular interest in the way in which industry and Government needs for detailed information have been dove-tailed in the new scheme. The talks gave members of the Government Statistical Service an opportunity to discuss informally statistical problems relating to particular industries with particular reference to regional problems.

It is planned to follow up these initial talks to ensure that the developing needs of suppliers and users of Government industry statistics are being met.

(1) See articles by J. Stafford and R. W. Green in *Statistical News* Nos. 1 and 8 respectively.

(2) See examples given in CSO publication *Profit from Facts*.

Industrial forecasting

The December 1971 edition of *Long Range Planning* (quarterly Journal of the Society for Long Range Planning) includes an article on 'Computerised Industrial Forecasting for Planning in Central Government' by J. D. Wells, a Chief Statistician at the Department of Trade and Industry. The article is based on a talk given to the IBM Conference on Management Science and Strategic Planning that was held in September 1970. It relates therefore to work on medium term industrial forecasting that was undertaken in the former Ministry of Technology. Responsibility for this work has subsequently been transferred to HM Treasury.

FOOD AND AGRICULTURE

National Food Survey

The twentieth Annual Report of the National Food Survey Committee published in December last, deals with the economic, social and nutritional aspects of household food consumption. The National Food Survey is a continuous sampling enquiry into the domestic food consumption and expenditure of private

households in Great Britain. In 1969 more than 7,500 households provided a record of their food purchases for one week. The Report gives detailed tabulations of average household food consumption, expenditure and prices paid by housewives in Great Britain for each of some 150 categories of food in each quarter of 1969 and 1970.

In both 1969 and 1970 household food expenditure increased at a slightly greater rate than food prices and housewives continued to spend an increasing proportion of their housekeeping money on convenience foods. These foods accounted for almost 25 per cent of the household food budget in 1970 compared with just over 22 per cent in 1965.

Further analyses of the Survey data for 1969 which are presented in the report include details of estimates of consumption in Scotland, Wales and each of the standard regions of England, and in various categories of urban and rural areas. Details of average expenditure and consumption for each of some 45 broader categories of food in 1969 are presented for households in various income groups and for various sizes of family.

In addition to these customary analyses and tabulations of Survey data, the report contains an analysis of household food consumption and expenditure according to the age of the housewife in each of two broad socio-economic groupings; this analysis indicates that average household food consumption per head is affected more by the size of the household and the age of its members than by the socio-economic factors. A further special analysis of the Survey data suggests that the types of shops used by housewives for their main food purchases depend more on the facilities available locally than on the income and size of the household; these latter characteristics, however, appear to have more influence than choice of shop on the amount of money spent and the average prices paid.

A statistical appendix to the report gives estimates for individual foods of the average effects on purchases of differences in income and changes in prices, and indicates how the effects of increases in incomes have changed since 1955. In 1969 the cross-sectional income elasticity of demand for all food included in the Survey was 0.2 compared with 0.3 fourteen years earlier.

The nutritional section of the report contains estimates of the average energy value and nutrient content of the diet in various types of household, and compares them with the intakes recommended by the Department of Health and Social Security in 1969. The broad picture revealed by the Survey is satisfactory. The results do not preclude the existence of over-consumption of food in some individual families, or of under-consumption or dietary imbalance in others, but

they are nevertheless consistent with the findings of the individual medical and dietary studies conducted under the aegis of the Department of Health and Social Security in indicating that there is little under-nutrition in Britain. They are equally consistent with the view that the major manifestation of poor nutrition in this country is an excessive energy intake in relation to requirements, leading to some people becoming overweight.

Comprehensive annual reports necessarily take a considerable time to prepare and print, but summarized results are published as soon as possible in the *Monthly Digest of Statistics*, in *Trade and Industry* and in the MAFF series *Food Facts* (obtainable from the MAFF Press Office). Unpublished results are available for some detailed analyses, including quarterly estimates of household food consumption, expenditure and average prices paid for nearly 150 categories of food by households of different income group and family composition, and in different areas of Great Britain. Such unpublished data can be supplied on payment of a fee which varies according to the amount and nature of the information required; application should be made to the National Food Survey Branch, Ministry of Agriculture, Fisheries and Food, Government Buildings, Tolcarne Drive, Pinner, Middlesex, HA5 2DT. Telephone: 01-868 7161, Extensions 43 and 44.

References

Household Food Consumption and Expenditure: 1969 with Preliminary Estimates for 1970 (HMSO) December 1971 (Price £1.58, by post £1.65½)
Recommended Intakes of Nutrients for the United Kingdom, Department of Health and Social Security. Reports on Public Health and Medical Subjects, No. 120 (HMSO) July 1969 (Price 27½p)

Measuring self-sufficiency for food and drink

An article by Mr. L. J. Angel in *Economic Trends*, November 1971, describes developments in the measurement of the degree to which the United Kingdom is self-sufficient in food, and discusses ways of measuring self-sufficiency for alcoholic drink. The rates of growth in home-produced and imported supplies of food are compared for the two seven-year periods 1955/56 to 1962/63 and 1962/63 to 1969/70, valued both at current prices and constant prices. The latter comparison gives a measure of the change in volume. An analysis of the food import bill distinguishes imports of the types of food which are produced in the United Kingdom ('indigenous-type foods'), and also foods imported in manufactured form.

The cost of processing and distributing food

Estimates of the cost of processing and distributing food in the United Kingdom for the years 1962/3 to

1969/70 are contained in an article by Mr. J. Beaumont in *Economic Trends*, November 1971. In the article the term 'processing and distribution' is taken to include all those activities involved in bringing to the final consumers the products of domestic agriculture and food imports. The costs are estimated in aggregate by taking the difference between total food inputs, valued at ship's side and farm gate, and the total final expenditure on food by consumers, businesses, government and overseas buyers.

Farm Classification in England and Wales

The sixth volume in the series *Farm Classification in England and Wales*, begun in 1963, was published in November 1971 by HMSO, price 89p net. It covers the years 1969-1970 and contains distribution of agricultural holdings, crop acreages and farm labour by the type of farming practised and size of business. The type of farming classification is based on the relative importance on each holding of the various enterprises - dairying, livestock rearing and fattening, pigs and poultry, cropping, horticulture, mixed, etc. Both the type of enterprise and its size are measured by the standard labour requirements on each holding.

Survey of aerial spraying

Each autumn since 1968 the Ministry of Agriculture, Fisheries and Food has carried out a survey of aerial spraying for agricultural purposes. The survey is by postal questionnaire, and response is voluntary. It covers all agricultural aviation operators in the UK known to the Department of Trade and Industry and the response rate is nearly 100 per cent. Most cropping or arable farms are able to spray economically by pressure pumps attached to tractors, but aerial spraying has the advantage of avoiding damage to well-grown crops or to wet ground, and the ability to cover large acreages very quickly, which is sometimes desirable to deal with a sudden occurrence of disease.

The operations surveyed are mainly the spraying of fungicides and herbicides but also include fertiliser and seed spreading from the air. The information collected relates to the acreage sprayed and average charges (excluding the cost of materials sprayed) for the current year e.g. 1971 and forecasts for the following year e.g. 1972 showing helicopter and fixed wing aircraft activities separately. The data are included in the estimates of farmers' aggregate costs, taken into account at the Annual Price Review. The aggregate data on the area sprayed are circulated to respondents annually but estimates of charges are not circulated

because they cover too wide a variety of operations to be meaningful. The results of the 1971 survey are expected to be available in January 1972. The results of surveys for the last three years are below.

Estimated acreage sprayed from the air for agricultural purposes in the United Kingdom

		thousand acres		
		1968	1969	1970
By helicopter	91	125	152
By fixed wing aircraft	496	500	471

The use of contracts

At the request of the Committee of Inquiry on Contract Farming, the Agricultural Departments of England and Wales, Scotland and Northern Ireland are conducting a survey among farmers and growers, designed to establish the present extent and importance of contracting in agriculture in the United Kingdom and the types of contracts currently in use in the agricultural and horticultural sectors. The results of the survey will be considered by the Committee when making its report.

The survey relates to the year ended 31 May 1971 and is being undertaken in two parts. A postal survey is being held of a randomly selected sample of agricultural and horticultural holdings stratified by holding size and type. The questionnaire used is designed to collect only certain key facts about agricultural contracting such as the number of producers with contracts, the relative importance of contracting by commodity, the type of contracts in use and the quantities of the various commodities that are sold and purchased under contract. A field survey is also being undertaken in which Departmental representatives are visiting a much smaller number of holdings to obtain detailed information about the nature of the contracts being used particularly with respect to the arrangements adopted for setting prices, the degree to which the contract transfers management control from the farmer and the various financing procedures in use.

CONSTRUCTION

Private enterprise housing

In the article on 'Statistical forms sent to the construction industry' in *Statistical News* 15.6 it was stated that a census would be taken every two years of private enterprise house builders, and that there would be five

inquiries between the censuses on a sample basis. It has since been decided that all these inquiries will be taken on a sample basis. The sampling frame will be obtained and up-dated from additional questions on the DOE annual census form.

CITB annual levy inquiry

There have been consultations between representatives of DOE Statistics Construction Division and the Construction Industry Training Board on the possibility of using a common set of employment questions in the annual CITB inquiry and in the DOE annual census inquiry which forms the basis for a long time-series of constructional employment statistics. DOE representatives concluded that no single limited set of questions would be practicable for both inquiries, although it was recognised that this would have eased the burden of form-filling on the industry. To satisfy both DOE and CITB requirements would have needed about 90 headings, compared with the 23 occupational headings on the DOE form and 8 headings on the CITB form. The main reason for this situation is that the DOE form is designed to classify workers by occupation, whereas the CITB form has to distinguish groups for levy purposes by skills and levels of responsibility and would not necessarily continue in the same format for any length of time.

TRANSPORT

Survey of the transport of goods by road, 1967/68

The report, presenting the main results of the survey of road goods transport described in *Statistical News* 9.6, has now been published, and can be obtained from Publications Department, Room 303, Department of the Environment, 83-91 Victoria Street, London SW1, price 20p. In booklet form, the report contains a selection of tables of general interest and a detailed commentary. Analyses of the road goods transport fleet by vehicle characteristics including size, fuel and body-type are given, and estimates of the tons, ton-miles and miles performed by these vehicles are also shown. There are figures of the tonnage of various commodities transported, and of freight flows between regions.

In addition to the summary information in this booklet, further results from the Survey have been retained at the Department of the Environment in the form of microfilms on which are recorded more detailed tables for Great Britain as a whole, and for the separate Planning Regions. It is hoped to supply

information from this source on request and at cost, subject to restrictions on disclosure. Moreover edited magnetic tapes from which confidential material has been removed and which contain estimates of freight flows between regions have also been prepared for release. Details of the information available from the microfilms and on the magnetic tapes can be obtained from the Director of Statistics, Department of the Environment, Room 10/23, 2 Marsham Street, London, S.W.1. Telephone: 01-212 8297.

Highway Statistics

The latest issue of the Department of Environment's annual publication *Highway Statistics* contains detailed statistics of vehicles in use, new registrations of vehicles, road traffic, road mileage and expenditure on roads. A section on road transport contains summary results from the major survey of road goods transport carried out in 1967/68.

Reference

Highway Statistics 1970 (HMSO) January 1972 (Price 85p)

OVERSEAS FINANCE

Effect on balance of payments statistics of changes in exchange rates

After 20 August 1971 the authorities ceased to intervene in the foreign exchange markets to prevent the sterling/dollar exchange rate rising above the upper limit (\$2.42=£1) of the existing band around parity. The effect of this development on the balance of payments statistics for the third quarter of 1971 is as follows.

Official financing

Up to 20 August 1971 the sterling equivalent of the net amount of gold and foreign currencies drawn on or added to the official reserves had been derived by conversion at parity. From 23 August net drawings on and additions to the official reserves were valued in the balance of payments estimates at the rates at which transactions occurred.

Current account

The general practice has always been to aim for transactions rates of exchange, when items are denominated in foreign currencies. As regards imports, the transactions value of goods are declared on Customs documents in sterling and there is a requirement for the United Kingdom trader (or his agent) to convert invoice amounts in foreign currency to sterling at the market rate of exchange appropriate at the time of lodgment of the customs document. Exports and

invisible earnings and payments, if denominated in foreign currency, are generally converted at the rates of exchange used in traders' books, which can be expected to tend towards market rates in the present situation.

Investment and other capital flows

Where flows are derived as the difference between opening and closing levels of assets or liabilities, special steps are necessary to exclude the revaluation element in the sterling valuation of balances denominated in foreign currencies. The main item affected is the net foreign currency borrowing or lending by United Kingdom banks. With effect from 23 August, the net flow was estimated by excluding so far as possible the revaluation element in the sterling valuation of existing balances. As regards direct investment and trade credit, where balances shown in traders' books are known to be partly denominated in foreign currencies, inquiries are being made by the Department of Trade and Industry to gauge the extent of exchange gains and losses arising from differences between the book values of indebtedness to or from overseas residents, and the sterling amounts paid or received.

Reference

Technical Note in *Economic Trends* December 1971, page X (HMSO) (Price 60p)

British Aid Statistics

The sixth issue of *British Aid Statistics*, published on the 10th November 1971, provides detailed statistics of official economic aid to developing countries for the years 1966 to 1970 as well as summaries of all official and private flows. The statistics for 1966 to 1969 contained in the fifth issue have been revised where necessary and the publication up-dated by the addition of data, some of it preliminary, for 1970.

In an article 'Statistics of British Aid' (*Statistical News* 11.7) the fifth issue, published in August 1970, was fully described together with background information on the international reporting of aid statistics and some of their characteristics. The present issue follows the format of its predecessor but a number of changes have been made in the coverage. For the first time statistics of flows for relief and economic development from private voluntary bodies such as charitable institutions and missionary societies have been included in the summary tables ⁽¹⁾. These flows, estimated for 1970 at £19 million, are additional to those channelled through voluntary organisations, mainly volunteer programmes, but financed from official funds. These latter have always been included in the statistics of the official aid programme. Secondly a change has been

made in the treatment of the flows to developing countries from the Commonwealth Development Corporation (CDC). The Corporation receives advances from the Exchequer which are part of the official development programme, but its total flows are often greater than this amount as a result of earnings on previous investments in excess of its obligations to service Exchequer advances. It is impossible to analyse the distribution of that part of the Corporation's transactions which relate to the official aid programme and in previous issues sector and geographical analyses of bilateral aid flows have included them as a block unallocated item. For the first time in this issue the total CDC transactions have been included in these analyses with a small adjustment to balance the total with the aid programme (Tables 5, 6 and 11).

The most important aggregate figures for 1970 are set out in the table below:—

British aid programme and other financial flows to developing countries.

Disbursements in £million 1970			% of GNP (at market prices)	
Gross aid programme	213.8			
of which multilateral aid	19.8			
bilateral grants	39.8			
bilateral loans	99.7			
bilateral technical assistance advances to CDC	45.5			
8.8				
Other official flows	5.0			
Gross official flows	218.8			
less amortization	29.9			
Net official flows	188.9	0.37		
Net private flows	336.8	0.67		
Total net financial flows	525.7	1.04		

(The United Nations Conference on Trade and Development in 1968 called for 1 per cent of each donor country's GNP as a minimum amount for net financial flows to developing countries).

A commentary on the statistics may be found in *An Account of British Aid Programme* (which reproduces the text of the annual British aid review submitted to the Development Assistance Committee of OECD).

References

- British Aid Statistics: Statistics of Economic Aid to Developing Countries 1966 to 1970* (HMSO) November 1971 (Price £2.10)
An Account of the British Aid Programme (HMSO) March 1971 (Price 20p)

(1) See 'OECD overseas development aid: Report of the Group on Statistical Problems', *Statistical News* 14.15, August 1971.

PRICES

Seasonal variations in retail prices

The index of retail prices compiled by the Department of Employment is not adjusted for normal seasonal variations because the seasonal variations in the index are far from regular from year to year. These variations are largely due to a few well-defined items (described for convenience as 'seasonal food') for which the Department has published a separate index for several years. If the variations caused by these items are removed, the underlying trend in prices can be seen more clearly. The Department has therefore started regular monthly publication, in its *Gazette*, of a separate index for 'all items except items of food the prices of which show significant seasonal variations', based on 16 January 1962=100.

Seasonal food (home-killed lamb, fresh and smoked fish, eggs, fresh vegetables and fresh fruit) accounts for only about 5 per cent of total household expenditure on goods and services but for the great bulk of the seasonal variation in the index of retail prices. However, since the seasonal variations in the prices of these items of food are larger in some years than in others, reliable estimates of seasonal adjustments to the all-items index cannot be obtained by standard seasonal adjustment methods. The use of estimates so obtained would sometimes give a worse indication of the trend in retail prices than the unadjusted figures. For example, there was little variation in seasonal food prices in 1968, and so, if standard methods had been applied at that time, the adjusted series would have 'corrected' for a seasonal variation which was known not to have happened.

There is a tendency for some prices, other than those of seasonal food, to increase in April. Here too, the changes vary from one year to another, being dependent in part on the size and direction of tax changes in the budget and in local rates. It is of course open to debate whether these are seasonal changes in the normal sense.

The advantages of the new series for 'all-items except seasonal food' are that the main seasonal movements in retail prices are excluded, seasonal adjustment estimates are not required and the series is not subject to retrospective revisions. There is no reason to suppose that this method of indicating the trend in prices introduces any long-term bias. Over the 9 complete years from the base-date in January 1962 to January 1971, the 'all-items' index increased by 47.0 per cent and the 'all-items except seasonal' food index by 47.1 per cent. The new index is not intended as a substitute for the 'all-items' index but is an aid to the interpretation of the movement of that index.

Reference

- Department of Employment Gazette*, monthly, Table 132.

HOME FINANCE

Reserve ratios

New arrangements for the control of credit came into effect from 16 September 1971. Banks in the United Kingdom have agreed to maintain minimum reserve ratios of 12½ per cent and finance houses at least 10 per cent. The discount houses, and a few other firms doing similar business, are not subject to reserve ratios but have agreed to keep at least 50 per cent of their borrowed funds in defined categories of public sector debt. The main features of the scheme are described in a supplement to the September 1971 *Bank of England Quarterly Bulletin* entitled 'Reserve ratios and Special Deposits', and full descriptions of the categories of assets and liabilities included in the ratios are given in an article 'Reserve ratios: further definitions' in the December 1971 *Bank of England Quarterly Bulletin*. Statistics of the reserve ratios for the main groups of banks and for the finance houses, and of the public sector lending ratios for the money market, as at the third Wednesday of each month, are now shown regularly in *Financial Statistics*.

Money supply

To supplement the present quarterly series of statistics on the money stock, it is hoped to begin publication of a monthly series in the March 1972 *Bank of England Quarterly Bulletin*, and subsequently each month in *Financial Statistics*.

INTERNATIONAL

Business statistics

During December officials from the United States Bureau of the Census and from Statistics Canada (formerly Dominion Bureau of Statistics) spent a week at the Central Statistical Office and the Business Statistics Office to discuss matters of common interest in the field of business statistics.

The US delegation consisted of Dr. George H. Brown (Director, US Bureau of the Census), Miss S. Kallek, Mr. M. Shor and Mr. E. Biles; the Canadian of Dr. Ivan P. Fellegi (Director General, Methodology and Systems Branch, Statistics Canada), Mr. A. Sunter and Mr. G. Campbell.

London visit of Officials of the Statistical Office of the European Communities

On 18 and 19 November 1971 Mr. R. Dumas, Director General of the Statistical Office of the European Com-

munities in Luxembourg visited London. Mr. Dumas was accompanied by four of his six Directors (Mr. Paretti, Mr. Ronchetti, Mr. Grotius and Mr. Gavanier). One of the main purposes of this visit was to enable Mr. Dumas and his colleagues to explain in broad terms to members of the Government Statistical Service the kind of statistical information which would have to be supplied to the European Communities when the United Kingdom became a member. Professor C. A. Moser, Director of the Central Statistical Office and head of the Government Statistical Service, together with a few senior members of the Government Statistical Service, had paid a visit to Luxembourg early in 1971.

On the morning of the 18 November Mr. Dumas and his colleagues had joint discussions with the Directors of the Central Statistical Office and of the Statistical Divisions of government departments. In the afternoon of that day Mr. Dumas gave a talk to about 150 members of the Government Statistical Service on the work of the Statistical Office of the European Communities, outlining its achievements and objectives. He explained the manner in which member countries had been encouraged to adopt various definitions as well as special surveys throughout the Community, which had been sponsored by this Office.

On 19 November Mr. Dumas and his four Directors had individual talks with the relevant Directors of Statistics of government departments on statistical questions for which they had particular responsibility in the European Communities. The discussions included social surveys, national accounts, regional statistics, balance of payments and financial statistics, industrial statistics, methods used in surveys of fixed capital formation, statistics of earnings and hours of work, the structure and distribution of earnings and labour costs, employment statistics and labour force surveys, household income and expenditure, external trade statistics and retail price statistics.

While these talks were extremely useful to enable an assessment to be made of the statistical requirements of the European Communities, the visit also provided an opportunity for Mr. Dumas and his colleagues to familiarise themselves with the statistical organisation of the United Kingdom and to learn something of the work done by the Government Statistical Service.

Conference of African Statisticians

The seventh session of the United Nations Conference of African Statisticians was held in Dakar from 13–22 October 1971. The Conference which is conducted jointly by the United Nations Economic Commission for Africa (ECA) and the Statistical Office of the United Nations meets every two years, normally in

Addis Ababa but on this occasion by invitation from and in co-operation with the Government of the Republic of Senegal.

It was attended by over 50 high level statisticians from 28 member and associate member nations of ECA, together with representatives of the Specialist Agencies and other International Organisations and observers from non-member countries and the various regional groupings in East and West Africa. The United Kingdom delegate was Mr. K. V. Henderson, Director of Statistics, Foreign and Commonwealth Office (Overseas Development Administration).

The Conference reviewed the development of statistics in the ECA region and noted that some of the apparent shortcomings of earlier African development plans were due to a lack of basic factual information. The provision of adequate statistical data was directly relevant to the solution of the problems raised by the African strategy for the Second Development Decade adopted by ECA. The revised UN System of National Accounts and related systems provide the basis for an integrated approach to statistical development at both national and international levels but might need further adaptation to African conditions. Especial attention would need to be given to the improvement of statistics on the rural sectors of economies and on income distribution. A problem of special importance was to devise means of measuring the output of public services in order to provide the information required for planning in the education, health and other social fields. The new system of demographic, manpower and social statistics should assist in this respect.

Other conclusions and recommendations of the Conference were that although the development of basic data in many fields of statistics had accelerated in the last ten years further development was still hampered by a lack of appreciation on the part of Governments regarding the need to establish comprehensive and integrated data systems and the required statistical organisation. Special attention should be given to the data processing problems of the region. Other recommendations covered the fields of training, national accounts, industrial statistics, foreign trade, agricultural statistics and population and housing censuses and surveys. The Conference approved with some amendments the work programme for the period from 1972 to 1976 which included some 20 Conferences, Seminars and Working Groups to be organised by the Statistical Division of ECA.

Seminar on population data and use of computers

The above seminar was organised by the German Foundation for Developing Countries jointly with the Federal Statistical Office of Germany especially for

the English speaking countries of Africa, following the success of a similar seminar for English speaking countries of Asia in 1969. It was held from 3 to 20 May 1971 in Wiesbaden, Bonn/Cologne and West Berlin.

In the field of population research electronic data processing (EDP) could contribute significantly to the study of interrelationships between demographic, economic and other variables, to the calculation of simulation models, the identification and classification of households and families on the basis of derived items, etc. as well as the calculation of rates, updating of census tables with the help of data from current statistics, analytical processing of basic data, and preparation of projections to be combined with the production of basic data. Such information is most urgently needed for economic and social planning, plan implementation and evaluation.

The Report of the Seminar contains guidelines to the optimum use of computers in an integrated system of population statistics and a more efficient production of sound demographic data. This report and the 28 papers presented at the Seminar have now been published by the Federal Statistical Office of Germany, and have evoked considerable interest in both developing and developed countries.

The Seminar was attended by 25 statisticians, demographers and computer experts from 13 African countries, Romania, the United Kingdom, the United States, the Federal Republic of Germany and by experts from the UN Statistical Office and Population Division in New York, the UNECA Population Programme Centre and the ECA Regional Demographic Statistics Advisers and the Executive Secretary of the IUSSP. The UK participant was Mr. K. V. Henderson, Director of Statistics, Foreign and Commonwealth Office (Overseas Development Administration).

Reference

Population Data and Use of Computers (Pop./Comp. 4/71. Federal Statistical Office of Germany, P.O. Box 828, 62 Wiesbaden and German Foundation for Developing Countries, Rauchstrasse 22, 1 Berlin 30).

PUBLICATIONS

Social Trends

HMSO published the second issue of *Social Trends* for the CSO at the beginning of December. Sales of the first issue had been higher than expected and it was possible to reduce the price of the second issue despite an increased number of pages. It is intended that it shall continue, for the time being, as an annual publication, and that it shall evolve to take in significant new statistics as they are developed and to reflect changing

policy needs. The welcome which was given to the first issue of *Social Trends* demonstrates the extent to which it has begun to fill a gap in our social statistics and the Library Association recognised its importance by nominating it as runner-up for the McColvin Medal for an outstanding reference book.

The general framework of the second issue is similar to that of the first. A series of articles is followed by tables drawing together key statistics relating to all areas of social policy and conditions. These are illustrated by coloured charts and maps designed to assist the reader to absorb the statistics and to assess quickly the main features. Notes and definitions provide background to the figures and for further research there are comprehensive source references.

There are many detailed additions and innovations in the second issue and there are many more tables than before. This has been achieved without adding greatly to the size of *Social Trends* because the layout has been modified and the charts are smaller. The main new features of a general nature in the tables are more regional material and more statistics relating to the United Kingdom as a whole. There is a new section on social services manpower resources. The information in the first summary table is being published for the first time in this comprehensive form and is a significant development in the preparation of social services manpower accounts. There is also a new section on the environment: it takes in the information on populous areas, New Towns and air pollution previously included in the population section, and adds further tables on pollution, water consumption, transport and road accidents. The housing section has been substantially revised and an appreciable amount of new material added to the social security, education and justice and law sections. A page of small charts puts together some of the rather mixed material at present available on selected leisure activities. Also new in this issue is an international section intended to enable selective and useful comparisons to be made between the United Kingdom and other advanced industrial countries. The pitfalls in making these comparisons are well known and every attempt has been made to avoid possible misinterpretation by appending to the tables extensive notes drawing attention to some of the more important problems.

Complementing the new social service manpower section is an article by Dr. S. Rosenbaum of the Central Statistical Office which evaluates the trends and discusses some of the problems in this area. In the second article, F. E. Whitehead of the Department of Health and Social Security deals with trends in certificated sickness absence. The other two articles are methodological: one, by Dr. Bernard Benjamin of the Civil Service College, considers the problems of using models to

project trends in the social and environmental fields; the other, by members of York University, explores the development of social indicators in the health field.

Abstract of Regional Statistics 1971

The 1971 edition of this annual was published at the end of January 1972. Among the new tables included is one giving some preliminary counts from the 1971 Census of Population. The section on Social Services contains estimates of the regional distribution of expenditure on the principal national insurance benefits, family allowances, etc. and a regional table of regular weekly payments of supplementary benefits. Economic activity rates and other population ratios from the 1966 Census of Population are included in the Employment section of the Abstract. Regional tables derived from the *New Earnings Survey 1970* extend considerably the range of information on wages and earnings in earlier Abstracts. In this issue also the Family Expenditure Survey table showing the percentage of households with certain durable goods has been restored.

Reference

Abstract of Regional Statistics No. 7, 1971 (HMSO) January 1972 (Price £1.45 by post £1.52½)

New Business Monitors

Since the last issue of *Statistical News*, fifteen new monitors have been published in the Business Monitor Production Series containing the results of new quarterly inquiries into manufacturers' sales. These inquiries have been designed to fit into a system of industrial statistics being introduced by the Government Statistical Service.

Seven of the new monitors – namely, P4 hosiery and other knitted goods; P6 pottery; P15 lace; P16 gloves; P17 footwear; P36 timber (sawmilling, etc. and builders' woodwork) and P72 warp knitting – replace existing monitors and links have been given, wherever possible, to provide continuity with the figures previously published. In general, the new monitors contain statistics for a wider range of products than the previous monitors.

A further four new monitors cover industries for which no short period information has previously been available – namely, P98 wooden containers and baskets; P99 miscellaneous wood and cork manufactures; P106 leather goods and P109 fur.

For the remaining four new monitors – namely P101 biscuits; P105 leather and fellmongery; P108 jute and P110 hats, caps and millinery – only very limited

short-period information has previously been available for publication.

Apart from sales data, selected additional information – such as statistics on prices, production, consumption, orders, exports, imports, employment, consumers' expenditure – is given in most of the new monitors.

Each monitor is obtainable from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH for an annual subscription of 37½p.

Survey of Personal Incomes 1969–70

The 1969–70 Survey is one of the series of larger surveys carried out every 5 years by the Inland Revenue. Because of the size of the sample – nearly one million units – it was decided, in order not to delay publication of *Inland Revenue Statistics 1972*, to publish the results separately, and the volume entitled *The Survey of Personal Incomes 1969–70* will be available shortly.

It includes all the major analyses which have been published for earlier surveys but the larger size of sample enables more detail to be given than hitherto. The opportunity has also been taken to give a fuller account of the methods used in the Survey. Also included is a comparative analysis of the distribution of incomes by size both before and after tax, for all the income surveys made since the war which cover a 20-year span.

Inland Revenue Statistics

The 1972 edition of *Inland Revenue Statistics* will be published in the middle of next month and will include data for the latest available year, normally 1969/70, but in some cases for 1970/71.

This publication contains a number of statistics of general economic interest, including estimates of incomes (both personal and corporate) and the wealth of individuals. There is a series of brief notes on the taxes administered by the Inland Revenue, which determine in many ways the form of the statistics. On this occasion only summary results of the *Survey of Personal Incomes 1969–70* are given. The main details will be found in a separate publication.

Customs and Excise

The *62nd Report of the Commissioners of HM Customs and Excise* was published on 15 December 1971. The Report covers the year ended 31 March 1971 and takes the customary form of a narrative review of the year's activities followed by an Appendix giving descriptions

and statistics of the various Customs and Excise duties. Most of the statistical tables cover ten years.

Reference

62nd Report of the Commissioners of HM Customs and Excise for the year ended 31 March 1971 Cmnd. 4826 (HMSO) December 1971 (Price £1.10)

Education Statistics (Northern Ireland)

Education Statistics which is issued by the Northern Ireland Ministry of Education is available at HMSO price 87½p. Volume 12, published in September 1971 contains updated figures relating to finance, school leavers, examinations and further education.

National Institute

Economic Review

The August issue of the National Institute Economic Review included a survey of some of the main economic issues involved in the decision as to whether or not the United Kingdom should join the EEC on the terms negotiated. Specifically it covered the questions traditionally comprised under the headings of 'static' and 'dynamic' effects and problems affecting exchange rate, monetary and regional policies. A bibliography was included. There was also an article by Marcus H. Miller, of the London School of Economics, which examined the question of entry costs in more detail.

Mr. Miller's article, 'Estimates of the static balance of payments and welfare costs of U.K. entry into the Common Market' analysed and compared seven different estimates (including those of the Government) of the effects on the balance of payments of entry into the Common Market, and computed the associated resource costs of re-establishing balance of payments equilibrium, using values for the price and income elasticities of demand for imports appropriate to each estimate. On the assumption of exchange rate flexibility, a resource cost of 1¼ per cent GNP (due largely to the adoption of the Common Agricultural Policy) was suggested as a compromise between the various results. The extra costs of 'devaluing by deflating' was also assessed.

In the November issue of the Review there were articles on incomes policy, by Frank T. Blackaby, and on the progressive adoption of the tunnel kiln in the United Kingdom brick industry, by S. W. Davies.

Mr. Blackaby's article, 'Incomes policies and inflation', discussed, first, the objective of stable prices, and the importance which it should be given, and suggested a price objective for the United Kingdom of an annual rise of 2–3 per cent in retail prices. Secondly, the article considered whether this objective was likely to be reached on present policies in the United

Kingdom, and concluded that it was not. Thirdly, it surveyed the range of possible incomes policies, with a section on the lessons of past experience, a section on the problem of incomes policies, and some classification of methods which have been tried and proposals which have been put forward.

Mr. Davies's article 'The clay brick industry and the tunnel kiln' originated from a study in which the National Institute has been engaged since 1967, in collaboration with research institutes in a number of other countries, of the general question of the diffusion of new technology in industry. A number of techniques, of which the use of the tunnel kiln is one, have been selected for study in greater depth, and the diffusion process was related in the article to the general economic background of the brick industry. The article considered how far the relatively slow adoption of the tunnel kiln could be attributed to the industry's poor expectations since the early sixties, and how permanent this and other obstacles to faster diffusion were likely to prove.

Professor Reddaway replied in the August issue to criticism, by J. D. Whitley and G. D. N. Worswick (in the May issue), of his report on the productivity effects of SET on the distributive trades, and the November issue included a rejoinder by Messrs Whitley and Worswick. Copies of all these issues are available from the National Institute Economic Review, 2, Dean Trench Street, Smith Square, London S.W.1.

Occasional Paper

The National Institute of Economic and Social Research has also produced recently an Occasional Paper, by M. J. C. Surrey, which gives an account of the methods currently used to produce short-term forecasts. The paper contains a chapter setting out the basic income expenditure model used in the Institute's forecasting, together with chapters dealing with particular sectors or relationships, for example the personal sector and the consumption function, import functions, fixed investment relationships and the inventory accelerator. One version of the econometric model at present used is specified, with a computer programme for its solution. As well as the formal relationships, the informal and intuitive processes which are still part of forecasting are also described, and there is a practical account of the actual process of forecasting involving the Institute's distinctive blend of science and judgement. An Introduction by the Director, G. D. N. Worswick, discusses the role played by the econometric model in forecasting, the problem of comparing the efficacy of alternative forecasting methods, the presentation of forecasts as conditional upon 'unchanged policies', and the relationship between

forecasts and policy. The paper also includes illustrations of some of the results obtained from provisional simulation studies based on the present model.

GOVERNMENT STATISTICAL SERVICE

Rebasing on 1970

It has been decided that the year of reference of the constant price estimates in the United Kingdom national accounts and of a number of associated index numbers will, by the end of 1973, be changed from the present base of 1963 to 1970. The change to 1970 has been recommended by the United Nations and will be adopted by most international statistical organisations, including the Statistical Office of the Economic Community.

As is usual when a change in the year of reference is being made, the opportunity will be taken to update the weighting patterns of the index numbers concerned. To the extent that these depend on the results of detailed censuses of production for their weighting patterns it will be necessary to a large extent for the weights to relate to 1968, the nearest year to 1970 for which a detailed census has been taken.

The constant price estimates of the national accounts on the new basis will first appear in the National Income Blue Book for 1973, to be published in the autumn of 1973; the rebased index of industrial production will appear at about the same time. Rebased indices of volume and value of imports and exports are expected to be published about the middle of 1972, and indices of wholesale prices in the early part of 1973.

Northern Ireland government statistics:

Reorganisation of Ministry of Health and Social Services

The Ministry of Health and Social Services recently reorganised its statistics service into two separate units. These are the Labour Affairs Statistics Branch which handles work in Northern Ireland broadly on the lines of that handled in Great Britain by the Department of Employment, and the Health and Social Security Statistics Branch which covers in Northern Ireland that range of statistics handled in Great Britain by the Department of Health and Social Security.

Labour Affairs Statistics Branch

The purpose of this Branch is to provide a comprehensive service relating to all aspects of labour statistics, from collection through to interpretation. Some

of the work currently undertaken by the Branch is very briefly summarized below:

1. Quarterly estimates of employment – These are derived from the quarterly exchange of national insurance cards. Broad analyses are produced at March, September and December and a more detailed analysis at June. These statistics cover the total working population, that is, insured employees (employed and unemployed) and employers and self-employed.

2. Census of employment – The census will replace the national insurance card exchange system of providing employment figures. It is presently being conducted in parallel with the card exchange method to enable a satisfactory system of bridging factors to be devised to reduce the inevitable discontinuity of the series of manpower statistics which has been virtually uninterrupted since 1948. The census first took place on a trial basis in 1970 and it covers over 30,000 establishments in Northern Ireland.

3. Unemployment – The Branch provides a comprehensive range of tabulations on various aspects of unemployment each month.

4. New Earnings Survey – In 1971 Northern Ireland began participation in this new sample survey on the same lines as in Great Britain. The sample in Northern Ireland yielded over 4,000 employees whose earnings will be analysed. First results are expected early in 1972.

5. Occupational surveys – The Branch has responsibility for carrying out manpower surveys for the nine Industrial Training Boards to show the detailed manpower situation in their respective industries. Also the Branch extends its surveys to include those manufacturing industries not covered in a particular year, or at all, by a Training Board.

6. General – In addition to the work outlined above the Branch produces a range of tables for various statistical publications in Great Britain and in Northern Ireland. It also carries out special statistical exercises on current topics of interest, whether these be related to the Province as a whole, or to individual firms. The Branch acts as a central information centre for labour statistics supplying data to a wide range of individuals and organizations, such as research students and planning authorities.

Health and Social Security Statistics Branch

(1) Health Statistics – Medical and other staff employed in Northern Ireland hospitals; detailed bed and patient statistics, e.g. admissions, discharges, operations, waiting lists; statistics of general medical, dental, pharmaceutical and optical services; data from local health and welfare authorities on school health services, vaccinations, handicaps in pre-school children, maternity services, etc.

(2) Social Security Statistics – National Insurance Scheme statistics, e.g. retirement, unemployment, sickness and industrial injury benefits; family allowance and supplementary benefits statistics; analysis of causes of incapacity or injury.

Social Statistics

Statistics Users Conference 1971

A one-day Conference for Social Statistics Users, sponsored by the Social Science Research Council, was held in the rooms of the Royal Society on 22 October 1971. About 135 people, drawn mainly from central government, local government, the academic world and the market research world, attended by invitation. This was the second in a series of Statistics Users Conferences, the first in October 1970 dealing with business statistics (see *Statistical News* 12.31 and 14.18). In its task of compiling the list of invitations and arranging papers, the Council was advised by the Standing Committee of Statistics Users which was set up after the success of the first conference.

The day was divided into three sessions. Mr. Andrew Shonfield (then Chairman of the SSRC) chaired the first session entitled 'Social Statistics, What For?'. The second session on 'The Census of Population and its Future' was chaired by Dr. B. Benjamin (Chairman of the Standing Committee of Statistics Users) and the final session on 'Social Statistics and the Public' was chaired by Professor C. A. Moser (Director of the Central Statistical Office). Professor D. V. Donnison (Director of the Centre for Environmental Studies) provided the closing remarks.

A number of short papers, distributed in advance of the Conference and intended to serve as a basis for discussion, were introduced briefly by their authors at the beginning of each session. They were as follows:

Session 1. 'Social Statistics, What For?'

A Review of some Developments in Social Statistics within Government by R. E. Fry (Central Statistical Office)

'Social Trends' by Mrs. Muriel Nissel (Central Statistical Office)

Local Government Needs for Social Statistics by Mrs. C. M. Firth (Greater London Council)

A Comment by Professor A. R. Iiersic (Bedford College, University of London)

Session 2. 'The Census of Population and its Future'

Future Censuses of Population by P. Redfern (Office of Population Censuses and Surveys)

The Academic Researcher and the Census by Dr. David Herbert (Secretary, Census Research Group)

The Overloaded Census by Tom Corlett (J. Walter Thompson Co. Ltd.)

Session 3. 'Social Statistics and the Public'

Establishing and Promoting a Code of Research Conduct by Roger Jowell (Social and Community Planning Research)

Surveys and the Public by C. G. Thomas (Office of Population Censuses and Surveys)

Extracting Data - Painlessly or Otherwise by C. A. F. Russell (Greater London Council)

The Conference papers may be obtained from the National Lending Library through local libraries.

This was decided because of the difficulty of maintaining up-to-date registers of hairdressers and launderettes, which are necessary if changes in numbers are to be allowed for in the monthly estimates; and because, with the growth of industrial work and linen hire relative to domestic work in the more traditional laundry trade, a single figure of total turnover is no longer so valuable either to Government (as an indicator of consumer spending) or to the trade.

It is proposed to review the situation when better registers of businesses are available, e.g. through the establishment of a central register.

Infofair

The Government Statistical Service participated in the second Infofair Exhibition at Imperial College on January 4th to 6th. Statisticians manned a stand displaying the wide range of official data available to the public and answered hundreds of individual enquiries. This is part of the continuing effort by the GSS to inform more people about the statistics they provide and to encourage greater use of them.

Appointments

DEPARTMENT OF THE ENVIRONMENT

Mr. W. H. Stott has been promoted to a new Chief Statistician post to take charge of Housing and Land Market Statistics in the Department of the Environment.

BUSINESS STATISTICS OFFICE

Mr. Max Richardson a Principal in the Business Statistics Office, and head of its ADP General/Systems Section, has been seconded for a year to the Computer Research Centre, Bratislava.

The Centre has been set up under the aegis of the Conference of European Statisticians of the United Nations and *Mr. Richardson* will be advising on the design of a standard statistical computing system for use by member countries of the United Nations.

LATE ITEM

Service trades: ending of the monthly turnover inquiries to laundries and dry cleaners, and hairdressers

The Department of Trade and Industry has discontinued the monthly inquiries into the turnover of laundries and dry cleaners and hairdressers after collection of the figures for December 1971.

Alphabetical Index

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

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

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

- abortions, 8.23, 10.18, 13.26
- accidents, road, 8.29, 12.24
- acquisitions and mergers, 14.16
- actuarial services, official, new organisation, 11.38
- African Statisticians, Association of, 8.33
- agricultural industry *Annual Review*, 9.26, 13.23
- agricultural property
 - capital investment, 11.31
 - expenses, 11.31
 - outgoings, 11.31
- agricultural wages, 11.32
- agriculture
 - aerial spraying, 16.25
 - egg yield survey, 14.13
 - Farm Classification in England and Wales*, 16.25
 - farm finance, 14.12
 - farming maps, 8.26
 - harmonised accounts for net output and farming
 - net income, 13.23, 15.19
 - land prices, 9.25
 - measuring self-sufficiency for food and drink, 16.25
 - new statistics, 13.23
 - Northern Ireland, 12.24
 - output estimates, 12.23, 15.19
 - Scotland, 9.26
 - statistics of wages and earnings, 11.32
 - structure, 10.22
 - tenure of land, 9.11 (A)
 - use of contracts, 16.26
- aid to developing countries, 8.31, 11.7(A), 16.27
- air transport growth, 13.23
- airline financial statistics, 12.25
- alcoholic drinks, new returns, 9.23
- Annual Abstract of Statistics*, 13.29
- armed forces
 - pay, 9.28
 - resettlement of officers, 9.13 (A)
- Association of African Statisticians, 8.33
- average earnings, index of, 15.16
- awards, local education authorities, 8.37
- baking industry, pay, 11.35
- balance of payments
 - capital and monetary flows, 10.23
 - current balance, 11.4 (A)
 - effect of changes in exchange rates, 16.27
 - invisible earnings, 11.4 (A)
 - new presentation, 11.34
 - NIESR forecasts, 10.28
 - official borrowing, 10.23, 13.24
 - official financing, 10.23
 - official lending, 13.24
 - overseas investment, 8.32
 - overseas sterling area, 8.32, 11.35
 - seasonal adjustments, 8.32, 11.35
 - total currency flow, 11.4 (A)
 - UK external assets and liabilities, 14.13
 - visible balance, 12.26
- Bank of England Statistical Abstract*, 12.29
- banks, London clearing, pay, 9.27
- births
 - by parents' birthplace, 12.17
 - in England and Wales, 13.18
- British Aid Statistics*, 11.7 (A), 16.27
- British Labour Statistics: Year Book 1969*, 16.20
- Business Monitor series, 11.28, 12.21, 12.29, 13.28, 14.15, 15.22, 16.31
- Business Statistics Office, 8.25, 8.26, 9.29, 10.1 (A), 11.37, 11.38, 13.1 (A), 13.30, 14.18, 15.23
- capital consumption estimates, 15.21
- car ownership, growth, 13.30

- car registrations, seasonal adjustment, 11.34
- catering trades, 1969 inquiry, 8.26, 15.8 (A)
- Census of Distribution
 - for 1966, 9.24, 14.11
 - for 1971, 8.25, 12.22, 15.19, 16.11(A)
- Census of employment, 9.22
- Census of Population 1966*
 - Economic Activity Sub-Regional Tables*, 11.24
 - Scientific and Technological Qualifications Tables*, 13.18
 - Usual Residence Tables*, 8.22
- Census of Population 1971
 - adjustment for underenumeration, 16.17
 - county reports, 16.16
 - data collections and processing methods, 12.13(A), 16.16
 - England and Wales, Preliminary Report*, 14.3
 - Scotland, Preliminary Report*, 13.19, 14.3, 16.17
- Census of Production
 - for 1963, 8.24, 9.29
 - for 1968, 8.24, 13.31, 15.17, 16.22
 - for 1970, 8.24, 14.8, 16.22
- central government current expenditure, commodity analysis, 15.22
- Central Statistical Office
 - automatic data processing (ADP), 11.38, 15.4 (A)
 - macro-economic data bank, 15.4 (A)
- chemicals industry, 9.23
- civil aviation, 8.29, 13.23
- civil servants, industrial, pay and conditions, 10.25
- Civil Service
 - management studies, 13.27
 - manpower planning, 16.9(A)
 - sickness absence survey, 11.10 (A), 13.27
 - staff records, 10.19, 13.21, 13.27
 - statistics, 8.14(A), 12.31, 13.27, 16.9(A)
 - structure, 13.27
- Commonwealth immigrants, 12.17
- companies
 - finance, 8.30
 - survey of liquidity, 8.31
- computers
 - BSO, Newport, 11.38
 - Civil Service staff records, 10.19, 13.21, 13.27
 - facilities in HM Treasury, 11.1 (A)
 - Integrated Statistical Information System (ISIS), 16.14(A)
 - seminar on population data and use of, 16.30
- CBI industrial trends surveys, 10.28
- Conference of African Statisticians, 16.29
- Conference of Asian Statisticians, 12.27
- Conference of Commonwealth Statisticians, 12.16
- Conference of European Statisticians, 10.26, 14.14
- confidentiality, 10.1 (A), 10.29, 13.30
- constant price estimates, rebasing, 16.33
- construction industry
 - CITB annual levy enquiry, 16.26
 - review of statistics, 14.10, 15.6 (A)
- Consumer Price Index, 13.14 (A)
- contract cleaning workers, 13.25
- costs
 - labour, 12.20
 - Smithfield Market, 8.33
- Council of Europe
 - meeting on demographic projections, 13.26
 - Second Population Conference, 13.25
- criminal statistics, offences involving firearms, 13.27
- Customs and Excise
 - Annual Report*, 8.31, 12.28, 16.32
 - monthly and quarterly returns, 9.23
- data bank
 - CSO, 15.4 (A)
 - ICC, 15.22
- deaths
 - by deceased's birthplace, 12.17
 - by occupation, 16.17
 - classification by cause, 13.18
- dental health, 9.18
- dentists, migration, 8.22
- disabled, survey 1968/69, 9.20
- Distribution, Census of
 - for 1966, 9.24, 14.11
 - for 1971, 8.25, 12.22, 15.19, 16.11(A)
- Distributive Trades Statistics*, 9.29
- doctor migration, 8.22
- domestic credit expansion, 8.31
- earnings
 - agricultural workers, 11.32
 - fire service, 16.22
 - new survey, 8.11 (A), 9.23, 10.23, 10.24, 12.18, 12.19, 16.21
 - qualified manpower, 12.19
 - regional, 11.26, 15.17
 - surveys of earnings, 1972, 16.21
- Economic Activity Sub-regional Tables*, 12.17
- economic growth, OECD countries, 10.29
- economic statistics
 - New Contributions*, 8.35
 - survey of collections, 9.29
- Economic Statistics Collections*, 12.30
- Economic Trends*, changes in content, 12.26, 13.24, 15.21
- education
 - curricula in secondary schools, 14.6
 - finance and awards, 8.37
 - in-service teacher training, 9.21

- international discussion, 8.38
- Northern Ireland, 8.35, 10.19, 13.20, 14.6, 16.32
- planning models, 9.22, 9.28, 11.36
- planning – programming – budgeting, 9.21
- teacher deployment, 14.6
- Education, Statistics of*, 12.29
- for the United Kingdom, 1967*, 9.20
- Special Series No. 4*, 14.6
- Educational Statistics, Scottish*, 11.25, 15.12
- electricity supply industry
 - publications, 11.29
 - sales, 11.30
 - standard statistical review periods, 14.10
- employment
 - census, 9.22, 13.21
 - sub-regional, 11.26
- employment vacancies, seasonally adjusted series, 10.20
- Energy Statistics, Digest of*, 10.27, 15.18
- engineering, qualified manpower, 14.6
- engineers
 - incomes, 10.27
 - surveys of professional, 10.27
- equal pay, 8.32
- European Economic Community
 - international comparisons, 10.29
 - London visit of Officials of the Statistical Office, 16.29
 - national accounts, 10.30
 - publications, 10.29
- exports
 - new system for recording, 15.20
 - preliminary estimates, 12.26
- FITC statistical review, 15.24
- Family Expenditure Survey
 - 1969 preliminary figures, 9.28
 - 1970 preliminary figures, 13.28
- Family Expenditure Survey*
 - 1968 Report*, 15.14
 - 1969 Report*, 10.27, 15.14
 - 1970 Report*, 14.16, 15.14
- family income supplement, 15.14
- Family Intentions*, 16.18
- farm classification, 8.26, 16.25
- farms
 - finance, 14.12
 - rents, 11.30
 - Scottish, 9.26
- fertility rates, 8.22
- film processing industry, pay and conditions, 8.33
- finance, company, 8.30
- finance houses, 12.29, 13.28
- Financial Statistics*
 - changes in content, 8.31, 12.27, 16.29
 - Supplement of notes and definitions*, 9.29
- firearms in crime, 13.27
- Fletton brick industry, pay, 11.35
- food and agriculture, self sufficiency, 16.25
- food, cost of processing and distributing, 16.25
- food consumption
 - expenditure and average prices, 8.26
 - income elasticities, 8.26
 - levels in the United Kingdom, 11.30, 13.23, 14.12
 - nutrition, 8.26
 - preliminary estimates, 9.25
- Food Survey, National*, 8.26, 12.22, 16.24
- forecasting
 - car ownership, 13.30
 - computerised industrial, 16.24
 - colliery profitability, 11.13 (A)
 - economic, 11.1 (A)
 - floorspace, 11.38
 - manpower, 10.20
 - manufacturing investment, 10.28
 - retail expenditure, 11.38
 - trade between OECD countries and primary producers, 10.28
- form filling
 - burden on small firms, 11.16(A)
 - reduction in, 12.31, 13.22
- garages, 13.24
- gas industry statistics, 11.28
- General Household Survey, 16.7 (A)
- Government Actuary's Department, 11.38
- Government Statistical Service
 - burden of form-filling on small firms, 11.16(A)
 - information for industry, 8.35
 - information for politicians, 12.9 (A)
 - liaison with industry, 8.36, 9.30, 10.30
 - reorganisation in the Department of Trade and Industry, 14.17
 - reorganisation of Ministry of Health and Social Services, Northern Ireland, 16.33
 - Statistical Liaison Committee, 13.30
 - transfer of statistical responsibilities, 8.36, 12.32
- Government Statistics for Industry*, 8.35, 15.23
- Greater London Council
 - Abstract of Statistics*, 8.35
 - Occasional Papers*, 10.29
 - Quarterly Bulletin*, 8.35, 10.29, 11.38, 15.24
 - Research Reports*, 13.29, 13.30, 15.24
- Greater London Council area,
 - employment, 11.38
 - population, 11.38
 - standard statistical sectors, 15.25
- ground staff at aerodromes, 8.33

- Handicapped and Impaired in Great Britain*, 14.1 (A), 14.4
- hairdressers, ending of monthly turnover inquiry, 16.35
- Health and Social Security, Department of
Abstract of Retirement Pensions and Widows' Benefits, 8.23
Annual Report for 1968, 8.23
Annual Report for 1969, 10.18
Annual Report for 1970, 15.13
social security research, 12.18
- Health Statistics for England and Wales, Annual Digest*, 12.29, 13.26
- health visitors, 15.24
- higher education
revised projections, 8.38
Robbins Report, 8.38
- Highway Statistics*, 16.27
- Horticulture in Britain*, 12.24
- hospital building, 13.26
- hours of work, overtime and shiftworking, 13.24
- households, projected numbers, 9.28, 11.24, 13.20
- houses, condition surveys, 8.23, 10.18
- housing
improvement grants, 11.25
private enterprise, 11.25, 16.26
progress, 11.25
slum clearance, 11.25
surveys, 8.23, 15.20
- immigrants, births registered, 8.22
- incapacity
certificates of, 8.23, 10.18, 12.17, 15.13, 15.14
estimates of, 15.13
regional statistics, 13.19
statistics of benefits, 10.18
- income elasticities, food consumption, 8.26
- Income Surveys, 8.31, 16.32
- incomes
engineers, 10.27
scientists, 10.27
- index number construction, 8.34
- individualised data system, education, 8.38
- Industrial Marketing Research Association, 9.30
- industrial production, index for Wales, 11.28
- Industrial Production, Index of*, 10.20, 10.21, 15.1 (A)
- industrial statistics
development of, 13.1 (A)
quarterly sales enquiries, 8.7 (A), 10.21, 11.27
regional talks on new system, 16.23
re-organisation, 8.25, 9.23, 10.21, 11.27, 12.20, 13.22, 14.8, 15.1 (A), 15.17, 16.22
world, UN report, 13.30
- Infofair, 8.36, 16.35
- injury benefits, 8.23
- Inland Revenue statistics, 8.31, 12.28, 16.32
- input-output
analysis 1963, 8.35, 11.27
analysis 1968, 11.27
comparable tables for 1954 and 1963, 14.8
development of, 12.1 (A)
- Input-Output Tables for the U.K. 1963*, 8.35
- Institute of Management Sciences, 9.28
- Institute of Petroleum, 10.22
- Insurance Business Statistics*, 14.16
- Integrated Statistical Information System (ISIS), 16.14 (A)
- international comparisons
EEC countries, 10.29
- International Computing Centre, 15.22
- International Standard Industrial Classification, 15.23
15.24
- investment
overseas, 11.7 (A)
plant and machinery, 15.22
- invisible earnings, monthly assessment, 11.4 (A)
- Journal of the Royal Statistical Society*, 12.31
- labour
costs, 10.25, 12.20, 15.17, 16.21
statistics, historical, 10.7 (A), 13.26
Labour Statistics, Year Book, 10.7 (A)
Labour Statistics, Year Book 1969, 16.20
- landlords, survey of, 13.19
- laundries and dry cleaners, ending of monthly turnover inquiry, 16.35
- laundry and dry cleaning workers, pay, 13.25
- liaison with industry, 8.36
- liquidity (companies), new survey, 8.31
- low income families, 15.14
- low-paid workers, circumstances of, 13.25
- manpower
civil service, 10.19, 16.9 (A)
fire service, 16.22
forecasting, 10.20
inter-industry flows, 10.19
models, 11.36
planning, 16.9 (A)
qualified, Census 1966, 13.21, 15.16
qualified, earnings of, 12.19
scientific and technological, 14.6
- Manpower, Planning Study Group, 9.22
- Manpower Society, 9.22, 10.20
- manufacturing industry, new monthly index of wages and salaries, 14.7

- manufacturing investment, forecasting, 10.28
- margarine and compound cooking fats, 10.25
- meat offals, supply, 9.25
- migration
 - dentists, 8.22
 - doctors, 8.22
 - International Passenger Survey, 8.22, 15.12
 - population, 8.22, 15.12
- milk industry, 9.27
- Ministry of Technology, statistical organisation, 9.1 (A)
- models
 - education, 9.22
 - education and training, 9.28, 11.36
 - manpower, 11.36
- money supply, 8.31, 12.26, 16.29
- Monthly Digest of Statistics*, 12.29, 13.29
- mortality by occupation, 16.17
- motor industry statistics, 13.28
- motor trades, 10.22
- motor vehicles, car ownership, growth, 8.29

- national accounts
 - constant price estimates rebasing on 1970, 16.33
 - EEC countries, 10.30
- national and sector balance sheets, 14.14
- National Board for Prices and Incomes
 - armed forces pay, 9.28
 - beer prices, 9.27
 - bread prices, 11.35
 - civil servants, industrial, 10.25
 - coal prices, 11.35
 - contract cleaning workers, 13.25
 - film processing industry, 8.33
 - Fletton brick industry, pay, 11.35
 - garages, 13.24
 - ground staff at aerodromes, 8.33
 - hours of work, overtime and shiftworking, 13.24
 - laundry and dry cleaning workers, pay, 13.25
 - London clearing banks, 9.27
 - low-paid workers, circumstances of, 13.25
 - margarine and compound cooking fats, 10.25
 - milk industry, 9.27
 - NHS ancillary workers' pay, 13.25
 - national newspapers, financial survey, 9.27
 - pottery industry, pay, 10.25
 - salary structures, 8.32
 - Smithfield Market workers, 8.33
 - solicitors, remuneration of, 8.33, 13.25
 - statistical surveys, methodology, 13.6 (A)
 - university teachers, 10.25
 - water supply industry, pay, 11.35
- National Coal Board
 - Annual Report*, 11.28
 - colliery profitability, 11.13 (A)
- National Food Survey*, 8.26, 12.22, 16.24
- National Health Service
 - ancillary workers' pay, 13.25
- National Income and Expenditure, 1971*, 15.21
- National Income and Expenditure, percentages derived from, 15.21
- National Institute Economic Review*, 8.34, 10.28, 11.37, 12.30, 14.17, 16.32
- national newspapers, financial survey, 9.27
- New Earnings Survey 1968*, 10.24
- New Earnings Survey 1970*, 12.18, 15.16
- New Earnings Survey 1971*, 12.19, 16.21
- North Atlantic Treaty Organisation
 - Advanced Study Institute, 9.28, 11.36
 - Manpower Conference, 7.37, 11.36
- Northern Ireland
 - agriculture, 12.24
 - education, 8.35, 9.29, 10.19, 13.20, 14.6, 16.32
 - family expenditure survey, 12.28
 - reorganisation of Ministry of Health and Social Services, 16.33
 - survey of labour costs, 12.20
- nutrition surveys, 8.26

- OECD countries
 - aid statistics, 12.27, 14.15
 - demographic trends, 10.26
 - economic growth, 10.29
 - financial statistics, 14.16
 - International Management Seminar, 9.28
- occupational pension schemes, 15.15
- occupations, classification of, 12.17
- Office of Population Censuses and Surveys, 8.35, 10.30
- officers' resettlement survey, 9.13 (A)
- official statistics, guide to, 14.15
- Operational Research Society, 10.30
- output
 - measurement, 10.21
 - measurement for public services, 16.20
 - per head, 12.5 (A)
 - use of net output statistics, 12.5 (A)
- overseas aid, 8.31, 11.7 (A), 14.15, 16.27
- overseas investment, 8.32
- overseas trade, published sources, 13.28
- Overseas Trade Statistics of the United Kingdom*, 13.29
- overseas travel, 13.28

- packaging statistics, 9.30
- Parliament, Members' salaries review, 16.21
- Passenger Transport in Great Britain*, 8.29
- pensions
 - invalidity, 16.19
 - occupational, 15.15
 - retirement, 8.23
 - war, 12.18
 - widows', 8.23
- petroleum statistics, 10.22
- planning
 - applications, decisions, 8.24
 - long range, 16.24
 - town and country, 8.24
- politicians, official statistics for, 12.9 (A)
- population, 8.22
 - Census data collection 1971, 12.13 (A)
 - census reports – see *Census of Population*
 - changes, 11.24
 - future Censuses of Population, 16.4 (A)
 - growth, 9.18
 - mid-1968, 8.22
 - mid-1971, 16.17
 - projections, 9.18, 9.20, 10.26, 11.24, 14.3, 14.4
 - regional sub-divisions, 9.18, 11.24
 - seminar on data and use of computers, 16.30
 - unproductive sector, 9.20
 - working, 9.20, 10.19, 10.26
- Population Censuses and Surveys, Office of, 8.35, 10.30
- ports, unit transport, 12.25
- pottery industry, pay and conditions, 10.25
- pound, internal purchasing power of, 13.14 (A)
- price indices
 - regional, retail, 15.21
 - wholesale, 10.25
- prices
 - beer, 9.27
 - bread, 11.35
 - coal, 11.35
 - grain, 11.33
 - seasonal variations in retail prices, 16.28
- prices and earnings 1951–69
 - econometric assessment, 13.21
- printing and publishing
 - occupational employment, 10.20
- Production, Census of
 - for 1963, 8.24, 9.29
 - for 1968, 8.24, 13.31, 15.17, 16.22
 - for 1970, 8.24, 14.8, 16.22
- Profit from Facts*, 15.23
- public expenditure
 - new presentation, 8.30, 9.26
 - overseas aid, 8.31
 - plans, 13.29
- public sector
 - financial statistics, 8.31
- public services, research project on output measurement for, 16.20
- qualified manpower
 - Census 1966, 13.21, 15.16
 - earnings survey, 12.19
- refuse disposal, 14.5
- Regional Statistics, Abstract of*, 16.31
- regions
 - earnings, 11.26, 15.17
 - Economic Activity Tables*, 11.24, 12.17
 - employee activity rates, 13.21
 - employment by sub-divisions, 11.26
 - house condition surveys, 8.23, 10.18
 - incapacity statistics, 13.19
 - population 1966, 8.22
 - population changes, 11.24
 - population projections, 9.18, 11.24
 - retail prices indices, 15.21
- Rent Acts, report of Francis Committee, 13.19
- rent tribunal cases, 13.19
- rents, farms, 11.30
- Report on Overseas Trade*, end of publication, 13.28
- research and development
 - expenditure 1966-67, 10.11 (A), 12.22
- reserve ratios, 16.29
- residence tables (England and Wales), 8.22
- retail prices index
 - measure of internal purchasing power, 13.14 (A)
 - seasonal variations, 16.28
- retail prices indices, regional, 15.21
- retail sales, 9.25
- retirement pensions, 8.23
- revised figures (policy), 16.1 (A)
- Road Accidents*, 8.29, 12.24
- road goods transport, 1967/68 survey, 9.6 (A), 16.26
- road traffic censuses, 15.20
- Robbins Report*, higher education, 8.38
- salaries
 - managerial, executive, etc. staff, 8.32
 - Members of Parliament, 16.21
- sample surveys in local authority areas, 15.15
- sampling methods, as used in survey of handicapped, 14.1 (A)
- schools, pupils' curricula, 14.6

- science, qualified manpower, 14.6
- scientists
 incomes, 10.27
 surveys of professional, 10.27
- Scotland
Annual Report of Registrar General, 8.23, 12.17, 13.19, 15.12, 16.18
 births, by parents' country of birth, 10.18, 15.12, 16.18
 Census, 1971, 13.19, 14.3, 16.17
 deaths by causes, 14.4
 education, 11.25
Educational Statistics, 11.25, 15.12
 farm classification, 9.26
 life tables, 13.19
 local elections, 11.24, 15.12
 mid-1971 estimates, 16.18
 migration, 9.18, 11.24, 12.17, 13.19, 15.12, 16.18
 mortality, 8.23
 occupational mortality, 9.18, 11.24
 population, 1969, 8.23, 13.19
 population projections to 1991, 10.18
 population projections to 2001, 14.4
 school-leavers survey, 11.25
 teachers, 11.25
 vital statistics, 8.23
Scottish Abstract of Statistics, 14.16
 Scottish budget, 8.35
Scottish Economic Bulletin, 14.16
Scottish Statistics, Digest of, 14.16
- seasonal adjustments
 balance of payments, 8.32, 11.35
 car registrations, 11.34
 employment vacancies, 10.20
 overseas trade figures, 13.24
 unemployment, 9.22, 10.20, 14.7
- service trades, ending of monthly turnover inquiries, 16.35
- shipping movements, 12.25
- sick pay schemes, 15.15
- sickness, invalidity and injury
 attendance allowance, 16.19
 benefits, 10.18, 15.13, 16.19
 Civil Service absence survey, 11.10 (A), 13.27
 claims for benefits, 8.23, 10.18, 15.13
 estimates of numbers incapacitated, 15.13
- slum clearance, 11.25
- Smithfield Market workers, pay, 8.33
- Social Science Research Council
 economic forecasting, 8.34
 educational research, 8.34
Newsletter, 8.34
Research Reviews, 9.29
 Social Statistics Users Conference, 16.34
 Statistics Users Conference, 12.31, 14.18
- social security
 attendance allowance, 16.19
 invalidity benefit, 16.19
 research, 12.18
 reception centre users, 16.20
 surveying of special categories, 8.18(A)
- social statistics
 organisation, 8.18 (A)
 Users Conference, 16.34
Social Trends, 12.28, 16.30
 solicitors, remuneration of, 8.33, 13.25
Sources and Nature of the Statistics of the United Kingdom, 10.26
- special drawing rights, 10.23
- Standard Industrial Classification, 15.24
- standard statistical sectors for Greater London, 15.25
- statistical sources, 9.29, 12.30
- statistical surveys, methodology, 13.6 (A)
Statistics of Science and Technology, 11.37
 Statistics Users Conference, 12.31, 14.18
- sub-regions, economic activity tables, 12.17
- supplementary benefits, 10.18
 reception centre users, 16.20
- taxes and subsidies, 11.35
- teachers
 deployment in secondary schools, 14.6
 in-service training, 9.21
 Technological Manpower, Studies in, 10.27, 14.6
- technology, qualified manpower, 14.6
- tenants, survey of, 13.19
Trade and Industry, 13.29
- trade between OECD countries and primary producers, forecasting, 10.28
- transport, statistical publications, 12.25
- UNCTAD
 insurance statistics, 12.27
 'one per cent' target, 8.31
- unemployment
 coloured workers, 15.16
 seasonal adjustments, 9.22, 10.20, 14.7, 15.16
- UNESCO reports on science statistics, 8.33
- unit transport, 12.25
- United Nations
Growth of World Industry, 13.30
 Statistical Commission, 16th Session, 11.36
- United States, strengthening Federal statistics, 8.1 (A), 11.35
- universities
 applications and admissions, 8.37, 9.21
 individualised data system, 8.38
 students, staff, finance, 8.37
 teachers' pay, 10.25

University Central Council on Admissions,
Seventh Report, 9.21
university graduates, first employment, 9.21
university statistics, 10.27

vital statistics, 12.17, 13.18, 15.12

wages, equal pay, 8.32
wages and salaries
Blue Book estimates, 14.14
index of average earnings, 15.16
new monthly series for manufacturing sector, 14.7

Wales
index of production, 11.28
water supply industry, pay, 11.35

wholesale prices
index numbers, 10.25

widows' benefits, 8.23

working population
falls since 1966, 10.19
projections, 10.26, 15.16

Abstract of
Regional Statistics
No. 5
1971

The subjects covered include:

- | | |
|------------------|----------------------------|
| AREA AND CLIMATE | CONSTITUTION AND TERRITORY |
| POPULATION | DISTRIBUTION |
| SOCIAL SERVICES | HOUSING AND ROAD TRAFFIC |
| EDUCATION | STATISTICS |
| EMPLOYMENT | STATISTICS BY INDUSTRY |
| ENERGY | STATISTICS BY REGION |
| PRODUCTION | STATISTICS BY COUNTY |

HER MAJESTY'S STATIONERY OFFICE

CENTRAL STATISTICAL OFFICE

Abstract of Regional Statistics No. 7 1971

This annual publication has been prepared by the Central Statistical Office to meet the demand for detailed regional information and is supplementary to the national figures published in the *Annual Abstract of Statistics*.

Issue No. 7 provides a wide coverage of economic and social statistics by Standard Regions and many of the tables also give details for sub-divisions of regions and for conurbations. It contains an outline map of the Standard Regions and includes a full description of these regions and their sub-divisions, defined in terms both of local authorities and employment exchanges. An index of the sources of the statistical data enables users to obtain later figures as they appear.

The subjects covered include:

AREA AND CLIMATE
POPULATION
SOCIAL SERVICES
EDUCATION
EMPLOYMENT
ENERGY
PRODUCTION

CONSTRUCTION AND INVESTMENT
DISTRIBUTION
ROADS AND ROAD VEHICLES
SHIPPING
SURVEY OF INCOMES
SURVEY OF EARNINGS
FAMILY EXPENDITURE SURVEY

Price £1.45 (by post £1.52½)

Obtainable from

HER MAJESTY'S STATIONERY OFFICE

at the addresses on cover page iv or through booksellers

HER MAJESTY'S STATIONERY OFFICE

Government Bookshops

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

*Government publications are also available
through booksellers*

30p net

Annual subscription £1.30