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STATISTICAL NEWS

Developments in British Official Statistics

A publication of the Government Statistical Service

Note by the Editor

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

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

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

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

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National and sector balance sheets

David J. Reid, *Statistician, Central Statistical Office*

Introduction

In a year when one bi-centennial has captured the public imagination it is interesting to reflect that it is also two hundred years since Adam Smith published his 'Inquiry into the Nature and Causes of the Wealth of Nations'[1]. To Smith and his contemporary economists, wealth was as much a subject of interest as income, expenditure or production; but the overwhelming domination of economics in the last forty years by the Keynesian and post-Keynesian concern with flow concepts makes it hard to realise that this was so. These forty years have also seen the creation and development of our national income and balance of payments accounts, much of it a direct result of the Keynesian influence, so it is perhaps not surprising that the system we have created is better geared to produce flow statistics than corresponding stocks or levels. Not that stocks were considered irrelevant – and indeed some stock figures have been published for many years – but rather that priority has been given to honing the transactions accounts as the principal tool of macro-economic analysis. Economists are now realising some of the deficiencies in their tool kit and attention is turning once again to the stock of assets and the web of financial claims within which the economy operates.

To a company accountant it must seem strange that the national income accounting system contains no equivalent of the company balance sheet. This describes the company's stock of assets and liabilities, giving a 'true and fair' account of the state of the business and can be used to assess the director's stewardship. This apparent deficiency has been allowed to exist in part because the conduct of national economic policy does not operate in the same way as the financial control of a business and hence the accounting needs are different. Nevertheless, it has long been recognised that there are advantages to be obtained from extending the national accounts to include national and sector balance sheets – complete statements of the year-end stock of assets and liabilities of sectors and of the nation as a whole. Differences between successive balance sheets would be accounted for by transactions recorded in the present capital and financial accounts of the sector, plus a reconciliation account that would record revaluations of assets and liabilities held, changes in the sector to which individual economic units are allocated and any other special items not recorded in the transactions account (for example discovery of new reserves of oil).

For each sector of the economy – public, company, personal etc – a balance sheet would record the holdings of tangible assets – for example land, buildings fixed capital and work in progress – and the financial assets and liabilities of the independent economic units that compose it. The precise scope of assets covered will be discussed later, but in general the sum of tangible and financial assets *less* (financial) liabilities is equal to the net worth of the sector. For the nation as a whole net worth can be calculated either by adding the net worth figures for domestic sectors or as the sum of domestically held tangible assets plus net financial claims on non-United Kingdom residents.

Official work on balance sheets

For a long time the CSO has had it in mind to extend the national accounts to include sector balance sheets. In the early 1960s Professor Revell and associates at the Department of Applied Economics (DAE), Cambridge, undertook some pioneering work culminating in the publication of a book[2] containing balance sheet estimates for 35 sectors and subsectors. This work was later extended by Revell and Roe[3], with CSO and Bank of England sponsorship, to include annual estimates for the period 1957–1966. It was intended that the work would be taken over by official statisticians, made compatible with the definitions used in the national accounts and continued on a regular basis. However other work was given priority and little was done apart from the takeover and documentation of DAE worksheets.

Development of official balance sheets estimates was included in a ten-year programme of work resulting from a thorough review of financial statistics carried out in 1972. Since then statistical enquiries have been designed with sector balance sheet needs in mind but work on the estimates themselves was not begun until last autumn. At the moment this is still very much a

research project. Though it is possible to draw on the methods employed by DAE, data sources change over time, some becoming less reliable and other new ones becoming available. It is hard to foresee the contingencies that might arise and lead to delay, or to judge how easy the reconciliation of alternative estimates will prove to be. Thus there is an understandable reluctance to make commitments on the date when official sector balance sheets will be published, although the CSO has said it will try to provide provisional estimates for the personal sector to the Royal Commission on the Distribution of Income and Wealth by the end of 1977.

The value of balance sheet estimates

The purpose of this article is to explain how the development of national and sector balance sheets is being implemented and what are the main reasons for doing it. There are three.

The first, which has already been alluded to, is the interest in stocks of assets and liabilities as an aid to economic analysis and forecasting. Economists often believe transactions may be explained in terms of an adjustment model whereby a sector adjusts its holdings towards some 'desired' balance sheet. To estimate such partial adjustment models they need balance sheet estimates of the actual stocks of assets and liabilities held. Also the financial position of a sector may impose constraints on its future course of action and this knowledge can be useful in forecasting. As an example of a situation where the portfolio as opposed to the net wealth of an economic unit is important, one may cite the need for liquid assets to finance day to day transactions. Information on the distribution of liquid assets is needed for economic policy.

Secondly, there is considerable public interest in the total national wealth and in the distribution of wealth both between and within sectors, and it is important that statistics should be available with complete coverage, the reliability of which can be cross-checked. One aspect of the balance sheet work is to bring together information about sector holdings of wealth from different sources and to attempt to reconcile it – at the same time filling known gaps. The Royal Commission on the Distribution of Income and Wealth, in the initial report on its standing reference[4], reviewed existing statistical material on personal wealth and saw an important role to be played by sector balance sheets in providing control totals as a basis for estimates of the distribution of wealth. Consequently it recommended (paragraph 365) that priority should be given to speeding up the development programme.

Finally, data on the end-year stocks of assets and liabilities are expected to improve the quality of the corresponding transactions figures with 'spin off' in many parts of the established national accounting system. An example might be that a better knowledge of sector holdings of property and financial claims would lead to a better allocation between sectors of the corresponding rent, dividend and interest flows on these assets. Also complete balance sheet information may help to identify and hence reduce components of the unidentified item in the sector accounts (which is by convention shown in the financial accounts).

Balance sheet concepts

At this point it is appropriate to delve a little into details. A basic principle in constructing a sector's balance sheet is that it should represent the combined balance sheets of the independent economic units that it comprises. Thus financial claims within a sector should not be consolidated out except below the level of individual units. In the company sector, for example, consolidation takes place in general between companies within a group, but not for claims between different groups.

There is a question as to what we should regard as sectors. In the transactions accounts there are different levels of detail; the quarterly income and expenditure accounts are based on a public sector (central government, local authorities and public corporations) *plus* company, personal and overseas sectors. The company sector is sub-divided into industrial and commercial companies and financial institutions, and the latter into banks and other financial institutions in the financial (or flow of funds) accounts. Statistical information for the accounts – particularly financial information – is assembled on a finer sub-division of sectors. At working level the sectors used in the balance sheet extension of the national accounts will be determined by the need to work with homogenous groups of economic units that are useful for analysis, and also by a desire to preserve detail that will allow flexibility to aggregate in various ways. They will be broadly the same sectors as those used by Revell.

Much the same considerations apply to the choice of assets and liabilities, but there are additional questions to be resolved. These concern the scope of assets covered by the balance sheets. Certainly tangible assets such as plant, buildings, stocks etc, should be included, as should all financial claims. But there are a number of other items that could be regarded as assets, such as consumer durables, patents and copyrights, rights to exploit subsoil assets, pension rights (in funded and unfunded schemes) and even items like human capital (education and skills) and 'goodwill'. There are difficulties both conceptual and practical in dealing with these items.

Conceptual problems arise because sector balance sheets may have different uses requiring different boundary lines to be drawn. Practical difficulties concern our ability to measure the items involved.

Consumer durables provide an interesting illustration. In the present accounts purchases are not regarded as capital formation and no incomes are imputed from their ownership and use. Therefore it would be inconsistent to regard them as assets in the personal sector balance sheet. Yet they are included in estimates of personal wealth based on estate duty statistics and it is important to have figures for them because they influence consumer behaviour. There are practical problems of estimating their extent and alternative methods of valuation can be advocated but these are not insuperable difficulties. Following the System of National Accounts guidelines[8] they will not be shown in the balance sheet proper (and hence will not be reflected in net worth) but will be included as a memorandum item.

Of the other contentious items mentioned above patents, copyrights and mineral rights should be included on conceptual grounds but may have to be excluded on practical ones; there are great problems in the valuation of pension rights and this question is still under consideration; human capital is excluded because it is neither realizable nor is there a satisfactory alternative valuation. Goodwill items in company balance sheets arise when ownership of assets is transferred. They are excluded from national and sector balance sheets because the act of transferring ownership should not affect total wealth. It would do so if goodwill were included for the purchasing sector without a corresponding contra entry in the accounts of the sector disposing of the assets. Another common item in company balance sheets is provisions. These are also excluded because there is no corresponding contra item. In fact a fundamental principle of constructing national and sector balance sheets is that all financial claims appearing must be shown simultaneously as an asset and a liability somewhere in the system, and their valuation must be the same in both cases.

Several alternative bases of valuation have been discussed in the balance sheet literature but it is widely accepted that 'ideal' market value is the most useful, that is the value obtained in a perfect market involving many willing buyers and sellers, all with perfect information. For most financial assets this poses few problems but for tangible assets that are often quite specialised the market, if it exists at all, is usually imperfect. A more appropriate valuation then is to use the written down current replacement cost and this is how Blue Book figures for net capital stock are valued. Although market value is the ideal to be aimed at in all cases, it is sometimes necessary to modify this valuation basis to overcome estimation difficulties.

Estimation methods

There are two basic approaches to estimating a sector's balance sheet. We may either aggregate the individual balance sheets of the economic units that comprise the sector (sometimes called the direct approach) or we may use a variety of 'indirect' methods – that is obtaining information from sources other than the units that comprise the sector. These indirect methods include analysing registers of certain types of debt (for example stocks and shares), obtaining information on financial claims from the counterpart sector, or even (for the holdings of a financial claim by one sector) the residual method – subtracting holdings by all other sectors from the total amount of the claim issued. Reconciliation of the direct and indirect approaches gives strength to a complete system of sector balance sheets that individually they would lack. Nevertheless it must be admitted that estimates for some sectors are likely to be better than others. Generally speaking the fewer economic units in the sector the easier it is to get direct estimates without the need for sampling, especially if figures are also needed for other purposes (as for example are figures for banks which are required for credit control). The company and personal sectors are likely to be the least reliable and financial claims between and within these sectors amongst the least reliable individual asset and liability figures.

Another technique for estimating the level of assets held is the perpetual inventory approach. This consists of accumulating and revaluing transactions figures from year to year. Of course it is necessary to know the starting stock, unless the assets have lives (as in the case of plant and machinery) shorter than the run of transactions data. The technique is particularly useful for interpolating between and extrapolating from benchmarks and can be remarkably accurate where the transactions data are good and revaluations can be done accurately.

Published information

Quite a lot of information relevant to the construction of balance sheets is already published. Financial assets and some liabilities of almost all financial institutions are published in *Financial Statistics*. Net capital stock and the book value of stocks and work in progress by broad sector are published in *National Income and Expenditure* (the Blue Book) and an inventory of United Kingdom external assets and liabilities is published in *United Kingdom Balance of Payments*

(the Pink Book) and June issues of the *Bank of England Quarterly Bulletin*. Thus it is possible to go a long way towards estimates of the net worth of the nation (but not of individual sectors). The most significant gap is the exclusion of the value of land from estimates of net capital stock. So far as sector data is concerned there is a good deal available but it is far from complete and tends not to be classified and valued in the appropriate way for our purpose.

In addition to this regular output of statistics there have been earlier attempts to estimate balance sheets, those of Revell and Roe[2][3] have already been mentioned. Subsequent estimates have been made for particular sectors, for example the Bank of England has published balance sheets for the banking sector[5] and for investment trusts[6], and the Royal Commission on the Distribution of Income and Wealth[4] has provided an updating of some later estimates by Revell and Tomkins[7] for the personal sector.

The balance sheet cause has also been taken up by the United Nations which has drafted guidelines[8] for the inclusion of balance sheets and reconciliation accounts as an extension to its System of National Accounts which is followed by the national accounting systems of most western countries. As yet few if any countries publish full balance sheets as part of their systems. Unofficial estimates have been constructed for the United States (for example by Professor Goldsmith), and *Statistics Canada* has started to publish partial balance sheets. The Economic Planning Agency in Japan has considerable experience with wealth surveys and publishes estimates of national wealth but their sector estimates, which cover tangible assets in great detail, exclude financial claims between Japanese residents.

Programme of work

The Government Statistical Service is decentralised and although responsibility for the national accounts rests with the CSO, most of the information that goes into them is built up in the statistics divisions of other departments. The CSO's role is co-ordinating, assembling and analysing; likewise with the balance sheet project. Information on stocks of assets and liabilities comes in most cases from the same sources as the flow data. But inquiries to financial institutions that are used to collect flow data are being extended to give complete coverage of balance sheet information and this is expected to improve the quality of the flow data as well. The development of these inquiries, which are a linch-pin of both the financial accounts and balance sheets, was described[9] in the previous issue of *Statistical News*.

Broadly speaking the division of responsibility is that the Bank of England are dealing with the balance sheets of central government, the overseas and banking sectors, and with some other financial institutions; Department of Industry collects data for finance houses, insurance companies and private sector pension funds as well as providing data for the industrial and commercial companies' sector; Inland Revenue collect information through the administration of estate duty and capital transfer tax which provides the basis for wealth estimates in the personal sector; and CSO is responsible for the rest of the public sector (local authorities and public corporations) remaining financial institutions (for example building societies, public sector pension funds) and non-profit making bodies – as well as co-ordinating the project as a whole.

Cutting across this division by sector is a division in terms of assets and liabilities. The CSO is dealing with tangible assets – land, buildings, plant and machinery, etc; Department of Industry is carrying out a survey of ownership of ordinary company shares; whilst the Bank of England, besides looking after deposits with and loans and advances by banks and statistics of other financial institutions, carries out a regular survey of ownership of British Government and Government guaranteed securities. Special investigations for certain other categories of financial claims are also under consideration.

It can be seen that the work is essentially an interdepartmental effort but it requires additional resources and the collection of new statistical information, and it can only proceed as fast as the varying demands on resources in the departments involved will allow. As work on historical data for each sector is completed it is being published. Initially the results will not be fully integrated with the transactions accounts but integration is the ultimate aim. It may not be possible to achieve this though until a system of regular estimates for all sectors is working, which cannot be before 1978.

Besides the occasional articles already being published to describe work on individual sectors, there will be a need eventually to bring together the available material into a single publication. It is too early to say what this will be but one possibility might be a volume in the series of *Studies in Official Statistics*. When balance sheets as an integral part of the national accounts are produced, a regular publication vehicle will be needed and this might take the form of an annual publication similar to the Blue and Pink Books – indeed it might be appropriate to include summary sector balance sheets along with the financial transactions accounts in the Blue Book.

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New system of statistics on homelessness

Howard Morrison, *Statistician, Department of the Environment*

This article describes a new system of homelessness statistics in England introduced by the Department of the Environment; the Welsh Office operates a similar system of returns in Wales. A press notice was issued on 31 August giving the first results from the new system and a report[1] giving further details is also available. A further press notice will be issued in the near future.

Background to new system

There are no universally accepted definitions of 'homeless' and 'homelessness' and these terms have been used in widely differing contexts. At one extreme there are people who are literally without shelter, but there are other cases – people living in hostels run by voluntary agencies, married couples living with in-laws – who because they do not have a 'home' of their own might also be regarded as homeless. At its widest, homelessness has been defined to include all those who live in overcrowded or unsatisfactory accommodation.

For many years the Department of Health and Social Security collected statistics on the provision of temporary accommodation for homeless families under the National Assistance Act 1948 and the Children and Young Persons Act 1963. Returns were made each quarter by social services authorities to the Department and included the number of applications made for assistance, the grounds of the applications, the numbers admitted to temporary accommodation, lengths of stay in temporary accommodation, the numbers discharged and the destinations on discharge. There was also information on the numbers rehoused in local authority dwellings on the grounds of homelessness without a stay in temporary accommodation and from 1973, in response to the growing use of 'bed and breakfast' accommodation, information on the use of 'bed and breakfast' was included in the returns from London Boroughs. The figures usually quoted as a measure of 'homelessness' were the numbers in temporary accommodation; the numbers of admissions were sometimes quoted but the numbers of applications were not used. The statistics were often quoted in answer to questions on the level of homelessness and were regarded by some commentators as being too narrow in scope since they were essentially a summary of the Department's fulfilment of its responsibilities under the two Acts.

In 1969, the Department of Health and Social Security commissioned two detailed studies of the nature and causes of homelessness: one by Bryan Glastonbury in parts of South Wales and the West of England and the other by Professor John Greve in London. The reports of these studies were published in 1971 and both recommended changes in the official statistics. Glastonbury pointed out that local authorities often assessed applicants according to the extent to which they could be seen blameworthy for the loss of roof and that, using this criterion, there were large variations in who were considered 'homeless' between different officials and different authorities. The Glastonbury report also claimed that local authorities tended to categorise homelessness to fit in with the facilities provided under the terms of the National Assistance Act which often resulted in men, single persons, the elderly (because they were often provided for without reference to the Act) and couples without children being excluded from the statistics. The Greve report made similar comments on the case excluded from the official statistics; and considered that the statistics were a measure of the supply of temporary accommodation rather than demand – although, of course, the supply was influenced by the demand. The Greve report also recommended that more information on the causes of homelessness should be available.

In 1974 the main responsibility for policy on homelessness passed from the Department of Health and Social Security to the Department of the Environment. A Joint Circular on Homelessness[2] was issued in February 1974 by the Department of the Environment, the Department of Health and Social Security and the Welsh Office. The aim of the circular was to 'set out general principles, to promote among local authorities a fresh approach to the policies of homelessness and to demonstrate more effective ways of deploying existing resources'. In particular it clarified the groups of homeless people to whom priority should be given. It also stressed that although the prevention and relief of homelessness is a function of local government as a

whole needing the closest collaboration between housing and social services departments, housing authorities should increasingly take the prime responsibility for homeless people and their accommodation.

Against the background of the Glastonbury and Greve reports and the imminent change in responsibilities for homelessness, a working party was established in 1973 to review the statistics, with representatives from the Department of Health and Social Security, Department of the Environment, London Boroughs Association and the Greater London Council. A new system of statistics was devised which was implemented in London in January 1974 and in the rest of England and Wales, following discussions with the other local authority associations, in January 1975. The object of the system as given in the circular was to obtain information based on individual application for help to local authorities and what action follows. The information is available to local authorities and to central government and others concerned to monitor the effectiveness of the measures used to help the homeless and consider whether changes in policy and practice need to be made. The system is designed to show the distribution of homelessness between local authority areas and provides much more useful information than has been available in the past about the causes of homelessness and the types of family involved.

The new systems of returns

The new statistics are based on the households reported as applying to local authorities for help on the grounds that they were homeless or in danger of becoming so. Local authorities complete a form (H1) for every household applying to them as 'homeless'; the form records details on the members of the household, when and why they become homeless, where they have lived previously, whether they have been receiving aid from the social services, and whether the local authority decides to accept responsibility for accommodating them.

The local authority also completes a progress form (H2) at the end of each quarter for each accepted applicant; this shows the changing types of accommodation occupied by the homeless household (for example bed and breakfast; short life property; local authority hostel) until a permanent solution is found. A flexible computer program is available which enables analysis of this information and cross analysis of one item against another. In particular the program links the details on the application forms (H1) with the following rehousing reports (H2) to enable a complete picture to be built up of the homeless households housing history at national local authority and at individual case level. In practice the use of the program has been limited by the difficulties of obtaining complete and consistent data.

Practical problems associated with the new system

Central to the new system of statistics are the terms 'an application', 'acceptance of responsibility' and 'a permanent solution'. Some of the initial difficulties experienced with the new system stem from the difficulty of framing definitions which are simple and compatible with the differing procedures for helping the homeless in various local authorities.

Applications

Originally authorities were asked to complete forms for all who applied for help on the grounds that they were homeless or in danger of becoming so. In practice, where it is known or thought that a local authority only accepts responsibility for certain categories of homeless people, other homeless people will tend not to apply. In general, local authorities only accept responsibility for the 'priority groups', i.e. families or people living alone who either become homeless in an emergency such as fire or flooding or who are vulnerable because of old age, disability, pregnancy or other special reasons. Apart from this, local authority staff found that in practice many cases arose where it was difficult to decide whether they should be included on the forms; many people approached local authorities when the threat of loss of roof was only slight or the likely date of loss was many months away. Often the loss of roof did not materialise. In order to meet these points and to reduce the form filling burden on local authority staff it was decided therefore to amend the definition to include only those applications where the people claimed to be literally without shelter or in danger of losing what shelter they have within one month.

Acceptance of responsibility

An H1 form is completed in respect of such applicants and this records, amongst other information, the decision of the authority on whether it accepts responsibility for finding suitable accommodation for the household. The concept of acceptance of responsibility stems from the Joint Circular on Homelessness. In the circular, the Departments asked local authorities, in cases where they were approached by people in danger of becoming homeless, to decide whether they would accept responsibility for securing suitable accommodation and inform the applicants of their decision well before the likely date of homelessness.

Permanent solution

The rehousing progress reports, H2 forms, are submitted quarterly for each case until a 'permanent solution' is found. The guidance given to local authorities has been that accommodation provided is a 'permanent solution' if it is of a satisfactory standard and the previously homeless household has a 'permanent' tenancy. In some cases local authority standard dwellings are let 'under licence' for short periods to homeless families; these are not recorded as a permanent solution. Short life property is considered a 'permanent solution' if it is of a sufficient standard and on the understanding that when the property comes to the end of its life (or earlier) the authority will move the household to other suitable accommodation. A 'permanent solution' also includes the return to their previous home or the household making other arrangements with or without the authorities assistance. Some homeless households, after the authority has accepted responsibility, make no further contact or leave temporary accommodation provided without contacting the authority; if no further contact is made during the following six months it is assumed that they are no longer homeless and a 'permanent solution' is recorded. Although when contact is lost this is recorded as a 'permanent solution', this is partly a matter of statistical convenience; it is permanent in the sense that the case is now closed. If the household reapplies at a later date this is treated as a new case; to do otherwise would make the statistical system too complex. The term 'permanent accommodation found' is used to cover all 'permanent solutions' except lost contact which is shown separately in the published statistics.

Short-term solutions

Between the date of acceptance of responsibility and the date a 'permanent solution' is recorded the local authority reports on the H2 forms the 'short-term solutions' used. These may include accommodation in bed and breakfast, short life property, local authority dwellings under licence or sometimes staying with friends or relatives. The form also records whether the 'short-term solution' involves the husband living separately or children living separately or being taken into care. It was decided that the terms 'short-term solution' (that is, short stay in accommodation) and 'short-life property' (housing of limited life but perhaps providing suitable accommodation for a number of years) are too easily confused and so in published statistics the term 'in temporary homeless accommodation' is used rather than 'short-term solution'.

Accuracy and timing of results

Apart from practical problems of the application of the definitions discussed above, there have been some initial 'running-in' difficulties particularly on accuracy and timeliness of reporting. Additionally, demands on the local authority staff dealing with homelessness have not only limited the time they have available for form filling but also tend to generate a high turnover of staff thus meaning that in some cases many of the staff are new and unfamiliar with the returns. Industrial action by some staff in London Boroughs in 1974 added to the problems as did the changeover of responsibilities from social services to housing departments and the current limits on local authority staffing. There were initial difficulties with the completeness of the sets of returns – application forms (H1) received but no rehousing progress reports (H2) and *vice versa*; or rehousing progress reports (H2) sent in for some quarters but not for others.

A problem of consistency arises from the extent to which some of the sets of forms are completed by social services departments rather than housing departments. In order to establish rapport with their clients, social workers tend to minimise the formality and paperwork in the initial interviews; this can give rise to difficulties in gathering together the information needed for the forms at a later date. They are also approached by people with a wide range of problems and it may not always be easy to identify, in the early stages, the cases in which the main problem is that of 'homelessness'. In contrast to this, housing departments, being concerned with the allocation of accommodation, usually have more formal and standardised recording of information on applicants and so tend to have the information needed for the returns more readily available.

These are broad generalisations but illustrate the factors which can influence the accuracy and timing of the results.

Validation

To ensure satisfactory data quality, a substantial amount of manual checking of the forms takes place before they are entered for computer processing – where further validation checks are made. The computer checks consist of internal consistency checks on each form then at a later stage, when all the H1s and H2s for a case are linked, checks on the completeness of the set of returns. It became clear that completeness of the returns was going to be more of a problem than originally anticipated; to meet this a register has been established of all the returns from each authority. The register records, on a one line a case basis, the date an H1 is received, whether the authority accepted

responsibility, the dates of subsequent H2s and whether each one involves a temporary or permanent solution. Using this register it is possible to keep track of the completeness of returns. Feedback from these checks is made to the local authorities not only in terms of individual queries on forms but also in discussions with them on particular difficulties they appear to be having with the new system. As a further check on completeness all local authorities are circulated with summary figures of their forms for comment before publication of the statistics. In cases where the detailed forms cannot be provided, global totals of applications, acceptances, short-term solutions at the end of the quarter and permanent solutions are obtained from the local authority. Apart from information on applicants for whom the authority does not accept responsibility – this has been discussed above – this series of checks has enabled the production of what is an essentially complete picture of the homeless households applying to local authorities and detailed information is available for the great majority of individual cases. This is a very satisfactory response to the new system by particularly hard pressed local authorities.

Publication

A report was issued on 31 August 1976 summarising the main results up to mid-1975, and giving a selection of analyses including analyses of reason for loss of roof, type of last accommodation occupied by the household, the area they lived in one month previously and the household type. Further analyses and reports on later periods will be published as soon as possible. The main type of analysis which has not yet been possible is an analysis of the types of temporary homeless accommodation used. This analysis requires the linking of the H1s and H2s and some problems of data quality have delayed this linking although it is hoped to be up to date on this in the near future. Apart from the published statistics local authorities are provided with detailed analyses of their own figures.

Value of new system

The new system has been designed to meet the requirements set out in Circular 18/74 which were agreed after detailed consultations between the users and the providers of the statistics. The system provides a wider range of information than was available previously. The statistics reflects the practices of individual local authorities in their dealings with the problem of homelessness as manifested in the applications they receive and the actions they are able to take. It is recognised that there are some short-comings in the new system, particularly since this is an area where there are no clear and unequivocal definitions. For example, those households who approach the local authority and do not fall into one of the groups which it is the policy of that local authority to help, often never reach the stage of making a formal application. Local authority officers are understandably reluctant to ask for detailed information from someone they know they will be unable to help. The collection of information on those without shelter who did not contact the local authority would be even more difficult; it is extremely doubtful whether a comprehensive set of statistics could be maintained on those people.

Through the Department's continuing contacts with individual local authorities and the local authority associations, further improvements to the new forms and the statistics available will be made.

References

(1) 'Interim report on homeless households reported by local authorities in England; Statistics to mid-1975'. Available from Department of the Environment, Statistics Housing B Division, Room S14/07, 2 Marsham Street, London SW1P 3EB.

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Energy balances - some recent developments

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This is a condensed version of an article to be published by the Department of Energy as an Energy Paper.

Why energy balances?

One of the necessities for economic analysis of the energy industries and their relationship to the rest of the economy is to trace for any given fuel[(a)] the relative contributions of indigenous production and imports to the supplies of each fuel, the various uses inside the energy industries of their own and of other fuels, and the distribution of each fuel between final users. Correspondingly there is a need to be able to assess the relative importance of each fuel within any particular flow either of supplies or into consumption. An energy balance in which all forms and uses of fuel are recorded in a common accounting unit provides the framework for analyses of this sort. At the same time – as was found at an early stage with classical input/output analysis – such an accounting framework if rigorously designed is also a very exacting test of the internal consistency of one's basic data. Not least, such an accounting framework by showing the inter-relationship between supplies, transformation and final uses of fuels, provides a basis on which to construct forecasting models of each energy industry separately and of the energy industries taken as a group. Even if such models are not used in the actual process of forecasting, they are invaluable for testing the consistency and plausibility of forecasts made by other methods.

Which accounting unit?

The original units in which fuels are most naturally measured (tons or tonnes for coal and petroleum, kilowatt hours – or some multiple thereof – for electricity, and therms, kilocalories, cubic metres or cubic feet for gas) are very disparate. Nevertheless, one of these could be used as a basis for recording the other fuels if one has suitable conversion factors. Such factors could be derived from prices, and this is what is done when constructing the energy rows and columns of input/output tables. However, prices are a rather unstable attribute of fuels (as of other raw materials and in consequence, finished products). A more stable and, for many purposes, more useful basis is the energy derivable from one 'natural' unit of each fuel. This raises the twin problems of which *accounting unit* to choose and what *route* to use in order to express units of one fuel in terms of the agreed common unit.

The meaning of 'Conversion' and 'Equivalence'

Before going on to explore these two questions, it should be noted that 'converting' one fuel into its energy equivalent in terms of another fuel does not necessarily mean that x units of 'energy source B' can in reality be substituted for 1 unit of 'energy source A'[(1)]. For example, one ton of petroleum products contains the same amount of 'potential energy' as 1·7 tons of coal, but we cannot directly replace one ton of motor spirit or diesel oil by 1·7 tons of coal. If we are looking for the quantities of one fuel that would be needed to *replace* the actually existent (or forecast) quantities of other fuels, we must take account of the uses to which particular fuels are currently put, the equipment that converts each fuel into heat, light or motive power and the scope – which may be limited or non existent – for using that equipment, as it is or after adaptation, with an alternative fuel.

This consideration leads on to two others. The first concerns the different efficiencies with which useful energy can be extracted from the ton of petroleum products or the 1·7 tons of coal. The amount of coat needed to produce a given amount of traction power in transport depends not only on the relative energy contents of coal and oil but also on the relative efficiencies of steam engines on the one hand and of petrol or diesel engines on the other. The fuel equivalence in this substitution sense may be even more roundabout if petroleum-fuelled engines are replaced by electrically powered trains using coal-fired boilers in the power stations.

(a) In the present article *fuel* includes electricity.

The second complication is that if, for example, relatively cheap electricity were not available, some factory operations now powered by electricity might be done by hand. More generally, the present level and mix of fuel consumption is what it is because the present supply and mix of fuels is there and because of investment made in fuel using appliances and the relative prices of different fuels. With a basically different mix of fuel availability, the level of fuel consumption would almost certainly be very different too.

One particularly important case of conversion and substitution is the conversion of primary fuels (for example, coal, crude oil) to secondary fuels (for example, electricity, petroleum products) or – viewed from the *downstream* end of the flow, the substitution of a secondary fuel for one or more primary fuels. Even this apparently straightforward conversion itself raises one further problem. This is the question of how to treat non-energy products of the conversion process. Such products are of two types. One consists of products that are incapable of economic conversion to heat or other forms of energy (for example lubricants). The other type comprises products that are suitable for both energy and non-energy uses but which are largely used for the latter (for example naphtha used as petro-chemical feedstock).

Accounting units in the United Kingdom

Hitherto, in UK energy statistics, two accounting units have been used. The first is the ton of coal equivalent and the second is the therm. These two units are not independent of one another since the tonnage of coal equivalent to a given number of natural units of oil or gas depends on the average calorific values per natural unit of each fuel. Such thermal equivalents may be calculated on an overall average basis and on this basis one can say that 'one ton of coal equivalent' equals 0·58 tons of petroleum and 'one ton of petroleum' equals 1·7 tons of coal.[b] Such factors are good enough for broad overall presentation in which all coal without regard to the mix of grades is treated as 'coal equivalent', and likewise for oil without regard to the product mix in an 'oil equivalent' table. They are not good enough for energy balances which set out to show the flows from producer to final user in some degree of detail differentiating, for example, between coal of relatively low average calorific value (CV) going to power stations and the much higher CV coals used by coke ovens or directly by final users, or distinguishing petroleum products going for heating use and for transport.

For such a more detailed analysis, the therm or the the calorie or – as it may be next year – some large multiple of the Joule – is more appropriate for ensuring that the results adequately reflect the heat supplied for different purposes. It is possible (although this is not done in UK statistics) to present results derived *via* this thermal *route* as tons (or tonnes) of coal (or oil) equivalent, defining the equivalent unit as a convenient standardised package of a given number of thermal units. This form of presentation is commonly used in international energy statistics: a tonne of oil equivalent defined as containing 10×10^6 kilocalories (or 10 G cal) net calorific value is frequently used, although the rigorous *route* or calculation method necessary for arriving at results conforming strictly to the definition adopted is not always followed.

Both the broad, overall method and the thermal content approach are used in the United Kingdom's published energy statistics. In *Energy Trends*, for example, the figures in Table 1 of the main components of inland energy consumption are measured in tons of coal equivalent and (since March 1976) tonnes of oil equivalent. In Table 2 of *Energy Trends* on the other hand, where therms are the accounting unit, the thermal content of coal consumed by different sectors and of each petroleum product (and similarly for other fuels) are calculated separately and aggregated. The table of conversion factors at the end of *Energy Trends* summarises the overall 'rough and ready' conversion factors. The detailed average gross calorific values from which thermal contents are derived are given, together with overall average gross values for coal and oil, at the back of the *Digest of United Kingdom Energy Statistics*.

Different levels of measurement

Energy consumption may be measured in at least three ways. The first assesses total *primary fuel input* before allowing for conversion losses in, for example, power stations and for distribution losses in transmission lines. The second measures the *heat supplied* to final users either directly as a primary fuel, for example, coal or natural gas, or after conversion of (for example) coal and oil into electricity or crude oil into petroleum products. Neither of these measures deducts the losses that occur during further conversion into space or process heat or motive power by final users. What is effectively available after these losses are deducted is *useful energy*. These losses depend very much not only on the type and quality of fuel and the appliances and equipment used but also on the conditions, duration

(b) In the United Kingdom the ratio between the average gross calorific value of all coal and all petroleum fuel products consumed is approximately 1:1·7, although this ratio varies to some extent year by year as the product mix alters.

and intensity of their use. Statistics on useful energy are not at present felt to be sufficiently firm for publication owing to lack of robust data on average utilisation efficiencies and on the different purposes for which fuels are used by some consuming sectors.

Intuitively it makes sense for final energy consumption to be measured only on a *heat supplied* or on a *useful energy* basis, since, for example, final users themselves (directly) purchase electricity and not the coal and fuel oil used by the public electricity supply system to generate it; they consume petroleum products and not the crude oil, part of which was used up as refinery fuel or lost in the refining process. Nevertheless, it can make sense to express demand for energy by final users in terms of a demand for *primary fuel*. This, after all, is what the economy must produce or import in order to meet the demand of final users. Conversion of final users' demand[(c)] to its primary fuel equivalent does however require some convention or assumption about whether the electricity is to be generated by coal or oil fired or nuclear or hydro stations, and about whether the petroleum products are to be refined in the United Kingdom from indigenous or imported crude or are to be imported as such.

In *Energy Trends*, Table 1 shows total inland consumption measured on a primary fuel input basis whilst Table 2 shows inland consumption (disaggregated by fuel within final user sector) measured on a heat supplied basis. Table 2 also shows the transition from primary fuel input to heat supplied. The difference represents conversion losses, distribution losses and use by fuel producers.

Different accounting formats

Energy balances may be constructed in a whole host of different ways. No one format is 'right' and the others 'wrong'. Different formats may be useful for different purposes. At the same time, the variety of different accounting formats can cause unnecessary work in the preparation of energy balances, and can cause confusion to users when comparing different presentations of the same data within the same country. Confusion can become all the greater when trying to make comparisons between countries. International comparisons are becoming increasingly important and the United Kingdom has over the past few years not only contributed to the discussion on the most desirable formats for harmonised international energy balances but has adapted its own detailed energy balance format substantially towards that now used by the OECD/IEA.

(c) The terms 'final demand' and 'final consumer' have been deliberately avoided because *final use of energy* includes use by industry and other sectors which in the national accounts context are *intermediate* rather than final consumers.

An energy balance may be *partial* or it may be *complete*. In either case, conversion of the raw data to some defined common unit is necessary. (Although it is possible to produce supply/demand balance sheets for individual fuels in their original units of measurement, such balances cannot be combined and aggregated into total energy without first converting the data to the common unit chosen). Partial balances, in the sense in which the term is used in this article, are those which, for simplicity (or lack of data), do not go beyond primary fuels and do not attempt to follow each fuel from supply through conversion into alternative forms and final use either in the original form or after conversion into another fuel. Complete balances provide for the conversion process from one fuel to another. The following is the general form of a partial balance:

Source/Use	*Primary fuels*				*Total energy*
	Coal	*Crude oil*	*Natural gas*	*Primary electricity*	
Production					
Imports					
Exports and bunkers (–)					
Stock changes*					
Total supply = apparent consumption or demand					

*Rise –; Fall +

A complete energy balance may be *aggregated* or *disaggregated*. This distinction relates primarily to the number of separate fuels distinguished in the columns, but a highly disaggregated balance in this sense will almost certainly also be pretty detailed in its treatment of the secondary fuel producers' rows. A balance that gives that same amount of detail in the secondary fuel producers' rows may however be more, or less, highly aggregated as regards the detail on secondary fuels it shows in separate columns. Aggregated balances are generally convenient for showing time series of their compenents whilst highly disaggregated balances are usually less suitable for this purpose.

Fairly highly disaggregated balances for individual fuels in a form that is suitable for displaying time series data were developed by OECD and have been followed by UN and ECE. All of those balances, however, only show original units. In this form they do not need to tackle the problems of converting the raw data for each fuel to a common unit and thus avoid the problem of double counting that can arise unless care is taken

to ensure (for example) coal or oil used for the generation of electricity is counted once only and not both as an input to power stations and in the form of electricity supplied to consumers.

The Statistical Office of the European Communities (SOEC) has for many years been publishing highly disaggregated balances in which all fuels are summed in tonnes of coal equivalent. However in order to show time series in one table, the fully disaggregated balance does not appear as an integral whole but is displayed in two forms. Firstly all the origin/use rows are shown separately but with only a total figure for all fuels together in the column for each time period. Secondly, all the fuels are shown separately but only one origin or use is shown in the 'time' columns of each fuel's row. Conversion losses do not appear explicitly in any of these balance tables. (These overall balances are supplemented by detailed balances for each fuel in original units).

OECD recently developed a very compact form of complete balance that shows explicitly the conversion losses in each transformation industry that is separately distinguished[2]. This format has been further refined by the Combined Energy Staff of OECD/IEA after consultation with those member countries with experience in this field[3].

The accounting unit for these balances is million tonnes of oil equivalent (mtoe) but could be million tons of coal equivalent (mtce), million therms, Joules $\times 10^{12}$ or Terajoules (TJ) or any other common unit. In this format the double-counting problem is resolved by recording only primary fuels in the 'Production' row in the first part of the balance. Production of secondary fuels is recorded in the row of the producing industry with a *positive* sign. Inputs to secondary fuel producers are recorded in those same respective rows but with a *negative* sign. It follows that the figure in the total colum represents the conversion losses incurred in each of the secondary fuel producing industries. The format of this balance in a fairly highly aggregated form is shown below.

This elegantly compact balance is however deceptively simple. To complete the first column, one needs to construct separate balance accounts for each of its fuel components (coal, coke, other solid fuel) and then 'collapse' them into a single column. The same can (but need not, if one is satisfied with broad average conversion factors) be true of the petroleum products column. Again, to complete the 'Energy industries' own use and losses' row, one really needs 3 or 4 basic component rows. The final use sectors are also highly aggregated and for some purposes it may be desirable to disaggregate them to some extent, for example sub-dividing 'Transport' between 'Land', 'Air' and 'Inland waterways'.

As was pointed out earlier, the variety of balance formats can be bewildering. It would be convenient if a standard form of disaggregated balance could be adopted, whose rows and/or columns could be collapsed

Source/Use	*Fuel*							
	Coal and other solid fuel	*Crude oil*	*Petroleum products*	*Gas*	*Nuclear electricity*	*Hydro electricity*	*Other electricity*	*Total*
Production Imports Exports Bunkers Stock change								
Total energy requirement								
Electricity generation Oil refineries Gas works Energy industries' own use and losses								
Total final use								
Non-energy use(2) Industry Transport Domestic and other								
Total final energy use								

in a readily recognised manner if any of the more aggregated balances is needed.

UK practice

Tables from which partial energy balances could be derived were published for many years in the Ministry of Power's annual *Statistical Digests*. These table gave:

(i) Inland consumption of each primary fuel
(ii) Total inputs of fuels to secondary fuel producers
(iii) Consumption of fuels, primary and secondary, by final users and the energy producing industries.

The figures were expressed throughout as coal or coal equivalent on a primary fuel input basis. For example, electricity consumed by industry as a final user appeared as the proportion of total power station fuel input necessary to produce it and not as the direct thermal equivalent of the electricity actually consumed. The tables gave only partial results in that they took consumption as their starting point and did not attempt to link the figures to production and supply. In the 1963 edition, an additional table was introduced showing the energy content in therms (heat supplied basis) of consumption of each fuel by final using sectors, collieries and oil refineries.

Complete energy balances for each fuel separately, measured in original units, were first published in the Ministry of Power's *Statistical Digest* for 1965. The figures related to 1964. The first balance in which all fuels were expressed in a common accounting unit (millions of therms) was published in the *Digest of Energy Statistics for 1968 and 1969*. The balance was in respect of the year 1968. It began with total consumption of primary fuels, went on to consider the production of secondary fuels by each of the secondary fuel industries (power stations, gas works, coke ovens, etc.) and then analysed final consumption of both primary and secondary fuels by sector (iron and steel, other industry, transport, domestic and other). The flows of primary fuel to secondary fuel producers and the flows of secondary fuels between primary and secondary fuel producers were shown as a separate table. This format continued unaltered up to and including the volume of *United Kingdom Energy Statistics 1973*, which gave a balance for the year 1972.

In the 1974 edition of the Digest, the table of inputs and outputs of secondary fuel producers was incorporated in the body of the supply balance and the analysis of final consumption by fuel within sector was placed at the end of the balance. At the same time, the primary fuels section of the balance was expanded 'upstream' so as to show production, arrivals, shipments and stock changes in primary fuels.

In the 1975 edition of the Digest, the secondary fuel producers' section of the balance was rotated 90° (or 'transposed') so that, in both the primary and secondary fuel sections of the balance, the headings for fuels were in columns and the headings for sources and uses of fuels were in rows. For the sake of continuity with earlier balances, however, the final consumption section of the balance was left in much its original form with consuming sectors as column headings and fuels as row headings. Up to and including that balance, petroleum *products* were treated as the primary fuel so that refineries did not appear at all as secondary fuel producers, nor was the size of their output shown directly (although it could be derived as conversion losses at refineries were shown). Correspondingly, crude oil and petroleum products were shown together as a single figure against imports, exports and the stock change.

The new format

In the 1976 edition of the Digest this process of 'rationalisation' of the balance has been carried a stage further. The latest format is both easier to understand and to compare with the energy balances published by SOEC and OECD/IEA. The new UK format has the following characteristics:

(*a*) The final consumption matrix has been transposed and now all the column headings relate consistently to fuels. Primary fuels (grouped together), secondary fuels (grouped together) and a grand total appear once only across the top of the table. Sources and uses appear only in the row headings of the table. Crude oil and petroleum products each have their own column, refineries have their own row and the flows to and from refineries can be seen clearly.

(*b*) In line with the convention used by the Statistical Office of the European Communities and by OECD/IEA, imports, exports and stocks changes of secondary fuels are regarded as 'primary fuel equivalent'. This is perfectly defensible in that, so far as any national economy is concerned, the net stock change and net trade in secondary fuels do represent an addition to or diminution of the supplies of fuel available to that economy in any given accounting period. To that extent such changes are on all fours with supplies of truly primary fuel such as coal or crude oil.

(*c*) A corollary of these changes is that imports and exports of electricity are now treated in terms of electricity and not in terms of the primary fuel equivalent of such electricity (as was the treatment hitherto).

(*d*) As pointed out above when describing the IEA

balance, this new format of energy balance makes it possible to show with great economy of space conversion losses in the secondary fuel industries. Inputs to these industries are shown with a negative sign and outputs are shown in the same row but with a positive sign. It follows that the row total is the difference between input and output, that is to say the conversion loss. Separate rows are shown in this section of the UK balance for inputs of fuels to primary or secondary fuel producers for purposes other than conversion into a secondary fuel – such as electricity used by coal mines and oil used for the operation of refineries. The latest UK energy balance is reproduced in the Appendix.

A fairly detailed matrix format such as this is not suitable for showing time series except by using one page for each year. OECD has however recently published a thick volume[3] of energy balances in the IEA partly-disaggregated format covering the fifteen years 1960–74 for the United Kingdom and for each of the other 23 member countries of that Organisation. (IEA and OECD treat autogeneration and some other elements such as coke oven gas differently from the way these elements are treated in the United Kingdom). Time series tables however can be readily produced separately for selected rows and columns of such matrices.

Other problems

Electricity raises some other problems. Conventional thermal generation poses no difficulty when it comes to recording fuel deliveries to or fuel consumption by power stations and electricity generated by such fuel use. In the cases of hydro-electric generation and nuclear power stations, however, the problem is rather more complicated. Hitherto and indeed still, the convention has been that the primary fuel input for such generation could most conveniently be represented by the amount of fossil fuel that would be required to generate the same amount of electricity in conventional thermal stations. One could argue that in the case of nuclear generation, the primary fuel input should be the amount of heat released by the nuclear material since such material could be used to generate that amount of heat for other purposes. In the case of hydro-electricity, one could argue that the primary fuel input should be the amount of energy released by a given mass of water falling a given distance. It has not so far been possible to resolve these problems satisfactorily and the present convention in the United Kingdom is still that adopted ten of more years ago. (An alternative and more appropriate approach will be necessary at least when fast breeder nuclear reactors are brought into commercial operation).

This convention still leaves open the options of using the fossil fuel input required per unit of electricity generated by *all* conventional stations, or by *new* conventional stations if they were built now to replace the nuclear or hydro stations or the 'contemporary' conventional station that would have been built instead of each of the existing nuclear and hydro stations, or the *marginal* conventional station(s) that would have to be brought into service if one or more of the nuclear or hydro stations broke down. Norway adopts this last basis. SOEC and OECD/IEA use the 'all existing conventional stations' basis, and the United Kingdom uses the 'contemporary stations' basis.

Future prospects

This is not the place to describe the changes made in the Department's energy transactions matrix[4] so as to align it rather more closely with the conventions and format of the Central Statistical Office's input/output matrix for the economy as a whole. It is, however, appropriate to record that having made that move, it is hoped that it may be possible to produce a *quantitative analogue* of the transactions matrix in money terms. This would amount to being a rearrangement of the data in the full energy balance described in this article. It should then also be possible to construct a matrix of average unit values for each energy flow. These are the aspirations for the future.

Another aspiration for the future is the extension of the last section of the balance (on final use) so as to show separately the conversion losses that occur between the levels of *heat supplied* and *useful heat* for each fuel in each sector. When that can be done, the Energy Flow Chart published with the 1975 edition of the *Digest of United Kingdom Energy Statistics* will be updated and revised so as to reflect these conversion losses and the new definitions of 'primary fuel and equivalent'.

References

(1) Laading drew attention to the variety of possible meanings of 'conversion' and 'equivalence' in *Methods for establishing overall energy balance sheets:* World Power Conference 1960.

(2) *Energy Prospects to 1985* (OECD Paris 1975).

(3) *Energy Balances of OECD Countries 1960–1974* (OECD Paris 1976).

(4) 'Commodity analysis of purchases in the energy sector – 1975': Table 9 of *Digest of United Kingdom Energy Statistics* 1976.

Energy balance for th
(Heat sup

Source/Use	Primary fuels					
	Coal (1)	Crude petroleum (2)	Natural gas (3)	Nuclear electricity (4)	Hydro electricity (5)	Total (6)
Primary fuel and equivalents						
Production of primary fuels	31,430	665(1)	13,578	2,528(2)	454(2)	48,655
Arrivals	1,242	38,869	335	—	—	40,446
Shipments	453	648	—	—	—	1,101
Bunkers	—	—	—	—	—	—
Stock changes (3)	− 2,284	+ 473	—	—	—	− 1,811
Statistical differences (4)	− 80	+ 528	—	—	—	+ 448
Gross inland consumption	29,855	39,887	13,913	2,528	454	86,637
Non energy use						
Feedstock for petrochemical plants	...	− 77(5)	...	...	...	− 77
Other	...	—	...	...	...	...
Total	...	− 77	...	...	...	− 77
Inland energy consumption of primary fuels and equivalents	29,855	39,810	13,913	2,528	454	86,560
Secondary fuel production (Fuel input for conversion (−), output of secondary fuels (+)) (7)						
Petroleum refineries	—	− 39,810	—	—	—	− 39,810
Electricity supply industry	− 16,667(8)	—	− 858	− 2,528	− 454	− 20,507
Gas suppy industry	− 3	—	− 680	—	—	− 683
Coke ovens	− 5,331	—	− 3	—	—	− 5,334
Other manufactured fuel plants	− 1,108	—	—	—	—	− 1,108
Total	− 23,109	− 39,810	− 1,541	− 2,528	− 454	− 67,442
Used by energy industries						
Primary fuel producers	− 285(10)	—	− 94	—	—	− 379
Secondary fuel producers	− 41	—	− 82	—	—	− 123
Total	− 326	—	− 176	—	—	− 502
Losses in distribution	...	...	− 600	...	...	− 600
Total final inland energy consumption	6,420	—	11,596	—	—	18,016
Final inland energy consumption by user						
Iron and steel industry	72	—	367	—	—	439
Other industries	2,458	—	4,617	—	—	7,075
Total industry	2,530	—	4,984	—	—	7,514
Transport	19	—	—	—	—	19
Domestic	3,381	—	5,395	—	—	8,776
Other final consumers	490	—	1,217	—	—	1,707

(1) Crude petroleum (528 million therms) and natural gas liquids (137 million therms).
(2) Fossil fuel input required had primary electricity been produced at conventional stations.
(3) Stock fall (+), stock rise (−).
(4) Supply greater than recorded demand (−).
(5) Natural gas liquids.
(6) Industrial and white spirits, lubricants, bitumen and wax. Also includes miscellaneous products mainly for inland consumtpion but excludes small quantities derived from coal.

nited Kingdom – 1975
d basis)

Million therms

Secondary fuels								Total energy	Source/Use
Coke and breeze (7)	Other solid fuel (8)	Creosote/ pitch mixtures (9)	Petroleum products (10)	Town gas (11)	Coke oven gas (12)	Electricity (13)	Total (14)	(15)	
									Primary fuel and equivalents
—	—	—	—	—	—	—	—	48,655	Production of primary fuels
—	32	—	5,347	—	—	7	5,386	45,832	Arrivals
259	72	—	5,807	—	—	4	6,142	7,243	Shipments
—	—	—	1,418	—	—	—	1,418	1,418	Bunkers
– 242	– 50	—	+ 980	—	—	—	+ 688	– 1,123	Stock changes(3)
—	—	—	– 624	—	—	—	– 624	– 176	Statistical differences (4)
– 501	– 90	—	– 1,522	—	—	3	– 2,110	84,527	Gross inland consumption
									Non energy use
...	...	...	– 2,240	...	...	...	– 2,240	– 2,317	Feedstock for petrochemical plants
...	...	...	– 1,789(6)	...	...	...	– 1,789	– 1,789	Other
...	...	...	– 4,029	...	...	...	– 4,029	– 4,106	Total
– 501	– 90	—	– 5,551	—	—	3	– 6,139	80,421	Inland energy consumption of primary fuels and equivalents
									Secondary fuel production (Fuel input for conversion (–), output of secondary fuel (+)) (7)
—	—	—	+ 39,427	—	—	—	+ 39,427	– 383	Petroleum refineries
—	—	—	– 5,245	—	—	+ 8,757	+ 3,512	– 16,995	Electricity supply industry
—	—	—	– 270(9)	+ 753	– 10	—	+ 473	– 210	Gas supply industry
+ 3,524	—	+ 38	—	—	+ 1,072	—	+ 4,634	– 700	Coke ovens
+ 29	+ 875	—	—	—	—	—	+ 904	– 204	Other manufactured fuel plants
+ 3,553	+ 875	+ 38	+ 33,912	+ 753	+ 1,062	+ 8,757	+ 48,950	– 18,492	Total
									Used by energy industries
—	—	—	—	—	– 12	– 160	– 172	– 551	Primary fuel producers
– 118(11)	—	—	– 2,646	– 3	– 563	– 686	– 4,016	– 4,139	Secondary fuel producers
– 118	—	—	– 2,646	– 3	– 575	– 846	– 4,188	– 4,690	Total
—	—	—	—	– 36	– 75	– 654	– 765	– 1,365	Losses in distribution
2,934	785	38	25,715	714	412	7,260	37,858	55,874	Total final inland energy consumption
									Final inland energy consumption by user
2,374	—	26	1,357	4	346	344	4,451	4,890	Iron and steel industry
142	22	12	7,426	84	66	2,234	9,986	17,061	Other industries
2,516	22	38	8,783	88	412	2,578	14,437	21,951	Total industry
—	—	—	12,143	—	—	99	12,242	12,261	Transport
256	706	—	1,434	496	—	3,035	5,927	14,703	Domestic
162	57	—	3,355	130	—	1,548	5,252	6,959	Other final consumers

(7) Losses in conversion appear as negative figures in col. (15).
(8) Including coal derived electricity purchased from collieries (7 million therms).
(9) Including petroleum gases (51 million therms).
(10) Excluding coal derived electricity sold by collieries to the electricity supply industry (7 million therms).
(11) Including blast furnace gas used at coke ovens (35 million therms).

National food survey - a study of differential response based on a comparison of the 1971 sample with the Census

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Summary

The problem of non-response in the National Food Survey (NFS), as in other surveys depending on voluntary co-operation, is difficult to examine because of the lack of information about those who fail to take part. This article describes a check made on the 1971 NFS sample and identifies some of the areas in which differential response appeared. The study has been made possible by supplying the Census Offices with a list of households drawn in the 1971 NFS sample: the Census Offices identified the 1971 Population Census returns of these households and from these produced statistical tables which were supplied to Social Survey Division (SSD) of OPCS. Substantial variations in response were found in almost all the variables which it was possible to examine. Particularly noticeable were the low response rates obtained from persons living on their own, from households without children, and from those consisting of elderly people.

Introduction

Sample surveys in the personal sector which rely on voluntary co-operation are liable to suffer biases arising from variations in the willingness of different sections of the sample to take part in the inquiry. However well designed the original set sample, it is likely that the final achieved sample will not be as representative as the original. It also seems reasonable to suppose that the bias will tend to be more serious the lower the overall response. These hypotheses are, however, difficult to examine. Usually little or nothing is known about those who fail to take part in a voluntary survey.

Generally speaking, the sample frame will contain little information that can be used to investigate the possibility of differential response rates. In theory this lack of data can be overcome by collecting details about those who fail to take part and then, using this information in conjuction with corresponding data for co-operating cases, to establish the existence of differential response. In practice, this is rarely successful. Usually only a proportion of those who refuse to take part in a sample survey are willing to provide even the barest details about themselves or their households. The NFS illustrates the problem; taking the situation over a year, it will be found that while between forty five to fifty per cent of the set sample fail to co-operate in the NFS, less than half this group, usually about twenty per cent of the original sample, are willing to give a short interview. The information provided by these partial respondents has been compared with corresponding data obtained from those who participated fully in the NFS by providing both interviews and seven-day log books. For several years, reports on the survey have referred to these comparisons, concluding 'that in respect of income group, household composition and geographical distribution, these partial non-respondents are usually similar to the fully participating households' but also adding that 'they include relatively fewer larger families but relatively more wholly adult households'.[1]

These conclusions are necessarily somewhat limited, particularly as thirty per cent of the original sample are excluded from the comparisons. Furthermore, as this section of the sample includes the hard core of refusals the overall result might well turn out rather differently if only data could be obtained for the whole original sample.

Fortunately there is now available the results of an exercise in which data were made available for virtually the whole of the original sample. For this study each sample unit in the 1971 NFS sample has been identified in the 1971 Population Census. The identification was made possible by supplying the Census Offices with a list of addresses drawn in the 1971 sample. The Census Offices identified the 1971 Census returns of the households, and from these returns produced statistical tables which were supplied to SSD. The exercise was similar to one carried out at the same time on the 1971 Family Expenditure Survey (FES) sample and reported earlier.[2]

This article describes the procedure followed and

the results obtained for the NFS. Incidentally, it also provides some evidence on the second issue raised at the outset of this introductory section, namely whether differential response tends to be more serious the lower the overall response rate.

Procedure

The Social Survey is responsible, on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF), for the main operational stages of the NFS. Fieldwork and coding are contracted out to the British Market Research Bureau (BMRB) and are carried out under the supervision of SSD. The field documents, namely the seven-day log book and questionnaire are, on completion of coding, passed by BMRB directly to MAFF who are responsible for the computing, analysis and reporting. However, all work on the samples, both the design and selection, is handled directly by SSD, and it is this arrangement which has made this study possible. In order to provide information continuously, each year is divided into a series of ten-day periods. In any one period fieldwork takes place in half the forty four selected constituencies but an intermediate sampling stage restricts fieldwork to a single polling district in each constitutency.

The starting point for this exercise was the individual address list containing the addresses pre-selected by SSD Sampling Branch for fieldwork in 1971 during one basic time period in a particular intermediate sampling unit. Each list contains twenty addresses selected at random from the Electoral Register for each polling district chosen for that period. In 1971 there were seventeen such lists for each of the forty four sampled constituencies, making seven hundred and forty eight in all.

These address lists are drawn up by the SSD Sampling Branch and then passed to BMRB where they are allocated to the interviewers responsible for fieldwork in the selected constituencies. During the course of this fieldwork each interviewer regularly notes on her address list details of the outcome at each address. She indicates whether the housewife co-operates fully by keeping a food diary for seven days as well as giving an interview, or whether the housewife is interviewed only or refuses, or whether no contact is possible. After checking at the BMRB head office the lists are returned to SSD where they form the basis of regular response returns to MAFF. The lists as issued by SSD give the surnames of all those registered at the selected address in the Electoral Register current at the time. These address lists are separate from the field documents containing the collected data, and are seen only by SSD and BMRB; MAFF do not see them. The field documents are passed by BMRB to MAFF once the coding has been completed. The purpose of these arrangements is to safeguard the confidentiality of the data and the identity of those who take part in the NFS. These arrangements continued throughout 1971 and were not disturbed in any way by the sample check described in this paper, but as an additional aid to identification in the 1971 exercise the interviewer was also asked to note the surname of the housewife irrespective of whether or not her name appeared on the address list.

As in the corresponding FES exercise[2], the Census Division of OPCS and the General Register Office of Scotland agreed to match the 1971 address lists with the census data and from this matching provide SSD with certain tables. The Census Offices did not see the NFS field documents containing the collected data, nor did SSD see the census returns.

Success of the matching operation

Altogether the Census Offices attempted to match 14,280 cases. This was virtually the whole sample after excluding institutions and also addresses where no one was resident at the time of interview. The results from the matching operation are summarized in Table 1 for the year as a whole. Identification was possible in ninety two per cent of cases, as compared with ninety four per cent for the FES. On the other hand, the proportion where the address could be identified but the household had changed between census night and interview was 2·6 per cent, about the same as in the FES study (2·7 per cent). The main difference from the FES occurred in the non-co-operating cases, where 8·3 per cent could not be identified against only 3·5 per cent in the FES. In both cases surnames registered at the selected address were provided by SSD Sampling Branch. The only slight difference in procedure was that FES interviewers were asked to confirm whether the people listed at the non-co-oper-

1971 NFS sample matched with the Census

Table 1

	Co-operating households	*Refusals and non-contacts*	*Whole NFS sample*
Households identified in 1971 Census	7,117	6,065	13,182
Address identified, different household	168	201	369
Not identified	161	568	729
	7,446	6,834	14,280
	per cent	*per cent*	*per cent*
Household identified	*95·6*	*88·8*	*92·3*
Different household	*2·3*	*2·9*	*2·6*
Not identified	*2·2*	*8·3*	*5·1*
	100·0	*100·0*	*100·0*

ating household were still living at the address, while in the NFS the interviewer had to note only the surname of the housewife. Each of the four calendar quarters produced similar results but, as in the FES, the second quarter gave the best match (ninety four per cent) and the fourth quarter the poorest (ninety per cent).

The comparisons that follow were made on as large a part of the original sample as possible, that is on 13,551. This includes the 369 in the second row of Table 1 where there had been a change in household either because the census household had moved out of the address by the time it appeared in the NFS sample, or because the reverse situation had occurred. In the absence of the actual NFS cases, the characteristics of the corresponding census households were taken as the best guide available to those of the NFS cases. This sub-sample of 13,551 is slightly biased in favour of co-operating households. It shows an overall response rate of 53·8 per cent compared with 52 per cent obtained for the whole NFS in 1971.

Differential response found from the census check

The matching described above produced two sets of distributions, one of co-operating households and the other of non-co-operating cases, each pair of distributions classifying the 13,551 cases by a census variable. The NFS, being a household survey, these variables, seventeen in all, refer to an attribute of the household or to a particular member such as the head (HOH) or housewife. Each pair of distributions has been compared using X^2 as a measure of the association between the two, with the results shown in Table 2.

Differential response as measured by X^2

Table 2

		X^2	*Degrees of freedom*
1	Household type	248	4
2	Number of household members in employment	106	5
3	Number of persons usually resident in household	364	9
4	Car ownership	88	3
5a	Social class of HOH	114	6
5b	Socio-economic group of HOH	157	18
6	Marital condition of HOH	238	4
7a	Educational attainment of HOH	29	3
7b	Educational attainment of housewife	17	3
8a	Household tenure	21	4
8b	Availability of inside WC	55	3
9	Employment status of HOH	41	5
10a	Year of birth – HOH	329	11
10b	Year of birth – housewife	358	12
11	Number of household members under 15	344	5
12	Sharing of dwelling	15	1
13	Occupation of HOH	172	27

All the values are high, some very high indeed, suggesting the existence of a considerable degree of differential response. All are well above the conventional levels of significance, although it is not possible to apply the usual tests because of a design effect due to the multi-stage nature of the NFS sample design. This design effect is produced by the geographical clustering of households through the need to confine each interviewer's quota in a period to a single polling district. The correct allowance is not known but the apparent values of X^2 are so high that no corrections, whatever they are, are likely to reduce them to an insignificant level.

Variation of response rate with certain characteristics

The detailed data showing response rates for the separate categories defined by each of the seventeen variables of Table 1 are shown in the Appendix. It must be emphasized that all variables and categories used to classify each individual household are based on information obtained in the 1971 Population Census; none relates to data obtained in the course of the NFS. Inspection of these tables suggests a number of tentative conclusions as the the existence and direction of biases in the achieved sample of co-operating households. First, it will be seen that there are several groups where response is well below the mean level for 1971, that is below fifty four per cent.

Households consisting of one person or of several unrelated people had an average response of only forty per cent (Tables A1 and A3). Households sharing a dwelling (Tables A8b and A12) had almost as poor a response. These were the lowest rates found for any of the main categories. There was also a small group of cases, some twenty to thirty, where response was even lower; these are households classified in some tables as DK cases. They appear to have been as unco-operative in the Census as they were in the NFS. A larger group showing similar features appears in Table A13 at Occupation Order XXVII. People over seventy also tended to be unco-operative but this appears to be part of the tendency for response to decline with age (Table A10). Apart from the groups already mentioned, the only others to display response markedly below the average are households where there was no one in employment (A2), those where the head of household was in SEG 2·1 that is employers in small establishments (Table A5b) and where the HOH was single, widowed or divorced (A6).

At the other end of the response distribution there are hardly any groups where response is as outstandingly high as the lowest response rates are low. Only where the HOH was between twenty six and thirty five (A10) or the housewife twenty one to thirty, or where there were two or three children in the household (A11)

did the response rate reach sixty seven or sixty eight per cent.

Apart from these cases the variation of response with different categories is not large, being within the range fifty to fifty eight per cent. The data show few cases where there is a definite regression relationship between response and the census variable; there is a declining relationship between response and social class (A5a) and also a tendency towards improvement in response with the number of children up to 3 (A11). There is also a very slight improvement in response with educational qualifications. The most marked relationship, however, appears with age. There is a loss of 2·23 percentage points for each five years in age for the HOH, and 2·24 for housewives. Although the correlation coefficient between response rate and age group is high (0·95), the age regression accounts for only about two per cent of total response variance.

The relationship between the level of response and the extent of bias

The second issue mentioned at the commencement of this article was the possibility that differential response may be more serious the lower the overall response. Direct evidence on this is not likely to be readily forthcoming since it would require the kind of exercise described in the paper to be repeated for a series of separate household samples each co-operating in the NFS, but producing different levels of response. What is available, however, is the parallel exercise carried out on the FES sample for 1971.[2] The two surveys produce response rates which are rather different in level; the NFS achieves between fifty and fifty five per cent the FES about seventy per cent. Comparison of Table 2 above with the corresponding X^2 values for the FES (Table 5 of reference[2]) immediately shows certain pronounced differences. Most X^2 values obtained for the NFS are greater than those for the FES, some are considerably greater. In only two cases, household tenure and employment status, is the reverse true. It seems unlikely that sample design can account for the differences between the two sets of X^2. The use of polling districts in the NFS as compared with wards in the FES means a greater clustering, and theoretically at least, a larger design factor for the NFS. This does not seem sufficiently important to explain away the largest differences in the pairs of X^2 values. Apart from this reservation these results go some way to justify the general hypothesis, namely that a lower response is associated with an increased susceptibility to differential response and bias. However, the feature is not uniform throughout the different variables, but has affected some much more than others. The most substantial differences in the two values of X^2 occur in variables concerned with household composition, structure and size and whether the dwelling is shared (variables 1, 2, 3, 8b and 12 of Table 2). There is no ready explanation as to why these particular variables should display so much greater differential response than the others. One can do little more than hypothesize that, like the lower response of the NFS, it arises from the different circumstances and conditions under which the survey is carried out. The appeal of the NFS is to the housewife and her food purchases, whereas the FES is concerned with each household member and the whole field of domestic expenditure. At the same time there are considerable differences in the way the two sets of fieldwork are organized so as to produce continuous flows of data.

References

(1) *Household Food Consumption and Expenditure:* 1973, *Annual report of the National Food Survey Committee* (HMSO 1975) (Price £2·33) (p 157, para 7 and p 158, footnote).

(2) 'Family Expenditure Survey. A study of differential response based on a comparison of the 1971 sample with the Census', by W F F Kemsley. *Statistical News No. 31*, Nov. 1975.

Appendix

Response rates (r) for the sample breakdowns defined by the 17 variables of Table 2

All definitions relate to Population Census 1971
(n = base of response percentages)

A1 **Household type**

	n	r
No family	2,786	40
1 family, no others	9,705	57
1 family, others	863	58
2 families, no others	139	55
Others	58	53
	13,551	54

A2 **Household members in employment**

None	3,049	46
1	5,255	56
2	3,798	55
3	1,083	53
4	297	57
5+	69	63

A3 **Persons usually resident in household**

1	2,273	40
2	4,332	50
3	2,562	58
4	2,383	62
5	1,134	63
6	502	64
7	186	64
8	75	63
9+	71	55
DK	33	18

A4 **Car ownership**

None	6,553	50
1	5,784	58
2 or more	1,184	55
DK	30	20

A5a Social class of HOH	*n*	*r*
I Professional etc occupations	548	60
II Intermediate	2,215	56
III Skilled: non-manual	1,464	53
manual	3,996	58
IV Partly skilled	2,172	54
V Unskilled	883	48
Not classified	2,273	45

A5b Socio-economic group of HOH		
1 Employers and managers in large establishments	457	59
2.1 Employers – small establishments	295	45
2.2 Managers – small establishments	688	55
3 Professional – self-employed	95	59
4 Professional – employees	453	61
Intermediate non-manual:		
5.1 Ancillary workers	618	60
5.2 Foremen and supervisors	96	58
6 Junior non-manual	1,558	54
7 Personal service workers	240	48
8 Foremen and supervisors – manual	452	58
9 Skilled manual workers	3,061	58
10 Semi-skilled manual	1,507	55
11 Unskilled manual	858	47
12 Own account (not professional)	434	52
Farmers:		
13 Employers and managers	153	61
14 Own account	150	59
15 Agricultural workers	163	63
16 Members of Armed Forces	96	63
Not classified	2,177	45

A6 Marital condition of HOH		
Single	1,023	41
Married	10,008	58
Widowed	2,242	44
Divorced	246	45
DK	32	19

A7 Educational attainment

	HOH		Housewife	
	n	*r*	*n*	*r*
Degree	538	59	172	53
Other higher qualification	486	60	544	62
A level or equivalent	450	61	354	56
Unqualified or none stated	12,077	53	12,481	53

A8a Household tenure		
Owner occupied	7,006	54
Council or New Town	4,169	54
Rented unfurnished	2,045	51
Rented furnished	293	48
DK	38	29

A8b Availability of inside WC		
Sole use	11,748	55
Shared	265	40
None	1,509	48
DK	29	21

A9 Employment status (1) of HOH		
Self-employed:		
with employees	511	51
without employees	678	54
Employees:		
managers	1,147	56
foremen	686	58
others	9,427	54
na	1,102	46

(1)Related to main employment in week before Census night or to the most recent job if retired or out of work.

A10 Age distribution

	HOH		Housewife	
	n	*r*	*n*	*r*
Age in 1971				
16 –	26	58	100	52
21 –	455	65	768	66
26 –	844	67	941	68
31 –	1,017	67	1,074	64
36 –	1,064	59	1,165	59
41 –	1,221	55	1,238	55
46 –	1,355	56	1,347	56
51 –	1,287	53	1,166	50
56 –	1,386	49	1,351	53
61 –	1,488	51	1,338	49
66 –	1,231	50	1,102	49
71 –	2,145	42	1,929	41
Not known	32	19	32	19

A11 Number of children (under 15)		
None	8,794	48
1	1,846	62
2	1,790	65
3	680	68
4 or more	410	63
DK	31	16

A12 Sharing of dwelling		
Households not sharing	13,279	54
sharing	272	42

A13 Occupation order of HOH

Definitions as in Population Census 1971

I	Farmers, fishermen, etc.	607	61
II	Miners and quarrymen	161	53
III	Gas, coke and chemicals makers	71	56
IV	Glass and ceramics makers	19	47
V	Furnace workers, etc.	127	50
VI	Electrical workers	302	57
VII	Engineering workers n.e.c.	1,605	58
VIII	Woodworkers	257	58
IX	Leather workers	71	48
X	Textile workers	147	50
XI	Clothing workers	124	50
XII	Food, drink and tobacco workers	163	52
XIII	Paper and printing workers	137	61
XIV	Makers of other products	130	49
XV	Construction workers	391	58
XVI	Painters and decorators	189	59
XVII	Crane drivers, etc.	220	59
XVIII	Labourers n.e.c.	700	48
XIX	Transport and communications workers	893	57
XX	Warehousemen, etc.	346	56
XXI	Clerical workers	944	52
XXII	Sales Workers	871	51
XXIII	Service workers, etc.	894	51
XXIV	Administrators and managers	686	58
XXV	Professional, technical workers, etc.	1,233	61
XXVI	Armed forces	96	62
XXVII	Inadequately described occupations	1,057	43
	na	1,110	46

The EEC's farm accounts network

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In 1965 the Council of Ministers acting on a 1963 proposal from the Commission, adopted a Council Regulation (79/65/EEC) setting up a farm accountancy data network (FADN, the French equivalent acronym being RICA). Subsequently there have been some twenty implementing regulations, mainly by the Commission. The main purpose of the network was to provide comparative information on the financial situation in farming year by year. This information was required primarily to help the future development of the common agricultural policy, for example, by identifying the types and sizes of farms which might call for special attention at Community level. The results were also to form the basis of part of the annual report on the agricultural situation by the Commission to the Council; the latest of which is the *Agricultural Situation in the Community 1975 Report*, Part II (Com 75/601–10 December 1975). A secondary aim was to enable financial analyses of the operation of different categories of farm businesses to be made. Progress in this sphere, including measurement of the profitability of individual farm enterprises, has however been limited.

It was envisaged that setting up a suitable harmonised network in the Six original member states would take time and that, in the first few years of the operation of the network, only a limited number of farm types would be included. Substantial difficulties were indeed experienced, not least by those member states which already had comprehensive national farm account networks in adapting their procedures to the new Community scheme. Conversely, several of the member states starting *ab initio* made relatively good progress. Development was slow both in establishing the network and in processing of the data and, although results began to become available from 1968, no data were published until September 1972 when the first three years results 1968, 1969 and 1970 appeared in one volume. Subsequent progress has been noticeably faster, despite the need to assimilate the three new member states from 1 January 1973, and the 1974 results appeared in the summer of 1976.

The basic organisation of the network is through a five-tier system.

The Community committee

The strategic development, general supervisation and scrutiny of the results, etc. is in the hands of the Farm Accounts Community Committee which meets about eight times a year mostly in Brussels. Before any new measures are introduced, the committee votes on them in accordance with the normal Community voting procedures. The Community committee is the counterpart of the management committees which, for example, organise the market in commodities subject to the CAP such as milk, cereals or beef. The members comprise the Commission, which also provides the chairman, the Community's statistical office (SOEC) and up to five officials from each member state.

The liaison agencies

A liaison agency, generally the Ministry of Agriculture, is designated by each member state and is charged with supervising the overall running of the network in each member state. It acts as a liaison body between the Community committee and the regional committees concerned with detailed implementation of the regulations. It is also responsible for assembling, checking and dispatching the completed farm accounts to the appropriate directorate in Brussels (DG VI – G3).

Regional committees

The regional committees are the link in each country between the grass roots (farmers and accountancy agencies) and the liaison agency. They comprise up to twelve members representing the liaison agency, farmers, accountancy agencies and, where appropriate, local bodies concerned with agricultural economies, advisory services, education, etc. The number of regional committees per member state varies from one in the smaller countries (Netherlands, Denmark, Belgium, the Republic of Ireland and Luxembourg) to six in the United Kingdom and twenty-one in Italy. Their duties include determining the actual numbers of farms within each type and size category in the region; fixing the appropriate sample for each category within their quota, which includes an allowance of up to twenty per cent to allow for fall-out of co-operators between selection before, and preparation of the

information after, the account year has ended (in practice this fall-out averages about fifteen per cent); and selecting farms typical of the region. Farms are selected either on some random basis (for example random replacements each year, or as a completely new sample every five years) or where this is not practical, on a representative basis.

Accountancy agencies

Comprehensive physical and financial data covering all the agricultural activities on each farm are collected by accountancy agencies. These are generally government or semi-government agencies, except in Germany where most are private recording agencies and in Great Britain where universities and colleges of agriculture are commissioned by the Ministry of Agriculture, Fisheries and Food and Department of Agriculture for Scotland.

Farmers

Participation by individual farmers in the network is entirely voluntary and an assurance is explicitly given that their farm account shall be treated as anonymous and that no information may be disclosed for taxation purposes.

Coverage

At the outset, the network aimed at collecting ten thousand accounts or a quarter of one per cent of farms within the field of survey. On the accession of the three new member states, this total was increased to thirteen thousand six hundred, of which the UK quota was one thousand six hundred. In 1974 the Commission proposed a substantial increase in quotas, particularly in Italy and France where the coverage was notably thin. After lengthy discussion, a figure of twenty eight thousand was agreed as the target for 1978. With the steady decline in the number of farms in most regions and the reduction in the field of coverage, this is likely to represent about one per cent of the field of survey by the early 1980s.

In most member states, even when the 1978 targets have been reached, the quotas for FADN will be sub-samples of the total number of accounts collected in the national networks often set up before the Community system was established. For example, in the United Kingdom less than half the farm accounts in the national surveys will be sent to the Commission. This arises in the main because a number of farms in national networks are ineligible for FADN, for example if they are below the lower limits of labour requirements or actual size (see below).

One of the early regulations stipulated that every category of farm selected in the network had to be represented by at least twenty four farms. This severely limited the opportunity to have a representative sample of all types, particularly for those countries with a small quota but a high proportion of the total number of possible categories, and the regulation has been rescinded. The network is now restricted to holdings which are 'market orientated'; require at least 0·75 annual labour units that is the equivalent of not less than 0·75 persons including the farmer and his family; and exceed five hectares except for intensive holdings.

Total number of farms and number in the farm accounts network – 1973

	Estimated total number of farms over 1 hectare(1) (2)	*Total number in field of survey*(2)	*1973/74*		*Possible 1978 quotas*(3)
			Quotas	*Number of completed records*	
France	1,300,000	1,022,485	3,000	3,109	6,000
Germany	968,000	581,618	2,000	2,017	3,500
Italy	2,170,000	922,497	3,500	3,241	8–15,000
Belgium	114,000	84,778	550	581	870
Luxemburg	6,000	4,732	50	52	125
Netherlands	150,000	122,938	900	898	1,500
The original Six	4,708,000	2,739,048	10,000	9,898	(24,000)
Denmark	136,000	118,266	1,450	1,407	1,550
Ireland	270,000	112,900	550	560	700
United Kingdom	287,000	160,973	1,600	1,529	1,650
The Community of Nine	5,400,000	3,131,187	13,600	13,394	(28,000)

(1) Including small farms below the threshold of FADN, but excluding statistically insignificant in the UK.
(2) Based on latest statistics which refer to 1970 for some countries.
(3) A final allocation will be made on the basis of the 1975 Community survey of agriculture.

Classification of farms

For the purposes of the network, farms are classified into five main types of farming (split into twenty six sub-types) on the basis of the proportion of gross output in each production activity or enterprise on the holding. Each type is further subdivided into five sizes of farm categories measured in hectares, of which the top open-ended category is fifty hectares and over. These size categories reflect the preponderance of small farms in the Community but they are not well suited to the UK where the average size of full time farm is much larger and exceeds a hundred hectares. One of the sub-types of farming is milk and/or cattle rearing and fattening (Code 336); in the three new member states this sub-type is extremely heterogenous and, for example, grouped hill cattle farms with intensive lowland dairy units. At the request of these states, further sub-divisions were made into milk, cattle, or mixed milk and cattle. Sub-divisions were also introduced in the classification of arable farms, vineyards and pig farms and the total number of types rose from twenty six to forty nine. These changes are interim measures designed to bridge the interval until a new classification based on financial measures can be agreed within the Community. The new classification will, it is hoped, be used throughout the Community for most, if not all, farm classification work, including analyses of the 1975 Community agricultural survey.

The uses of the network

The existence of FADN facilitates an assessment of the impact of the CAP on farm incomes. Over the years the network results have played an increasingly important role in the annual price fixing discussions in Brussels held in the first quarter of each year. The Council and Commission agreed during the early 1970s that the aim of CAP price policy should be to maintain incomes of modern farms, these being defined as farms which had achieved incomes comparable with outside earnings. To ensure this parity of agricultural earnings *vis-a-vis* outside comparable incomes is maintained, the Commission have developed an 'objective method'. The essential features of which are: first all farms in the network in the latest year for which data are available with incomes within a range of eighty to one hundred and twenty per cent of the comparable income are identified; secondly the cost structure of these modern or reference farms in each member state are aggregated; then changes in costs and in comparable income in each member state between the base year and the year preceding the price fixing (at present a period of three years) are assessed by the Community's statistical office (SOEC) and applied to the cost structures. This gives the average gross increase in prices in each member state necessary to maintain parity of agricultural incomes.

A number of modifications are then made to this average increase for each member state, including deductions for improvements in technical efficiency and for any price increases already given during the three year period, and adjustments for changes in exchange rates; the latter played a particularly important part in the 1976 discussions. Finally, the results for each member state are weighted together to give an indication of the necessary price change needed in the Community as a whole. In the Commission's proposals to the Council, this overall average may be adjusted to take account of other factors such as supply and demand, market trends etc. as does the breakdown between commodities. The Commission's proposals set the tone for the discussions in the Council of Ministers. In 1976 the overall price increase finally agreed by the Council matched almost exactly the Commission's proposal, but in previous years there have been appreciable divergencies.

The results

The results from the network are prepared and analysed by the Commission and after scrutiny by the Community committee are published in an official Commission Report. The results for 1968–1970 appear in Sec 72 2800, those for 1971 and 1972 in Com 75 335 and for 1973 in Com 75 683. These reports summarise the information on the physical and financial details for each type and size of farm represented in the results by not less than ten farms in a Region in the year under consideration. The data include labour income per annual labour unit, this being the main income concept of the Community. It is the average reward for all working on the farm, including the farmer and his family, after deducting from gross production all costs, including a notional return on tenants capital.

Because the network does not as yet cover a majority of the farming categories which have been identified, the Commission have been reluctant to produce weighted national or Community results. All averages are therefore simple arithmetic means of the sample data and in those member states where it has been the policy to stratify the sample, some of the results, particularly those on a per farm basis, need to be treated with caution.

In recent years the reports include a second set of tables giving indices of change in the same physical and financial indicators for a two year identical (or constant) sample of farms. Farms in the identical sample are classified by their organisation in the second year in which they are in the sample. The results for any category with at least five farms are published.

Cost of the survey

No details are available of the total costs falling on member states of collecting and processing farm accounts. The Commission does, however, make a payment of (currently) forty units of account per correctly completed record, but this is intended simply as a contribution towards the costs incurred in transmitting an account to Brussels.

The future

The network is in a continuous state of development and over the next few years substantial improvements can be expected in its coverage, in the harmonisation of definitions and in the processing and publication of the results. There is also the possibility that, with the help of member states, the Commission may be able to update the results and produce forecasts of the current year's situation on different types of farm.

Further details of the FADN including a booklet issued in 1973 may be obtained from Economics Division I, Ministry of Agriculture, Fisheries and Food, 6th Floor, 3 Whitehall Place, London SW1.

Six o'clock one early August morning in Parliament Square

Delivery of a second processor to augment the CSO/Treasury's computer installation. The extra power is required to provide for Treasury Economic Modelling and CSO expansion of activity on its Macro Economic and Industrial Data Base.

Sea transport in the balance of payments

A. A. Croxford, *Statistician, Central Statistical Office*

Introduction

The balance of payments estimates for shipping services have been revised recently following the receipt of the results of the latest of the series of quadrennial surveys of British shipping conducted by the General Council of British Shipping (GCBS, formed by the recent amalgamation of the United Kingdom Chamber of Shipping and the British Shipping Federation). This article describes the treatment of shipping services in the balance of payments and how the estimates are obtained from the quadrennial surveys and other sources, and also indicates how recent changes to the quarterly surveys run by the GCBS are expected to lead to better estimates. The figures themselves appear quarterly in summary form in *Economic Trends* and a more detailed presentation is given in the annual United Kingdom Balance of Payments Pink Book.

The sea transport account is one of several relating to services in the invisible sector (other such services include civil aviation, travel, banking, insurance, civil engineering, royalties, etc.). The account is concerned with the earnings and operating expenses abroad arising from the provision of sea transport services to overseas residents and the corresponding earnings and expenses of overseas operators in their dealings with UK residents. The exact form of the main accounts, which are described below, is shown by the table on page 31. The table indicates the various types of earnings that are received, such as freight on exports and charter receipts. The various operating disbursements are described separately in this article but are shown in total in the table. The borderlines between the sea transport and related accounts are not always obvious. It will be seen that the table does not include the purchases abroad of ships themselves (which are included in the visible trade figures) but does include the fares paid by visiting tourists on international routes, for example on channel ferries, which are included here rather than in the travel ('tourist') account; the latter relates to services to overseas visitors provided within the United Kingdom itself. It is not the intention in this article to list all such demarcation problems, but simply to acknowledge that they exist and to mention that they and their solutions are described in the Pink Book.

Within the sea transport figures are three separate subsidiary accounts: (i) for ships owned by UK owners, (ii) for ships chartered from abroad by UK companies, and (iii) for ships operated by overseas operators.

In addition to these three items there is a memorandum item which sets out the earnings of UK companies from services to other UK residents: although not a balance of payments item, it is included as an indication of the payments which would be necessary if the UK shipping industry did not exist. A subsidiary table is also included in the Pink Book which sets out in more detail the operations of UK companies, in particular separating their tanker services from other activities. This article is concerned however only with the three basic accounts; UK operators covering accounts (i) and (ii) which relate to ships operated by companies resident in the United Kingdom and overseas operators.

United Kingdom operators

Accounts (i) and (ii), which both relate to UK operators, rely on basic data produced by the GCBS. The GCBS, in co-operation with the Bank of England, the Department of Industry and the Central Statistical Office, conducts a series of enquiries among its members. The main enquiry is held at four-yearly intervals and goes into a considerable amount of detail, is supplemented by annual and quarterly enquires of less detailed nature. Each type of enquiry is discussed in turn.

Quadrennial enquiry

The most recent four-yearly enquiry, of which the full analysis has recently been completed, related to operations in 1974 and followed broadly the pattern of its predecessors. It was addressed to every member of the GCBS and consisted of a separate set of forms, each with its own distinguishing colour, for liner ships, container ships, tramps, tankers, 'OBO' (oil/bulk/ore) carriers, and off-shore supply vessels. For analytical purposes, separate balance of payments accounts for the ships owned by UK companies and for those

which are chartered from foreign owners, are shown. Shipping companies, however, do not keep records of the balance of payments earnings and expenses of each ship separately, but can and do supply these figures in total in the enquiry. These, together with details of the usage of each ship, are used to estimate the required balance of payments entries as explained in the next paragraph. Freight earnings for transport between each pair of foreign countries, passenger receipts in each foreign country, and expenditure abroad (disbursements) on such items as bunkers, port charges, etc., are each recorded in total, but for each ship the enquiry calls for extensive details: its tonnage and the number of months it was in use by its owner during the year are recorded, as are any earnings from its chartering abroad, or (in the case of foreign-owned ships) any charter payments abroad. (A ship chartered from overseas could subsequently be re-chartered to another overseas company, giving rise to a charter receipt to offset the original charter payment.)

In order to split the various receipts and disbursements abroad connected with freight operations between those involving UK-owned ships and those involving ships chartered from overseas, the GCBS makes an individual estimate for each ship-type: using the detailed data in the survey, the total ship-usage in the year is calculated separately for owned ships, those chartered from other UK owners and those chartered from overseas. This ship-usage, usually called 'effective tonnage', is measured in ton-months – the tonnage of each ship multiplied by the number of months it is in use. The effective tonnage of ships chartered from overseas is expressed as a proportion of the whole, and the total receipts and expenditure figures for each ship-type are divided in the same proportion. The separate estimates for each ship-type are then aggregated.

In estimating passenger revenue from overseas, the country of residence of passengers, which should be the criterion by which their expenditure is entered in (or excluded from) the balance of payments, is not known by shipping companies, and it has to be assumed that all passengers pay their fares in their own country of residence. The separation in the enquiry of fares paid in the UK from fares paid elsewhere is therefore the only guide to the numbers of overseas residents travelling as passengers, and their fares paid. The subdivision of this total into 'visitors to and from the United Kingdom' and 'others' is made by reference to the International Passenger Survey (which is described more fully on page 30, and which produces an estimate of the numbers of 'visitors to the UK' and of those entering the UK for a more permanent stay). The fares for non-visitors to the UK in the sea transport account relate to this latter group, together with all those who travel between two foreign ports on UK ships and can not therefore be covered by the IPS.

Annual surveys

The analyses described above produce a complete picture of the effect of UK shipping operations on the balance of payments which is renewed every four years. Between these very finely-detailed enquiries a simplified version of the same enquiry is held annually. It is addressed to a sample only of the shipping companies (although it is ensured that all major companies are included) and the questions themselves are reduced in complexity. For example, the company is asked merely to give its total freight earnings (on imports, exports and cross-trades separately) in place of the country by country analysis in the quadrennial enquiry. Similar abbreviations are made for passage money received and for disbursements abroad.

The results of this sample enquiry, which are usually available six months after the end of the year, are linked to those of the most recent quadrennial survey by comparing the figures for the sampled companies with their earlier results. For any particular item it is assumed that the change in earnings (or payments) will be proportional to the change in the UK total effective tonnage, multiplied by any change in earnings/ton (or payments/ton) observed in the figures for the sampled companies.

By this method estimates are obtained for the years in between the quadrennial surveys. There is no parallel running; the two surveys are not held in the same year, and therefore no direct comparison of the results of the two surveys can be made.

A watch is kept, however, on the changing values of the earnings/ton figures for different types of ship over the years, and these have so far indicated that the progression between any two quadrennial surveys is adequately charted by the results of the annual sample enquiries.

Quarterly surveys

In order to provide balance of payments estimates on a quarterly basis for publication in *Economic Trends*, the GCBS on behalf of the Department of Industry and the CSO conduct an enquiry to a small sample of shipping firms, excluding oil companies. Until 1976 this enquiry contained only four questions, which are reproduced in full below:

(*a*) Aggregate freights in foreign trades;
(*b*) Time-charter receipts from non-UK charterers;
(*c*) Time-charter payments to non-UK owners;
and
(*d*) Aggregate of other foreign disbursements.

The assumptions on which this return was based were that changes in overall earnings by the sampled firms, over a short period of time, were reasonable indicators of movements as a whole. The survey has in the past, however, been found to produce results which when totalled over a year do not correspond well with those of the annual survey. This is partly because no account at all can be taken of fleet size (so that earnings/ton cannot be calculated) and partly because the sample firms may have fleets of different usage patterns from those chosen in the annual survey.

To counteract these effects the procedure for the quarterly enquiry was changed at the beginning of 1976. The major change has been to address the enquiry to the same sample of companies that completed the previous enquiry, thereby eliminating the problem of different fleet patterns, and a further change has been to model the questionnaire entirely on the annual version, but without asking for separate details for each ship or ship type. It can reasonably be assumed that the fleet in the sample will not have differered greatly from the previous year, and a grossing-up procedure can be employed which relates back directly to the last full quadrennial survey on exactly the same lines as that described for the annual enquiry.

The annual results for 1976 will provide the first test of the effectiveness of this new system.

The article now turns to the third of the main accounts listed on page 27, which is concerned with shipping operated by overseas operators.

Overseas operators

The 'profit and loss' account (in balance of payments terms) of overseas operators is as it were a mirror image of that for UK operators. Their operating expenses in this country are a UK balance of payments credit, while their income from UK residents or companies is a UK balance of payments debit. There are no means by which overseas operators themselves can be approached for this information; they are numerous and worldwide, and even if they could be traced they could not be expected to have kept such detailed accounts that they could isolate with precision the UK transactions within all their overseas business.

The Department of Industry and the Bank of England have therefore to piece together the required information from a variety of British sources, and there is no doubt that this side of the account continues to present considerable difficulties. One difficulty in particular, which obscures any picture of the balance of payments transactions involving foreign shipping, is that each ship is most usually and clearly recognised as British or foreign by the flag it is flying. This flag, however, indicates the country in which the ship is registered but not necessaily the nationality of its present operators: the ship may be registered with a flag of convenience, or may well be chartered from another country. The result of this practice is that ships recognised as 'foreign' by various UK shore enterprises (and therefore included in their returns of balance of payments transactions) include some ships which are in fact British-operated: conversely some balance of payments transactions with foreign-operated ships go unnoticed because the ships are flying the British flag.

In describing the sources from which the account for overseas operators is put together it is convenient to consider first the various types of credits and then to go on to the different debit entries.

Credits

On the credits side, the single item which is shown in the Pink Book is 'Disbursements in the United Kingdom of overseas operators'. This had a total value in 1975 of £372 million, and was assembled from a variety of sources.

First, all oil companies which supply oil to vessels of foreign flag make a quarterly return to the Bank of England of the amounts received. The total in 1975 was £55 million. Secondly, the ship repairing industry makes a quarterly return to the Business Statistics Office of the total value of work done. This return does not distinguish between UK and foreign vessels, but an enquiry conducted by the National Ship Repairers' Association obtains annually from its members an estimate of the proportion of this work performed on foreign ships, which is used in conjunction with the BSO enquiry to estimate the current value of the work. The NSRA also produced an estimate, in 1972, of the proportion of this work which might be described as improvements rather than repairs, and this proportion is deducted from the repairs figures and added to that for visible exports. The value of repairs estimated by this method in 1975 was £22 million. Thirdly, Trinity House reports to the Department of Trade the total receipts from foreign vessels for light dues (which in 1975 came to £11 million). Fourthly, the expenditure ashore by ships' crews, which clearly cannot be measured with precision even by the crew members themselves, is estimated at intervals. A Home Office enquiry addressed to masters of foreign ships (again identified only by their flag) asks for the average amount paid out in sterling to members of the crew. The total number of crew members on every ship is known, and the total amount paid to crew members of foreign ships can be calculated. It is assumed that the total amount paid out is all spent, and that any British crew members on such ships (whose expenditure should not have

been included but which is not known) are compensated for by foreign crew members on British ships whose expenditure is not included. In the periods between the Home Office enquiries estimates are made which take account of changes in crew numbers and of the retail price index. In 1975 the figure for this item was £32 million. Fifthly, a periodic enquiry is made of ships' chandlers on the amount of goods sold to vessels of foreign flag. The most recent was held in respect of 1975, by the trade association concerned (The British Association of Ships' Suppliers). In the years between enquiries an estimate is produced which scales up the most recent results by reference to the tonnage of foreign ships visiting the United Kingdom and the wholesale prices index. The estimate for 1975 was £18 million.

Sixthly, it is known that foreign earnings are derived from towage charges, but there is no direct source of information for this item. An estimate of several years ago is increased in line with the pilotage estimate, and it is again assumed that this will approximately represent the year-to-year changes. The 1975 estimate was £6 million.

Finally, there is the major area of expenditure by foreign vessels on port charges and handling costs. The estimated total in 1975 for this was £161 million, thus representing over forty per cent of all disbursements. There is no direct source of data for this estimate, and the most that can be hoped for is that year-to-year changes will be adequately reflected by the practice of scaling up an earlier estimate *pro rata* to the tonnage of cargo handled and the stevedores' wage index produced by the National Dock Labour Board.

Debits

By far the major item in the account is that of payments to overseas operators for freight on the carriage of goods imported into the United Kingdom. In 1975 the total value of such payments was estimated at £811 million.

The total value of freight charges (that is including payments to British and foreign carriers) is estimated by the Department of Industry for all imported goods except oil using freight rates obtained from a variety of sources.

Using their survey described earlier, the GCBS obtain from their members their total earnings from the freighting of British imports, and this is subtracted from the grand total to give an estimate of the earnings of foreign-operated ships. It should be noted that the GCBS enquiry relates specifically to ships which are either UK-owned or chartered from overseas, and excludes UK-owned ships which themselves are chartered out overseas. The estimate for the freight earnings of foreign-operated ships does not therefore have to make use of that unreliable indicator, the flag of the vessel. This method of estimating foreign freight earnings, as a residual after subtracting known UK earnings from the estimated total, does not need to be followed for oil tankers. The number of importing firms, that is oil companies, using tankers is small, and a direct assessment of the payments to overseas operators is made by each oil company and reported to the CSO *via* the Bank of England.

The other component of earnings by overseas operators is that of fares paid by UK passengers. The basic framework of these estimates is provided by the results of the International Passenger Survey, a multi-purpose UK survey of international passengers which provides material for a large number of uses, and which is operated by the Office for Population Censuses and Surveys on behalf of the Department of Industry. A sample of passengers arriving and departing by sea or air on various routes is interviewed in depth at UK ports, their questioning being designed to yield results on migration, the pattern of travel visits and the expenditure involved, and other items such as the pattern of air routes used by travellers who change aircraft at one or more places. The particular results of the survey of interest here are the total fares paid for sea voyages on UK ships by foreign residents: these provide an estimate of the total value of fares paid on voyages which begin or end in the United Kingdom, excluding cruises. The survey provides a basis for estimating the amount spent on cruises which begin and/or end outside the United Kingdom (fly cruises). An estimate of passenger expenditure ashore, together with their estimated air fare to or from the port of embarkation or disembarkation is deducted from their total declared cost of the holiday to give an estimate of the amount paid to the overseas ship operator. Finally an estimate of fares paid by UK residents on foreign ships on cruises which begin and/or end in the United Kingdom is obtained from the Department of Industry's passenger movement statistics and the estimated average cost of such trips.

Summary

By means of four-yearly enquiries the General Council of British Shipping is able to provide a detailed picture of the balance of payments transactions of British ship-operators: in intermediate years this picture is kept up to date by means of sample. Details of the transactions of overseas operators cannot be obtained by any such direct method, and recourse has instead to be made to piecing together the figures from a variety of sources. It is this aspect of the work which offers most scope for improvement.

APPENDIX

Sea transport in the balance of payments

£ million

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Credits										
Ships owned by UK operators										
Freight on exports	133	138	162	171	177	212	191	224	329	371
Freight on cross-trades	207	233	282	288	382	462	401	531	711	655
Charter receipts	32	40	48	51	88	101	184	264	450	492
Passenger revenue										
Visitors to the United Kingdom	19	25	23	23	19	20	18	19	22	34
Other passengers	33	36	36	41	46	54	67	58	65	76
Total	424	472	551	574	712	849	861	1,096	1,577	1,628
Ships on charter to UK operators										
Freight on exports	13	18	26	25	17	22	18	23	30	33
Freight on cross-trades	204	261	331	306	466	561	527	684	699	560
Charter receipts	9	6	9	10	17	6	7	18	63	55
Total	226	285	366	341	500	589	552	725	792	648
Overseas operators										
Disbursements in the United Kingdom ...	115	127	136	136	149	180	197	237	306	372
Total credits	765	884	1,053	1,051	1,361	1,618	1,610	2,058	2,675	2,648
Debits										
Ships owned by UK operators										
Disbursements abroad	241	239	260	273	310	396	428	493	745	797
Ships on charter to UK operators										
Charter payments	225	344	385	399	643	743	628	778	799	667
Disbursements abroad	78	86	100	98	104	120	129	167	316	307
Total	303	430	485	497	747	863	757	945	1,115	974
Overseas operators										
Freight on imports	204	220	259	298	361	390	475	690	883	811
Passenger revenue										
Visitors from the United Kingdom ...	9	9	10	12	14	18	23	27	31	49
Other passengers	3	3	4	4	5	5	4	4	6	5
Total	216	232	273	314	380	413	502	721	920	865
Total debits	760	901	1,018	1,084	1,437	1,672	1,687	2,159	2,780	2,636
Sea transport (net)										
Ships owned by UK operators	+183	+233	+291	+301	+402	+453	+433	+603	+832	+831
Ships on charter to UK operators	− 77	−145	−119	−156	−247	−274	−205	−220	−323	−326
Overseas operators	−101	−105	−137	−178	−231	−233	−305	−484	−614	−493
Sea transport (net)	+ 5	− 17	+ 35	− 33	− 76	− 54	− 77	−101	−105	+ 12
Memorandum item – Other receipts of UK operators from international services										
Freight on imports	267	321	375	363	395	433	397	482	558	510
Passenger revenue from UK residents	31	32	34	36	41	47	50	48	66	73

Source: *United Kingdom Balance of Payments 1965–75*

Notes on current developments

POPULATION AND VITAL STATISTICS

Scotland

Population projections

The 1975 based population projections for Scotland, calculated by the Government Actuary's Department, were published in Weekly Return No 34/76. Other non-weekly material provided in weekly returns over the past half year includes:

Week

16/76 District populations, live and still births, marriages, deaths and infant deaths – 1975.

17/76 Deaths by selected causes to region and health board, first quarter of 1976.

20/76 Weekly deaths by selected causes, in 1975 and 1976 covering the period of the 1976 influenza outbreak.

23/76 District populations etc as 16/76 for the first quarter of 1976.

24/76 Birth, marriage and death rates derived from the above.

25/76 Region and Health Board population estimates, mid 1975, by age and sex.

29/76 Census comparisons 1961, 1966, 1971 for selected demographic economic and social indicators.

30/76 Notification of infectious diseases by health board area, second quarter of 1976.

31/76 Abridged life tables for Scotland – 1975 based.

36/76 Vital Statistics, quarterly, 1965 to 1975.

The weekly return is now a departmental publication, available free of charge from General Register Office for Scotland, Publications Section, Statistics General Branch, Ladywell House, Ladywell Road, Edinburgh EH12 7TF. Region and district population projections, consistent with the GAD national projections and incorporating assumptions on migration within Scotland agreed with the Scottish Development Department, have been prepared for single calendar years to 1991 and single years of age. Abridged versions will be published in the second quarterly about the end of the year, and the full version may be obtained at the cost of copying from the above address.

The Registrar General's annual report for 1975 will be published at the end of this year. New tables include the first cause of death tables according to the population of the continuously built-up area of residence as 1 million and over, 100 thousand and over, 10 thousand and over, one thousand and over, and remaining towns under 1000 population and rural areas.

1971 Census

The second Fertility report for Scotland, based on a 10 per cent sample and incorporating data on family spacing and socio-economic variables, is due for publication shortly. All tables originally intended for publication, and their unpublished extensions, are now available at copying cost.

Population Trends

The latest issue of the quarterly journal of the Office of Population Censuses and Surveys, *Population Trends* examines the effect of abortion in limiting the numbers of babies born in recent years to married women and to single, widowed, separated and divorced women. The broad conclusion to be drawn from the available statistics and surveys is that for married women contraception rather than abortion has played the more important role in the decline in the annual number of legitimate births. This decline reflects both a move towards smaller family sizes and a delay in starting a family for those recently married.

Other articles present the most recent set of local population projections, a new classification of local authority districts in Britain according to their distinguishing features, (see note below), an article on the daily fluctuations in deaths in London and their significance, and an analysis of the changing incidence of appendicitis.

In addition to these feature articles, *Population Trends 5* includes up-to-date figures on population, births, marriages, deaths, migration and abortion.

Population Trends 6 due for publication in December 1976 will include articles on:

Alcoholism and mortality – characteristics of alcoholics in terms of death and environmental factors.

New Towns – changes in their roles and structure as seen from the statistics of post-war censuses.

Europe's changing age structure – a critical assessment of the recent Council of Europe conference in Strasbourg.

1971 Census grid Squares – a description of the main features of the data and some indications of their uses.

Population Trends can be obtained on subscription (£8·44 including postage, per year) from:

HMSO
PO Box 569
London
SE1 9NH

References
Population Trends 5 (HMSO) September 1976 (Price £2·00 net).
Population Trends 6 (HMSO) due in December 1976 (Price £2·00 net).

Which local authorities are alike?

Readers of *Statistical News* made a number of valuable contributions when John Craig outlined the project *Multivariate socio-economic area classifications* in issue 28 (February 1975). The first results have been published in an article 'Which local authorities are alike' in *Population Trends 5*. As well as giving results the article outlines the method and discusses the conceptual difficulties. The local authorities analysed are, in England and Wales, the metropolitan and non-metropolitan districts together with the London boroughs; in Scotland they are the districts and island areas.

To identify groups of local authorities that are similar to each other, forty variables from the 1971 Population Census were used – earlier work had suggested this was an adequate number – drawn from the demographic structure of the population, household composition, housing conditions, socio-economic structure and employment structure. Starting with forty such variables for four hundred and fifty seven new local authority districts in Great Britain it was found that the districts could be combined into thirty groups in such a way that 75 per cent of the initial variability in the full set was retained; 25 per cent was lost because the districts in each group, though similar, were not identical. No size limits were imposed on the groupings and the number of districts ranged from 1 to 32 and the population from 0·3 per cent to 8 per cent of the Great Britain total. Two districts were so distinctive as not to combine with any other district: the London borough of Kensington and Chealsea and the City of Glasgow.

These thirty groups can be further reduced to eleven groups, retaining 60 per cent of the initial variability, or to six groups, retaining 48 per cent . A listing of the districts by group is given in the article together with a brief description of the character of each group. Such descriptions are no more than a rough general indication of the character of districts and of the differences to be found in the variables used in constructing the cluster groups. The six group solution can be described as:

1. Suburban and growth areas, (126 areas, 25 per cent of population).
2. Rural and resort areas, (138 areas, 16 per cent of population).
3. Traditional industry and mining areas, (106 areas, 27 per cent of population).
4. Service centres (50 areas, 22 per cent of population).
5. Areas with much local authority housing, (27 areas, 7 per cent of population).
6. Inner and Central London, (10 areas, 4 per cent of population).

Obviously detail is lost in grouping, but the reduction in the number of units is a gain which, for some purposes, will more than offset the loss. The main applications anticipated for the groupings are as a standard classification which can be used to summarise data – from any source provided an area code is included – and as a form of stratification of districts for sampling purposes. Summarising data may serve a variety of ends. Patterns within a set of data or patterns in different sets, may be more readily detected and compared; the variability of the data may be emphasised; data which cannot be made available for each local authority (for example because the sample size within districts is too small or because a listing by individual district is too long) can be aggregated in such a way that an indication is obtained of the performance of different types of local authority; and so on. Another approach reverses this relationship between area and variable; the stress is then that an enhanced understanding of the properties of the variables can be obtained by considering how they differ between groupings and so between the various types of area. Thus for a specific topic – say areas of adverse social conditions – the properties of different variables can be examined by comparing their values for the various groupings in the classification. Hence the effect of selecting particular variables as indicators, or of using particular combinations of variables, may be better understood.

A full report is in preparation. Also local authority districts are fairly large areas – average population is about 120,000 – and within such areas considerable internal variations will be found. So similar analyses using (a) wards and parishes and (b) enumeration districts as the basic areal units are planned.

References
Statistical News No. 28 (HMSO 1975) (Price 60p net).
Population Trends 5 (HMSO) September 1976 (Price £2·00 net).

SOCIAL STATISTICS

Family expenditure survey 1975

The recently published *Family Expenditure Survey*

Report for 1975 is in the now well-established general format but there are, once again, some new features.

Standard errors of estimated total household expenditure and expenditure on commodity or service groups have been added, as percentages, to some of the main expenditure tables.

Households with married women not working have been added to the table of the distribution of income of households with married women working so that it now covers all households with married women.

The chart showing the variation of household expenditure patterns over the years has been extended so that it includes all surveys from the first post-war survey of household expenditure, the Household Expenditure Enquiry of 1953–54.

A new chart shows the variations in the size of households recorded by surveys from the Household Expenditure Enquiry on 1953–54 onwards.

Some preliminary results for 1975 and comparisons with 1973 and 1974 were published in an article in the June issue of the *Department of Employment Gazette*.

References

Family Expenditure Survey Report for 1975 (HMSO) 1976 (Price £4·00 net).

Department of Employment Gazette June 1976, pages 582 to 584 (HMSO) (Price 90p net).

Social Trends

The seventh edition of *Social Trends*, the annual summary of social statistics, is due to be published in the first week of December. Although, generally, it retains the same basic format, more text commenting on the tables has been introduced. The social commentary again opens the batting, followed by two articles on crime and one on subjective measures of the quality of life. This is followed by the sections of tables and charts containing information on key statistics and others of current interest relating to all areas of social conditions and policy. A calendar of social events and notes and background information are provided, as well as a comprehensive list of sources and further references and a subject index.

This year the Central Statistical Office's fifth social commentary looks back over the period 1970 to 1975 and tries to identify some social developments characteristic of that period. The introductory paragraphs present a somewhat individual assessment of some aspects of the period which are not easily summarised in statistical form. The commentary also analyses the main areas of social and of political change.

The social commentary does not include an item on crime as it is followed by two articles on aspects of that subject: Dr Glennie of the Home Office deals with problems of measurement of crime and gives examples for England and Wales, while Dr Bruce of the Scottish Home and Health Department describes the Scottish crime situation. Because of the different legal systems of Scotland and of England and Wales, crime is one of the areas where it is particularly difficult to present a coherent picture for the United Kingdom as a whole.

The fourth article in this issue is by John Hall, who was with the Survey Unit of the Social Science Research Council (SSRC). It examines subjective social indicators of individual well-being resulting from the three 'Quality of Life Surveys' that took place in 1971, 1973 and 1975. The way in which subjective reactions can be related to 'objective' measures, apparently covering similar areas, is also discussed. This is an important area of research; but the article is designed not just to show how research is developing, but also to provide a background to tables, derived from the SSRC surveys, which have been included in some of the topic areas in the Tables and Charts section.

This year, as some commentary is given on certain tables and charts, their numbers have been reduced. There are some two hundred and ten and ninety respectively; with about one-third of those new. The remainder, the core of the publication, have been updated where possible and in some instances modified. The charts, though somewhat fewer than last year, have been enhanced with improved pictorial presentation. The format of the topic areas remains much the same as previously, generally reflecting the administrative functions of government. The Household and Families and the Civil Administration sections have been renamed Household, and Social Participation respectively. The Social Participation section includes data on elections, membership of organisations such as unions or charities, and parliamentary and quasi-legal activities, as well as civil justice. There has been some movement of the public expenditure tables from the Resources section to their repsective subject areas. An interesting addition, of commentary and four tables, on homeless households is made to the Housing section; and for the first time a Ministry of Defence table together with commentary on Search and Rescue Operations at Home is included in the section on Public Safety. An increased number (over thirty) of tables derive from the General Household Survey, many of them time series and some of them including preliminary 1975 data.

A special effort has been made to include data relevant to the problems of ethnic minorities in those sections – Population, Employment, Leisure, Households, Housing and Social Participation – where

such data were available. The International section has been shortened, largely because so many qualifications are needed when attempting international comparisons.

The calendar of events, listing significant events which have influenced, or are indicative of, social change, covers the same period as the Social Commentary – 1970–1975. The Calendar's layout has been changed, by separating out the references to legislation. The appendices listing statistical notes, definitions and terms, and sources and further references have been updated. The Index this year includes some references to some of the major events listed in the Calendar.

Reference
Social Trends No 7 1976 (HMSO) due in December 1976.

Statistical Package for the Social Sciences (SPSS)

A copy of SPSS version 4B, developed for ICL 1900 computers at Southampton University with modifications to input and output by Oxford University, has been acquired by the Department of Health and Social Security and is installed at Reading Computing Centre. The version can provide for magnetic tape or exchangeable disc systems. For information contact:

Mr Wishick,
SR3A, Department of Health and Social Security,
10 John Adam Street,
London WC2.
Telephone 01-217-3474.

HEALTH

Mental illness and mental handicap statistics

A wide range of information about hospitals and units for the mentally ill and the mentally handicapped in England in 1974 is given in a new report published in November 1976. National statistics as well as information about individual hospitals are included.

The report shows that in mental illness hospitals and units the number of patients per 1,000 population resident at the end of 1974 was 31 per cent below the 1964 level and 5 per cent below that for 1973. Admission rates increased from 1964 to 1970 but have since shown little growth and in fact fell slightly in 1973 and 1974. The number of patients attending other services increased rapidly in the second half of the 1960s but while day patient care continued to expand there has been comparatively little growth in out-patient services.

In mental handicap hospitals and units, the number of resident patients per 1,000 population fell by 8 per cent from 1970 to 1974 while admission rates rose by 13 per cent due to the increased use of hospital beds for short term care to the mentally handicapped normally cared for in the community. The staffing statistics also showed continued increases.

The statistics for individual hospitals show improvements in the ratios of staff to patients and the provision of certain amenities for patients with the number of hospitals still below minimum standards being generally fewer in 1974 than in 1973. The report also highlights the decrease in size of many large hospitals for the mentally ill; the number of hospitals with 1,500 or more beds fell from 30 in 1966 to 8 in 1974. For mental handicap hospitals the reduction was not so marked but by 1974 there were no hospitals with 2,000 or more beds compared with 3 in 1966.

Reference
Statistical and Research Report Series No 15. *The Facilities and Services of Mental Illness and Mental Handicap Hospitals in England 1974* (HMSO) November 1976 (Price £3·00 net).

SOCIAL SECURITY

Supplementary benefit take up

Take up estimates of supplementary benefit have recently been published in the *Supplementary Benefit Commission Annual Report 1975* (Chapter 6, Cmnd. 6615). They will also be published in *Social Security Statistics 1975* (HMSO, forthcoming 1976). Some details of the methodology employed in these estimates are given in both sources.

The estimates, derived from the 1974 Family Expenditure Survey (FES), show 76 per cent of all those pensioner families eligible to claim supplementary pension, as actually receiving the benefit, leaving 560 thousand pensioner families eligible but not claiming. For families under pension age the take up estimate is 72 per cent, with 350 thousand families not claiming the benefit.

The take up estimates should not be confused with other estimates also derived from the FES which show the number of families with incomes below supplementary benefit level (see *Social Trends 1975*, No. 6 Table 5.31). The latter estimates indicate which types of family have low incomes (after income net of housing costs has been adjusted to take account of family composition by using the relativities of the supplementary benefit scale rates), whereas the take up estimates take account, so far as practicable, of the detailed rules of assessment for supplementary benefit (such as disregarding some income from certain sources) and also exclude families not eligible to claim supplementary benefit (mainly where the head is in full-time work).

Further details can be obtained from:

Statistics and Research Division
Branch SR3
Department of Health and Social Security
10 John Adam Street
London WC2

EDUCATION

The future school population

In June 1976 DES issued Report on Education No. 85, *The Future School Population*, which outlined the implications of the decline in births since 1964, and of the projected up-turn, for the maintained school population in England and Wales.

The prospective decline in the school population in the early 1980's, based on birth projections provided by the Office of Population Censuses and Surveys and the Government Actuary's Department, has been the subject of earlier reports.

The projections of births used in report No. 85, however, are later, and lower, than those used previously and underlie a projection of the school population which decreases from a maximum of 9·1 million in 1977 to 7·7 million by the late 1980's (or 7·1 million by 1990 using a low varient of the birth projection). The series is extended to 1996 to show the later up-turn in the school population (a reflection of the projected rapid recovery in the number of births from 1977).

The report then goes on to explain how the timing of the trend will be different for primary and secondary schools, and to raise some of the problems that are associated with a temporarily reduced school population – especially when the length and depth of the 'trough' are uncertain and will vary from area to area.

Copies of Report on Education No. 85 are available free from:

Room 1/27,
Department of Education and Science,
Elizabeth House,
York Road,
London SE1 7PH.

Attitudes to education

Some of the preliminary conclusions of two surveys carried out in 1975 among 16 year old secondary school pupils and 18 year old further education students have been published in a DES Report. The results are based on nearly 2,800 interviews.

The surveys were initiated early in 1975 by the then Minister of State, Lord Crowther-Hunt, mainly because since 1970 the annual growth in the number of school-leavers with A-levels had been consistently less than forecast. The enquiry was conducted by the Office of Population Censuses and Surveys (OPCS) in collaboration with Professor Gareth Williams and Alan Gordon of Lancaster University. Questionnaires were designed to identify the personal, social, educational and economic factors associated with academic or career intentions.

A conclusion of the Report is that influences far back in a child's educational career and social background affect their decisions, and it is these, rather than marginal adjustments at the time of the minimum school leaving age, which determine the decisions made at the end of compulsory education.

Department of Education and Science Report on Education *16 and 18 Year Olds: Attitudes to Education* available free on request from:

Room 1/27,
Department of Education and Science,
Elizabeth House,
York Road,
London SE1.

HOUSING

Housing Statistics: National Movers Surveys

Two national movers surveys have been undertaken, one in 1972, the second in 1974. These surveys provide a source of statistics covering a wide variety of topics relating to moving households in England and Wales. In both years the information was collected by interview surveys of large samples of recent movers (questionnaires for about 20,000 households were completed for each survey). The fieldwork was organised by OPCS for Department of the Environment and information collected included household composition both before and after the move, socio-economic group, income, reasons for moving, characteristics of present and previous accommodation, financial aspects of owner occupation (where applicable), amount of rent paid.

The results have been analysed extensively and are used within the Department in work concerned with economic and administrative assessments of the housing market. It is planned to include an article describing in more detail the surveys and some of the results in a future issue of *Statistical News*.

Further information on these surveys can be obtained from:

Lucy de Jong,
S14/05,
Department of the Environment,
2 Marsham Street,
London SW1,
Telephone: 01-212-8494.

TOWN PLANNING

Planning: Development Control Statistics

The Department of the Environment and the Welsh Office have produced a booklet *Development Control Statistics 1974/75* which contains statistics of planning decisions by local authorities in England and Wales and of planning appeals decided by the Secretaries of State. Statistics relating to office development permit applications are also included. Copies of the booklet, which replaces the publication *Statistics for Town and Country Planning, Series I Planning Decisions*, are available from:

S S Husain
Department of the Environment
Statistics Planning and Regional Division
Room S13/20
2 Marsham Street
London SW1P 3EB
Telephone: 01-212-8533

Floorspace Statistics Book 4, 1974 Floorspace Stock 1967-74 changes

The Department of the Environment recently published the fourth bulletin in its series Floorspace Statistics giving the results of a 1974 Floorspace Census carried out for them by the Inland Revenue. The publication is called *Statistics for Town and Country Planning Series II Floorspace No. 4*, (HMSO 1976) and forms part of the range of statistical bulletins relevant to town and country planning that are published from time to time by the Department, in conjunction with the Welsh Office.

Book 4 shows the results of the 1974 census in seven non-domestic use categories (Industry, shops, commercial offices, Central Government offices, warehouses – shops and warehouses are in two categories) for regions and local authority areas. Shops with living accommodation are included for the first time as is Open land storage. Book 3, which was published in 1974, contained the annual floorspace changes 1967–1969. Book 2 which was published in 1972 contained the results of the 1967 floorspace census. A section in Book 4 compares the results of 1967 and 1974 census for some of the categories *viz* industry and warehousing (combined but excluding open land storage), shops and commercial offices.

Provisional regional figures for 1975 can be obtained by sending a stamped addressed envelope not less than 21 cm × 15 cm to Room S6/16, Department of the Environment, 2 Marsham Street, London SW1P 3EB. Provisional 1976 data will appear in the Central Statistical Office's publication *Regional Statistics No 12 1976*.

MANPOWER AND EARNINGS

New estimates of employment on a continuous basis

The Department of Employment has produced new series of annual estimates of employees in employment by industry (SIC Order group) for each of the standard regions of Great Britain for the years 1965 to 1975. These series make allowances for the discontinuities present in previously published data: in particular, the series relate to the standard regions as now defined. These estimates complete the series of employees in employment on a continuous basis; national estimates (by Minimum List Heading) for both Great Britain and the United Kingdom having been published previously (*Statistical News* 29.24).

Reference
Department of Employment Gazette August 1976 pages 839 to 850 (HMSO) (Price 90p net).

Unemployment and vacancy statistics

The Department of Employment has reviewed its programme for compiling detailed unemployment and vacancy statistics with a view to achieving economies in the compilation of the figures, particularly at local offices. The detailed analyses are costly to compile and it has been decided to reduce the frequency of the industrial analyses from monthly to quarterly; most of the other detailed analyses have always been made on a quarterly basis. The industrial analyses are now being made only in February, May, August and November and the results are being published in the *Department of Employment Gazette* for the following months.

An article on unemployment and notified vacancies flow statistics, previously mentioned in *Statistical News* 33.21, was published in the September issue of the *Department of Employment Gazette*. The statistics cover the numbers joining and leaving the unemployment register and the number of vacancies notified to employment offices and those filled, cancelled or lapsed. A feature of the new statistics is the exclusion of adult students, on an estimated basis, from the unemployment flow figures to bring the series into line with the published unemployment count statistics.

International statistics of unemployment

An article describing the unemployment statistics of eleven major industrialised countries was published in the July issue of the *Department of Employment Gazette*. It covered the ILO definition of unemployment and the main points of difference between the countries' statistics. Figures on a comparable basis for these countries prepared by the United States Bureau of Labour Statistics, were also included. Some results

from the General Household Survey in Great Britain, in which the definition of unemployment is not very different from that of the United States Bureau enquiries, were presented.

Up to date official unemployment statistics from the same eleven countries are now published each month in a new table (113) in the *Department of Employment Gazette*.

Reference
Department of Employment Gazette July 1976 (HMSO) (Price 90p net).

Articles on manpower planning

The series of articles of interest to manpower planners, which have been included in the *Department of Employment Gazette* since October 1973, continued in the July 1976 issue of the *Gazette* (see *Statistical News* 34.33 etc.). An article by Mr Clive Purkiss of the Institute of Manpower Studies was the first of several which will review the literature of manpower planning at the level of employing organisations. The aims are *inter alia*, to point to where those involved with, or responsible for, manpower planning, can get help from the writing of others; what sort of approaches can be recommended; what methods are being proposed. The other article described a local labour market survey carried out by a hospital board which in a very short time made extensive use of available statistics from a variety of sources to assess the medium and long-term prospects of staffing hospitals in the area.

Reference
Department of Employment Gazette, July 1976 (HMSO) (Price 90p net).

Qualified manpower in Great Britain

A new study entitled *Qualified Manpower in Great Britain – The 1971 Census of Population* has been published as No 29 in the series of Studies in Official Statistics.

The 1971 Census of Population included a question on formal professional and educational qualifications obtained after the age of 18 and the data obtained from this have been coded according to academic level and subject. Those with such qualifications have been analysed by a number of characteristics including age, sex, economic status, occupation, industry and region. Some of the major tables have been published in a volume entitled *Qualified Manpower Tables* and others are available from the Office of Population Censuses and Surveys on an unpublished basis. The purpose of the study, prepared by the Unit for Manpower Studies, Department of Employment, as part of the Unit's continuing work programme on the employment of highly qualified people, is to summarise and highlight the key features of the available data. The volume also contains a section pinpointing some of the difficulties of comparing data for 1966 and 1971.

References
Studies in Official Statistics No 29. *Qualified Manpower in Great Britain – The 1971 Census of Population* (HMSO) August 1976 (Price £1·10 net).
Census 1971, Great Britain, Qualified Manpower Tables (10% Sample) (HMSO) 1976 (Price £5·70 net).

Agricultural labour in England and Wales

Information on the wages and conditions of agricultural workers is collected by Wages Inspectors of the Ministry of Agriculture, Fisheries and Food as part of the Ministry's responsibility under the Agricultural Wages Act 1948 to ensure the proper observation of the minimum agricultural wages orders of the Agricultural Wages Board. In 1975 the Inspectors visited a stratified random sample of 3,500 holdings, employing some 13,000 hired regular whole-time workers. This investigation has been carried out since 1945. Analyses of the results, together with other data, are published each year in *Agricultural Labour in England and Wales*.

It contains information on the average total weekly earnings and hours of men (by category of worker), youths, women and girls. Also shown are details on overtime pay, bonuses, benefits-in-kind, minimum wage rates, age and years of service and the total cost of employing a regular whole-time man. Time series, frequency distributions and a regional breakdown of some of the data are included. In addition to the Wages and Employment Enquiry results, analyses of the June agricultural census results show the breakdown of the agricultural labour force in England and Wales, and the other countries of the United Kingdom.

Copies of the latest issue (August 1976) are available on request from:

Ministry of Agriculture, Fisheries and Food,
Economics Division 1,
Room 708,
3 Whitehall Place,
London SW1A 2HH.

Bank holidays

The Secretary of State for Employment has announced details of the bank holiday arrangements throughout the United Kingdom this winter. There will also be an additional bank holiday next Summer in celebration of the Silver Jubilee of the Queen's Coronation. And, from 1978 onwards, there will be a new May Day holiday as well.

In the United Kingdom this winter, Monday December 27, Tuesday December 28 and Monday

January 3 will be bank holidays. In addition, in Scotland (where, by tradition, public holidays are arranged on a local basis and bank holidays are not necessarily observed as general public holidays), Tuesday January 4 will be a bank holiday.

The Jubilee holiday will be on Tuesday June 7, 1977 in England, Wales and Northern Ireland. This will be the day after the Spring bank holiday. In Scotland, Monday June 6 will be designated as the Silver Jubilee bank holiday. In 1978, Monday May 1 will be a bank holiday in England, Wales and Northern Ireland.

British Labour Statistics: Yearbook 1974

British Labour Statistics: Yearbook 1974 published recently is the sixth in the series which bring together the main statistics for particular years compiled by the Department of Employment.

Subjects covered include wage rates; earnings; hours of work; retail prices; employment; labour turnover; unemployment; vacancies; family expenditure; membership of trade unions; industrial disputes; industrial accidents; costs per unit of output; employers' total labour costs and output per person employed. Some time series for up to 10 years and regional analyses of many items are also included.

The yearbooks from 1969 onwards complement the information contained in *British Labour Statistics: Historical Abstract 1886–1968*. More recent figures are to be found in the *Department of Employment Gazette*.

References

British Labour Statistics: Year Book 1974 (HMSO) (Price £17·00 net).
British Labour Statistics: Historical Abstract 1886–1968 (HMSO) (Price £7·00 net).

Ministers and Members of Parliament

The latest Report (No. 8) of the Review Body on Top Salaries, to which the Office of Manpower Economics (OME) provides the secretariat, contains the results of a survey of the expenses and hours of work of Ministers and Member of Parliament and of their views on their remuneration, allowances and facilities. It was carried out in March 1975 and the results were taken into account in considering the recommendations in Report No. 7 of the Review Body on Top Salaries (which was published in July 1975), although they were not included in it. The questionnaire was addressed to all Members and received a 70 per cent response, compared with 84 per cent to a similar survey conducted in July 1971. Expenditure on subsistence, secretarial and research support and other items and hours spent on Parliamentary work and other paid occupations are analysed in various ways.

Reference

Review Body on Top Salaries, Report No. 8: Ministers of the Crown and Members of Parliament and the Peers' expenses allowance: Part II – Cmnd. 6574 (HMSO) July 1976 (Price 95p net).

Royal Commission on the Distribution of Income and Wealth – Reference on lower incomes

The government has made a further reference to the Royal Commission on the Distribution of Income and Wealth (*Statistical News* 27.14, 30.32) on incomes at the lower levels (about the lowest 25 per cent of income recipients). The Commission has been asked to analyse the present position and past trends in the levels and distribution of such incomes and to examine the economic, social and other factors which give rise to low incomes. The government have requested a progress report within one year.

FOOD AND AGRICULTURE

Agricultural censuses and surveys

The June 1976 Agricultural census

The provisional results of this census in England and Wales were published in a Press Notice on 18 August 1976[1]. Compared with June 1975, they show an increase in the total area under cereals, increases in wheat and oats more than offsetting decreases in barley and mixed corn. Bare fallow fell to its lowest recorded level. There was a small decrease in the area of fodder crops planted by June 1, rises in beans for stockfeeding and maize cut green being offset by a fall in other fodder crops. The area under potatoes increased; that under horticultural crops was nearly maintained. The dairy herd was almost unchanged over the year, but the beef herd decreased. Dairy-type heifers increased, while beef-type heifers declined. The number of calves under one year old decreased. The total pig breeding herd continued to expand, as did the number of gilts. The number of breeding ewes (including shearlings) fell, while lambs increased. The egg-laying flock, breeding fowls and geese increased in number, but growing pullets, broilers, turkeys and ducks decreased compared with June 1975.

Second provisional results for England and Wales covering agricultural and horticultural items were published recently in a Statistical Information Notice.

The provisional results of the June census in the United Kingdom were published in a Statistical Information Notice on 2 September 1976.[2]

The August 1976 Sample Pig Enquiry

The results of this EEC enquiry in England and Wales

and in the United Kingdom were published in a Statistical Information Notice in October 1976.

References
(1) Press Notice No 266 issued by the Ministry of Agriculture, Fisheries and Food.
(2) Statistical Information Notice Stats 225/76 issued by the Ministry of Agriculture, Fisheries and Food.

Provisional results of the June 1976 Scottish Agricultural Census

Provisional results of the Scottish Agricultural Census held on 1 June 1976 were published as a Scottish Office Press Notice on 19 July 1976 (Press Notice No 719/76).

Compared with a year earlier, cattle numbers have fallen by 3 per cent and the contraction is spread across almost all classes of cattle. The national sheep flock has decreased marginally but total pig numbers show an 11 per cent increase over 1975.

The switch from oats to barley continues and for for the first time in six years the potato area has increased, the ware area by 2,000 ha (15 per cent) and the seed crop area by 1,000 ha.

A reduction of 2 per cent since 1975 in the regular labour force is smaller than that of the two previous years.

National investigation into the economics of milk production (England and Wales) – 1976/77

Information is now being collected for a periodic investigation into the economics on milk production in England and Wales. The survey is commissioned jointly by the Ministry of Agriculture, Fisheries and Food and the Milk Marketing Board. Staff from University Departments of Agricultural Economics visit farmers to collect extensive records of both physical and financial data. The survey is based on a randomly selected sample of 500 holdings with dairy cows (out of a population of 62,733 holdings at June 1975) and covers all categories of dairy farming. It will provide detailed information on the costs and returns in milk production over the twelve months 1 April 1976 to 31 March 1977 and makes possible analyses of profitability, efficiency and methods of farm management. It thus serves as a basis both for policy decisions at the industry level and for management decisions at the farm level. It also helps to identify areas where specific research may be necessary.

Surveys are held every three our four years, the most recent being in 1972/73. From the data which they yield, combined with the information available, estimates can be made of the likely position in intermediate years, but (as in the rest of the economy) costs and returns have changed very greatly over the last few years and it will be interesting to see how close the results of this year's survey will be to the estimates based on the last survey. There will also be particular problems about assessing this year's results because of the effects of the drought (notably on feeding practices).

Publications

Annual Digest of Welsh Agricultural Statistics Supplement 1974/75[1]

This supplement (published in August) gives figures from the Farm Management Survey of inputs, output and net income per farm in Wales for 1973/74 and 1974/75, together with data on capital investment, assets and liabilities in 1974/75, parallel to the information published in *Farm Incomes in England and Wales 1974/75*.

The supplement also brings up to date (that is to 1975) the main results of the agricultural census, estimates of crop yields, average earnings and hours of agricultural workers and average farm rents. Structural statistics of Welsh agricultural holdings and enterprises are summarised and figures are given of agricultural support in the form of grants and subsidies.

Reference
(1) Produced in Wales by HMSO Reprographic Division, Cardiff.

Sea Fisheries Statistical Tables 1975

The Sea Fisheries Statistical Tables 1975 published by HMSO largely follow the layout of the 1974 publication, but a changeover to the metric unit of tonnes for quantities of fish and fish products has been made to maintain the progress of the decimalisation of Fisheries Statistics. The previous units were cwts or '000 cwts. Classification of vessel lengths, gross registered tonnage of vessels and estimates of human consumption levels remain in imperial units. Most of the tables refer to the United Kingdom with separate totals for England and Wales, Scotland and Northern Ireland. Additional statistics relating to Scotland are contained in *Scottish Sea Fisheries Statistical Tables 1975*.

The Sea Fisheries Statistical Tables 1975 provide details of landings of fish, estimates of fish supplies moving into consumption, number of fishermen employed, a profile of the fishing fleet and imports and exports of fish and fish preparations and marine mammal products.

Reference
Sea Fisheries Statistical Tables 1975. Ministry of Agriculture, Fisheries and Food (HMSO) (forthcoming).

TRANSPORT

National Travel Survey 1972/73

The Department of the Environment published in September the second of a series of publications based on data collected during the 1972/73 National Travel Survey. It contains 46 tables grouped into these sections according to whether the counting unit used is households, individuals or vehicles. There are six charts illustrating these data.

The section relating to households shows the proportion of journeys by bus, rail and car according to household income, household structure, by planning region, by area type and vehicle ownership. For individuals there are journey data shown separately for public transport and car according to age and sex, by socio-economic group and income of head of household for specific journey purposes. Information on vehicle stages for various journeys is given according to the year of the first registration, by vehicle ownership, by engine size and by status of vehicle.

All tables are based on the number of journeys occurring in a week and are shown as grouped frequency distributions.

Reference

National Travel Survey 1972/73. Number of journeys per week by different types of households, individuals and vehicles. (HMSO) (Price £1·25 net).

DISTRIBUTION AND OTHER SERVICES

Inquiry into retailing for 1977

The second of the annual, sample inquiries into retailing, described in 'Developments in the Statistics of the Distributive Trades' (*Statistical News* 31.11), is to be carried out by the Business Statistics Office for 1977. Due to the need to economise in the use of official resources, the original plan for the inquiry set out in the earlier article has been modified. The original proposal was for a basic list of questions to be asked every year together with some additional questions which would be included, some in each year, on a rotating basis. The 1977 inquiry will now include only a basic list of questions, and the additional rotating topics originally planned for the 1977 inquiry will be postponed.

For the large and medium-sized firms – probably those with an annual turnover of £50,000 or more – information will be collected on total turnover, with separate estimates for England, Scotland and Wales and also analysed by commodity, capital expenditure, stocks, purchases for resale and VAT on sales. Small businesses – that is those with an annual turnover probably of less than £50,000 – will be asked to complete a simplified questionnaire covering turnover, with some simple indication of commodity sales, capital expenditure and stocks and purchases for resale.

The sample of businesses to be sent forms will again be selected from the VAT register. The exact size of the sample is uncertain but it will be about the same size as for the 1976 retailing inquiry, that is about 30,000 businesses out of a total of some 300,000. As before the sample will include all the larger businesses and progressively smaller proportions of the smaller businesses.

It is proposed to send a letter to the businesses selected for the inquiry early in 1977 giving them notice of the list of questions to be asked. Forms will be despatched for completion early in 1978.

Inquiry into catering for 1977

Preparations are being made for a detailed inquiry into catering to be carried out by the Business Statistics Office on behalf of the Department of Trade and other departments.

Sample inquiries are carried out each year to provide figures of capital expenditure and stocks for the national income and expenditure accounts but the last detailed inquiry into catering was for 1969. Similar inquiries have been taken for 1960 and 1964. A longer time interval has elapsed on this occasion because of the development of the VAT register at Business Statistics Office, which will be used for this inquiry. This register provides the basis for a continually updated list of names and addresses of business and makes it possible to improve the reliability and range of the information collected while at the same time easing the burden of form filling on small firms.

The aim of the 1977 catering inquiry is to provide information on the catering trade and in particular, to provide an analysis of turnover by commodity, to provide a detailed breakdown of catering turnover according to the kind of business and to provide firm and up-to-date estimates to which will be linked the existing quarterly capital expenditure and the quarterly catering turnover series. (The latter series is at present monthly but is being changed to a quarterly basis from the beginning of 1977 in order to save resources and reduce the burden of form filling).

It is proposed to send a letter to the businesses selected for the inquiry in January 1977 giving them notice of the list of questions to be asked. Forms will be despatched for completion early in 1978.

The inquiry will cover hotels and other residential accommodation, cafes and snack bars, public houses, clubs, and catering contractors. The information collected will be total turnover and the amount of VAT payable on it, the number and turnover of establish-

ments according to 14 kinds of business, total turnover according to six commodity headings, capital expenditure by types of assets, stocks at the beginning and end of the year. Larger businesses only will be asked for the total value of purchases sub-divided into four commodity headings and total turnover for England, Scotland and Wales separately.

The availability of the VAT register makes it possible to design a scientific sample. The size of the sample is expected to be no more than about 25,000 businesses out of a total of some 105,000 businesses within scope of the inquiry. The sample will include all the largest businesses and progressively smaller proportions of the smaller businesses. The burden of form filling on small firms will also be lightened by their exemption from the questions on purchases and breakdown of turnover by country.

NATIONAL ACCOUNTS

Fixed assets

An article published in the October issue of *Economic Trends* very briefly describes the present measures of the stock of fixed capital, which are calculated for the UK national income and expenditure accounts, and attempts to explain how they might best be used for a number of different purposes. The main object is to help the best use to be made of what there is rather than to discuss what ought to be. An additional purpose is to introduce the tables of 'retirements' (that is the trend in the scrapping of fixed assets) which appeared for the first time in *National Income and Expenditure 1965–1975* (the Blue Book) published in September.

After the introduction the methods used to calculate gross capital stock, net capital stock, retirements and consumption are described in broad outline. A number of uses of the series are then discussed in turn.

Two standard capital stock estimates, net capital stock and gross capital stock, are compared and it is maintained that an index of gross capital stock provides a reasonable basis for measuring medium-term productive capacity and that net capital stock is suitable for example in calculating the wealth or capital employed in estimates of return on capital. It is also suggested that capital consumption is better than depreciation calculated at historic prices as a measure of the 'consumption' of fixed assets for most economic purposes. But further it is suggested that capital consumption can be used in the same capacity as gross capital stock. Retirement series, which are sharply differentiated from capital consumption, are recommended as a proxy for the trend in replacement investment.

References

'The stock of fixed assets in the United Kingdom: how to make best use of the statistics' *Economic Trends* No 276 October 1976. CSO (HMSO) (Price £1·45 net).

National Income and Expenditure 1965–1975 (Blue Book). CSO (HMSO) (Price £3·50 net).

New estimates of investments in assets for leasing, hiring and renting out

An article was published in *Trade and Industry* on 24 September, describing the improvement of the Department of Industry's estimates of investment in assets for leasing, hiring and renting out. The continuing quarterly survey of capital expenditure was extended in 1975 to give greater coverage of this investment and to obtain some information about the industry classification of lessees in respect of financial leasing (in which the full cost of the asset is recovered by the lessor within a fixed (contractual) period).

The new approach was directed to leasing subsidiaries of banks, finance houses and to specialist leasing companies, whose capital expenditure is allocated to the industrial order: Insurance, banking, finance and business services, on the basis of ownership of the assets. (An exception to this rule is investment in ships, which is classified to the shipping industry.) It appears that the total net investment in this context in 1975 was about £500 million, at current prices, only about half of which had been covered by the previous surveys. This total includes leasing by banks (which is reported to the Bank of England) and the relevant figures for ships, but not the leasing of building acquisitions by property companies, etc. The hiring of contractors' plant and scaffolding, which is classified to the construction industry, and television rental in the retail sector, are also excluded. Some contributors could not give separate data relating to lessees, but it seems clear that at least £100 million was allocated to lessees in manufacturing industries in 1975, under financial leasing.

Reference

Trade and Industry, 24 September 1976 (HMSO) (Price 35p net).

Input-output tables for 1972

The third in the annual series of updated input-output tables compiled by the Central Statistical Office was published in August as a Business Monitor, *Input-output tables for the United Kingdom 1972*, reference No. PA 1004. Summary tables for 1972 were published in the April 1976 issue of *Economic Trends*.

As for 1971, the full tables for 1972 distinguish only 59 industry and commodity groups compared with

90 in the tables for 1968 and 1970 to reduce the potential errors as the base year recedes.

A full description of the construction of input-output tables can be found in *Studies in Official Statistics No. 22.*

References

Input-out tables for the United Kingdom 1972, Business Monitor PA 1004 (HMSO 1976) (Price £2.10 net).

Input-output tables for the United Kingdom 1968, Studies in Official Statistics No. 22. (HMSO 1973) (Price £7·30 net).

Taxes and social security contributions: international comparisons

An article by the Central Statistical Office to be published in the December 1976 issue of *Economic Trends* shows a comparison of taxation in several of the world's leading industrial countries for the years 1968 to 1974. The tables are based on national accounts returns made to OECD and show for each country total taxes and social security contributions as a percentage of gross national product, and for the latest year an analysis by type of tax.

Reference

Economic Trends (HMSO) December 1976 (Price £1·45 net).

HOME FINANCE

Quarterly appropriation accounts for industrial and commercial companies

The October 1976 issue of *Financial Statistics* shows quarterly figures for the appropriation accounts of industrial and commercial companies (ICs), Table 9.1, and of financial companies (FCs), Table 9.4. The accounts appear on both unadjusted and seasonally adjusted bases. The separate accounts also appear in the same month's issue of *Economic Trends* in the Appendix following the quarterly national accounts article (pages 88–91), and supplement the consolidated appropriation account. Notes on methodology are included in both publications. The IC table shows the intra-company sector interest flows and the FC table splits interest flows between the Banking sector, Building societies and Others. A change in presentation is that 'income from abroad' is shown net of tax but 'taxes paid abroad' is included as a memo item. The ICs account will replace the All companies account on page 58 in the Tables and Charts section in a later issue of *Economic Trends*. The IC and FC accounts will also appear in the *Annual Supplement* to *Economic Trends*.

Estimates are available from the first quarter of 1960 and those that are not being published initially can be supplied on request. The choice between alternative methods of presenting company accounts is subjective and some users may have a requirement for the All companies account on a quarterly basis. Letters on this subject and requests for information should be addressed to:

Mr N D Rudoe,
Central Statistical Office,
Great George Street,
London SW1P 3AQ.

References

Financial Statistics, Central Statistical Office (HMSO) monthly (Price £2·40).

Economic Trends, Central Statistical Office (HMSO) monthly (Price £1·45)

Public sector debt

A much revised presentation of public sector debt statistics will appear as Table 373 in the 1976 edition of the *Annual Abstract of Statistics*, replacing Table 365 in the 1975 edition. It is a summary table; details of national debt and local authority debt are shown, as before, in separate tables (Nos. 384 and 391 respectively). Table 373 is now virtually exhaustive in its coverage of public sector debt. Besides showing nominal amounts outstanding for each part of the public sector, it gives an analysis by sector holding the debt. Foreign currency debt is distinguished and is valued at market exchange rates rather than the official (IMF) rates previously used. This brings the table into line with the revised treatment of the foreign currency part of national debt adopted in Supplementary Table A of the May 1976 issue of *Financial Statistics*.

Reference

Annual Abstract of Statistics, No 113, 1976; Central Statistical Office (HMSO) (forthcoming).

OVERSEAS FINANCE

The balance of payments and the exchange rate: developments in the first half of 1976

An article in the September 1976 *Bank of England Quarterly Bulletin* first refers to the balance of payments accounts in order to identify, by main category, the flows which in fact took place and which form the statistical counterpart of the official financing that was supplied. It then examines in a broader context various ways in which pressure on sterling can, in principle, develop. A further section discusses the difficulties of identifying and measuring particular sources of pressure, and notes the limitations of balance of payments accounts for this purpose. The conclusion is that it is difficult to identify precisely the

sources of pressure on sterling, but it is unlikely that events would have run the course they did had there not emerged a widespread view that sterling was overvalued.

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

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

United Kingdom Balance of Payments 1965–75

A detailed account of the United Kingdom's balance of payments with the rest of the world in each of the last eleven years is given in *United Kingdom Balance of Payments 1965–75* (the Pink Book) which was published by Her Majesty's Stationery Office on 1 September 1976 price £2·05. This complements the monthly statistics of visible trade and quarterly balance of payments estimates with revised and more detailed annual figures particularly for invisible transactions and investment and capital flows and levels. The tables are followed by annexes which include additional analyses together with descriptive material illustrating aspects of the balance of payments for example the amounts of trade credit outstanding and the overseas earnings of 'the City', which do not emerge from the standard form of presentation. Finally, there are detailed descriptions of the definitions and sources and methods employed in compiling the accounts.

A number of changes have been introduced in this year's Pink Book. Foreign currency borrowing by the public sector under the exchange cover schemes, net of repayments, is now shown separately, at transaction values, within 'official financing'. In previous issues of the Pink Book, this borrowing was included either as overseas currency borrowing by UK banks to finance lending to the public sector or within overseas investment in the UK public sector.

Outstanding levels of foreign currency assets and liabilities and inter-government loans to the United Kingdom had previously been converted to sterling using parity or middle rates equivalent at end-years 1971 and 1972 to $2·60571=£1, and, at end-year 1973 and subsequently, to $2·89524=£1. Since 1972 the gap between this parity and the middle market rate has persistently widened and these assets and liabilities have now been revalued using market rates.

Earnings on construction work overseas have now been sub-divided to show separately the earnings of architects and quantity surveyors, consulting engineers engineers and construction contractors.

Reference

United Kingdom Balance of Payments 1965–75 (HMSO) (Price £2·05 net).

The Investment Currency Market

The purpose of an article in the September 1976 *Bank of England Quarterly Bulletin* is to explain what is meant by 'investment currency' and the 'dollar premium', and to show how the investment currency market works.

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

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

Economic Progress Report

The September issue of the Treasury's *Economic Progress Report* includes an article on 'International investment and the balance of payments'. The article explains the exchange control regulations on the financing of overseas investment, discusses the concept of investment adopted in the balance of payments accounts and then goes on to explain why it is helpful to bring together a number of entries from different parts of the accounts to assess the effect of overseas investment on the official reserves.

The table presented at the end of the article combines all the identified items relating to international investment, both in the capital account and in the current account for 'invisibles'. The table is divided into two parts, the first referring to UK private investment overseas, and the second to overseas investment in UK private sector. Identified transactions in the current invisibles account and the capital account are given for each part of the table. The usual balance of payments sign convention is used throughout the table so that the sub-totals and totals together show the effect on the balance for official financing. It is pointed out that the table does not show the total effect of overseas investment on the reserves because (i) exports and imports of goods associated with international investment are omitted from the table (mainly because these are not identifiable) (ii) no attempt is made to estimate the indirect effects of overseas investment on UK trade, and (iii) no allowance is made for the effects on the exchange rate.

With these qualifications in mind the table shows that the identified items associated with UK private investment overseas have had a beneficial effect on reserves, averaging over £1½ billion in the last three years. When account is also taken of those items associated with overseas investment in the UK private sector this positive effect increases to an average of £2¼ billion.

OVERSEAS TRADE

Statistics of trade through United Kingdom ports

A digest of statistics of import and export trade

through United Kingdom ports and airports *Statistics of Trade Through United Kingdom Port* is being produced by the Statistical Office of HM Customs and Excise. The new publication will appear quarterly, price £6·00, and will be available from Government bookshops or through booksellers.

The first issue published recently relates to the first quarter of 1976 and shows total trade in tonnes and value through individual ports and airports during that period, compared with the same period last year. The cumulative total trade to date for each year will also be shown in each issue.

The digest contains six tables. Table I (Imports) and Table IV (Exports) show total trade by United Kingdom Economic Planning Region and Port: Table II (Imports) and Table V (Exports) show the total trade by United Kingdom Economic Planning Region, Port and Overseas Trading Area: and Table III (Imports) and Table VI (Exports) show the total trade by Divisions of the Standard International Trade Classification (Revised), United Kingdom Economic Planning Region and Port.

This publication is the first of a series aimed at replacing the *Annual Statement of Trade* which will cease after the 1975 edition. The decision to publish was taken in the light of highly favourable response to a questionnaire sent out last year to possible purchasers by the Statistical Office.

An annual edition of *Statistics of Trade through United Kingdom Ports* will be published, commencing with that for 1976. It will show trade in each of the four quarters of the year, as well as total trade for the year, the figures being up-dated to include all amendments notified to the Statistical Office by the time of compilation. By annual subscription the four quarterly editions plus the annual volume will cost £33·50, which includes £3·50 postage and packing.

Further information may be obtained from:

Unit 62,
HM Customs and Excise,
Statistical Office,
Portcullis House,
27 Victoria Avenue,
Southend-on-Sea,
SS2 6AL.
Tel. No. 0702-49421 extension 284

OTHER PUBLICATIONS

Guide to Official Statistics

After several years work the *Guide to Official Statistics* will be published this month. Compiled by the Central Statistical Office in collaboration with the statistics divisions of other Departments and in response to a recommendation by the Estimates Committee of the House of Commons, it provides a new and unique reference document for all users of statistics.

The Guide covers every area of official statistics and many important unofficial sources too. It is the most comprehensive work of its kind ever attempted.

The main part of the publication comprises sixteen broad chapters which are broken down into 106 sections, each dealing with a specific topic. In most cases sections are further divided into sub-sections covering particular aspects of each topic. For each of the 781 sub-sections appears a list of all official and major unofficial published sources with a detailed description of the relevant statistics contained in them. These take in not only regular publications but also special reports, articles etc. with significant statistical content published over the last ten years.

An alphabetical index pinpoints the occurrence of some 3,000 'key words' throughout the main part of the 350 page Guide. Details of price, frequency and source of the 2,500 or so, publications mentioned in the text are given in a bibliography. Also included is a list of contact points in central government Departments for further information.

It is envisaged that future editions of the Guide will appear at about annual intervals.

Reference
Guide to Official Statistics (HMSO) (Price £7·50 net).

INTERNATIONAL

Publications of the European Communities

Full details of the statistical publications of the European Communities, both those recently published or about to be published, can now be found in each issue of *Eurostat News* (described in *Statistical News* No. 34). Details are shown of all the annual publications and the special publications and series which have been published since the previous issue of *Eurostat News* or which are to be published shortly. In addition, the full list of 'Eurostat' periodicals is given each time. It is hoped that *Eurostat News* will be appearing on a regular monthly basis from September onwards (only four issues appeared from January to August). With such a regular source of detailed information now available it will no longer be necessary to continue this regular feature in *Statistical News* and it will therefore cease to appear after the February 1977 issue. Until then, a summary of the annual and special publications and series listed in *Eurostat News* as published since the previous issue of *Statistical News* or about to be published will be shown. Details of how to obtain copies of *Eurostat News* will also be given.

Summary of publications (as at issue 5/7–1976 of *Eurostat News*).

Published:

(A) *Basic statistics, 1975–1976*
(A) *Balance of payments – Geographical breakdown, 1970–1974*
(A) *Regional statistics: population, employment, living conditions*
(A) *Regional statistics: The Community's Financial Participation in Investments*
(A) *Earnings in agriculture 1974*
(A) *Selling prices for animals and animal products, 1969–1974*
(A) *Energy statistics – Yearbook 1970–1974*
(A) *Special edition of the monthly external trade bulletin Annual external trade figures 1958–1975*
(S) *Some Figures: Public expenditure on Research and Development in the Community countries, 1974–1975*
(S) *Survey of the structure and distribution of earnings in industry in 1972*
(S) *Tariff Statistics – Code numbers CCT*

To be published shortly:

(A) *Balances of payments – Global data, 1961–1975*
(A) *Regional accounts: main economic aggregates, 1970*
(A) *Selling prices for vegetable products, 1969–1974*
(A) *Agricultural prices – Fruit, vegetables and potatoes, 1975*
(A) *Utilization of nuclear power stations, 1975*
(A) *Analytical tables of EC external trade – NIMEXE, 1974*
(S) *Input-Output Tables – Volume I: Methodology, 1970–1975*
(S) *Agricultural price statistics, 1969–1975*

(A) denotes annual publications.
(S) denotes special publications and series.

For those who do not already have access to copies of *Eurostat News*, which are issued free of charge, and can easily be obtained by writing to:

Eurostat,
Publications,
BP 1907,
Luxembourg,
Grand Duche de Luxembourg.

SURVEY CONTROL UNIT

Surveys assesed

In the third quarter of 1976, 115 proposals for new surveys were assessed by the Survey Control Unit. Table A indicates the gradings given for these new surveys, and Table B compares the totals for the four previous quarters. A brief description of the grading system used was given in *Statistical News* 21.15.

Table A. New surveys assessed during second quarter 1976

Type of survey	*Initial grading*				*No grading given*	*Total*
	Unrecognised	*Under consideration*	*Provisionally recognised*	*Fully recognised*		
Small *ad hoc*	1	3	34	51	10	99
Other *ad hoc*	–	2	2	3	2	9
Continuous	–	–	1	5	1	7
Total	1	5	37	59	13	115
Percentage of total	*1*	*4*	*32*	*51*	*11*	*100*

Table B. New surveys assessed in the last five quarters

Quarter	*New surveys*
3rd quarter 1975	104
4th quarter 1975	78
1st quarter 1976	80
2nd quarter 1976	116
3rd quarter 1976	115

Of the 115 new surveys, 69 were addressed to households or individuals, 37 to businesses and 9 to local authorities. One survey carried out by the Department of Industry, into Coastal Trade, was discontinued after the second quarter of 1976; contributors and recipients of results have been informed.

GOVERNMENT STATISTICAL SERVICE

Appointments and changes

Dr C M Glennie, Chief Statistician in the Home Office transferred to the Scottish Office on 18 October.
Mr C G Lewis, Statistician in the Central Statistical Office was promoted to Chief Statistician and transferred on 18 October to the Home Office.

LATE ITEM

Report of a Business Statistics Seminar

The Industrial Marketing Research Association (IMRA) has published a report on the seminar which was arranged jointly by IMRA and the Government Statistical Service and held at the Department of Industry in November 1975. The theme of the seminar was set by a paper given by Dr Roger Boothroyd of the

Department of Industry during the 1975 IMRA Conference which led to the belief within both IMRA and the Government Statistical Service that a formal exchange was needed on questions of industrial commodity classifications.

The report includes the two main papers given at the seminar together with notes prepared by the Business Statistics Office (BSO) on commodity and industrial classifications and their relationships and on the BSO's statistical publications. The first paper presented by Mr W B Wakefield, Assistant Director, Central Statistical Office was on 'The New NACE-based Standard Industrial Classification' (NACE is the General Industrial Classification of Economic Activities within the European Communities). The second on 'Views and Suggestions on a Marketing Strategy for the BSO's Statistical Output' was presented by Mr I MacLean of Imac Research.

A detailed report of the discussions which followed the presentation of the papers is also included. There is also a postscript which lists the points made at the seminar about what strategy the BSO should adopt towards marketing its Business Monitors and the BSO's plans for dealing with the suggestions.

Copies of the proceedings are available from:
The Administrative Secretary,
Industrial Marketing Research Association,
11 Bird Street,
Lichfield, Staffs,
WS13 6PW.
(Price £3·00 and 50p postage and packing)

List of Principal Statistical Series and Publications

1974 EDITION

Amendment list no. 9 — July to September 1976

Introductory note

In the *List of Principal Statistics Series and Publications*, second edition 1974 (HMSO Price 80p net), it is stated that details of important amendments and additions to the list will appear quarterly in *Statistical News* thus enabling users to keep their copies up to date. Accordingly a list of amendments covering the period July to September 1976 is given below. Off prints of this list can be obtained from the Central Statistical Office, Telephone 01-233-7261.

With the publication this month of the *Guide to Official Statistics* (page No 35.45) this service is to be discontinued. Users of the *List of Principle Statistics Series and Publications* should in future refer to the *Guide to Official Statistics* for more up-to-date information or if this is not possible, contact the Press and Information Office of the Central Statistical Office (01-233 6193) who may be able to assist them.

Amendments to Part I. List of Principal Series

Page

Population and Vital Statistics

1. Population statistics
   (a) Census of population figures — 1

Add suffix (²) to Education, qualifications

Amendments to Part II. List of Publications

Page 33

Agricultural Statistics, Scotland
Delete £1·90 (1974) Substitute £2·25 (1975)
British Labour Statistics: Year Book
Delete £12·00 (1973) Substitute £17·00 (1974)

Page 34

Business Monitors Miscellaneous Series
Add the following new entry:
M10 Overseas Trade Analysed in Terms of Industries 1975, 30p

Page 37

Business Monitors – Reports on the Annual Census of Production
Add the following new entry
PA1007 Mnierals 1974 and 1975, 95p

Page 41

Census 1971, Great Britain, Persons of Pensionable Age
Add after this entry, the following new entry:

Census 1971, Great Britain, Persons with Qualifications in Engineering, Technology and Science £7·50	Decennial	Office of Population Censuses and Surveys	1

Digest of United Kingdom Energy Statistics
Delete £6·60 (1975) Substitute £9·00 (1976)
Education Statistics for the United Kingdom
Delete £3·50 (1973) Substitute £3·80 (1974)

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Judicial Statistics, Scotland, Civil Judicial Statistics
Delete 35p (1973) Substitute 67p (1975)

National Income and Expenditure
Delete 91p (1963–73) Substitute £3·50 (1965–75)

Northern Ireland Education Statistics
Delete 87½p (Nos 16 and 17 1974) Substitute £1·50 (Nos 18 and 19 1975)

Overseas Trade Statistics of the United Kingdom
Delete £2·50 Substitute £4·75

Population Projections
Delete £1·10 (1973–2013) Substitute £1·55 (1974–2014)

Prisons in Scotland, Report
Delete 61p (1972) Substitute £1·25 (1975)

Quarterly Return of the Registrar General, Scotland
Delete 23p Substitute 60p

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Scottish Economic Bulletin
Delete 50p Substitute £1·10

Scottish Sea Fisheries Statistical Tables
Delete 65p (1973) Substitute £1·35 (1975)

Scottish Social Work Statistics
Delete £1·20 (1972) Substitute £3·35 (1974)

Statistics of Education Volume 2 School Leavers CSE and GCE
Delete £3·00 (1973) Substitute £3·85 (1974)

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Trade and other Accounts (N. Ireland)
Add after this entry the following new entry:

Transport Statistics £5·25 (1964–74)	Annual	Department of the Environment	13, 14, 15

United Kingdom Balance of Payments
Delete 97p (1963–73) Substitute £2·05 (1965–75)

Alphabetical Index

The index to *Statistical News* covers the last nine issues. Page numbers are prefixed by the issue number e.g. 27.31 signifies issue number 27, 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.

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