AUGUST 1979

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# STATISTICAL NEWS

Developments
in British Official
Statistics



A publication of the Government Statistical Service

JOHES PASSE

# 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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CENTRAL STATISTICAL OFFICE

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No. 46

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# Human resources in statistical services

Ian B. Beesley, Chief Statistician, Central Statistical Office

Heads of the majority of European statistical services meet annually under the aegis of The United Nations Economic Commission for Europe. Mr. A. J. Boreham, Head of the Government Statistical Service of the United Kingdom, attended the latest conference in June 1979. Among items for substantive discussion was 'The use of human resources in statistical services'. The following paper was prepared as a discussion document for that session. Other discussion papers were prepared by the German Democratic Republic, the Ukranian Soviet Socialist Republic, and Yugoslavia. The views expressed are personal and not necessarily those of the United Kingdom government.

This paper discusses a number of important choices about staffing for statistical services. It is based partly on the information documents provided by the governments of Austria, Canada, Czechoslovakia, Greece, Hungary and Spain whose contribution is gratefully acknowledged. It is also based on experience in the United Kingdom where, unlike most other countries, the statistical service is largely decentralised in separate government departments. The issues discussed arise for all types of statistical organisation, however.

### Qualifications at recruitment

The future need for staff

The work done by statistical services has changed rapidly in the 1970s. There are more statistics on more subjects. The processing, manipulation and presentation of data are increasingly undertaken using computers. At the same time, in many countries the numbers of staff in statistical services has increased dramatically, especially at graduate levels. And still the demands for more statistics continue.

The statisticians also face growing opposition. Businesses are increasingly reluctant to supply data; those which are available must be used more efficiently. The public is increasingly sensitive about the uses to which data about persons and households are put.

In these circumstances the statistical services need people with a wider variety of skills than before who are sufficiently flexible to adapt to changing situations. At the technical level some of the staff need to keep

abreast of the latest methodological developments. A higher proportion need to be brought up to date by periodic refresher courses. Most statisticians need to appreciate the opportunities for data manipulation and presentation brought by computer developments. Although they were perhaps trained with large computing systems in mind, they need to be adaptable to the future age of micro-processors. Increasingly, they need to be able to organise and manage computer operations without being the prisoners of computer experts.

At middle and senior management the skills of organising people and of public presentation are demanded. Statistical services are moving out of the environment of research dominated activities set amid the kindly world of career civil servants who stayed in the public service for life. Senior people now have to motivate staff, maintain the interest and dynamism of people with a wider range of attitudes to work and with wider alternative work opportunities. They have also to defend statistical activities increasingly in public.

All of this is often further complicated by a combination of uncertainty and of size. In some countries a period of rapid growth in graduate staff has stopped quite suddenly, leaving an age and grade structure which is unbalanced. In the United Kingdom, for example, of 320 graduates working in the main statistical grade 130 are aged between thirty and thirty-four. It is difficult to predict how many will remain in the statistical service, faced with slim prospects for further enhancement. Private sector jobs beckon to many and the prospects for ensuring a smooth flow of staff over the next decade may be a major challenge to our manpower policies.

Recruitment targets can be based on manpower models for the statistical service needs, but in the United Kingdom case at least, the service has perhaps grown too fast to be balanced. Adjustment towards a more rational age structure is now unlikely without painful disruption. In services employing up to around five or six thousand permanent staff, of whom about ten per centare graduate statisticians (including economists, social scientists, etc.) the establishment and maintenance of stable policies for manpower presents

major challenges if bottlenecks in supply or in promotion are to be avoided.

Little has been written or discussed about whether statistical services should limit their growth to enable human resource use to be planned over the years to the end of this century.

Recruits for specific jobs or generalist statisticians

Even within statistics there is a tendency for further specialisation. Individuals often wish to be known as survey statisticians, methodological experts, specialists in economic or social statistics, and of late specialists in statistical computing. As managers of statistical services we seek to reconcile conflicting pressures:

- i. We need experts to raise the quality and efficiency of the service. Obvious examples are on sampling, on other survey work, on computing, on national accounting and so on.
- ii. We need a small number of statisticians with exceptional ability, breadth of vision, and sensitivity who will be the future managers and directors of the statistical service. Are these to be denied specialism in favour of width of experience?
- iii. We need a core of staff who are sufficiently flexible to allow efficient staff allocation in changing circumstances.
- iv. We need to allow for the individual to move to fresh pastures if he has become stale or otherwise needs a change.

Part of the answer to 'how best to strike a balance' depends on how different is the work done by government statisticians and other statisticians. The wider the gap the more recruits must be generalists and the more the statistical service must itself add the layers of expertise it requires.

Paradoxically, it appears that the most highly specialist work in government statistics is that which is closest to work done elsewhere, particularly in universities and survey organisations. For example, sampling experts, survey statisticians and methodological experts on subjects such as seasonal adjustment can often be recruited as experts who need no further training.

The most effective government statisticians in the sense of using data and commenting on its significance have often gained their expertise within the government service. In a largely decentralised statistical service this type of statistician will predominate.

Where recruits are usually taken into the service with a good general statistical qualification (or even just a good academic qualification in a related subject) there is a risk that government training and academic training drift apart. A gap of this kind has been

identified recently by a number of countries (and also by the International Statistical Institute).

In general, the UK system has not recruited specialists for individual functional needs. Only in a minority of cases have statisticians specialised in anything more than the broadest of categories such as economic or social statistics. As an approximation, at most ten per cent of graduate statisticians in the service would be in jobs which require them to stay closely in touch with academic statistical developments in methodology.

# Computing as a functional specialism

Computing is a special case of expertise. Historically, where staff grades are grouped into categories, computer staff have often not belonged to the upper tier. They have been drawn from the supporting staff who used to manage and conduct the labour intensive calculations in pre-computer days. This has brought serious problems, particularly from the undervaluation of computing expertise. Some services, in Austria for example, are able to pay young computer experts at a market rate even when that is higher than the pay of more senior staff. In many cases (including the United Kingdom) that is not possible. The result is a gap in pay between public and private sector employers which severely handicaps the statistical service in obtaining computer expertise. To overcome this it can sometimes be necessary to divert scarce manpower, trained in statistics, on to computing. Increasingly the statistician and the statistical service find it more satisfactory for statisticians to be their own computing experts and where possible to have line management control of computing for statistics. With the wider availability of small computers at reasonable cost it may be that the days of computing as a functional specialism are numbered.

# Career and development plans

A dominant pattern in government is recruitment of new graduates and of new school-leavers who are offered a career in the public service. Traditionally, a major attraction of employment has been the promise of job security, further training and promotion opportunities. Most employees have been full-time and permanent. The statistical services have been little different from other public sector employers. In many cases their conditions of employment have been the same as those offered throughout by central government.

This pattern has many advantages, particularly from the economies of scale which common central government employment rules realise, but it also brings difficulties. Two of the most important concern the identity of statisticians and the careers of staff who are not statisticians.

# Identity of statisticians

At bottom, the issue is whether statisticians are civil servants or members of a profession. Some of the time they can be both but occasionally the requirements of each conflict. Apart from academic life the statistical services probably permit the individual to continue to work by operating as a statistician for longer than other employers. Even so, senior positions are less concerned with exercising the skills of a statistician than the skills of management (though they must stay in contact with the skills). It is unavoidable that this should be so. In consequence, statisticians are pulled in two directions.

An additional influence is that, for some, in mid career after 15 years measuring events, there comes a yearning to participate more directly in influencing them.

Requirements in these circumstances include contriving to show appreciation of the high quality professional statistician who is best used practising statistical skills. These need not be just money rewards. Status with colleagues, 'expert' status, a contribution to international statistics, sabbatical leave, all play a part. Technical assistance postings in the developing world can be particularly rewarding to both sides of the arrangement.

A management expression of interest in the individual's own career aspirations is vital. Most countries have some form of annual assessment of performance. Feedback to the person concerned helps his personal judgements. Promotion arrangements need also to command universal respect in the service. Further developments in some statistical services include formal regular discussion between the senior manager and individual statisticians about how job satisfaction can be improved. (In the United Kingdom, for instance this is done annually, and every five years the individual statistician is offered the chance to discuss his career with an interview board of three senior members of the statistical service drawn from different parts of government. Experiments are also going ahead to classify posts in the service according to aspects of statistical experience: sample design, data collection, data processing, data analysis, interpretation, etc.)

It is important that the gradings in the statistical service match those elsewhere in the bureaucracy. This is partly a matter of the status of statistics. But it is also important to enable some movement in staff between the statistical service and other parts of government service (in both directions).

### Other skills

Movement between institutions is also important for staff who are not statisticians. Here the problem is that it is not always possible to provide full career development within the statistical service. It is relatively easy in principle to provide the means for the office boy to become the Director-General if he trains as a statistician. But the careers of other specialists (including economists, lawyers, computing staff and public relations experts) will often develop beyond the statistical service. As far as practicable they should be given the same opportunities to discuss career development inside the statistical service but there will be more movement in and out.

In passing, it is notable that in a decentralised statistical system, like the United Kingdom, the cohesive factor among statisticians is their professional status. Accordingly, efforts to provide access to senior posts for those who enter in a junior non-graduate capacity impose severe strains on the service unless they require a formal statistical qualification to be acquired.

Equally, there are strains if a formal qualification is demanded. Not the least, staff who do not have it or who have a different qualification, often feel second-class-citizens.

## Recent changes

In the last five years in the United Kingdom new patterns have begun to emerge. There are now virtually no statisticians who are employed in a temporary capacity. This is to be regretted because such employment should provide the opportunity to replenish the service with new blood at key grades without upsetting the career structure. It would also provide an opportunity to bridge some of the gap between government and academic statisticians.

Increasingly recruits are women, particularly as graduate statisticians. Most recently, about a half of the intake each year have been women. Some stay for full careers. Others have families and then prefer not to work full-time, if at all. It is possible that part-time employment on specific projects will be a useful source of statisticians and will bridge a difficult period in a woman's career prior to returning in a full capacity. The same may also be true for computer programming staff.

### Organisation of training and its costs

Maintenance of the professional competence of the statistical service requires a training effort irrespective of whether recruitment is of generalists or highly trained functional specialists. The environment in which we work changes too rapidly to ignore the need for formal training.

Much training is on the job. Development of staff should be in the job specification of every line manager. The means will range from wholly informal contact in the day to day operation of the service, to semi-formal discussions and seminars about issues affecting day to

day decisions. There is no substitute for this kind of training.

Many of us have benefited greatly from the example and the patience of our earlier superiors. This kind of contact is a prime source for improving the quality of work in the service. But it is not enough.

Off the job training facilities provide scope for new perspectives and new stimuli. Most services now encourage staff to attend limited courses or seminars relevant to their work. Many provide scholarships for longer-term study. Among the most frequent subjects are:

- basic training to graduate standard in statistics;
- induction courses for new recruits (which have often replaced the system of rapid short spells observing work in different parts of the service);
- refresher courses for statisticians to keep up with methodological developments;
- computer training;
- field training for survey work;
- training in management skills;
- seminars on topical issues or developments in public administration;
- skills which statisticians often lack for reasons of education as well as temperament (speaking, writing, persuasion, negotiation, etc.).

The appropriate form of organisation to run the courses varies with circumstances in different countries. In general, however, the following principles can be maintained:

- the more academic the training requirements the more efficient it is to leave it to the colleges and universities;
- it is a good thing for working statisticians to lecture or attend seminars about the issues surrounding their responsibilities;
- short spells of training at a national civil service college or similar body are often efficient because the courses can be made directly relevant to government work;
- statisticians should mix with other disciplines.
   Attendance at mixed discipline training courses helps foster better working relationships between the statistical service and government departments;
- where the statistical service runs its own training courses, for example on statistics or computing, it is often beneficial to allow participation of students from outside organisations.

In addition to formal courses the exchange with or loan of staff to outside organisations is becoming popular. There is particular merit in the placing of statisticians temporarily in other parts of government, and in private sector bodies, such as business firms and universities. The individuals can learn valuable

lessons respectively about how data are used to come to government decisions, how businesses reach key decisions and how statisticians can collect information from businesses with least disruption. In the case of university work a spell of concentrated application to a problem of applied research can be rejuvenating for the institutions and the individuals concerned.

Cost is often felt most acutely in work foregone when the individual is absent on training. In this regard frequent short absences are probably more easily coped with than larger infrequent periods unless the budget authorities are prepared to build a margin for training into the staffing levels. Professional groups such as economists, lawyers and statisticians can make a strong case for such margins. At the graduate level a target of five per cent of staff absent at any one time is as much as might be afforded.

## Special measures

Job rotation

Job rotation can be a part of 'on the job' training, and a means of re-motivation for staff who have been in the service for some time. It brings considerable benefits in the employment of generalist statisticians, but has costs in loss of expertise unless handled sensitively. There will be some people, at all levels, who wish to specialise and there are some tasks which demand it. For other staff periods associated with the design of enquiries, their conduct, data processing and data interpretation will be helpful.

It is the normal practice in the UK statistical service to move staff regularly at most levels. The most frequent moves are for the middle-rank supporting staff, the newly recruited graduate statisticians, and the main professional statistical grade. Senior staff, i.e. branch heads and the directors, are moved less frequently. In these posts the occupants can be expected already to have had a variety of experience. Continuity is provided by the more senior posts in both the graduate statistician and other tiers.

As an illustration of the extent of job rotation the following guidance applies to the first three statistical grades in the United Kingdom:

- An Assistant Statistician (the basic recruitment grade with a good honours degree) will normally remain in that grade between two and four years and occupy at least two posts in that time.
- A Senior Assistant Statistician can expect to be in the grade two to three years, often in only one post, occasionally more.
- Main grade Statisticians (the bulk of the graduate staff, 320 out of 570 in total) can expect to remain in one post for between two and five years. Tenure

of a post for more than five years is unusual for younger people (i.e. less than 35 years old).

Job rotation is not necessarily inimical to all specialisation. Successive posts can be related and often are within the same broad specialism (for example, industrial statistics, macro-economic statistics, health statistics, demography, etc.).

# Mixed discipline teams

Statisticians bring one discipline to bear on government issues. It is one discipline of many which are required to contribute to the resolution of these issues. The statistician needs to work closely with other disciplines, notably economists, social scientists and administrators. Increasingly this is done through membership of teams created for the resolution of one problem or group of problems.

The individual statistician may be a member of several teams concurrently. They need not all be within the formal statistical service. Particularly in a decentralised service the statistician will spend some of his time on teams organised by interests outside the statistical service, though normally within the government service.

Within the statistical service teams created to tackle specific problems will draw members from a wider source. For example, a team considering rules for the protection of the confidentiality of statistical data may include lawyers, administrators, economists, research workers and others outside the statistical profession.

This form of arrangement is of growing importance. It provides individuals with the scope for a wider personal contribution to government. It can improve job satisfaction and effectiveness. Many of the major departments in the United Kingdom operate a form of mixed discipline teams over wide areas of work. But it brings management problems for the statistical service.

Experience suggests that it operates best when the statisticians have a firm base within a statistical division and are loaned out to the teams. Permanent location of statisticians in research or administrative divisions appears to damage a vital link back to the data sources. The individual also seems to prefer to work within an organisation where he has close professional contact with fellow statisticians.

### Matrix management

Involvement in mixed discipline working also presents a challenge to management in terms of organising the work of the statistical service. On the one hand the individual has to be encouraged to join in the work of the teams. On the other he is not a free agent and must be constrained to a reasonable balance which

does not neglect the central task of producing statistics in favour of the more glamorous analytical work.

Some countries, notably the central bureau of statistics in Sweden, have sought to tackle this problem by use of the American technique of 'matrix management'. Under this, the individual is formally responsible to different hierarchies for different aspects of his performance. The office is conceived as a matrix with resources on one axis, work to be done on the other. It would seem to require a consistent commitment to organise all work on a project basis and a refined sense of time allocation in the individual which is more vigorous than is usually the case in the government service.

Nevertheless, this may be the direction in which statistical services should move, particularly for experienced staff. It encourages individual responsibility and creativity. Managerially it enables greater flexibility in the use of human resources. Perhaps the greatest challenge of all in the next decade will be the wise use of the staff we have available.

# Travel-to-work areas

Harold Howson, Senior Executive Officer, Department of Employment

One manpower statistic always of interest for any area is the unemployment rate – the percentage of its total employees who are registered as unemployed. The working method for this is given at Appendix A. This rate gives an indication of whether the employment situation in an area is improving or getting worse and provides a means of comparison with other areas. It is a key factor when the area is considered for possible inclusion in an assisted area (a Special Development Area, Development Area or Intermediate Area).

The calculation of the unemployment rate for an individual employment office area is currently made using a numerator and denominator which are not on quite the same basis. The numerator is the number of people registered at the office as unemployed and can be accepted as a good representation of the position, since anyone who becomes unemployed generally registers at the office in his or her home area. The denominator, however, is not so clear cut, as the available statistics show the number of employees working in the area, not all of whom will live in the area. Because of this difference between the two parts of the calculation the resulting unemployment rate could be misleading. An employment office area is either an industrial or a commercial centre, with a lot of workers travelling in each day, will show a low unemployment rate; one in a dormitory area, with little in the way of employment, will have a high unemployment rate. Neither of these rates would be a good indicator of the employment prospects for local people.

The best example of this is the City of London. The 1971 Census of Population\* showed that only 3,110 employees lived in the City of London and that, excluding the temporarily sick, there were a further 170 or 5.2 per cent of the total employees resident there, who were out of employment. However, the unemployment rate by the Department of Employment formula would take as the main figure in the denominator the employees working in the City of London although most of them are commuters. Since they amounted to 329,780 the unemployment rate would be

$$\frac{170 \times 100}{329,780 + 170} = \frac{17,000}{329,950} = 0.05$$

The Department of Employment (then the Ministry of Labour) was aware of this problem when it first introduced percentage rates of unemployment for areas smaller than regions in the article 'Statistics of Local Unemployment: Principal Towns and Development Districts' (April 1960 issue of the Ministry of Labour Gazette). This article pointed out that if an area 'is of such a nature that workers customarily travel in considerable numbers into it or out of it to get to their place of work, a valid percentage rate of unemployment cannot be calculated for that area alone as many of the employed will not live in the area and many of the unemployed will not work in the area'. Accordingly, some grouping of areas was done in the accompanying table Principal Towns (by Region). Such grouped areas were later to be termed 'travel-to-work areas'. The grouping had to be done as a matter of judgement as the Department did not know the employees home addresses.

When the results of the 1961 Census of Population became available a more scientific study was undertaken to determine which areas should be grouped together to form travel-to-work areas that was published in Labour Market Areas, uses and definitions by M. W. Smart.

The Census of Population included questions on both residence and workplace so the Registrars General were able to produce tables\* showing, for every local authority area

- i) Residents by workplace; and
- (ii) Workers by residence.

Each area has three characteristics:-

- (i) R. The number of residents in employment (irrespective of where they work);
- (ii) W. The number of workers who work in the area (irrespective of where they live); and
- (iii) RA. The number of residents who work in the area (and, correspondingly, the number of workers who live in the area).

The ratio  $\frac{RA}{R}$  measures the extent to which residents

work locally; the ratio  $\frac{RA}{W}$  measures the extent to which local people fill the jobs in their area. When both these

<sup>\*</sup>Source: Census 1971, England and Wales, Economic Activity County Leaflet, Greater London, Table 1 and Table 2

<sup>\*</sup>Census 1961 England and Wales; Scotland; Workplace Tables, Table 3A

ratios are sufficiently large an area is considered to be 'self-contained' for travel-to-work purposes, i.e. it provides local work for most of its residents and fills most of its jobs with workers who live in its area. (Figures of 75 per cent for each ratio were considered adequate.)

Any area which did not have satisfactory self-containment figures had to be merged with one or more other areas until the self-containment level was reached. Where there were several areas which were not self-contained it was decided that merging should start with the one which exported most of its labour, i.e., had

the lowest  $\frac{RA}{R}$  value.

It was then necessary to have a 'link formula' in order to find out which area would be selected for the merging, since in any normal situation any one area would send workers to and receive workers from a number of other areas. If the weakest area is area i, the other areas can be regarded as area  $k_1$ , area  $k_2 \dots$ , area  $k_n$ . The link formula then had to be applied to areai and each area k in turn; the highest result, or highest 'link value', indicating the selected area.

Four separate elements had to be taken into account:

- (i) The flow from area; to area k as a proportion of the residents of area; who worked within area; (RAi)
- (ii) The same flow as a proportion of the residents of area k who were working in area k (RAk)
- (iii) The flow from area k to area i as a proportion of RAi
- (iv) The same flow as a proportion of RAk

The weight of each flow was assessed as the product of the relevant proportions and the link value constructed by adding the two together as shown in link 1 at Appendix B.

Taking the area k which had the highest link value, area i and that area k were merged and the sums of Ri+Rk and Wi+Wk obtained. To the sum of RAi + RAk had to be added the number of workers who commuted between the two areas. New percentages then had to be calculated to see if this merged area was self-contained; if it was not, action continued with the new area replacing its constituent local authorities.

The results of this investigation were adopted by the Department as the basis for assessing which employment exchanges areas (as they then were) should be merged into travel-to-work areas, and published in the Department's Gazette, on page 554 of the July 1968 issue.

When the Workplace and Transport Tables from the 1966 Sample Census of Population became available it was thought necessary to review certain areas either

because doubts had been expressed as to whether or not the merging which had been done had been completely satisfactory or because it was known that significant changes had occurred in an area since 1961. The results of the review were published in the Department's Gazette, in the September 1970 issue at page 778.

This review proved to be not only slow and laborious, but also limited as to the number of local authorities which could be handled at any one time. Because of this experience, when it was decided to carry out a complete review of the travel-to-work areas in Great Britain using the 1971 Census of Population information, it was decided to make the analysis by computer.

At the same time, the opportunity was taken to consider whether or not a different starting point should be chosen. It seemed appropriate that the weakest area should be one which either exported or imported a lot of its labour (or even did both: in which case the starting point might be the area which

had the lowest product when  $\frac{RA}{R}$  was multiplied by

$$\frac{RA}{W}$$
).

The link formula was also examined and efforts were made to improve it. In fact three alternatives were produced\* and all four formulae were tried in conjunction with each of the three starting options (the

local authority with the lowest  $\frac{RA}{R}$  percentage; the

lowest 
$$\frac{RA}{W}$$
 percentage; or the lowest  $\frac{RA}{R} \times \frac{RA}{W}$  value) using data for selected areas in England and Scotland.

In the light of the results obtained by these test runs it was decided that the best method to use was the third starting option (Option 3) with the last of the alternative formulae (Link 4). The revised link formula expressed movement between the areas in terms of the total movement to and from those areas. However, in order to check any changes in travel-to-work areas suggested by this method, the original method (Option 1, Link 1) was also applied. In the vast majority of cases both methods produced similar results. An example is given in Appendix C.

Data was extracted from Tables 2 and 3 of the 1971 Census of Population Workplace and Transport and a number of computer runs was made. A single run was generally for all the local authorities in a county together with the local authorities just across the county boundary. Larger counties were subdivided into suitable areas whilst in the case of smaller counties some amalgamation was done. Some local authorities,

<sup>\*</sup>See Appendix B: Links 2, 3 and 4

were, therefore, included in two or more computer runs.

Two separate runs were made for both Option 1 Link 1 and Option 3 Link 4. In the first run the criteria for self containment were set at 80 per cent for each

percentage  $\left(\frac{RA}{R}\right)$  and  $\left(\frac{RA}{W}\right)$ ; in the second the criteria

were lowered to 70 per cent. When a merged area satisfied the criteria the names of the constituent authorities were printed out.

The run came to an end when either:-

(i) All areas were self-contained (no self-contained area could be the starting point for merging purposes) or

(ii) Any area left did not either send workers to or receive workers from any other area included the same computer run.

In rare cases, e.g., when processing parts of Greater London, the run ended because all the areas had been merged into one which even then was not self-contained.

The results had to be translated from local authority areas to employment offices areas. This was done in consultation with the Regional Offices of the Department of Employment and the Employment Service of the Manpower Services Commission and with other interested Departments. Comments taken into account, and which led to changes in the areas as originally suggested, concerned such things as changes which had

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taken place since the Census of Population, the location of industry in certain Rural Districts and the effect of new motorways. The agreed travel-to-work areas were published in the Department of Employment Gazette, July 1978, pp 815 and 816.

The review of travel-to-work areas was an interesting and important exercise. It must be emphasised that at no time were any constraints imposed on the computer's operation either to produce pre-determined results or to take the effect on existing unemployment rates into account. Probably no method of producing travel-to-work areas would satisfy everybody but it is believed that the review which was carried out produced logical labour market areas and thus is the most satisfactory basis for the calculation of unemployment rates.

#### References

Census 1971, England and Wales, Economic activity county leaflet Greater London Table 1 and Table 2 (HMSO 1975) (Price £2·15 net)

Labour Market Areas; Uses and definitions (M. W. Smart) (Pergamon Press) (1974) (Price £4.00 net)

Census 1961 England and Wales; Scotland; Workplace Tables (HMSO 1966) (Price £2.80 net)

Employment and Productivity Gazette, July 1968 and September 1970 (HMSO)

Census 1971 England and Wales, Workplace and Transport to Work Tables (HMSO 1975) (Price £13.50 net)

Census 1971, Scotland, Workplace and Transport Tables (HMSO 1975) (Price £3.60 net)

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

The unemployment rate for an employment office area is calculated by expressing the unemployed registered at the time of the monthly count (usually the second Thursday in the month) as a percentage of the total employees.

The total employees figure is the sum of the number of employees in employment in the area and the number of registered unemployed. From 1971 onwards the number of employees in employment has been obtained by the Annual Census of Employment, held in June.

The unemployment rate for the area in, say, August can, therefore, be expressed as

$$\frac{U_A\!\times\!100}{E^J\!+\!U_J}$$

where U<sub>A</sub> is the registered unemployed in August, E<sub>J</sub> is employees in employment at the latest available Annual Census of Employment (ACE), and U<sub>J</sub> is registered unemployed in the June when that ACE was taken.

The unemployment rate will be re-calculated when more up-to-date figures are available for the denominator.

Between 1948 and 1970 the estimate of the number of employees in employment was obtained from a count of National Insurance cards at the time of the exchange of the B suffix National Insurance cards each July.

### **OPTIONS**

Option 1 Starting point the local authority with the lowest  $\frac{RA}{R}$  percentage.

Option 2 Starting point the local authority with the lowest  $\frac{RA}{W}$  percentage.

Option 3 Starting point the local authority with the lowest  $\frac{RA}{R} \times \frac{RA}{W}$  value.

### LINK FORMULAE

$$\begin{array}{cc} Link \ 1 & \frac{p^2 + q^2}{RA_i \times RA_k} \end{array}$$

Link 2 
$$\frac{p+q}{RA_i+RA_k}$$

Link 3 
$$\frac{p+q}{W_i+W_k}$$

Link 4 
$$\frac{p^2}{(R_i - RA_i)(W_k - RA_k)} + \frac{q^2}{(R_k - RA_k)(W_i - RA_i)}$$

where p is the number of workers who live in area i and work in area k and q the number of workers who live in area k and work in area i.

R = residents in employment (irrespective of where they work)

RA=residents in employment who work in the area in which they live

W = workers in the area (irrespective of where they live).

The weakest area is merged with that area which maximises the value of the link formula used. The process continued with the next weakest area and ceases when

- (i) all areas are self-contained. (Self-contained areas cannot be selected as starting points for merging purposes), or
- (ii) In addition to the self-contained areas there is one (or more) which neither sends workers to nor receives workers from the other areas in the same computer run, or
- (iii) All the areas have been merged into one which does not satisfy the criteria for self-containment.

### Criteria for self-containment 80 per cent, 80 per cent \*denotes satisfaction of the criteria

					Percentage	Percentage
		D A	D	W	RA	RA
Area	Local Authority	RA	R		R	W
1	Plymouth CB	93,750	98,720	106,990	94.97	87.63*
2	Plympton St. Mary RD	2,900	5,900	4,530	49.15	64.02
3	Tavistock RD	6,530	9,500	7,350	68.74	88.84
4	Saltash MB	1,510	3,900	2,050	38.72	73.66
5	Torpoint UD	1,190	2,270	1,990	52.42	59.80
6	St. Germans RD	3,050	5,370	3,400	56.80	89.71
	Original method (Option	1. Link ()				
	Original method (Option	I, Link I)				
4+1=7	Saltash MB, Plymouth CB	97,560	102,620	109,040	95.07	89.47*
2+7=8	Plympton St. Mary RD, Saltash MB, Plymouth CB	104,090	108,520	113,570	95.92	91.65*
5+6=9	Torpoint UD, St. Germans RD,	4,510	7,640	5,390	59.03	83.67
9+8=10	Torpoint UD, St. Germans RD, Plympton St. Mary RD,	111,350	116,160	118,960	95.86	93.60*
	Saltash MB, Plymouth CB					
3+10=11	Tavistock RD, Torpoint UD, St. Germans RD, Plympton St.	120,840	125,660	126,310	96.16	95.67*
	Mary RD, Saltash MB, Plymouth CB					
	Revised method (Option	3, Link 4)				
			100 500		No. of Street, or other	
4+1=7	Saltash MB, Plymouth CB	97,560	102,620	109,040	95.07	89.47*
5+7=8	Torpoint UD, Saltash MB, Plymouth CB	99,950	104,890	111,030	95.29	90.02*
2+8=9	Plympton St. Mary RD, Torpoint UD, Saltash MB, Plymouth CB	106,480	110,790	115,560	96.11	92.14*
6+9=10	St. Germans RD, Plympton St. Mary RD, Torpoint UD,	111,350	116,160	118,960	95.86	93.60*
	Saltash MB, Plymouth CB					
3+10=11	Tavistock RD, St. Germans RD, Plympton St. Mary RD,	120,840	125,660	126,310	96.16	95.67*
	Torpoint UD, Saltash MB, Plymouth CB					

It will be noted that both methods produced the same final result although differing in the way in which the merging was done.

Both methods therefore gave a travel-to-work area comprising the employment offices of:

Plymouth – Plymouth CB., part of Plympton St. Mary RD. and a small part of Tavistock RD.

Devonport - Torpoint UD and part of St. Germans RD.

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Plympton - Part of Plympton St. Mary RD and part of Totnes RD.

Saltash – Saltash MB, most of St. Germans RD, a small part of Launceston RD and a small part of Liskeard RD.

Tavistock - Most of Tavistock RD.

Part of St. Germans RD is in the Liskeard employment office area and part of Tavistock RD is in the Launceston employment office area.

# Library manpower statistics

Mrs. Sylvia Keith and Mrs. Elizabeth Mellor, Statisticians, Department of Education and Science

Both the Library Association (LA)<sup>(1)</sup> and the Department of Education and Science (DES) have estimated recently that there is likely to be a significant oversupply of around 1,600 newly qualified librarians in the United Kingdom by 1981 if the number of posts remains constant until then. This represents about one quarter of the total qualified student output between 1976–81. The estimates co-ordinate a number of statistical sources, collected mainly by the DES, and they are supported by current evidence indicating that some librarians, especially the newly qualified, are unable to obtain work as professional librarians.

Ten years ago, it was predicted<sup>(2)</sup> that over-supply could occur and library schools were advised to concentrate on qualitative improvement within the current quota of student places. The limited data then available suggested that various manpower series should be set up and considerable progress has been made. The DES now conducts two annual studies of library school students and surveyed all library staff in both 1972 and 1976. Manpower statistics are also included in certain general library series, in the DES study (now biennial) of colleges of further education (including polytechnics), in the University Grants Committee survey of university libraries and in local authority treasurers' (CIPFA/SCT) public library statistical series.

The relative lack of national data on the school library area becomes less surprising when one considers the large number of data points and, even more important, the apparent variety of practice in funding, staffing and organising such libraries. However the limited evidence obtained in the 1976 staffing census<sup>(3)</sup> indicates that under 1,000 qualified librarians work in this area. The DES is currently surveying a ten per cent sample of secondary schools in England to study library facilities including staffing.

The two library school leaver surveys consist of a simple return from each of the 17 library schools in the United Kingdom, concentrating on student output, and an individual return, identifying the newly qualified students' first employment or employment prospects. In 1977/78 1,398 successfully completed their courses and three-quarters were women. Student output reached a peak of 1,529 in 1976 and seems likely to continue

to decline to between 1,000 and 1,300 by 1982. Since 1969 some four-fifths of library school leavers have replied each year concerning their employment or prospects (a remarkably good response for a postal survey)<sup>(4)</sup>. The percentage of those responding who had obtained professional work within two to five months after leaving college has declined steadily from nearly 90 per cent in 1973–74 to about 60 per cent in 1976–78. One in four of those without professional work had a library post, but on non-professional duties. Nearly half of those with a professional post entered the public library service.

Each library staff census also demonstrated that public libraries were the main employers, accounting for 58 per cent of full-time equivalent staff in both 1972 and 1976. Some 3,300 libraries and information departments were identified in the 1976 exercise, some 400 less than in 1972 because of administrative changes mainly in the local government sector, which led to the co-ordination of separate library systems into single managerial units. In 1976 over 18,000 staff, mainly full-time, were in qualified posts. The tendency for the age distribution of staff to peak in the 25 to 29 group had become more marked than in the earlier exercise, as 29 per cent of full-time staff in qualified posts were in this group in 1976. (Both reports include regional analyses and categorise libraries by type.) In the autumn of 1977, the LA produced a report which concluded that by 1981 there would be a considerable 'over-supply' of qualified librarians. Their approach was updated and extended by later information available to DES, and a joint LA/DES report was made to the Committee on Manpower Forecasting in Librarianship and Information Science in 1978. This report was revised by the DES this year using the latest survey results and by refining the wastage calculations and extending the time span of the estimates to 1986.

# Supply

On the supply side the DES used the latest output survey figures together with Library Association estimates for part-time students. This resulted in a further reduction in the estimate of the size of the new cohort of qualified librarians. No estimates are yet available of projected output beyond 1983 and the output has been assumed to remain constant for the next two years. In addition some library schools were not able to provide estimates for certain courses in earlier years. For these courses maximum and minimum estimates have been made: a. the output for the latest year shown has been assumed constant for all following years and b. the output has been taken as zero. Assuming that few if any courses will be discontinued (apart from the two year courses which are unlikely to take any new students after 1980) it is likely that the actual output will be nearer the maximum than the minimum shown. On the other hand the minimum is useful in illustrating the effect on future supply if some courses are discontinued. The output of overseas students has been assumed to remain constant at 105 students per year from 1980 onwards. Earlier figures for overseas students are based on known enrolment and output numbers. The numbers unavailable for professional employment (those failing their exams and those not seeking work immediately in the profession) have been estimated from the DES surveys up to 1978. In that year 13 per cent of the UK output of students was unavailable for professional employment. It has been assumed that this percentage will remain constant up to 1986. In the past a higher proportion of first degree graduates than other students were not available for employment. As these graduates have been accounting for an increasing proportion of all students over the last few years the assumption that the percentage unavailable for professional employment will remain constant may be an underestimate.

As a result of the assumptions stated above the latest figures for the output of UK students available for employment are as follows:

1972-76	1976-81	1981-86
5,700	6,150/6,410	3,700/5,200

### Wastage

Wastage calculations have been refined to take account of the age related stock and by expressing wastage in annual rates. The calculations were based on the 1976 library census age distribution of the numbers of staff in posts for qualified staff excluding schools and the results were grossed up for the total supply. It was

assumed that all new entrants were aged under 30. The net wastage calculated for those aged 50 or more has been taken as the number of retirements and deaths. In practice some of those aged 50 or more leaving their jobs may return and this may account for a slightly higher rate of deaths and retirements calculated in this way than that shown for 1975/6 in the 1976 library census. Other comparisons of net wastage rates with the census results for changes to full-time qualified staff between 1975 and 1976 cannot be made accurately as the census does not differentiate between entrants and re-entrants. Taking account of the library student output figures the library census results imply that there were only about 400 re-entrants in 1975/6 with a resulting higher net wastage for that year than has been calculated. The resultant net wastage, retirements and deaths, student output and the total stock at the beginning and end of each period are shown in Table 1.

Thus by 1981 the supply of librarians is likely to be around 21,200; similar to the 1978 estimate. By 1986 the maximum estimates show a rise to 21,500 and the minimum estimates assuming certain courses are discontinued show a drop to some 20,200.

### Demand

The demand for librarians may be subject to a number of factors especially economic changes mostly quite outside the profession's control. The LA's Report using the data available to them concluded that 'there is no likelihood of significant additional demand for qualified librarians within the next five years'. However the latest indications are that there has been a small increase in posts since the 1976 census. The latest CIPFA statistics for public librarians show increases of 1.4 per cent between 1976 and 1977 and 0.8 per cent between 1977 and 1978. The latest first employment surveys show a larger proportion of students finding employment in the special library sector than in the past and steady recruitment to posts in the academic sector which indicates some expansion of these sectors. If we assume that the special library sector has increased by 100 posts between 1976 and 1978 and the academic sector by 50 posts, but that there was little change in the number of school posts, the resultant number of posts in 1978 together with

### Table 1

### Supply of Librarians

1972-76	1976-81	1981-86
18,640	20,180	21,050/21,250
5,700	6,150/6,410	3,700/5,200
3,050	4,000/4,050	3,200/3,600
1,110	1,290	1,400
20,180	21,050/21,250	20,200/21,500

Table 2

### **Demand for Librarians**

		Posts			Demand necessar	y to balance suppl	V
					1981		1986
	1972	1976	1978	Minimum	Maximum	Minimum	Maximum
Public	8,519	9,146	9,350	10,000	10,100	9,550	10,150
Academic	4,137	4,255	4,300	4,700	4,750	4,500	4,850
Special	5,140	4,829	4,950	5,300	5,350	5,100	5,450
School	464	928	950	950	950	950	950
Total	18,260	19,158	19,550	20,950	21,150	20,100	21,400
Total plus Unempl	loyed			21,050	21,250	20,200	21,500

the 1972 and 1976 numbers are given in the table above. Table 2 also shows the numbers required to balance the minimum and maximum estimates of supply for 1981 and 1986.

Table 2 shows that a growth of between seven and eight per cent in all libraries except school libraries between 1978 and 1981 would be required to take up the total supply of librarians. (Such growth seems unlikely judged from the recent small increments.) This would more than cover the minimum total supply in 1986 but a further increase of between one and two per cent would be required to take up the maximum total supply in 1986. On the other hand if there is no increase in the number of posts after 1978 there could be as many as 2,000 librarians unemployed in 1986, (that is nearly half of those newly qualified would be unable to find library work).

Statistics from a separate source confirm that qualified librarians are finding more difficulty in obtaining suitable work. The Department of Employment's quarterly counts of those registered as unemployed identify

this group from 1972 onwards. Initially some 250 registered (on average) each quarter but in 1975 this level rose (coinciding with the first sign of declining employment prospects for library school leavers).

By 1977–79 some 800 registered (on average) each quarter and that was more than three times the level noted in the early 1970s. Throughout the series the peak level occurred in September, just after most students graduated, and was around 1,000 in September 1977 and September 1978.

#### References

- (1) \*The Library Association Report of the Commission on the Supply of and Demand for Qualified Librarians 1977 (Price £2.00 net)
- (2) Library Advisory Councils (England and Wales). A report on the supply and training of Librarians (HMSO 1968)
- (3) Census of Staff in Librarianship and Information Work in the United Kingdom 1972. Ditto 1976. Free on request from: Department of Education and Science, Elizabeth House, York Road, London SEI 7PH
- (4) \*Library Association Record articles on serial studies of library students' first destination last included in November 1978
- \*Enquiries on these publications to: The Library Association, 7 Ridgmount Street, London WC1E 7AE

Manual of Steels and Society Security

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# Recently available statistical series and publications

The following publications containing social statistics have recently, or will soon become available during the July-September quarter of 1979. Unless otherwise specified, copies may be purchased from Her Majesty's Stationery Office. A list of release dates of economic series is published monthly in *Economic Trends*.

Statistics of the Misuse of Drugs, United Kindom 1977 Statistics of Persons acquiring citizenship of the United Kingdom and Colonies 1978

# Department of Education and Science

Education Statistics for United Kingdom, 1976 and 1977 Statistics of Education, Volume 6, 1976: University statistics, 1976

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

Statistics of Education, Volume 2, 1977: School leavers and CSE/GCE examination statistics, 1976-77

Statistics of Education, Volume 4, 1977: Teachers' Statistics, 1977

Statistics of Education, Volume 5, 1977: Finance and Awards Statistics, 1977

# Department of Employment

Employment Gazette, published towards the end of each month, contains indicators on earnings, unemployment and prices. Issues due in the third quarter will contain the Family Expenditure Survey results for the fourth quarter of 1978.

# Department of the Environment

Housing and Construction Statistics, Issue 29: figures for the first quarter 1979

Local Housing Statistics, Issue 50: figures for the first quarter of 1979

# Department of Health and Social Security

Mental Health Statistics, England, 1976

# Home Office

Report of the Carlisle State Management District 1978 Report of H.M. Chief Inspector of Fire Services 1978 Statistics of Experiments on Living Animals – Great Britain 1978

Report of the Work of the Prison Department for 1978 Prison Statistics England and Wales 1978

# Inland Revenue

Inland Revenue Statistics 1979

# Office of Population Censuses and Surveys

Population Trends No. 17

OPCS Monitors available free from the Office of Population Censuses and Surveys include:

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

### Scottish Office

Scottish Economic Bulletin No. 18 Scottish Housing Statistics No. 5 Criminal Statistics, Scotland, 1978

In addition to the above, the following analyses in the Department of Health and Social Security statistical series have recently become available. Extracts and summaries from these will eventually be published in Social Security Statistics.

### Unemployment benefit

Quarterly analysis of decisions of Insurance Officers, quarter ending 30 June 1979

Monthly analysis of claims by sex and region:

- 4 weeks ending 31.3.79
- 4 weeks ending 28.4.79
- 5 weeks ending 2.6.79

Quarterly analysis of registered unemployed by class, sex and region, quarter ended 10.5.79

# Guardian's allowance/Child's special allowance

Quarterly analysis of children for whom allowance is in payment, quarter ended 30 June 1979

### Child Benefit

Analysis by family and children, 5 months ended 31.5.79

Further information can be obtained from:
Mr. R. J. McWilliam,
Department of Health and Social Security,
Room 2216,
Newcastle Central Office,
Newcastle upon Tyne NE98 1YX.

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# New surveys assessed by the Survey Control Unit

# March to May 1979

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

An introductory note was given in Statistical News 36.41

New surveys assessed March - May 1979

Title	Sponsor	Those approached	Approximate number approached	Location	Frequency
Bu	siness surveys				
Stress grading of timber – evaluation of a wall chart Operational effects of the maternity provisions of the Employment	BRE	Construction companies	300	UK	AH
Protection Act 1975	DEM	Employers	300	EW	AH
Effect of public policies on firms in the Nottingham area	DOE	Employers	550	EM	AH
Monitoring the processes of inner city manufacturing change	DOE	Manufacturers	700	SE	AH
Freight market monitoring - pilot	DTP	Transport companies	30	GB	AH
1979 Occupancy survey of static caravan and chalet sites	ETB	Caravan and chalet			
		site operators	440	E	Y2
Occupancy survey of tourist accommodation in North Pennines	ETB	Hoteliers	140	NW	AH
Shipbuilding ITB non-statutory return of manpower and training Clothing and Allied Products ITB survey of self-employed	MSC	Shipbuilding companies Clothing	1,030	GB	A
and outworkers	MSC	manufacturers	4,000	GB	AH
Knitting, Lace and Net ITB transport training needs survey	MSC	Manufacturers	400	GB	AH
Toys and games examination - distributors survey	PC	Distributors	120	UK	AH
Toys and games examination - manufacturers survey	PC	Manufacturers	45	UK	AH
Bass Limited - Scottish survey	PC	Publicans	100	S	AH
Free House beer price collection	PC	Publicans	130	UK	AH
Survey of hostels and lodging houses	SDD	Hostels and lodging			
		houses	175	S	AH
Proposed investment in livestock auction markets	WO	Livestock auctioneers	100	W	AH
Local	authority survey	S			
Access and allocation to council housing	1 DOE	Housing departments	403	1 EW	AH
Value for money in rehabilitation (dwellings) work	DOE	Housing departments	68	E	AH
Link based road traffic census 1979 – supplementary information	DTP	Highways departments	63	GB	AH
Use of LEA school buses	DTP	Education departments	84	GB	AH
Housing stock: annual return	SDD	Housing departments	56	S	A
Sales and transfers of dwellings by local housing authorities	SDD	Housing departments	56	S	Q
Acquisitions of dwellings by local housing authorities	SDD	Housing departments	56	S	Q
Housing below the tolerable standard	SDD	Housing departments	56	S	A
Housing action areas: annual progress report	SDD	Housing departments	56	S	A
General development control return – planning applications	wo	Planning departments	48	W	Q
Processing time for planning applications	wo	Planning departments	48	W	Q
Outstanding planning permission for large sites	wo	Planning departments	48	W	HY
Planning permission for large sites - supplementary return	wo	Planning departments	48	W	A
Special development control return	WO	Planning departments	48	W	A
	Other surveys				
		Patients	60	ı WM	AH
Accidents involving stairs and steps	BRE	Various organisations	NK	EW	AH
Day and short-stay residential centres in national parks	COI/DEN	Car owners	1,000	GB	AH
	COLDEN		10,000	GB	AH
Fuel consumption information - motorists' survey	COLIDEN	HIIVARS OF HAW MARS	10,000		
Fuel consumption information – motorists' survey Fuel consumption information – new car buyers' survey	COI/DEN	Buyers of new cars Children	60	E	AH
Fuel consumption information – motorists' survey Fuel consumption information – new car buyers' survey Green Cross Man – TV advertising rotascope technique	COI/DTP	Children	60	E E	AH AH
Fuel consumption information – motorists' survey  Fuel consumption information – new car buyers' survey  Green Cross Man – TV advertising rotascope technique  Two-wheeler 'Junction' road safety TV test	COI/DTP COI/DTP	Children Drivers	60 200		
Fuel consumption information – motorists' survey Fuel consumption information – new car buyers' survey Green Cross Man – TV advertising rotascope technique	COI/DTP	Children	60	E	AH

Title	Sponsor	Those approached	Approximate number approached	Location	Frequenc
Other	surveys—continue	od.			
Royal Mint research – stage 2	COI/MINT	Consumers	1 250	l con	
RAF recruitment advertising research	COI/MOD	Youths	250	GB	AH
Naval commercial test	COI/MOD	Youths	32	GB	AH
Royal Navy artificers research	COI/MOD	Youths	32	GB	AH
Recruitment of TOPS instructors – qualitative research	COI/MSC	Applicants	3,650	GB	AH
Research into OFT leaflet 'How to Put Things Right'	COI/OFT	Adults	250	E	AH
Ordnance Survey market study	COI/OS	Adults	2,000	GB	AH
Operational effects of the maternity provisions of the	001/00	riduits	2,000	GB	AH
Employment Protection Act 1975	DEM	New mothers	2,700	EW	ATI
Ageing, needs and nutrition – assessment of alternative food	D D A T	Tien moners	2,700	EW	AH
services	DHSS	Elderly	70	YH	AH
Solicitor and social worker relationship in child court cases	DHSS	Solicitors and social	10	111	АП
onenor and social worker relationship in clinic court cases	Diibo	workers	210	Е	AH
Study of Fostering and the Children Act 1975	DHSS	Parents	125	E	AH
Early detection of gastro-intestinal cancer	DHSS	Patients	1,750	YH	AH
Antenatal care study	DHSS	Mothers	1,200	SE	AH
Parents for Children' Agency - inquirers for specified children	DHSS	Social workers	240	SE	AH
nstitute of Housing Research - transfers and exchanges	DOE	Tenants	750	E	AH
National dwelling and housing survey – stage III	DOE	Households	300,000	E	AH
Community based initiatives in inner urban areas	DOE	Self-help groups	600	SE	AH
Playground accident survey	DOE	Parents	80	EW	AH
Survey of night-time disturbance – main stage	DT	Adults	7,400	SE	AH
418 Thame to Stevenage A1(M) traffic survey	DTP	Drivers	16,208	EM	AH
59 Bickerstaff to Bretherton improvement survey	DTP	Drivers	5,000	NW	
Origin and destination surveys at Lincoln	DTP	Drivers			AH
Lewes area study – household survey	DTP	Households	4,800	EM SE	AH
Lewes area study – rail survey	DTP	Passengers	2,000	SE	AH
Oxford-Birmingham route roadside interview survey	DTP	Drivers		E	AH
979 Image survey of selected holiday destinations	ETB	Adults	20,000		AH
Holidaytaking behaviour of recipients of 1978/79 area booklets	ETB	Adults	3,000	GB	A
urvey of 1978/79 'Let's Go' booklet applicants	ETB		3,000	GB	AH
Visitors to 4 sites in North Pennines Tourism Growth Point area	ETB	Applicants Visitors	1,500	GB	AH
angling centre market research	HIDB		2,200	N	AH
Vinter sports market research	HIDB	Adults	1 200	GB	AH
n-depth study of the long-term unemployed	MSC	Adults	1,300	GB	AH
Census question test 1979	OPCS	Unemployed Households	2 100	GB	AH
OEC labour force survey 1979	OPCS/DEM	Households	2,100	SE	AH
dult heights and weights research – feasibility study	OPCS/DEM OPCS/DHSS		100,000	UK	Y2
lanning of primary education in rural Scotland	SDD SDD	Adults	200	UK	AH
RUTEX - village comparison study	SDD	Households	900	5	AH
RUTEX - Ballochmyle on-bus survey	SDD	Households	170	5	AH
RUTEX - Blackmount on-bus survey	SDD	Passengers	200	5	AH
urvey of social education in secondary schools		Passengers	150	5	AH
Evaluation of children's magazine 'Blaze Buster'	SED	Headteachers	450	2	AH
yne and Wear public transport impact study – roadside survey	SHHD	Children	1,500	S	AH
yne and Wear public transport impact study – foadside survey	TRRL	Drivers	13,000	N	AH
Novice motorcycle and moped rider survey	TRRL	Passengers	50,000	N	AH
Northampton taxi users survey	TRRL	Adults	200	SE	AH
eachers' attitudes to road safety and traffic education	TRRL	Passengers	7,000	EM	AH
RUTEX – Taw Valley final surveys	TRRL	Teachers	500	GB	AH
Turning at road junctions – pilot survey	TRRL	Passengers	120	SW	AH
diffing at road junctions – phot survey	TRRL	Adults	200	SE	AH

Abbreviations used	DEM - Department of Employment	SHHD - Scottish Home and Health
Auditons useu	DEN - Department of Energy	Department
General  LEA - Local Education Authority  NK - Not known	DHSS - Department of Health and Social Security	TRRL - Transport and Road Research Laboratory
NK - Not known  RAF - Royal Air Force  RUTEX Rural Transport Experiment  SOEC - Statistical Office of the European	DOE - Department of the Environment  DT - Department of Trade  DTP - Department of Transport	WO - Welsh Office
Communities  TOPS - Training Opportunities Scheme	ETB - English Tourist Board  HIDB - Highlands and Islands Development  Board	Locations E - England
	HOME- Home Office	EM - East Midlands
Frequency	IR - Inland Revenue	EW - England and Wales
A - Annual	MINT - Royal Mint	GB - Great Britain
AH - Ad hoc (or single time)	MOD - Ministry of Defence	N - Northern England
HY - Half-yearly	MSC - Manpower Services Commission	NW - North West England
Q - Quarterly	OFT - Office of Fair Trading	S - Scotland
Y2 - Every two years	OPCS - Office of Population Censuses and	SE - South East England
	Surveys	SW - South West England
Sponsors	OS - Ordnance Survey	UK - United Kingdom
BRE - Building Research Establishment	PC - Price Commission	W - Wales

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- Countryside Commission

- Central Office of Information

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# Notes on current developments

### REGIONAL STATISTICS

### Regional accounts

The Central Statistical Office is currently developing summary income and expenditure accounts of local authorities within the framework of the regional accounts. These cover the eleven standard regions of the United Kingdom. The work is financed by a contract with the Statistical Office of the European Communities, who have placed similar contracts with other EEC countries. The purpose is to extend the regional accounts which currently cover GDP, personal income and fixed investment. Ultimately it is hoped to include those activities of the general government sector which can be readily disaggregated by region. The development contract is expected to run to the end of 1980 and provisional figures should be published this autumn.

Welsh Local Government Financial Statistics

The Welsh Office publication, 'Welsh Local Government Financial Statistics, No. 3, 1979', is published this month. Recent trends in the local government financial sphere are highlighted in a series of 39 tables, supported by diagrams and notes.

The publication is divided into nine main sections, with Section I as a summary. In Section II, the income and expenditure of local authorities in Wales is detailed; categories covered include rate fund services, the housing revenue account, trading services and the wages, salaries and superannuation positions. Section III presents a service analysis of local authorities' capital payments in 1978/79, while Section IV deals with authorities' estimated revenue expenditure in both 1978/79 and 1979/80. Local authority borrowing data up to 1978/79 are given in Section V, and details of outstanding debt are given in Section VI. Rate support grant and supplementary grant payments in recent years are presented in Section VII together with, for 1977/78, a service analysis of specific grants and subsidies. Details of rates, rateable values and rate rebates are given in Sections VIII and IX.

Appendices provide, in the main, a further analysis of some of the information presented in the main body of the document: Appendix I, for example, breaks down into finer categories some elements of authorities' outturn of income and expenditure in 1977/78 (summarised in Section II) and Appendix II a detailed the response rates obtained in the past from inner

breakdown of authorities' revenue expenditure estimates for 1978/79. Finally, a glossary of the major terms used is given at the end of the publication, together with detailed notes on some of the major statistical sources.

#### Reference

Welsh Local Government Financial Statistics, No. 3, 1979 (HMSO, forthcoming

Welsh Economic Trends No. 6, 1979

The sixth edition of Welsh Economic Trends is to be published shortly. The format broadly follows that of the previous edition with sections on population, regional income and expenditure, the working population, earnings and hours, household income and expenditure, industrial activity and capital and public expenditure. The publication sets out the latest available economic data for Wales with comparative information where appropriate. Tables are supported by text and good diagrams.

New tables in this issue relate to reasons for persons working other than normal hours, the Development Board for Rural Wales and the transport of goods into and out of Wales.

Any enquiries should be addressed to:

Mr. E. Swires-Hennessy, Welsh Office, 31 Cathedral Road, Cardiff CF1 9UJ.

Telephone: 0222-42661, Ext. 35.

### Reference

Welsh Economic Trends, No. 6, 1979 (HMSO, forthcoming

## POPULATION AND VITAL STATISTICS

### 1979 Census test

The Office of Population Censuses and Surveys conducted a Census Test in the London Borough of Haringey in April 1979. The test, part of a series of voluntary tests leading up to the next Census of Population in 1981, covered some 56,000 households in 16 wards of the Borough.

Completed forms were returned by 54 per cent of households. This figure indicates a lower overall response rate than in other recent tests but is close to

urban areas. It was not possible to contact 15 per cent of households, 7 per cent refused to accept a form and 25 per cent accepted a form but did not complete it.

It is important to test procedures in an area difficult to enumerate. Haringey offers a variety of challenges to the census-taker, including a good deal of older multi-occupied property and a number of minority groups from, for example, the New Commonwealth Countries and European countries.

Two forms were tested. These differed only in one respect; a question on parents' country of birth, used in the 1971 Census, was replaced by a question on racial or ethnic group in half the forms.

Further information can be obtained from:

Census Division, OPCS, St. Catherines House, 10 Kingsway, London WC2B 6JP.

Population projections

Published this month is an OPCS Monitor which gives some key results of the mid-1978 based population projections. Information on the underlying assumptions is given, together with summary figures of the projections for England and Wales, Great Britain and the United Kingdom. Full details will be published in a booklet *Population Projections* 1978–2018 (Series PP2 No. 10).

Further information is available from: Government Actuary's Department, 22 Kingsway, London WC2B 6LE. Telephone: 01-242 6828.

## Life Tables

The thirteenth in the series of decennial reports prepared by the Government Actuary at the invitation of the Registrar General for England and Wales was published in May. OPCS mortality data for the years 1970, 1971 and 1972 and 1971 Census population figures were used to construct these complete life tables. The expectation of life at birth was 69 years for males and 75 years for females, an improvement of  $17\frac{1}{2}$  years for males and nearly 20 years for females since 1911. At age 65 the expectation of life in 1971 was 12 years for men and 16 years for women. Over the 60 year period since 1911 the infant mortality rate has been reduced to one-sixth of its former level for both sexes and mortality rates have been at least halved up to age 50 for males and beyond age 60 for females. An OPCS volume on mortality statistics issued on 14 December 1978 contains an abridged life table for

England and Wales based on mortality data for 1974–76 (Table 22).

#### References

Life Tables 1970-72 (decennial supplement). OPCS Series DS No. 2 (HMSO 1979) (Price £1.25 net)

Mortality Statistics 1976. OPCS Series DH1 No. 4 (HMSO 1978) (Price £2.75 net)

# Socio-economic classification of census enumeration districts

Published in July was the latest in a series of national studies carried out jointly by the Centre for Environmental Studies (CES) and OPCS, and of which mention has been made from time to time in *Statistical News*. Previous studies have classified local authority areas, parliamentary constituencies and wards and parishes. Now there is a study intended firstly to provide a classification of the whole of Great Britain at the very small area level of the census enumeration district (on average about 150 households) showing the ecological structure at each district and county, and secondly to show the way in which these districts and counties differ in the share of the population resident in each of a number of different types of neighbourhood.

A set of 40 census variables, chosen in such a way as to give approximately equal weight to housing, age structure/household composition and social and economic characteristics, acted as criteria for assessing similarity between enumeration districts and thence for grouping into some 60 different types.

### References

Census enumeration districts: a socio-economic classification. OPCS Occasional Paper No. 14 by Richard Webber (HMSO 1979) (Price £1.00 net)

Socio-economic classification of local authority areas. OPCS Studies on Medical and Population Subjects No. 35 by Richard Webber and John Craig (HMSO 1978) (Price £4.75 net)

Parliamentary constituencies: a socio-economic classification. OPCS Occasional Paper No. 13 by Richard Webber (HMSO 1978) (Price £1.30 net)

The national classification of residential neighbourhoods: an introduction to the classification of wards and parishes. PRAG Technical Paper No. 23 by Richard Webber (HMSO 1978) (Price £2.50 net)

# Marriage and Divorce Statistics

Published in July was the fourth of a series of annual publications issued by OPCS presenting data on marital status of the population by age and sex for the period 1901–77; a summary of number and rates for marriages and divorces, 1901–77; more detailed marriage analyses for 1977; divorce statistics including tables on children of couples divorced for the period 1967–77; new widowers and widows in 1977; cohort analyses of the ever married, divorced and widowed populations.

### Reference

Marriage and divorce statistics 1977. OPC SSeries FM2 No. 4 (HMSO 1979) (Price £2.75 net)

### **Immigration statistics**

An OPCS Occasional Paper published last month sets out the main differences between the immigration statistics collected by OPCS for demographic purposes and those compiled by the Home Office in order to monitor the administration of immigration control procedures. Because figures from the two sources are collected for different purposes, their coverage, methods and definitions differ. The Occasional Paper lists these differences and explains why it is not, in general, possible to carry out a reconciliation of the two types of statistics. The facts given have been published before, but this publication brings them together and is a convenient source of reference.

#### Reference

OPCS Occasional Paper No. 15. Immigration statistics: Sources and definitions. Population Statistics Division OPCS and Statistical Department Home Office) (Price 50p net). Obtainable from:

Information Branch (Dept. SN),
Office of Population Censuses and Surveys,
St. Catherines House,
10 Kingsway,
London WC2B 6JP.

### Sub-national population projections

OPCS has now produced mid-1977 based population projections for the regions, counties, metropolitan districts and London boroughs in England. These projections, first mentioned in *Statistical News* number 43, page 43.27, supersede the mid-1975 based series published in *Population projections: area* 1975–91 Series PP3 No. 2 (HMSO, 1978). Results have been released initially in a series of OPCS Monitors. Projections for the regions and counties at 1981 and 1991 together with the percentage change in population from mid-1977 were issued in *OPCS Monitor* PP3 79/1 on 13 March 1979. Similar information for the metropolitan districts and London boroughs was released in *OPCS Monitor* PP3 79/2 on 12 June 1979.

Both Monitors are available direct from:

Information Branch (Dept. SN),

OPCS,

St. Catherines House,

10 Kingsway,

London WC2B 6JP.

The region and county projection results were mentioned in an article entitled 'Population projections: English regions and counties' written by R. Campbell and published in *Population Trends* 16 in June 1979. The article also included some discussion of the questions commonly arising in the projection field.

The projection results will be presented in more detail in an OPCS annual reference volume entitled *Population projections: area* 1977–91 Series PP3 No. 3 which will be published towards the end of 1979. Its

contents will be broadly similar to the mid-1975 based volume; that is, a short commentary on the projections embracing the limitations of projections in general, the methodology employed in the mid-1977 based projections and a discussion of the results and how they compare with previous projections, together with two appendix tables containing the projection results. Appendix table 1 will contain the projection results at 1981, 1986 and 1991 broken down by quinary age/sex groups for the constituent counties of Great Britain, and the regions, counties and metropolitan districts in England. Projections for the London boroughs will also be included for the first time but details of their presentation have not yet been finalised. Appendix table 2 will give the projected numbers of births, deaths and natural change per annum in each of the periods 1977-81, 1981-86 and 1986-91 for each projection area.

The mid-1977 based projections have been produced in considerable detail but only the main results will be published. As the projections are made using a single year of age model, data is available for each year in the period from 1977–91, both sexes and for each single year of age up to 85. Consequently results can be made available for any age/sex aggregations required and for intermediate years subject to the payment of a charge to cover the cost of producing the special tabulations. Information regarding the fertility, mortality and migration assumptions incorporated in the projections is also available. Requests for unpublished information and enquiries about published data should be addressed to:

Miss J. Reeder,
Regional Demography Unit,
OPCS,
St. Catherines House,
10 Kingsway,
London WC2B 6JP.
Telephone: 01-242 0262, ext. 2180.

### References

Population projections: area 1975-91 Series PP3 No. 2 (HMSO, 1978)
(Price £2.00 net)

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

OPCS Monitor (reference PP3 79/2) available direct from OPCS

Population Trends 16 (HMSO, 1979) (Price £2.50 net)

Population projections: area 1977-91 Series PP3 No. 3 (HMSO, forthcoming)

### Mid-1978 Population Estimates

Mid-1978 population estimates for the United Kingdom, Great Britain, England and Wales and local authorities and health areas within England and Wales have now been made. Details have been published in the following OPCS Monitors:

(i) OPCS Monitor PP1 79/3 gives mid-1978 estimates by age and sex for England and Wales

and by sex for local authorities within England and Wales.

- (ii) OPCS Monitor PP1 79/5 gives mid-1978 estimates by age and sex for the United Kingdom and Great Britain.
- (iii) OPCS Monitor PP1 79/6 gives mid-1978 estimates by sex for managed regional and area health authorities and for health districts.

OPCS Monitors are available, free of charge, from the following address:

Information Branch (Dept. SN),
Office of Population Censuses and Surveys,
10 Kingsway,

London WC2B 6JP.

Plans for the annual reference volume PP1 No. 3 have changed. The volume will be extended to include mid-1978 estimates as well as mid-1977 estimates. The estimated publication date is early 1980.

**Population Trends** 

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

Divorce and remarriage – a record linkage study

This article describes the first attempt by OPCS to study in detail the level and patterns of remarriage of divorced people and to fill some of the gaps by linking the statistical information contained in a sample of marriage and divorce records for people who subsequently remarry. Evidence from the study shows that about half the people divorcing in a given year remarry within five years, the bulk soon after divorce.

Household surveys in the United Kingdom

The Social Survey Division (SSD) of OPCS carries out surveys for government departments and official bodies on a wide range of social topics. This article describes how the household surveys are carried out and is based on a paper to be presented at a seminar of the Statistical Office of the European Commission (SOEC).

Population projections – English regions and counties

The latest series of population projections for the regions and counties of England takes the mid-1977 projections as its starting point. This article describes the main features of the most recent projections and discusses some of the questions that commonly arise about the meaning and use of these projections.

This article presents new projections up to the year 1991 and beyond of the population of New Commonwealth and Pakistani (NCWP) ethnic origin resident in Great Britain. The projections are based on the mid-1976 estimates of the NCWP population and continue the analysis contained in *Population Trends* 9 and *Population Trends* 11. The article looks at the population of NCWP ethnic origin in two parts: the population of wholly NCWP ethnic origin and the population of partly NCWP ethnic origin (that is of mixed descent).

Population of NCWP ethnic origin - new projections

higher assumptions about both fertility and migration.

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

The projections are taken in some detail to 1991 but

the broad prospects for the end of the century are also

discussed. Two projections are presented, a lower and

higher projection respectively based on lower and

#### References

Population Trends 16 (HMSO) June 1979) (Price £2.50 net)
Population Trends 17 (HMSO) due in September 1979 (Price £2.50 net)

# Family Expenditure Survey-response rates 1978

Copies of an analysis of the 1978 response rates are available on request from the Office of Population Censuses and Surveys. Analyses show response by quarter, by region and by type of area. Requests should be addressed to:

Mr. R. U. Redpath, St. Catherines House, 10 Kingsway, London WC2B 6JP.

### GRO(Scotland) - census

The voluntary census test held in April 1979 secured 84 per cent response, ranging from 75 per cent in an inner-city part of Glasgow to 89 per cent in the town of Montrose and 88 per cent in a rural area near Lochgilphead. The procedures for enumerator recruitment, training and control were satisfactory as a dress rehearsal for 1981. Evaluation is still in progress, but a few ambiguities in question design have already been noted.

# **EEC Labour Force Survey**

Response to the EEC Labour Force Survey appears to be slightly lower than was achieved in the 1977 survey, but still well over 80 per cent.

# GRO(Scotland) - Population and vital statistics

The Registrar General's annual population estimates for 1978 were published in July, (price 75p net) and the Scottish 1970–72 Life Tables are due for publication this month.

### SOCIAL STATISTICS

### General Household Survey

General Household Survey 1977 (HMSO) ISBN 0 11 700831 1 was published in May 1979. This edition features a chapter on leisure activities in Britain 1977 (leisure was previously reported on in the 1973 edition). New data are included about the general health of the population and about the characteristics of men aged between 18 and 64 who had experienced unemployment at some time in the twelve months before they were interviewed.

In addition, the report contains tables showing some of the changes that have taken place in Great Britain between 1971 and 1977 in patterns of household composition, employment, and housing. The report also up-dates earlier editions by presenting 1977 data on all the topic areas (including family size and education) which are regular features of the survey.

The following article gives a comprehensive index of the main topics included in the GHS questionnaires from 1971–78.

The GHS is a continuous survey based on a voluntary random sample of some 15,000 households throughout Great Britain. It is carried out by the Social Survey Division of the Office of Population Censuses and Surveys and is sponsored by the Central Statistical Office. The sample used since 1975 involves a two-stage stratified rotating design, described in Chapter 1 of the 1975 Report. A detailed account of the survey's origins, aims, and methods was given in the Introductory Report.

Seven annual volumes have been published to date (see References below). In addition to the tables included in the reports, tabulations for the years 1971-77 are held by Social Survey Division and are available on request, subject to resources and reliability, provided that (a) the confidentiality of informants is preserved, (b) any work based on analysis of GHS data is the responsibility of the researcher only, and (c) any report or paper using additional data, whether prepared for publication or for a lecture, conference or seminar, is first submitted to OPCS for clearance. Copies of data tapes can be made available for specific research projects, subject to certain conditions; copies of the tapes are also now being deposited with the SSRC Survey Archive at the University of Essex. Copies of blank questionnaires can be obtained by writing to Social Survey Division.

Enquiries to:

Mrs. Mary Durant,
Principal Social Survey Officer,
Room 404,
Office of Population Censuses and Surveys,

St. Catherines House, 10 Kingsway, London WC2B 6JP.

#### References

The General Household Survey: Introductory Report (HMSO 1973) (Price £1.80 net)

The General Household Survey 1972 (HSMO 1975) (Price £5.00 net)

The General Household Survey 1973 (HMSO 1976) (Price £4.00 net)

The General Household Survey 1974 (HMSO 1977) (Price £7.00 net)

The General Household Survey 1975 (HMSO 1978) (Price £7.50 net)

The General Household Survey 1976 (HMSO 1978) (Price £10.00 net)

The General Household Survey 1977 (HMSO 1979) (Price £7.25 net)

# The General Household Survey: summary of questionnaire content 1971 to 1978

As announced in preceding review the seventh annual report on the General Household Survey (GHS) was published in May 1979. A new feature in that report is a summary of the topics covered by the survey since its inception in 1971.

The GHS collects information on a wide range of topics, the five main subject areas being Population, Housing, Employment, Education, and Health. Within these broad areas the survey attempts to balance continuity and flexibility of questionnaire content. Thus some items have been included continuously on the schedule as core questions; some sections are included on a rotational basis; other sections have been developed or modified over the years, with new questions added, to meet the changing policy needs of government departments.

In addition to these developments within the five major subject areas, new topics have been introduced from time to time, sometimes once only and sometimes repeated after an interval.

To indicate the scope of the GHS, the summary of questionnaire content is presented below, updated to take account of the questionnaires used in 1978.

### HOUSEHOLD COMPOSITION

1971-1978

Age,\* sex,\* marital status

Relationship to head of household\*

Housewife

### COLOUR AND COUNTRY OF BIRTH

1971-1978

Colour, assessment of\*

Own country of birth

Parents' country of birth

Year of entry to UK

### FERTILITY

Date of present marriage

Whether first marriage

1971–1978

Expected femily sizes

Expected family size:

at time of present marriage

at time of interview

Whether woman thinks she has completed her family

Age when most recent baby born

Age when expects to have last baby

Date of birth and sex of each child born in present marriage

1971-1978

<sup>\*</sup>Including children

PRESENT ACCOMMODATION		Length of time with present employer/	
Tenure	1071 1070	of present spell of self-employment	1971–1978
Age of building	1971–1978	Number of changes of employer in 12 months before interview	1071 1076
Type of accommodation		Number of new jobs started in 12 months before	1971–1976
Mortgage history and method of acquiring home	1978	interview	1977-1978
(owner occupiers) Floor level of accommodation	1973-1978	Source of hearing about present job	1971-1977
Access to lifts		Source of hearing about all jobs started in 12 months	
Number of rooms and number of bedrooms		before interview	1974-1977
Possession of kitchen		Whether paid by employer when sick	
Bath/WC: sole use, shared, none	1971–1978	Whether covered by employers' pension scheme,	
WC: inside or outside accommodation		whether the scheme is contributory, reasons for not belonging to the scheme	1971-1976
Central heating	1978	Retention of pension rights from a previous	19/1-19/0
Type of fuel used for heating Installation/replacement of bath or WC		employer	
Cost of improvements made to accommodation	1971-1976	Type of National Insurance contribution paid by	
Possession of consumer durables	1972-1976, 1978	married women and widows	1972-1978
Possession of a telephone	1972-1976	Overall measures of job satisfaction	1971-1978
Possession or use of a car or van	1971-1978	Satisfaction with, and importance of, specific aspects	
		of job	1974–1978
PREVIOUS ACCOMMODATION		Whether thinking of leaving present employer, and if	
Tenure	1971–1973, 1978	so why	1971-1976
Household composition		Father's usual job	1971–1978
Number of rooms		Absence from work in reference week:	1071 1072
Bath/WC: sole use, shared, none	1971–1973	reasons for absence and length of absence	1971–1972 nd 1974–1978
WC: inside or outside accommodation		whether absent because of illness or accident, and length	nu 17/4-19/8
		of absence	1973
HOUSING COSTS		whether in receipt of National Insurance sickness	
Type of mortgage, and mortgage payments	1972-1977	benefit (and supplementary allowance) for this	
Rent  Rent  Rent  Rent	19/2-19//	absence	1971-1976
Rent rebate/allowance and rate rebate		Whether registered as unemployed in reference week	
Met rateable value	1971-1978	(if had worked less than full week)	1977-1978
Yearly rate poundage	1972-1978	Unemployment experience in 12 months before interview	1975–1977
I carry rate poundage			
HOUSING SATISFACTION	1978	Those currently unemployed	
		Most recent job - occupation and industry	
MIGRATION: PAST MOVEMENT		- employee/self-employed	1971-1978
Length of residence at present address*	1971–1978	Whether seasonal worker	1971–1973
Previous address*		Whether registered as unemployed in reference week	1971–1978
Length of residence at previous address*	1051 1055	Methods of seeking work in reference week	
Reasons for moving from previous address	1971–1977	Whether paid unemployment benefit (and	1071 1071
Address one year ago and five years ago*		supplementary allowance) for reference week	1971-1974
Number of moves in last five years*		When last worked and reasons for stopping work	1971–1973
		Length of current spell unemployment and reasons for leaving last job	1974-1978
MIGRATION: POTENTIAL MOVEMENT	1971-1978	Unemployment experience in 12 months before interview	1975-1977
Household members thinking of moving*	1971-1978	Number of new jobs started in 12 months before	
Reasons for moving		interview	1977
Methods of seeking accommodation  Composition of future household*	1971-1976	Source of hearing about all jobs started in	
Frustrated potential movement:	1974-1976	12 months before interview	
reasons for potential movers		Retention of pension rights from a previous employer	1971-1976
being deterred from moving		Father's usual job	1971-1978
HOUSEHOLD THEFT	1972-1973	The economically inactive	
Incidence of household theft		The economically inactive Activity status in reference week	
Value of stolen goods/cash		Last job – occupation and industry	1971-1978
Whether stolen goods were insured		- employee/self-employed	
Whether theft was reported to police		Usual job (of retired persons)	
Reasons for not reporting theft to police		- occupation and industry	1973-1976
		- employee/self-employed	1973-1970
EMPLOYMENT		Whether seasonal worker	1971–1973
Those currently working		IT HOLL ILLEIDED TO STORY OF STORY JOHN	73, 1977–1978
Main job - occupation and industry	A HARDELET LAND	Reasons for stopping work	71-1973, 1978
- employee/self-employed	1971–1978	Whether registered as unemployed in reference week	1972-1978
Subsidiary job - occupation and industry		Whether paid unemployment benefit (and supplementary	1972-1974
- employee/self employed	1051 1052	allowance) for reference week	1972-1974
Whether seasonal worker	1971-1973	Unemployment experience in 12 months before interview	
Usual hours of work (excluding overtime)	1971-1978 1973-1978	Number of new jobs started in 12 months before interview Source of hearing about all jobs started in 12 months	1977
Hours of paid/unpaid overtime Usual number of days worked		Source of nearing anoma an ions staticulii 12 months	
THE PROPERTY OF THE PROPERTY O			
>	1973	before interview	<u>J</u>
Weekend work  Journey time to work			J

Retention of pension rights from a previous employer	1971-1976	GP consultations	
Future work intentions, including whether would seek		Consultations in two weeks before interview:	
work earlier if satisfactory arrangements could be made for looking after children	1971-1976	number of consultations*	
	1971-1978	NHS or private* type of doctor*	1971-1978
Father's usual job	19/1-19/0	site of consultation*	
		cause † of consultation*	1071 1071
CAREER OPPORTUNITIES/TRAINING		Access to GPs:	1971-1976
Attitudes towards careers in the Armed Forces and the		whether own doctor works alone or with other doctors	1977
Police Force	1972	ability to consult doctor of own choice at surgery	
Past service in the Armed Forces		most recent consultation at surgery:	
Knowledge of TOPS (Training Opportunities Scheme)	1973-1974	- when it took place	
		- NHS or private	
EDUCATION		- by appointment or not	
Current education		- how far ahead appointment made	
Current education Current education status		- time spent waiting at surgery	
Whether taking a trade apprenticeship	1971-1978	- attitudes towards waiting time for appointment	
Type of educational establishment		waiting time at surgery, and length of consultation	
attending – adults aged under 50	1971-1978	waiting time at surgery, and length of consultation	
- children aged under 16	1971-1977		
- children aged under 5	1978	Outpatient (OP) attendances	
	, 1974–1976	OP attendances in a three-month reference period:	
Expected date of completion of full-time education	, 17/4-17/0	number of attendances*	1971-1978
Intention to do any paid work while still in full-time	1971-1976	NHS or private*	1973-1976
education, and if so when	17/1-17/0	nature of complaint causing attendance*	1974-1976
Attendance at leisure or recreation classes	1973-1978	Appointment with OP departments:	1973-1976
Attendance at leisure of recreation classes	17/3-19/0	whether has (or is waiting for) an appointment*,	17/3-19/0
Past education		how long ago since told an appointment would be made*	
Type of educational establishment last attended full-time,		and the state of the transfer would be made.	
and age on leaving	1071		
Type of school last attended	1971 1972–1976	Inpatient spells	
Age of leaving school	1972-1978	Inpatient spells in a three-month reference period:	
Type of further educational establishment last	19/4-19/6	number and length of spells*	1971-1976
attended full-time, and age on leaving	1972-1978	NHS or private patient*	1973-1975
Qualifications obtained	1971-1978	Whether on waiting list for admission and length of time	
Qualifications obtained	19/1-19/6	on list*	1973-1976
HEALTH			
Chronic sickness (long-standing illness or disability)		Health and welfare services	
Prevalence and causes† of long-standing illness or		Use of services in a one-month reference period:	
disability*	1971–1976	types of service used*	1971-1976
When the illness or disability started*	1971	number of times each service used*	
Whether it limits activities and when it started to limit		through whom referred*	1971-1974
activities*	1972–1976	type of vaccination (children only)	
Whether housebound/bedfast because of it*			
		Hearing and sight	1977-1978
Acute sickness (restricted activity in a two-week reference perio	od)	Difficulty with hearing and whether wears an aid	19//-19/0
Prevalence, causes, † and duration of restricted activity*		Difficulty with sight and whether wears glasses or	
Number of days in bed/absent from work (school)/of	- 1971-1976	contact lenses	
certificated absence from work (school)*		Contact ichses	
Help from people outside household with housework or			
shopping	1971–1974	Medicine-taking	1973
		Medicines taken in the 7 days before interview:	17/3
Health in general in the 12 months before interview	1977–1978	categories of medicine	
		brand of analgesics, whether prescribed, and pattern	
Chronic health problems	1977-1978	of consumption	
Prevalence of chronic health problems		or consumption	
Constant effects of chronic health problems (e.g. taking			
things easy, using prescribed/non-prescribed			
medication, watching diet, taking account of weather, etc.)		SMOKING	
Contact with health services in 12 months before interview		Cigarette smoking	
because of chronic health problems		Current smokers:	
Effects of chronic health problems in 14 days before		number of cigarettes smoked per day	1972-1976
interview (e.g. resting more than usual, using		type of cigarette smoked mainly	and 1978
prescribed/non-prescribed medication, changing eating		regular or occasional smoker	1072 1072
or drinking habits, cutting down on activities,		age when started smoking regularly	1972–1973
consulting GP, seeking advice from other persons, etc.)		Current non-smokers:	
		ever-smoked cigarettes regularly 1972	2-1976, 1978
Short-term health problems	1977-1978	age when started and age when stopped smoking	
Prevalence of short-term health problems		regularly	1072 1072
Effects of short-term health problems (e.g. resting		number smoked per day when smoking regularly	1972–1973
more than usual, using prescribed/non-prescribed		how long ago stopped smoking regularly	
de la commentación de la constante de la const			
medication, changing eating or drinking habits,			
medication, changing eating or drinking habits, cutting down on activities, consulting GP, seeking advice from other persons, etc.)		*Including children	

Pipe smoking	deligible of Tal
Current smokers:  whether smokes pipe nowadays amount of tobacco smoked per week age when started smoking regularly  Current non-smokers: ever smoked pipe regularly age when started smoking regularly how long ago stopped smoking regularly	1972-1976, 1978 1972-1973 1972 1972-1976, 1978 1972
how long ago stopped smoking regularly	
Cigar smoking	
Current smokers:	***** *****
whether smokes cigars nowadays	1972–1976, 1978
type of cigar smoked	1972-1973
number smoked per month age when started smoking regularly	1972
Current non-smokers:	
ever smoked cigars regularly	1972-1976, 1978
type of cigars smoked regularly	1972-1973
age when started smoking regularly	1972
how long ago stopped smoking regularly	

DRINKING
Self-image
1978

Frequency and amount in the 12 months before interview Whether think drinking/smoking can damage health

LEISURE 1973, 1977

Holidays away from home in four weeks before interview: length of holiday countries visited (in UK)

Leisure activities in four weeks before interview:

types of activity

number of days on which engaged in each activity whether activity done while away on holiday

LONG-DISTANCE TRAVEL 1971–1972

Number of long-distance journeys made in 14 days before interview

Starting and finishing points of journeys

Type of transport used for longest part of

Type of transport used for longest part of journeys

Main purpose of journeys

Number of people travelling with

INCOME (GROSS)

Sources of income during the 12 months before interview:

amount received from each source
number of weeks for which income received from
each source
whether currently receiving income from each source

1971–1978

Reference

General Household Survey 1977 (HMSO 1979) (Price £7.25 net)

### Criminal statistics

Statistics on the prevention of terrorism legislation

Quarterly statistics on the operation of the Prevention of Terrorism (Temporary Provisions) Acts 1974 and 1976 are now being published in the series of Home Office Statistical Bulletins. The first, in Bulletin 3/79 covering statistics up to the first quarter of 1979, was

published in April; the second was published in July. Tables are included which show numbers of persons detained under the Acts at ports or airports and elsewhere in Great Britain and of extensions of detention granted since the legislation came into force on 28 November 1974. Persons made subject to an exclusion order are shown by the country of destination and those charged with criminal offences either under the Acts or under other legislation are shown by principal offence and outcome of the charge. For the most recent quarter, the length of detention of persons who were not excluded or charged with offences is also shown.

Home Office Statistical Bulletins are issued free of charge and can be received post free from:

Home Office, or by personal application to:
Room 1617, Senior Librarian,
Tolworth Tower, Home Office,
Surbiton, 50 Queen Anne's Gate,
Surrey, KT6 7DS. London SW1H 9AT.

# Previous conviction, sentence and reconviction

'Previous convictions, sentence and reconviction: a statistical study of a sample of 5,000 offenders convicted in January 1971' This report in the Home Office Research Studies series contains an analysis of the previous convictions and reconvictions of a random sample of offenders convicted in January 1971.

The first section looks at the number of previous convictions of the offenders in the sample, in relation to their age and sex and the principal offence of which they were convicted in January 1971. The differences in the sentencing of the males are then examined according to their age, principal offence and number of previous convictions. The second section considers the pattern of reconviction of the offenders in the sample within six years of their January 1971 conviction, in relation to the factors age, sex, number of previous convictions, and principal offence and sentence in January 1971. A third section looks at the 'criminal careers' of the offenders in the sample over the whole 14-year period covered by the study.

Particular aspects examined are the similarity of consecutive offences, the relationship between consecutive sentences, the average time between convictions and the progression from lower to higher courts.

Reference

Home Office Research Studies No. 53 (HMSO, forthcoming)

Amendments to Social Trends No. 9

The 1979 edition of *Social Trends* was published by HMSO on 14 December 1978. The following errors have since been discovered in the published version:

Page 9, Editorial

2nd paragraph, penultimate line, delete intentions, insert dimensions.

Page 34, Table 1.4

Row – Mid-year estimates 1975–76, column Live births, delete 789, insert 689.

Page 35, Table 1.7

Note to table, line 2, delete and, insert area.

Page 49, Table 2.11

Estimated number of married people, row Total, column 1966, delete 26,820, insert 26,830.

Page 70, Chart 3.21

Caption at foot of chart, delete 5 year.

Page 83, Chart 5.1

Add footnote, 4Includes self-employed.

Page 87, Text

1st paragraph, last line, delete 1969, insert 1961.

Page 104, Table 6.15

Row 60–64, column women, manual, delete 1.2. insert 41.2.

Page 116, Chart 6.34

Title, delete retiremet, insert retirement.

Footnote, last line, after persons, insert apostrophe after s and add pensions.

Page 133, Text

Delete 2nd line, insert shown in Chart 8.5. As Chart 8.4 makes clear.

Page 171, Table 11.8

Column Percentage change, 1951-1977, delete +270, +644, +156, and +106, insert +170, +544, +56, and +6 respectively.

Page 182, Table 12.13

Title, after people, add, , 1976.

Page 186, Table 12.19

Title, after Gambling, add, , 1976.

Page 214, Table 15.6

Districts: Metropolitan, row 1973, column No clear control, delete the second 5.

Page 219, Text

Last paragraph, 1st line, delete Registry, insert Register.

Page 219, Table 15.16

Column 1971–1976 percentage change, the percentages shown should have been set in italics.

Page 227, entry at December 1

Delete, line 3.

Page 228, Royal Commissions

Title entry line 31, The Press, amend Chairmen to read:

Sir M Finer

O McGregor

Title entry line 32, Civil Liability and Compensation for Personal Injury, amend Chairman to read: Ld Pearson

Page 230, Education, Table 4.14

Footnote 1, 1st line, delete and, insert are.

Any queries should be referred to Ron Freeman (01-233 7637) in the Central Statistical Office, Great George Street, London SW1P 3AQ.

## HEALTH AND SOCIAL SERVICES

### Misuse of drugs

Statistics of the misuse of drugs, United Kingdom, 1977 is the title of a new Home Office publication issued at the end of July 1979. It gives, in fuller detail than has previously been published, statistics of seizures of controlled drugs and of drug offenders, covering the years 1973–77, and of drug addicts notified to the Home Office during the years 1970–77.

The seizures statistics show the numbers of seizures and quantities seized for each type of drug; the circumstances of seizures are analysed and details are given of large seizures. Persons dealt with for drug offences are shown by age, type of offence, type of drug and outcome. For 1977, details of length of sentence of imprisonment and amount of fine are shown by type of offence and type of drug. Addicts known to the Home Office at the end of each of the years 1970–77 are shown by age and sex, and also by the type of drugs prescribed in treatment. Numbers of new addicts, renotified addicts known in earlier years, and persons no longer recorded as addicts, are also given.

Two appendices give the lists of drugs controlled under the Misuse of Drugs Act 1971 and of drugs notifiable under the relevant regulations.

Reference

Statistics of the Misuse of Drugs, United Kingdom, 1977. (HMSO 1979) (Price £3.35 net)

### MANPOWER AND EARNINGS

### Census of Employment

On 8 June the Department of Employment announced that, as a part of the government's economy measures the 1979 census of employment has been cancelled with a consequent saving in public expenditure of about £1 million.

The census has been carried out annually in June since 1971 and provides national, regional and local area data on the numbers in employment previously obtained from national insurance cards. The census

also provides a check on the accuracy of employment estimates obtained from the monthly and quarterly surveys carried out by the Department. The cancellation of the 1979 census will make it possible to expedite the 1978 figures which have been delayed because of computer difficulties; it is hoped to publish the 1977 results shortly.

# Regional and sub-regional earnings of employees

An article on 'Trends and Differentials in Earnings by Region' was published in the April 1979 issue of *Employment Gazette*. It was based on the principal information that has been published by the Department of Employment over the years on earnings in particular regions of the United Kingdom.

It concluded that percentage differentials in average earnings between regions have narrowed in recent years. Among manual men at least part of the narrowing was a consequence of relative changes between regions in broad industrial structures and in average hours of work. The figures for manual men also indicate that, in those regions in which relative earnings have increased or decreased the most, such changes have occurred across most industry groups rather than being concentrated in a few. By 1978, the remaining differences in levels of average earnings between regions were relatively small. Figures for manual men suggest that these remaining differentials would be even smaller if industrial and occupational structures were the same in all regions. On the other hand, the differentials for manual men (but not for manual women or non-manual employees) would be larger if hours of work were the same in all regions.

Further work analysing earnings below the regional level is in hand with a view to possible publication of a further article.

### Reference

Employment Gazette: April 1979 (HMSO) (Price £1.35 net)

### Manpower planning

A recent issue of the *Employment Gazette* has included a further article on manpower planning and related subjects (*Statistical News* 45.30, etc.). The May 1979 issue contained an article on skill shortages in British industry which examines the extent of skill shortages, how they arise and possible action that can be taken on them.

### Reference

Employment Gazette: May 1979 (HMSO) (Price £1.35 net)

### Analysis of unemployment by age and duration

The age-duration analysis of the unemployed, which until October 1978 was made only in January and July each year, is now made quarterly. The breakdown by

age was changed slightly in July 1978, and the analysis has now been further revised to provide more detailed information about the long-term unemployed. Those unemployed for more than one year, previously shown as a single category, are now divided into five categories with splits at 15 months, 18 months, 2 years and 3 years. Information on this new basis is available for the first time for April and is published in the May 1979 issue of the *Employment Gazette*.

### Reference

Employment Gazette, May 1979 (HMSO) (Price £1.35 net)

### Top salaries

The Third Report on Top Salaries by the Review Body on Top Salaries under the chairmanship of Lord Boyle of Handsworth was published in June 1979. The groups covered were Chairmen and members of the Boards of nationalised industries, the higher judiciary, senior civil servants and senior officers of the Armed Forces. The report includes, in Chapter 2 and Appendix C, details of a survey of top management remuneration carried out on behalf of the Review Body by the Office of Manpower Economics (the secretariat to the Review Body). The survey followed the same general pattern as earlier ones, the last of which was conducted in 1977 and was summarised in the Review Body's Second Report on Top Salaries (Cmnd. 7253 (HMSO) June 1978), but for simplification the coverage on this occasion was confined to a representative sample of private sector organisations which had been approached in 1977 and the extent of the enquiries was limited by excluding questions on superannuation and fringe benefits. There was a 69.2 per cent response from the organisations in the sample: the results are based on 1,186 posts in 83 organisations, and relate both to 1 January 1978 and 1 January 1979. To indicate the broad comparability of the respondents' characteristics between the two surveys, the 1 January 1978 results are compared with those for end-September 1977 taken from the previous survey. Analyses show movements in earnings in the year to 1 January 1979, distributions of 1 January 1979 earnings and the incidence of dates of the most recent salary increases. Classification is mainly by size of organisation and level of appointment or earnings.

### References

Review Body on Top Salaries, Report No. 11: Third Report on Top Salaries – (Cmnd. 7576) (HMSO) June 1979 (Price 95p net)
Review Body on Top Salaries, Report No. 10: Second Report on Top Salaries – (Cmnd. 7253) (HMSO) June 1978 (Price £3.00 net)

### Doctors' and dentists' remuneration

The Ninth Report of the Review Body on Doctors' and Dentists' Remuneration, to which the Office of Manpower Economics (OME) provides the secretariat,

includes a table giving a further year's results (to April 1978) for the study of comparative movements in earnings at different levels based on the New Earnings Survey (Appendix D). The report also includes the results of a survey carried out by the OME on behalf of the Review Body in July and August 1978 to examine the pattern of work and responsibilities within the NHS of medical assistants and assistant dental surgeons (Appendix C). The information was required to assist in the pricing of a proposed new contract for these grades and the survey was similar to one carried out a year earlier on consultants, which was analysed in the Review Body's Eighth Report (Cmnd. 7176 (HMSO) May 1978). The results are based on returns from 381 medical assistants and assistant dental surgeons, just over a quarter of the estimated total population, and analyse time spent on clinical work, NHS administrative duties and undergraduate teaching. They also show the incidence of on-call commitments, extra duty allowances, domiciliary consultations and emergency recalls to hospital. Classification is mainly by type of contract and specialty. The form of the proposed new contracts for consultants and for medical assistants and assistant dental surgeons is set out in Appendices E and F, and the method of pricing, based on the two surveys referred to above, is described in Chapter 4. Other statistical surveys briefly reported cover hours of work of general dental practitioners (Chapter 6) and the out-of-hours commitments of community physicians (Chapter 7) and trainee general medical practitioners (Chapter 5).

#### Reference

Review Body on Doctors' and Dentists' Remuneration, Ninth Report 1979 (Cmnd. 7574) (HMSO) June 1979 (Price £2.25 net)

Review Body on Doctors' and Dentists' Remuneration, Eighth Report 1978 (Cmnd. 7176) (HMSO) (Price £1.60 net)

#### Civil Service Statistics

The tenth annual edition of Civil Service Statistics is split into two parts.

The first part presents a broad picture of Civil Service manpower at 1 January 1979 and of the changes which have occurred during 1978.

The second part comprises mainly standard, statistical tables. These are arranged in five groups covering analysis of staff in post (Tables 1 to 6), new entrants (Tables 7 and 8), promotions (Table 9), leavers (Tables 10 to 15) and Civil Service Commission competitions (Tables 16 and 17). The staff in post figures are classified by department, by grade and, within major departments, by regional location. Age and length of service distributions (or averages) for certain grades are given for staff in post and the other groups as appropriate.

#### Reference

Civil Service Statistics 1979 (HMSO) (Price £2.75 net)

#### AGRICULTURE AND FOOD

## **Agricultural Censuses and Surveys**

## The October 1978 Vegetables and Flowers Census

Results of the October 1978 Census in England and Wales were published in Statistical Information Notice STATS 169/79 on 20 June 1979. County/Regional results for England and Wales will be published shortly.

The statistical material mentioned above may be obtained from:

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

#### December 1978 Scottish Agricultural Census

The provisional results of the Scottish Agricultural Census held on 1 December 1978 were published as a Scottish Office Press Notice on 9 January, 1979 (Press Notice 13/79).

### New agricultural landscapes

It is two years since the Commission published their booklet, 'New Agricultural Landscapes: Issues, Objectives and Action', their policy for conserving and improving the lowland countryside of England and Wales.

In that time a good deal of work has been done to halt the deteriorating quality of our landscape. The second edition of the booklet records the progress to date.

Its new 'Part III – Action Achieved' tells of the Commission's work on subjects like amenity tree planting grants, demonstration farms, countryside management projects and educational publicity, and describes the ways in which other organisations with interests in the countryside – National Farmers' Union, Country Landowners' Association, Nature Conservancy Council, Forestry Commission, Ministry of Agriculture, Fisheries and Food, Department of the Environment and local authorities – have responded to the Commission's initiative.

Further copies of the booklet are available free of charge from:

Countryside Commission,
Public Relations Branch,
John Dower House,
Crescent Place,
Cheltenham, Glos.
GL50 3RA.

#### INDUSTRIAL STATISTICS

## Real output of insurance, banking, finance and business services

The output-based estimates of gross domestic product are calculated by weighting together, with weights proportional to net output or value added in the base year, indicators of the net output of individual industries; for practically all industries changes in gross output are used as proxy indicators of changes in net output. The gross output of production industries is readily identifiable but it is less easy to define and assess output for service sector industries, such as insurance, banking, finance and business services. Output Measures: Occasional Paper No. 11 - 'Measurement of the output of insurance, banking, finance and business services sector' discusses some of the problems involved and outlines the methodology adopted for this sector in the 1975-based estimates of the gross domestic product (output-based). Copies of the Occasional Paper are available, on request, from:

Branch 5, Central Statistical Office, Great George Street, London SW1P 3AQ.

## Imports and exports of finished manufactures classified by end-use

An article introducing new series of imports and exports of finished manufactures classified according to end-use, i.e. capital goods, intermediate goods and consumer goods, was published in Trade and Industry on 15 June 1979. The new series are based on the United Nations Classification by Broad Economic Categories; they replace the end-use series constructed by the Department of Trade and published in Trade and Industry on 5 August 1977. The analysis is based on the Overseas Trade Statistics, and provides value figures as well as volume and unit value index numbers annually from 1970 to 1978. One of the main advantages of this analysis is that it makes it possible to relate imports of each end-use category more closely to the appropriate indicator of domestic economic activity. Some of the new series will be published on a regular basis; others will be made available on request.

Enquiries to:

Mr. M. Stevenson,
Department of Trade,
Room 251,
1 Victoria Street,
London SW1H 0ET.
Telephone: 01-215 3131.

### **Production Statistics Advisory Committee**

The first meeting of the Production Statistics Advisory Committee was held on 17 May. Although the name and many of the members are new, the Committee is in fact the successor to the Census of Production Advisory Committee which was established under the Statistics of Trade Act 1947 and which has been meeting for many years. As Mr. Ray Ash, Director of the Business Statistics Office and Chairman of the Committee, explained at the meeting, the name had been changed and the terms of reference widened to enable the members to advise on subjects extending over the whole range of statistics from official inquiries addressed to the production sector. The Committee includes representatives of the Government Statistical Service, manufacturers and other firms, trade organisations, the Trades Union Congress and educational establishments.

The timing of the meeting was particularly appropriate because the Business Statistics Office was able to report on the successful introduction of the personalised forms scheme for the quarterly manufacturers' sales inquiry. The Committee welcomed this innovation. Amongst other matters discussed were the introduction of sampling for the manufacturing element of the annual census of production and plans for introducing a revised Standard Industrial Classification.

Inquiries about the Production Statistics Advisory Committee should be addressed to the Secretaries:

Mr. D. R. Lewis or Mr. G. M. Tann, Business Statistics Office, Cardiff Road, Newport, Gwent NPT 1XG.

Telephone: Newport 56111.

## Business Monitors – Annual Censuses of Production 1974 and 1975

Readers of Statistical News are made aware of the results of the 1974 and 1975 Censuses of Production as the Business Monitors become available. The following table gives details of monitors published since those listed in the last number of Statistical News.

Business Monitor		Standard Industrial Classification Minimum
Number PA Series	Description	List Heading
103	Chalk, clay, sand and gravel extraction	103
109	Miscellaneous mining and quarrying	109/1/2/3 and 4
276	Synthetic resins and plastics materials ar	nd
	synthetic rubber	276
339.9	Miscellaneous (non-electrical) machinery	339/9
341	Industrial (including process) plant and	
	steelwork	341
396	Jewellery and precious metals	396

469.2	Miscellaneous building materials and	mineral
	products	469/2
485	Printing and publishing of newspaper	s and
	periodicals	485/486
All 161	Business Monitors in the series have nov	v been published.

## Business Monitors - Annual Censuses of

Production 1974 and 1975 PA 1002 – Summary Volumes Business Monitor PA 1002 Volume 2, the last part of the Report on the Censuses of Production 1974 and 1975, has recently become available. As in Monitors (PA 1002) published for previous census years, a number of tables appear which analyse data by enterprise. These tables include concentration ratios for the five largest enterprises by employment size; analyse enterprises by size of employment and net output; summarise data for the 100 largest enterprises in manufacturing; and include tables relating to foreign enterprises. Volume 2 complements Volume 1 (already published) which summarises results (on an establishment basis) previously published in separate industry monitors (PA 101 – PA 603).

### **Business Monitors – Annual Census of Production 1976**

As the Business Monitors reporting the results of the 1976 Census become available they will be brought to the attention of the readers of *Statistical News*. A list of the first of these monitors to be published is given below:—

Business		Stan	dard Industrial
Monitor		Classif	ication Minimum
Number	Description	List	Headings
PA Series			
1001	Introductory notes		
101	Coal mining		101
211	Grain milling		211
217	Cocoa, chocolate and sugar confectioner	у	217
229.1	Margarine		229/1
239.2	British wines, cider and perry		239/2
261	Coke ovens and manufactured fuel		261
274	Paint		274
275	Soap and detergents		275
311	Iron and steel (general)		311
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Copies of these Business Monitors are available on standing order from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH (telephone 01-928 1321), or through any Government Bookshop. They are not, however, included in the global subscription arrangements of the Business Monitor series.

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

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

### Business Monitor - PQ 271 General Chemicals

To bring the presentation of data into line with that of the annual census of production and to improve publication dates, as from the first quarter of 1979 the above publication will be issued in three parts as follows:—

PQ 271.1 Inorganic Chemicals

PQ 271.2 Organic Chemicals

PQ 271.3 Miscellaneous Chemicals

Available quarterly on subscription from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH. Price £1.95 (including postage) per year.

## Business Monitor - PQ 342 Ordnance and small arms

Statistics showing, for the first time, sales of ordnance and small arms by UK manufacturers are published in a new Business Monitor PQ 342.

The new monitor contains information for 1976, 1977 and the first three quarters of 1978, on sales of products such as rifles, guns, armoured fighting vehicles and other naval, military and air force ordnance and small arms. Research and development work for customers including government departments is shown, as well as sales of the principal products of this industry by establishments classified to other industries.

Business Monitor PQ 342 is available quarterly on subscription from Her Majesty's Stationery Office, PO Box 569, London SE1 9NH. Price £1.95 (including postage) per year.

#### **ENERGY**

Digest of United Kingdom Energy Statistics 1979

The latest edition in this series, prepared by Economics and Statistics Division in the Department of Energy, was published at the end of July. It contains about 100 tables and six pages of maps and charts, Most of the material from the 1978 Digest has been retained with some improvements and extensions, and four new tables have been introduced.

A new table in the Energy section of the Digest shows the annual average rate of growth in primary energy consumption and gross domestic product (measured at 1975 factor cost) over six-year spans between 1950 and 1978 along with the energy coefficient derived from this information. This table condenses the statistics previously shown in a group of three tables.

A new table in the North Sea Oil and Gas section deals with offshore production giving details of production from each oil field in the United Kingdom Continental Shelf, annually from the start of production to 1978.

A new table in the Gas section shows gas sales to commercial users in Great Britain from the public supply system for the last ten financial years.

In the Financial section, which is devoted to the key financial statistics of the nationalised fuel industries, a new table shows the principal statistics for the British National Oil Corporation. These cover the last three years on a calendar year basis. The Corporation's main activities in this period were offshore exploration and development under the licence interest acquired in 1976. The statistics given have been derived from information published in the Annual Report and Accounts of the Corporation.

#### Reference

Digest of United Kingdom Energy Statistics 1979 (HMSO 1979) (Price £6.00 net)

## **British Gas Corporation**

The seventh Annual Report and Accounts of the British Gas Corporation, for the financial year 1978/79, was published on 24 July, 1979. The body of the report again summarises the main events and results for the year. The table giving a ten-year run of key statistics has been revised and a second table giving a ten-year run of certain performance ratios is included. The appendices giving statistics for the industry from 1969/70 to 1978/79 and for the Regions for 1978/79 have again been recast with the final removal of tables relating to conversion and town gas manufacture.

#### Reference

Annual Report and Accounts of the British Gas Corporation 1978/79 (HMSO 1979) (Price £1.50 net)

## TRANSPORT

#### The Regional Highway Traffic Model data bank

As part of the Regional Highway Traffic Model Project the Department of Transport has established the first country-wide data bank of detailed road travel data. This data bank is being made widely available to the Divisions and RCUs of the Department of Transport, other government departments, local authorities, universities and other organisations concerned with highway planning, research and other associated activities.

The data bank comprises five main components:

Data

Computer storage facilities
Application software
Documentation
User support

#### Data

The current contents of the data bank are as follows:

- 1976 RHTM survey data comprising
  - Manual classified counts (at 2,000 sites)

Roadside interview surveys (at 1,000 sites)

Household interview surveys (50,000 households in 21 areas)

- The RHTM national road network for base (1976) and future (1981, 1986, 1991, 2001) years
- RHTM zone boundaries in digitised form (3613 zones)
- Regional zone planning data for base and future years covering population, households, workforce and employment
- Gazetteer of post codes/ordnance survey grid references/RHTM zone numbers
- Automatic traffic count records for 1977 at about 80 sites

## Computer storage facilities

Data is stored as files on magnetic tapes at a London computer bureau.

### Application software

The data bank is backed by computer programs which enable users to enquire what data is stored and, subject to permission, to retrieve copies of the data for direct processing at the bureau or conversion to a suitable format for transfer and processing on their own computers.

#### Documentation

Comprehensive documentation is available to describe the method of access to the data bank, the data and its format in the form of a user manual, information notes and data notes.

#### User support

The data bank is maintained and supported by the department's data bank administrator (DBA) to whom all queries should be sent at the following address:

Department of Transport,

Traffic Engineering Division,

Room 1/56,

St. Christopher House,

Southwark Street,

London SE1 0TE.

Telephone: 01-928 7999. Ext. 4776.

The DBA will be pleased to deal with any problems concerning data content, its access and application and will also be pleased to consider applications by users for data additions to the data bank.

National travel survey 1975/6 Report

A publication based on data collected from the 1975/76 National Travel Survey will be published by the Department of Transport this summer.

It contains over 170 tables and 20 charts with explanatory paragraphs grouped into nine separate sections describing different aspects of the survey. Firstly there is a description of the background to the survey together with an outline of the sample design and collection methodology, followed by comparisons of the 1975/76 survey with data from earlier National Travel Surveys of 1965 and 1972/73.

The next section of the report describes the travelrelated characteristics of households, individuals and household vehicles in the survey. Further sections cover topics such as general travel, journeys to and from work and in course of work, journeys to and from place of education and other non-recreational journeys, and journeys for recreation.

Six technical appendices give information on the accuracy and response to the survey, the definitions used, and comparisons with other sources of personal travel data.

#### References

National Travel Survey: 1975/6 Report (HMSO, forthcoming)

National Travel Survey 1972/3: Cross sectional analysis of passenger travel in Great Britain (HMSO 1975) (Price £1·10 net)

National Travel Survey 1972/73: Number of journeys per week by different types of households, individuals and vehicles. (HMSO 1976) (Price £1.25 net)

National Travel Survey 1972/73: A comparison of 1965 and 1972/73 surveys. (HMSO 1976) (Price £1.80 net)

## Bussing of Service school children in Germany

The British Army in Germany has the responsibility for transporting Service children to and from Service schools. At present buses are routed manually by superintendents of transport.

Defence Statistics were asked if a method of picking the routes could be devised to be programmed and run on computer. Apart from the advantage of relieving the superintendents of the manual task it was hoped that the program could be easily re-run when the basic data changed, and that the routes picked would make more efficient use of buses, thus releasing scarce resources for other Army tasks.

The problem was to route buses to pick up all the children and deliver them to the appropriate schools subject to constraints on the earliest and latest arrival times, the maximum time on the buses and the availability of buses of different capacities.

It was thought that an optimal method of picking the routes could not be devised, so a strategy that could easily be applied was developed.

Each pick-up point was given a priority based on

whether a 55-seater, 39-seater or 12-seater coach had sufficient capacity to pick up all the children. The strategy then was to send a bus to the nearest unvisited pick-up point of highest priority. If capacity and time were both available, the bus then went to the unvisited pick-up point nearest to the current location. This step was repeated until the time or occupancy constraints would be violated, in which case the bus visited all necessary schools. The next bus was then routed in the same fashion. This process was continued until either all pick-up points had been visited or all available buses had been used.

A program was written and tested using data for the garrison town of Osnabruck, where there were 1,021 children at 27 pick-up points to be delivered to 3 schools. The program used 15 buses to deliver all the children as opposed to 19 currently used in the manual method.

The routes are to be physically tested this summer, and, if satisfactory, to be implemented in the next academic year. We then hope to apply the program to the other garrisons in Germany.

Although this problem borders more on OR than pure statistics, it is typical of the kind of problem encountered by a branch in Defence Statistics. The program is written in BASIC, and can possibly be extended to other problems which require the delivery of items from many points to many points. Further details can be obtained from:

Defence Statistics (E)1, Room 0020, Old War Office Building, Whitehall, London SW1A 2EU. Telephone: 01-218 4933.

### INCOME AND WEALTH

## Capital gains survey

The July edition of *Economic Trends* contains an article which presents the results of an Inland Revenue survey of capital gains tax assessments which was designed to provide information on the holding periods of capital assets, i.e. the period of time between the acquisition and disposal of an asset. Cross-classifications by type of asset, year of disposal, status of owner, etc. are provided, together with illustrative charts. Owner-occupied houses and certain other assets which are exempt from capital gains tax are excluded from the survey, which is concerned mainly with company securities and land and buildings.

Information of this type has not been previously available, and it is thought that the survey will provide

valuable data for economists and others interested in the theory of investors' behaviour. Enquiries regarding the survey may be made to either of the authors:—

J. A. Astin (Tel: (01)-438 6280)

or

J. R. King (Tel: (01)-438 7023), Board of Inland Revenue, Somerset House, London WC2R 1LB

#### Reference

Economic Trends, No. 309, July 1979 (HMSO) (Price £2·10 net)

## Undergraduate income and expenditure

A survey was carried out for the Department of Education and Science and the Scottish Education Department into the income and expenditure patterns of undergraduates and trainee teachers during the academic year 1974/5.

The report was published in June 1979. A representative sample was drawn of full-time 'home' students on first degree or teacher training courses at universities, polytechnics, colleges of education and further education colleges in Great Britain during the academic year 1974/5. The students, who were interviewed in each of the three terms, gave details of all their sources of income and their expenditure on accommodation and books and equipment per term. For the Spring and Summer terms only, the students kept a record of every item of their expenditure for 14 consecutive days from the day after interview. Only students who completed all three interviews and two record books were included in the survey results.

The report gives information on students' income for the three terms from all sources—covering grants, money from parents (including parental contributions), earnings from jobs, savings, etc.—and their expenditure on accommodation, everyday living and, in particular, books and equipment for their courses. A comparison of the students' total income with their total expenditure for the three terms is also included.

#### Reference

Undergraduate income and expenditure, 1979 (HMSO) (Price £3.75 net)

#### Inland Revenue publications

Inland Revenue Statistics 1979 was published this month. It contains a wide range of statistics derived from Inland Revenue sources relating to direct taxation (including capital taxes and stamp duty), incomes, wealth and property valuations.

Two new tables are included based on Table 16 of the Public Expenditure White Paper. These tables detail all Inland Revenue tax reliefs and give costs where these are available. Also included for the first time are tables showing the numbers, analysed by sex and marital status, of income tax payers liable at each marginal rate of tax.

Statistics of incomes have been derived from tax assessment data, both for individuals and companies, and from the annual Survey of Personal Incomes. Summary results from the 1976–77 Survey are included: the full results were published earlier this year.

Estimates of personal wealth derived from statistics relating to capital transfer tax and estate duty are given, including the distribution of wealth of individuals by type of asset and range of wealth.

The valuation data include figures of rateable values, floor space, agricultural land prices and conveyancing statistics.

The Survey of Personal Incomes 1977–78, giving the results of this survey, will be available in the Autumn. It is not intended to publish summary results in advance. The coverage will be very similar to that of The Survey of Personal Incomes 1975–76 and 1976–77.

#### References

Inland Revenue Statistics 1979 (HMSO 1979) (Price £6.00 net)
The Government's Expenditure Plans 1979-80 to 1982-83 (Cmnd. 7439)
(HMSO) January 1979 (Price £4.25 net)

The Survey of Personal Incomes 1975-76 and 1976-77 (HMSO 1979) (Price £5.00 net)

## **OUTPUT STATISTICS**

National Institute gross output forecasts: a comparison with US performance

This article by D. R. Osborn appears in the May 1979 issue of the *National Institute Economic Review* and aims to compare the National Institute's forecasting performance with that of United States forecasters. Because of the magnitude of this task, our attention was restricted to forecasts of the principal output measure in each country – real gross domestic product in the United Kingdom and real gross national product in the United States. Results for US forecasters are taken from the detailed study by McNees (1975), where there is also information on the methods employed by these forecasters.

#### HOME FINANCE

Financial Statement and Budget Report 1979-80
The Financial Statement and Budget Report (FSBR)
1979-80 was published on 12 June. It summarises the estimates and the forecasts used in the Budget.

Part I of the publication deals with the general economic background to the Budget proposals, including both a review of the past year and the economic outlook to 1980. It gives forecasts of the main economic indicators, including the public sector borrowing requirement (PSBR), and changes in real gross domestic

product, real consumer expenditure and the retail price index over the period.

Part II presents estimates of the transactions of the public sector in 1978–79 on a national income accounting basis leading to estimates of the financial deficit and the PSBR. The latter is estimated to have been £9¼ billion in 1978–79 and is forecast to be £8¼ billion in 1979–80 after taking account of the Budget measures. The forecasts included in Tables 5 and 7 of Part II of the FSBR can be monitored on a quarterly basis by reference to Tables 2.7 and 2.4 respectively in *Financial Statistics*.

Part III deals with central government transactions in 1978-79 and 1979-80 and presents these on both the conventional cash basis of the Exchequer Accounts and on a national income accounting basis. Tables showing the financing of the capital requirements of each nationalised industry in both years are also included; central government loans and grants make a large contribution to the external financing of these industries. The outturns of the forecasts in Tables 8-12 of Part III, dealing with conventional accounts, are published monthly in a Treasury press notice issued seven working days after the end of the months and subsequently included in Tables 3.1-3.5 of Financial Statistics. Quarterly figures of central government transactions on a national income accounting basis are included in Tables 3.6 and 3.7 of the same publication.

#### Reference

Financial Statement and Budget Report 1979-80 (HMSO 1979) (Price £1.25 net)

Financial Statistics (HMSO) (Price £3.40 net)

#### Financial Statistics

The April issue of *Financial Statistics*, in addition to showing a series for stock appreciation for public corporations and the addition of acceptances to the tables on bank advances previously reported, also introduced, in the table on Inland Revenue Duties, details of advance corporation tax. The table on hire purchase and other instalment credit business was revised because of rebasing on the results of the enquiry to consumer credit grantors for 1976 and the finance houses series now shows separately regulated and non-regulated agreements under the Consumer Credit Act 1974.

In the May issue, the table analysing net issues of tax instruments showed figures of identified transactions by public corporations. These new figures were obtained from a new inquiry into liquid assets of certain public corporations.

The table on financing the public sector borrowing requirement has been changed in the June edition to show the contribution by other financial institutions,

industrial and commercial companies and the personal sector to financing the PSBR.

#### Reference

Financia! Statistics (HMSO) (Price £3.40 net)

## Financial Statistics Explanatory Handbook

The second edition of Financial Statistics Explanatory Handbook was published in April. This edition, as well as updating the first edition, also included some additional material – notably a diagram indicating reliability grading in the financial accounts, and illustrations depicting the main financial flows in recent years. The introduction to the Sections on Banking, Money Stock and domestic credit expansion, and the Balance of Payments were revised and improved; the Section on Public Corporations now contains a list of bodies which are included in that sector.

#### Reference

Financial Statistics Explanatory Handbook: second edition 1979 (HMSO) (Price £1.50 net)

#### Shortfall in Public Expenditure 1977-78

An analysis of the difference between the volume of public expenditure planned for 1977–78 and the volume of actual expenditure (i.e. shortfall) was recently published in the Treasury Working Paper series. It gives a more detailed analysis of figures which have already been published in the 'Government's Expenditure Plans 1979–80 to 1982–83' (Cmnd. 7439) in January 1979.

The paper is in three broad sections. The first is a general analysis which brings out the salient features of shortfall in 1977–78. The second is an analysis of the level of shortfall by spending authority (i.e. central government, local authorities or certain public corporations) and broad economic category, with detailed notes on the expenditure by central government. The third describes the shortfall on each of the main functional public expenditure programmes. Supplementary tables compare the level of shortfall in 1977–78 in percentage terms with that in each of the five previous years. A further supplementary table gives a more detailed analysis of local authority expenditure.

#### Reference

Government's Expenditure Plans 1979-80 to 1982-83. (Cmnd. 7439) (HMSO) January 1979 (Price £4.25 net)

Shortfall in Public Expenditure 1977-78. Treasury Working Paper. (Price 50p net). Available from: Committee Section, HM Treasury, Parliament Street, London SW1P 3AG

#### Local Government Financial Statistics

The 1977/78 edition of Local Government Financial Statistics in England and Wales provides full details of outturn revenue and capital accounts for each of the wide range of services provided by local authorities

for the year ending 31 March 1978, together with superannuation and special fund accounts. In addition, a series of general tables show more recent information on how local authority expenditure relates to national and public expenditure, on local authority employment up to the end of 1978 and rateable values and average rate poundages up to 1979–80. A new table provides an analysis of local authority revenue expenditure estimates for 1978–79 by the main groups of employees and the main categories of goods and services purchased by authorities.

#### Reference

Local Government Financial Statistics, England and Wales, 1977/78 (HMSO) (Price £2.00 net)

## Bank of England Quarterly Bulletin,

Sector financing: 1978

An article in the Bank of England's June 1979 Bulletin reviews the main developments in the flows of funds between the various sectors of the economy in 1978.

### The gilt-edged market

Another article reviews the objectives and techniques of the Bank's management of the market and examines a number of proposals for change that have been the subject of recent public discussion. The main objectives of gilt-edged management are seen as the maintenance of the long-run structural health of the market by maximising the desire of investors at home and abroad to hold British Government debt, and the shorter-term objective, which has increased in importance in recent years, of raising finance from domestic investors outside the banking system to restrict the growth of the money supply. Changes in the techniques of management such as the introduction of partly-paid and variable-rate stocks are reviewed. Suggestions for greater flexibility of official prices, the adoption of a tender system, a more direct relationship between government and major institutional investors and new forms of gilt-edged instruments (including indexation) are also discussed.

#### Monetary base control

A third article by three members of the Bank's staff, writing as economists rather than as representatives of the Bank, considers the question of whether monetary base control should be the means by which the authorities control the monetary aggregates. Various proponents of monetary base control often have quite different proposals in mind, and this article does not attempt to be an exhaustive treatment of the subject, but concentrates on the more theoretical economic issues, only raising in passing some of the implications of the proposals for the structure of financial markets.

The authors conclude that *rigid* monetary base control would be unacceptable. Putative benefits from more relaxed versions would have to be weighed against the costs of making major structural changes in the system.

Copies of the Bank's Bulletin and offprints of the articles may be obtained, free of charge, from:—

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

Company profitability and the cost of capital

A supplementary note to the Economic Commentary in the Bank of England's June 1979 Bulletin presents revised and updated estimates of company profitability, the cost of capital and the incentive to invest, as measured by the real rate of return and the cost of capital. The downward trend in 'real profits' in net domestic income during the 1960s accelerated during the 1970s; it recovered slightly in 1977 and 1978 but is still well below the levels characteristic of earlier years. A similar pattern is exhibited in both pre and post-tax measures of the 'real' rate of return.

## An assessment and comparison of two NIESR econometric model forecasts

This article by D. R. Osborn and F. Teal in the *National Institute Economic Review* for May 1979 presents a methodology for decomposing *ex ante* forecasting error into exogenous variable error, data revision error, model error and judgement error. This methodology is applied to the forecasts made by the National Institute in February 1975 and February 1976. The first section describes the methodology including the NIESR forecasting procedure. Then the NIESR model (with some if its problems) is discussed together with the data used in the study. The methodology for decomposing the forecasting error to 1975 is applied and a similar analysis presented for 1976. Some conclusions and a summary complete the article.

#### **OVERSEAS FINANCE**

### Balance of payments

Presentational changes have been made to the table accompanying the quarterly balance of payments press notice, the article in Economic Trends, and in Monthly Digest of Statistics, June 1979.

In summary presentations of the current account, greater emphasis is now being given to the three main categories of invisibles transactions -i services, ii interest, profits and dividends and iii transfers - to show more clearly the impact of these essentially different types of transaction.

Apart from the above changes, the tables in the article have been redesigned and expanded to identify:

- i Dry cargo and tanker figures separately under Sea transport;
- ii Services associated with UK Continental Shelf;
- iii More details of components of IPD;
- iv Volume and implied price indices for total services;
- V Investment by foreign oil companies in the United Kingdom and Foreign currency borrowing by UK companies from banks, etc. overseas; and

vi Sterling effective exchange rates and the sterling rates against the dollar and against SDRs.

The outstanding levels of official long-term lending and borrowing are not now shown on a quarterly basis; levels at the end of each calendar year will continue to be shown in the Pink Book.

## Intervention arrangements in the European Monetary System

An article in the Bank of England's June 1979 Bulletin gives a technical explanation of the exchange rate and foreign exchange market intervention mechanism of the system. In particular it covers the rules for determining when central banks should take action to defend their exchange rates.

## Special drawing rights: some recent developments

Another article outlines briefly the most important of the recent modifications made to the IMF Articles with the object of making SDRs the principal reserve asset in the international monetary system. It also describes the IMF's new methods of calculating the value of the SDR and the interest payable on it.

Copies of the Bank's Bulletin and offprints of the article can be obtained, free of charge, from:—

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

#### OVERSEAS AID

### Official development assistance

Net official development assistance to developing countries amounted to £639 million in 1978 compared with £524 million in 1977. This represented 0.40 per cent of gross national product at current market prices on the SNA basis (0.37 per cent in 1977). These figures were given in a written Parliamentary Answer on 15 June 1979. The figures are net of capital repayments to the United Kingdom in respect of past aid loans.

Official development assistance (oda) consists of technical assistance and financial flows in the form of grants and loans that are 'developmental' in purpose and where, in the case of loans, the 'softness' or concessionality is such that the 'grant element' is at least 25 per cent. The grant element of a loan is defined as the difference between the amount of the loan and the discounted present value of the contracted flow of interest and capital repayments (using a 10 per cent discount rate) expressed as a percentage on the loan amount.

Over 99 per cent of oda came in 1978 from the Aid Programme administered by the Overseas Development Administration. The remainder consisted of part of the contribution by other government departments to the budget of multilateral agencies (e.g. WHO, UN, UNESCO, FAO, ILO).

In addition to oda there are other official flows (oof) to developing countries on terms not qualifying as oda although broadly intended for developmental purposes. In 1978 these amounted to £57 million (net of amortisation). Thus, total public expenditure on overseas aid in 1978 amounted to £696 million compared with £537 million in 1977.

For further information on UK aid flows to developing countries see *British Aid Statistics* published annually by HMSO. The next edition is due out later this year. A summary of the main figures is given in the glossy card *British Aid in Figures* which should be available shortly from the Information Department of the Overseas Aid Administration.

Reference

British aid in figures (Free of charge) Available from:
Overseas Aid Administration
Information Department,
Eland House,
Stag Place,
London SW1E 5DA.

British Aid Statistics, (HMSO 1979) (forthcoming)

#### COMPUTING

## Conference of European Statisticians' Working Party on EDP

The 16th Session of the Working Party on EDP was held at Geneva during May 1979. The main theme of the Session was the interdependence of trends and requirements of computing technology and statistical services on which papers were presented by France, the German Democratic Republic, and the United Kingdom. Other papers were presented by the International Monetary Fund, United Nations Statistical Office, the United States Bureau of Labour and Bureau of the Census on the use of advanced techniques for the presentation of computerised statistical output.

At its 17th Session the Working Party will discuss the organisational, hardware and software problems of distributed processing as a major topic. A paper on the impact of mass storage devices will also be presented and papers will be solicited on the use of procedural and non-procedural interactive languages for statistical purposes, with particular reference to APL. The Working Party will also consider data processing aspects of the population censuses of the 1980s and the report of a Group of Rapporteurs on the computer aspects of statistical registers.

At later Sessions the following topics have been suggested for discussion:

- (a) Automatic coding of descriptive data.
- (b) Dynamic conditioning of statistical data bases.
- (c) The establishment of criteria concerning the content of data bases.
- (d) New techniques for data capture.
- (e) Systems and tools for modelling.
- (f) The use of artificial intelligence methods in statistical data processing.

#### RESEARCH AND DEVELOPMENT

#### **Business Monitor MO14**

Statistics of research and development (R&D) expenditure by industrial business organisations (including public corporations and research associations) and of R&D employment are now available in a Business Monitor. Until now, there has been no single publication, each new item appearing generally as an article in *Trade and Industry*. The monitor brings together these separately published statistics (including expenditure at constant prices) providing time series where possible, and allowing some revisions to be made to the results of the 1975 survey.

The Monitor includes analyses of R&D by the 100 largest spenders, of R&D financed by overseas controlled companies, and of the ratio of R&D to sales. Some interest has been noted internationally on the relationship between a principal product classification of firms, and the product groups of the R&D expenditure: a two-way matrix has been produced for UK industries, and this is also included.

An R&D survey is now being conducted in respect of 1978. The results will be available in 1980 in the second Business Monitor in this new series.

Further information about statistics on R&D expenditure and employment may be obtained from:

Economic and Statistics Division 6B, Department of Industry, Room 106, Abell House, John Islip Street, London SW1P 4LN. Telephone: 01-211 7152.

#### Reference

Research and development statistics, Business Monitor MO14 (HMSO) 1979 (Price £2.00 net)

#### CONFERENCES AND MEETINGS

#### Statistics: an active force

The 53rd Annual Conference of ASLIB will be held at the University of Sussex on Thursday, 20 September, 1979.

Mr. A. J. Boreham, Director, Central Statistical Office, will be delivering a paper entitled 'Statistics: an active force', of which the following is an abstract.

The first section of the paper claims to establish statistics as a basis and handmaiden of all sciences. The propositions of the sciences are either tautologies (many of them mathematical) or are probability statements. Handling probability statements is at the heart of statistics. The second section claims to establish statistics as the basis for the control of all processes. Only statistical treatment can establish the limits within which a process needs to be confined and only statistical analysis can determine when the process is about to go beyond those limits. The third section claims to establish statistics as the essential engine of the next phase of evolution. In the first phase of evolution the engine was natural selection of successful mutations by survival; in the second phase the essential engine was individual human self knowledge; in the next phase it is social self knowledge leading to social evolution.

#### World Fertility Survey Conference 1980

The International Statistical Institute/World Fertility Survey is organising a World Conference to be held at the Wembley Conference Centre, London, from 7-11 July 1980.

The objects of the Conference will be:

- (i) To give a public account of the substantial findings of the World Fertility Survey to date.
- (ii) To give ministers and senior officials concerned with population policies an opportunity to familiarise themselves with the significance of the findings of the Survey.
- (iii) To encourage use of the data available and stimulate further analysis at the country level as well as on a comparative basis.
- (iv) To consider the future of enquiries of the WFS kind.

Many at the conference will be attending at the invitation of ISI/WFS but there will also be places available for a limited number of other interested persons.

Enquiries should be made to:
Mr. David Whitelegge,
Chief,
Information Section,
World Fertility Survey,
International Statistical Institute,
35–37 Grosvenor Gardens,
London SW1W 0BS.

## International Time Series Meeting, Channel Islands

This conference will take place on Guernsey from 22-26 October 1979. It is to feature both invited and contributed papers and a full social programme. Further details are available from the organiser:

Oliver Anderson, 9 Ingham Grove, Lenton Gardens, Nottingham NG7 2LQ.

## Multivariate analysis course

The Institute of Statisticians will run a residential course organised by Colin Banfield of Rothamsted Experimental Station, from 3–7 September, 1979. The lectures will cover most of the best known methods for analysis of multivariate data, with more emphasis on practical application, including computer demonstrations and case studies. The course should be of most benefit to the practising statistician who wants to update his/her knowledge of multivariate methods.

The course will be held at Eliot College, University of Kent, Canterbury and the fees will be:

All grades IOS membership: £120+VAT

Non-members: £150+VAT

Further information and application forms may be obtained from: Rosamund Weatherall, telephone: 01-486 5811, ext. 6324 or 01-228 0673.

#### Statistics courses

Two new statistics courses are now available from the Open University. They are 'Statistical sources' and 'Fundamentals of statistical inferences' and are available as a single course. The courses will include sessions on computing and computers, numerical computation and statistics: an interdisciplinary approach.

The application period is now open and runs to October 10. A prospectus can be obtained from:

ASCO,

The Open University,

PO Box 76,

Milton Keynes, MK7 6AN.

Telephone enquiries: 0908 - 79685 (Jim Brannen).

#### GOVERNMENT STATISTICAL SERVICE

#### Appointments and changes

Miss M. Robson, Chief Statistician in the Department of Employment Group (HSE) transferred to the Department of Health and Social Services on 19 March 1979.

Mr. R. Turner, Chief Statistician in the Department of Employment retired on 30 March 1979.

Mr. M. J. Erritt, Chief Statistician in the Department of Industry, Trade and Prices and Consumer Protection transferred to the Ministry of Defence on 23 April 1979.

Mr. H. J. M. Jones, Chief Statistician in the Ministry of Defence transferred to the Department of Employment on 23 April 1979.

Mr. F. A. Fitzpatrick, Board of Inland Revenue, was promoted to Chief Statistician and transferred to the Department of Industry, Trade and Prices and Consumer Protection on 23 April 1979.

## OTHER PUBLICATIONS

### World Fertility Survey

The WFS have published their 1978 Annual Report, also country reports on Costa Rica, Pakistan and Panama, that are of possible interest to readers of Statistical News.

Further information may be obtained from:

Kay Evans,
Publications Office,
International Statistical Institute,
428, Prinses Beatrixlaan,
2270 AZ Voorburg,
Netherlands.

#### LATE ITEM

## The Institute of Statisticians Certificate Examination in Statistics

In 1977 the Institute introduced the Certificate Examination in Statistics, which is an open qualification and quite separate from the Professional Examinations. The Certificate is designed for new entrants working in Central or Local Government Administration, Marketing, Accounting, Management, etc., to enable them to demonstrate their competence in basic statistical procedures.

Candidates should normally expect to hold the General Certificate of Education ('O' Level) or equivalent

in Mathematics and Engish Language and no Mathematics beyond that of an 'O' Level standard are used. The Certificate consists of a single three-hour examination to be held annually in April/May. The paper concentrates on simple analysis interpretation and the collection, compilation and presentation of data and is set at the same level as those for the Institute's Preliminary Examination.

Courses have already been run at the Polytechnic of Central London and Gwent College, Newport (for BSO Welsh Office and DOE Bristol students); additional courses will be run in 1979/80, including one at the Civil Service College, which is providing a course of 20 meetings on Thursday afternoons from 13th September.

Further information regarding the Certificate Examination, including the syllabus and past papers, may be obtained from:

The Examinations Secretary,
The Institute of Statisticians,
36 Churchgate Street,
Bury St. Edmunds,
Suffolk IP33 1RD.
Telephone: Bury St. Edumnds (0284) 63660.

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