

Question bank Commentary: ECONOMIC ACTIVITY

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Variables in Social Research

"Economic activity" (EA) is an important topic which includes a group of person-level variables very often measured in censuses and surveys. The central concept is that of participation, or not, in the labour force and "employment" is a key term. EA variables occupy a central position in empirical social research because, in an industrial society, a high proportion of the population depend directly for their livelihood upon their own participation, or that of other members of their household, in the labour force - that is, in paid employment.

Sources and Variables

Classification of individuals and households according to their economic activity has a long history in census and survey work. Amongst the main standard UK sources are the following.

1. The UK Census of Population, which is held every 10 years.
2. The UK Labour Force Survey. The LFS is a continuous survey conducted by the Office for National Statistics. It covers annually a sample of approximately 60,000 households and collects individual data about their adult members. It includes questions on many aspects of economic activity and employment and is conducted in the UK and other EU countries to a fairly standard pattern.
3. The General Household Survey for Great Britain. The GHS is a continuous general purpose household survey conducted by the Office for National Statistics, which annually covers a sample of approximately 10,000 households and conducts interviews with their adult members. It contains a detailed section on economic activity and employment.
4. The New Earnings Survey. This is a large survey addressed to employers, who supply details of occupation, earnings and some background information for a sample of employees. As a non-household survey it is not covered by the Question Bank.
5. The British Household Panel Survey is a longitudinal survey of about 5,000 households and their individual members, conducted in Great Britain. It

covers a wide range of topics and has a substantial section on economic activity and employment.

A number of EA variables are routinely measured in a more or less standard way on these major government and academic surveys. Some of the most important ones are listed below.

1. *Economic Position* refers to a classification applied to all adults, which distinguishes, first, in terms of whether or not the adult is economically active, and then in terms of various subgroups amongst the active, on the one hand, and the inactive, on the other.
2. *Paid job* refers to an activity for which a person receives regular payment, normally in money but occasionally in kind. The job may be classified as *full-time* or *part-time* and the person may be either self-employed or an employee.
3. *Occupation* refers to the allocation of an individual to a category of a standard classification of occupations, by reference to the title etc. of a *paid job* that he or she does, or has done in the past.
4. *Status in Employment* (SIE) refers to the allocation of an individual who has a paid job to one of a set of categories indicating his or her relation to the means of production and position in the workplace hierarchy. This usage should be carefully distinguished from the use of the term "employment status" to refer to a variable indicating whether or not a person has a paid job at a given time.
5. *Industry* refers to the category in a standard classification of sectors of the economy (Standard Industrial Classification) to which the paid job done by a person mainly contributes and is allocated.
6. *Hours of Work* refers to the number of hours in a normal working week for which a person in paid employment is paid, according to his or her contract of employment.

Information on economic activity is used to allocate persons to appropriate categories of occupation-based socio-economic classifications.

Economic position

The key distinction which census and survey questions on Economic Position seek to make is between those who are in the labour force, most of whom are likely to be in paid employment of some kind, and those who are not. However, a full and informative classification requires a number of further distinctions to be made. A summary version of the classification is as follows.

Economically active (in the labour force)

1. In paid employment (self-employed, employee, working for a family business)
2. Unemployed but actively seeking work

Economically inactive (not in the labour force)

1. In full-time education
2. On a government scheme
3. Permanently retired from paid work
4. Unable, because of long-term sickness or disability, to undertake paid work
5. Looking after the family/the home
6. Other economically inactive

The usual aim of classification by economic position is to enable all adult members of the population (aged 16 or over) to be assigned to one category and one category only. It is important to understand that this convention is a simplification which makes statistics easier to produce, but at the cost of some distortion. For example, some persons classified as "in full-time education" also have paid jobs; many of those who have paid jobs also have a major commitment to "look after the family and the home"; and people doing voluntary (unpaid) work are not treated as "economically active".

The underlying principle of simplification is, first to distinguish and classify as such all who are economically active (i.e. in, or actively seeking, paid employment) and break them down into categories 1 and 2 above; and then to subdivide the remainder according to what is seen as their main reason for not being economically active. This way of proceeding reflects the traditional view of labour force economists.

Problems in classifying by "economic position"

1. In operational terms this approach works in general, but gives rise to a number of special problems, in particular because:
2. some distinctions can be hard to make in practice;
3. the position of some individuals does not seem to be catered for by the above summary classification;
4. some people seem to fit into several different categories.

A distinction which is sometimes problematic is between those who have one or more very small or occasional paid job(s) and those who have no paid job. If the former were treated as having no ("proper") job, they would have to be classified either as "unemployed and seeking work" or as "economically inactive". Hence estimates both of the number of economically active persons in a population and of the number of persons who are "unemployed" depends on the conventions adopted for making this distinction.

1. The convention generally adopted (following the *EU Labour Force Surveys* and other major government surveys) involves the use of a time reference period to which survey respondents are referred. The reference period often used is one week, either pre-specified or defined as the week immediately before the date of data collection. Even very small amounts of paid work within the reference period are then sufficient to cause the person to be classified as "economically active". If such a person is actually looking to be more fully employed, this fact is not recognised by the "economic position" classification as such and has to be established and recorded separately.
2. A second source of problems arises from the existence of schemes, partly or wholly funded by government, to provide work experience and/or work training for persons who might otherwise be counted as "unemployed". The usual convention is to distinguish these cases separately and to treat the as

either "active" or "inactive" according to the purposes of the analysis. In practice there are still some problems, however, because not all of the people involved are clear about whether they are "on a scheme" or "in a job".

3. A third distinction which can be hard to make is between those who satisfy the criterion of "actively seeking paid work" (and are therefore treated as "economically active") and those who do not, and are therefore treated as "economically inactive". Those who would actually like to be offered suitable work are counted as "inactive" if they were not actively searching for a job during the reference week. In some versions of the classification a category "Not seeking work during the reference period because of sickness or holiday" is recognised, but the classification itself does not recognise as economically active "discouraged workers" who have given up actively searching.
4. A fourth distinction which can be difficult for respondents themselves to make is between, on the one hand, those who are "permanently retired" or "permanently unable to work" and, on the other hand, those who are only "temporarily" retired from paid work. Because of this it is generally necessary to include the final category to the list given above to accommodate those who were inactive in the reference period but may become active in future.

Persons who contribute labour without formal payment to a family business are generally treated as economically active.

Limitations of classification by "economic position"

The sub classification of the economically inactive (neither in paid work nor actively seeking paid work during the reference period) is in general rather subjective for many persons. There are many overlapping reasons and circumstances which may lead to a person's not being economically active; and the reasons conventionally given change over time. For example, sixty years ago many married women did not expect to have paid employment, even if they had no children; whereas now a high proportion of married women have paid employment, including many of those with young children. This leads to a reduction in the number of persons classified as "housewives"; though on the other hand many older married women do not regard themselves as "retired".

Another situation on which attention often focuses because of concern about the lot of "carers in the community" is that of persons who cannot do paid work because of the responsibility they have for looking after a sick or disabled person. Of course, many people who do work (albeit perhaps part-time) and are counted as economically active also have such responsibilities.

In general, there is a strong tendency for the way persons are allocated to the subcategories of the "economic position" variable to be influenced by social labelling conventions (e.g. the overtones of the term and status "housewife") and also by the rules currently applied to determine eligibility for benefits. For example, more generous rules of eligibility for disability benefits may affect the numbers of persons who count themselves, or are counted, as "long-term disabled and unable to work".

All this warns us that questions designed to enable persons to be classified by "economic position" are not in general an adequate way of studying the full complexity of their relationship to the employment market.

Time Reference of Economic Activity Questions

For many purposes a "snapshot" of the population with respect to economic activity at a given point in time is required, so that persons are classified in terms of their current status. Since instantaneous "at this very moment" classification is not sensible, it is usual to define a reference week, such as the calendar week prior to the one in which data collection takes place, and to classify individuals' economic activity status by reference to their status during (most of) that week.

For other purposes, however, there is a need to classify persons according to their longer term labour force characteristics, such as occupation. From that viewpoint it may be desirable to refer to their main or most recent job, even if they are currently unemployed or economically inactive.

Jobs and Job Holders

Within the broad category of persons who are, or who have been, economically active, a number of other key distinctions and definitions need to be made in order to understand the structure and functioning of the labour force and individuals' participation in it. They include questions to identify and classify the following.

The occupational category into which the person's job falls (using eg.):

- The [Standard Occupational Classification](#) - (SOC);

The industrial sector of the economy to which the person's job contributes (using e.g. the Standard Industrial Classification - SIC);

Employment conditions, which may include:

- hours of work/full-time or part-time status;
- nature of employment contract;
- training arrangements;
- pension arrangements etc.
- amount and sources of income from employment.

Paid Job

Statistics of occupation are based on the nature of the person's main paid job. Other work outside the cash economy, such as informal and unpaid caring for other people or voluntary work, is generally ignored. An exception is in most cases made for people who work in a family business and get their livelihood from it, but receive no wages as such. These are treated as being economically active and having an occupation in the same way as a paid employee, but are often identified separately as "Family workers" at a question on Status in Employment.

On most official surveys, such as the Labour Force Survey, the practice is to treat any paid job which a person currently holds, even if it is a very small or temporary part-time job, as sufficient to permit them to be classified as "employed" and as a basis for occupational or other employment-based classification. This is so even though the person concerned may not regard the job as properly reflecting their "usual occupation". This practice is preferred to the alternative of asking people to answer about their "usual occupation", which might baffle some respondents and elicit unrealistic or misleading answers from others.

Hours of Work

Where people are in paid work, it is often important to know several other things about the nature and the extent of their involvement in the labour force. One which is measured in the Census of Population and most major surveys is the number of

hours which people devote to their paid employment. This is often summarised to a distinction between part-time and full-time employment.

Typical "Hours of work" and "full-time/Part-time question forms

A typical stand-alone question asked on this topic is the one included in the 1991 Census (to be answered by a household form-filler):

"How many hours a week does or did the person usually work in his or her main job?"

A typical alternative is:

"Is your (main) job part-time or full-time?"

The purpose and uses of "Hours of work" questions

There are two broad reasons for asking "Hours of work" questions. The first is to be able to classify survey sample members in terms of their (normal) working hours; the second is to be able to estimate the number of (paid) hours actually worked in the economy over a particular period of time (often a pre-specified week). Attempts are sometimes made to make a single question serve both aims, but they actually require different questioning strategies.

It is important to be clear that standard "Hours of work" questions are actually concerned to measure the number of hours for which a person is paid to work (by an employer), rather than the amount of time that they actually spend (productively) working. If the aim is to infer something about amounts of time spent on particular types of activity, then a totally different type of questioning approach is needed.

Partly because of vagueness about the different uses to which the data are to be put, outwardly simple "standard" questions about working hours, and the answers which they tend to attract, conceal many problems and complexities affecting many types of worker. This has been shown, for example, in the programme of research undertaken at the US Bureau of the Census to test and improve questions included in the Current Population Survey (the US equivalent of the European Union Labour Force Surveys) and also in question testing and question development work done in connection with the UK Census, the Family Resources Survey, etc.

Some (though not all) respondents have a ready answer and one which they give consistently to "Hours of work" questions. But it can be demonstrated that such responses are often made on different implicit assumptions and refer to different concepts. The numbers of hours which are then reported are quite discrepant with those that would have been recorded if all had been instructed, and had been able, to relate their answers to a well-defined and consistent "Hours of work" concept.

Different patterns of working hours

"Hours of work" questions work best in situations where there is an explicit and enforceable agreement that an employer will "buy" so many hours of an employee's time. Such questions usually specify one week as the period to which answers are to refer, as this is the unit most often used in pay and hours agreements. The questions are relatively unproblematic for workers who are paid by the hour and subject to factory-style "clocking on" and "clocking off" disciplines. More generally, they can most readily be answered by those who work at one well-defined job to a regular and predictable routine.

Even respondents with regular work patterns need to be directed by some means to exclude from consideration "abnormal" situations, such as being off sick, on holiday, etc. This is often done, as in the census question quoted above, by invoking the concept of "usual" weekly hours of work. As pointed out, there is an important strategic distinction here between asking about the "usual" pattern of work and asking about hours worked in a particular reference week (see below).

Where the bargain is less explicit and, still more, where the person is "self-employed", many more problems arise. Some employed persons have difficulty in answering "Usual hours of work" questions. Their difficulties increase where they try to respond accurately and become aware of underlying definition problems.

One particular source of problems is variability in working hours over time. This affects workers who do variable amounts of overtime, who work changing shift patterns, or whose (self)employment is inherently variable or spasmodic. The census question cited asks for "usual" working hours, which leaves it to the respondent to interpret the term "usual". Even if perturbations caused by holidays, sickness etc. are excluded, the less regular the work pattern, the more difficult and less consistent is likely to be the interpretation of "usual". For example, for some it may mean "The weekly total hours that I do most frequently", for others "My estimate of my average weekly working hours" and for others again "The hours I most often work in weeks when I am working".

The response "Hours vary from week to week" may be accepted or even prompted, but of course that is not helpful if the aim is to calculate total or mean hours worked for the population.

A specific definition needs to be communicated to respondents about the treatment of paid and unpaid overtime. In some situations the former may be included, but the latter excluded.

Use of a time reference period

An alternative way of dealing with the problem is to specify a time reference period, typically a week ending shortly before the date of data collection. If correctly applied, this produces responses which are representative in aggregate of the hours worked in that particular week.

When a time reference period is specified, the prime aim is usually to provide a "snapshot" of what actually happened in the labour market in that particular week. This may be done regularly on continuous or repeated surveys such as the EU Labour Force Survey, in order to establish trends over time. In contrast to surveys which mainly aim to classify workers in terms of their normal working hours, the "snapshot" approach aims to capture and count situations which are "abnormal" for the individual (eg days off). In general, reports of actual hours worked will give a lower mean than reports of normal hours worked, since in any given week there are more people whose working hours are reduced by sickness, holidays, layoffs etc. than there are people whose working hours are increased by unusual amounts of overtime working.

For this reason the "snapshot" approach does not necessarily give a representative picture of the average working hours of individuals whose working patterns differ from one week to the next.

Working hours of the "self-employed"

Self-employed persons and many managers and professionals often have particular difficulty when they try to answer "Hours of work" questions conscientiously, because they often do not distinguish as sharply as other workers

between "work" and "non-work" time. Indeed, for many self-employed persons the distinction has no consistent meaning.

Multiple jobs

Another second type of problem arises where an individual holds several jobs simultaneously. The prevalence of multiple job holding seems to be increasing. One way of dealing with this problem is to focus exclusively on what the individual considers to be his or her "main job". The main job may be defined for the respondent as the one which is most remunerative, or the one to which he or she devotes most hours, or it may be left to the respondent to decide what "main" means. A "main job" focus aims to provide representative information about the working hours associated with the population of "main jobs", but not about the total working hours put in by individuals with several jobs (or the working hours associated with all jobs, including minor part-time ones). Also, of course, it does not provide a measure of total hours worked by multiple job holders. Because most respondents are not good at mental arithmetic it is best to ask about each job separately, if total working hours is required.

Answering "Hours of work" questions

A less obvious, but very real, source of problems lies in differences between respondents in the interpretation which they attach to the terms used in "Hours of work" questions.

When asked "How many hours a week do you usually work?", many respondents give in a more or less automatic way their contractual hours (eg "I work a 35-hour week"). However, that may not correspond at all closely to the actual hours they worked in a reference week and in some cases it does not correspond, either, to the number of hours they "normally" work. Unless special instructions are given, the treatment of paid and, especially, of unpaid overtime is likely to be inconsistent. There are also complications over the treatment of meal-breaks and other periods which are not literally work-time, but may be seen as part of the working day.

Research on how respondents set about answering questions on hours of work, referred to a specific week but otherwise presented "just another question", shows that very few, unless specially prompted, attempt to recall in detail and add up the hours they actually worked on each day of the reference week. If they do make the attempt, problems may surface to do with the definition of "working", "working hours" and even "week". For example, if the reference week is specified as "last week" respondents do not agree as to which set of days that is.

Full-time/part-time distinction

For some purposes it is not necessary to get an explicit response on hours worked, but only to divide up the economically active part of the population into those who work(ed.) part-time and those who work(ed.) full-time. The distinction between part-time and full-time is conventionally set at 31 or more hours a week (full-time) versus 30 or fewer hours per week (part-time) and this can be applied when an "Hours of work" question has been asked (and answered). An exception is often made in the case of schoolteachers, who may base their reply to the "Hours of work" on school hours. These may amount to less than 30 hours per week, but teachers who state that they work a number of hours slightly below 30 are often treated as full-time on the grounds that they are expected to do lesson preparation etc. outside school hours.

There is, of course, no guarantee that persons who are categorised as "part-time" on the basis of actual hours worked would class themselves at "part-time" in

answer to a direct question about part-time/full-time working. However, the number of borderline discrepancies is likely to be fairly small because the distinction tends to be built into various formal job descriptions, may affect pension provisions etc., so that workers are familiar with their official categorisation as full-time or part-time.

"Hours of work" questions applied to past jobs

The wording of the census question cited above warns us that "Hours of work" questions are often asked about jobs which are no longer current and which may have ended years previously. In that case, of course, responses are likely to be impressionistic and attempts to get accurate figures will encounter severe problems of recall.

Conclusions and recommendations

Questions on "Hours of work" provide one of the foremost examples of commonly used and apparently straightforward question forms which are in fact methodologically treacherous and problematic.

In approaching this topic it is necessary to decide which concept or concepts it is desired to measure. Many people will give different answers according to which concept is conveyed to them by the question. The main possibilities are:

- contractual working hours
- usual working hours
- hours actually worked in a reference week.

It is also necessary to be clear whether the aim is to measure total hours worked in all jobs, or hours worked in a main job only. The proportion of economically active persons with more than one job is rising and this issue is assuming more importance than it has had in the past. Ideally a preliminary question should be asked to determine whether the person has one job or more than one job. If the "Hours worked" question is to apply to main job only, a definition of "main job" should be included as a preamble to the "Hours of work" question.

The first concept may have little meaning for those who are self-employed. If the first concept is intended, then a question form such as:

"How many hours a week are you contracted to work for your employer? Do not count overtime over and above your contracted hours"

may be reasonably effective.

Questions based on the second concept are likely to get unreliable and non-comparable responses from people whose working pattern is spasmodic, or varies widely from week to week. Respondents generally are not prepared or competent to calculate a true average in those circumstances and there are likely to be wide discrepancies of interpretation of "usually", with some taking it to mean "usually in those weeks when I am working at all". With those provisos the census question:

"How many hours a week do you usually work in your main job?"

may be the best option.

Questions based on the third concept require care to ensure that the definition of the reference week is understood. Care is also needed to make clear to the respondent whether an impressionistic estimate, based on a concept of what is "normal", is acceptable, or, on the contrary, he/she is required to go carefully through the days of the reference week, trying to remember how many hours were

actually worked on each day (including overtime but discounting meal breaks, time off etc. as appropriate).

Where "Hours of work" questions are asked about jobs which the sample member has held in the past, it is necessary to accept that the answers given will be impressionistic and related to what the person recalls as his or her "usual" working hours.

Workplace

Many surveys, including the Census of population, which are concerned to capture details of people's working lives, ask questions to establish where they work. The importance of this topic is growing because of the trend towards homeworking of various kinds. In the case of the census the issue arises via the question on address of place of work, which is mainly used to study travel to work patterns.

The concept of "workplace" is straightforward for people who always travel from a private address to premises occupied by their employer, where all their work activities take place. However, there are many workers whose lives do not fit that pattern.

Occupation

A person's occupation is defined as what he or she does, or did, for a living. Therefore survey questions usually ask about the paid jobs a person holds or has held.

The vast majority of the population aged 16 and over have had a paid job at some time, but only about 60-65% of adult men and 45-50% of adult women have a paid job at any given time (figures from the General Household Survey 1993 of the Office for National Statistics). The remainder are either unemployed and seeking work, or else economically inactive, the latter being mainly retired from paid work or looking after their home and family .

Apart from these adults with no paid job, children who have not yet reached the minimum school-leaving age (currently 16) are treated as having no occupation. It is also commonly assumed that, if a person aged 16 or over is in full-time education, he or she is not economically active and therefore cannot also have a current paid job. Thus, only a minority of the population have a job at any given time through which they can be directly assigned to an occupational category.

These conventions do not fully represent reality, in the sense that many aged under 16 and many students classified as full-time who are aged over 16 actually have part-time paid jobs. On the other hand, those who are in "full-time" education are not full members of the labour force and are often doing jobs which do not represent their likely "career" occupation. In situations where each member of a sample has to be assigned one, main, economic activity status, it may be less misleading to classify students as "in education" than as "in the labour force" and not to assign them to an occupation.

Some individuals have several current (part-time) jobs, which may fall into different occupational categories. To avoid the classificatory complications which this causes it is common to focus upon one job, defined either as the one from which the person usually earns most, or as the one to which he or she usually devotes most working time. In dealing with these cases it is necessary to decide whether the priority is to identify one job upon which classification can be based, or to do full justice to the working lives of people who have multiple jobs by repeating all job-related questions about each job.

In most quantitative surveys information about an individual's job is used to assign the person to one category of an occupational classification. The one normally used in the UK is the: [Standard Occupational Classification \(SOC\)](#).

The aim of SOC is to classify occupations taking account of two aspects: the type of skill required and the level of skill required. At the most detailed level normally used it distinguishes 371 basic categories known as Occupational Unit Groups (OUGs).

The Standard Occupational Classification

The Standard Occupational Classification was developed in the late nineteen eighties and published in 1990 by the then Office of Population Censuses and Surveys (now the Office for National Statistics - ONS) and the then Employment Department (now the Department for Education and Employment - DfEE). It replaced previous classifications used in the analysis of census and survey data and by the Employment Service. In some ways it maintains continuity with the Classification of Occupations 1980 which was previously used in censuses and surveys, but the correspondence is not complete or straightforward. SOC is maintained by ONS and is due to be revised towards the year 2000. A general description of SOC and its development will be found in: [Thomas and Elias \(1990\)](#).

The aim of SOC is to classify occupations taking account of two aspects: the type of skill required and the level of skill required. It takes no direct account of other aspects of jobs, such as the Status in Employment associated with them or the Industry to which they contribute. Thus for example: a foreman plumber, and plumber with no supervisory status and an apprentice or trainee plumber are all classified to the same occupation; and a lorry driver who works for a food retailing firm is classified to the same occupation as a lorry driver who works for a steel manufacturer.

In terms of type of skill and level of skill the aim is to align SOC with the developing system of National Vocational Qualifications (NVQs). However, SOC was developed before the NVQ system was fully in place and the alignment process will continue when SOC is revised towards the year 2000.

SOC is a hierarchical system of classification. At the most detailed level it distinguishes 371 basic categories known as Occupational Unit Groups (OUGs); these can be amalgamated to form 77 Minor Groups, which can then be further amalgamated to form 22 Submajor Groups or nine Major Groups. The Major Groups shown below can be and are used as a summary classification. However, an alternative approach is provided by the several systems of occupation-based socio-economic classification which are in use in the UK, such as Social Class According to Occupation, Socio-economic Groups and others. These systems too are based on occupation and produce summary classifications of 6-19 categories, but compared with SOC they use additional criteria of classification.

Some surveys, such as the Labour Force Survey or the Census of Population, have very large samples and are concerned with the full SOC detail of occupations and skills. Most others have samples too small to permit that and are concerned mainly with summary levels of occupational or occupation-based socio-economic classification.

However, even if SOC categories are to be combined for analysis purposes, the best practice is to proceed by coding each job to one of the 371 OUGs and performing the combination at a later stage. This is because respondents in the general population are better able to supply specific job titles than they are to decide in a consistent way to which broad category their job should be assigned.

In order to classify an occupation using SOC, it is necessary to obtain several items of information. The most important one is the usual title by which the job is known. Most jobs are classified by identifying this job title, as supplied verbatim by a survey respondent, in the SOC Coding Index. The index contains more than 20,000 job titles and specifies to which SOC Occupational Unit Group each job-title is allocated.

In practice, however, it is best not to rely on a single question asking for a job title. Some of the job titles given by members of the public in answer to survey questions are ambiguous or not specific enough for SOC coding purposes. In order to ensure that the coding information is sufficiently clear and detailed, it is good practice to supplement the question with others about the person's employment situation. Most of these are of analytic interest in their own right.

The most important supplement to the job title question is a question about the main tasks the person does in the job. This enables many ambiguities to be resolved and, in a few cases, may indicate clearly that the given job title is misleading.

A question often asked alongside the question about occupation in surveys specifically concerned with employment is one about the industry, or sector of the economy, in which the person works. When asked of household respondents this is usually in the form "What are the main things that are made or done at the place where you (he/she) work(s)?" Like verbatim responses to the questions on occupation, the responses to this question require to be coded to a detailed classification known as the: Standard Industrial Classification (SIC).

If information on Industry is available, it is useful in enabling other types of ambiguity in the given job titles to be resolved and thus to assist occupational coding. For example, some occupational categories are distinguished according to the types of material with which a person works, and this may be inferable from the information given under Industry, even if not given in reply to the questions on job title and job tasks.

The questions about job title and job tasks are very often supplemented in social surveys with one or more questions about Status in Employment (SIE). The main reason for asking about this is that the commonly used systems of Occupation-based socio-economic classification require information on SIE as well as information on job title. Where information on SIE is available, it is sometimes useful in resolving ambiguities as to how a job should be classified in terms of occupation. For example, there are many types of "Inspector" and the SIE information may help to determine whether a person with this title is doing a supervisory type of job or a type of job which involves inspecting products or other items in a routine way.

Social surveys which ask about occupation often also ask for other personal information about the individual, such as level of academic and/or vocational qualifications held. Where such information is held it may help to determine ambiguities about the occupational category to which a job should be assigned. For example, the term "engineer" is used to refer to many different types of job, but if the job-tasks question does not make clear which level of skill is involved, the answer to a question on qualifications may cast light. It should, however, be noted that many people do jobs which are unrelated to their formal qualifications, so this kind of evidence should be used very cautiously to assist classification of occupations and when more direct information about the nature of the job is lacking.

Some parts of SOC classify managerial jobs. In most cases it is possible to identify such jobs because they include the title "manager", or because the job title is deemed in SOC to have managerial functions (e.g. ship captain). However, this can be misleading (e.g. a "data manager" is not usually a manager in the sense required by SOC) and many surveys seek to clarify the situation by asking a separate question to establish whether or not the job has managerial status and functions.

In the full 371-category version of SOC managerial jobs are further subdivided according to Size of Employing Establishment in which the person works. A distinction is made between general managers in establishments employing up to 499 persons and those employing 500 or more. However, general managers of large establishments are a rare group in the population and, when analysing the results of surveys with modest sample sizes, it is likely that the distinction will not be worth making, so that the Size of Employing Establishment question may not be required.

Occupational classification is normally based on two conventional assumptions, namely: that each employed person has a job which is known by a single, generally-recognised title; and that the set of tasks of which the job consists fits one occupational category and only in of a system of classification such as SOC. Because unambiguous titles for referring to jobs are needed for purposes of agreements on pay and conditions, the first assumption is true in the great majority of cases and it is this that makes occupational classification on the basis of survey questions and answers possible.

However, jobs with the same title may occasionally involve rather different sets of tasks (according to their incumbents); and the job tasks which one person does might sometimes be thought to fit into more than one occupational category (implying that one job is actually several jobs). However, analysts of statistical surveys are in general unable to cope with anything other than a one-to-one set of relationships between job holder, job-title and occupation (except in cases where one person has distinct job contracts with different employers). Therefore there is inevitably uncertainty about the classification of certain broadly or informally defined jobs. Additional detail about the nature of the job tends to increase, rather than decrease uncertainty in these cases. For example, a high proportion of persons regarded as "professionals" and treated as such in SOC might also be regarded as "managers" in terms of the content of their jobs. In these cases occupational classification leans heavily on job title.

Of the survey researchers who ask questions about the paid job(s) of individuals, with a view to classify individuals according to their occupations, some are specifically concerned with economic activity, employment, working careers or the like. The surveys they design are likely to contain many questions about jobs and occupations and may face up to some of the complications caused by, for example, persons who have multiple current jobs, persons who have done quite different types of job, persons whose current jobs do not make use of their skills and abilities, etc.

Other survey researchers ask about occupation mainly as a way of assigning individuals or households to a category in some scheme of occupation-based socio-economic classification. In general these researchers have two aims which to some extent clash. On the one hand they wish to treat occupation as a convenient "hook" to hang classifications on and do not wish to devote many pages of questions to teasing out full details of people's work situations. On the other hand they wish to obtain data which will enable the highest possible

proportion of their sample to be classified socio-economically in as valid and reliable way as possible.

One problem faced by researchers in the second category is that only a minority of adults have current occupations. Several ways of reducing this problem are used.

One way to increase the proportion of the population of individuals for whom occupational data are available is to ask about the most recent job held by those who have no current job. This has the effect of increasing the number of people who can be directly classified to occupation-based socio-economic classification schemes to well over 90% (i.e. those who have ever had a paid job of any kind). This is achieved by bringing in most of the currently unemployed, the retired and mothers with young children, for example.

On the other hand, it does entail that many people, mainly pensioners and particularly women, are assigned to a socio-economic category on the basis of a job they may have left many years ago. From a sociological viewpoint it can be shown that, on average, current social attitudes, levels of education etc. are predicted by classification on the basis of a former occupation. However, market researchers and others interested in current circumstances or purchasing power often prefer to rely on classifications likely to be more closely related to those.

Another difficulty with the "most recent job" concept is that a person's last job may not fully represent their "main career" occupational status. To deal with this some surveys ask about the last main job. That, however, leaves it to respondents to decide which job was the "main" job, which may baffle them or cause them to decide using a variety of different criteria not controlled by the researcher.

Another way of getting round the problem that less than half the population have current jobs is the practice of allocating a socio-economic status to all members of a household or family on the basis of the occupation of one key member of the group. To achieve this, occupational details are required for one household member who is selected using certain criteria as the household/family reference person.

Occupational Coding

It is not practicable to present members of the general public with comprehensive list of occupational titles, or a manual on occupational classification such as the SOC manual, and ask them to find their own job in it so that a code can be recorded.

In order to assign occupational codes the traditional method has been to have interviewers elicit, or to ask respondents to record, verbatim responses to the "Job title" and "Job tasks" questions and then to code these responses in the office with the aid of the appropriate occupational coding manual. One way of partly short-circuiting this laborious procedure is to issue coding manuals to interviewers and have them code responses to occupation questions in the field, after completing the interview. This involves training interviewers as coders and is currently standard practice at ONS Social Survey Division.

Now that computerised data collection ([CAPI and CATI](#)) are becoming the norm in large survey organisations computerised coding of occupational data is also becoming widespread. The most radical application involves having this done actually in the course of an interview. This has the potential advantage that interviewers can ask supplementary questions, if needed, to elicit the information required for coding. This method is being experimented with at present.

Clerical occupational coding of verbatim responses to questions on job title and job tasks is not wholly reliable, in the sense that different coders, faced with the same verbatim text, may attribute different codes. In the case of a detailed coding frame, such as SOC Occupational Unit Groups, and with trained and supervised coders, the average inter-coder agreement may be about 85-90% in the case of interview survey data. The unreliability is mainly due to vagueness and ambiguity in the information supplied by respondents. However, individual coders tend to develop their own standard ways of treating ambiguous data and this leads to inter-coder bias as well as random variability.

Because each office coder typically codes a large number of cases, even mild inter-coder bias can have serious implications for the variance of survey estimates. It also implies that, in situations where the same person's occupation is elicited and coded separately on two occasions, most apparent "change" in occupation is likely to be due to coding artefacts.

Fully automated coding avoids such unreliability, but tends to be less valid in some cases because coding software does not recognise all nuances in job descriptions.

Status in Employment

The Status in Employment variable in surveys is intended to capture aspects of a person's employment situation which relate to their relationship to the means of production and their position in the labour market and the workplace hierarchy of authority.

Fuller and more condensed versions of SIE are used in different UK surveys. The International Labour Organisation (ILO) produces standard definitions of this and other variables related to labour force participation and these definitions are largely followed in the specification of the Labour Force Surveys carried out by government in all the countries of the European Union.

Determining a person's Status in Employment entails making distinctions in several stages. The first distinction is between:

1. owners of economic enterprises and all others who "work for themselves" (the self-employed); and
2. persons who work for enterprises owned by others (employees).

One survey question is generally needed to determine whether a person is self-employed or an employee. There are some marginal cases where individuals are treated as self-employed for certain purposes (e.g. employer liability) but as employees for other purposes (e.g. income tax). In these cases it is usual to accept the person's own definition of their status.

The "self-employed" include a range of people who are quite different in their labour market positions. They include, for example:

1. proprietors of large unincorporated businesses employing substantial workforces;
2. self-employed professionals working on their own or in partnerships and employing a small staff;
3. small contractors who occasionally or permanently employ one or two others;
4. self-employed tradesmen or other workers who sell their skills and experience in the labour market and employ nobody other than themselves;

5. "outworkers" who do piecework and are technically self-employed, even though they effectively depend upon the person or organisation which supplies them with work.

An important point is that directors of incorporated businesses are treated legally and in surveys as employees of the business, and not as self-employed, even though most people would think of them as entrepreneurs. This puts them on the same footing for Status in Employment purposes as managers (who are also employees).

Persons who are self-employed are often split into two groups, according to whether or not they employ others. This has the effect of roughly dividing the first three groups above from the last two. The former have on average a more advantageous labour market situation than the latter. An extra survey question is needed to establish whether or not a self-employed person employs others.

Persons who are employees are subdivided according to their position in a workplace hierarchy of authority denoted by the titles: Manager; Foreman or Supervisor; Apprentice or Trainee; Other Employee. The distinction between the last two is now quite difficult to make because training may occur at many stages in a worker's career. Therefore the last two statuses are now usually amalgamated and, if the topic of in-job training is of importance to the survey, separate questions are asked.

Most interview surveys ask an explicit question to determine into which of the above categories an employee's job falls (in the opinion of the person him/herself or of a household informant). However, the Census of Population has traditionally taken the view that elicited answers tend to give an inflated version of a person's position in the workplace hierarchy. In Census practice, therefore, no separate question is asked and this part of the SIE variable is constructed by taking account of whether or not the job title includes key words such as "manager", "foreman" or "supervisor" or denotes a job ("ship captain" is one example) which is assumed to have managerial status. This census practice may possibly have to change because in recent years the word "manager" has increasingly been incorporated in the titles of jobs which do not carry hierarchical managerial responsibility for directing the activities of other workers (e.g. "data manager").

The categories of Status in Employment which are generally recognised are therefore the following:

1. SELF-EMPLOYED
 - o Employing others
 - o Not employing others
2. EMPLOYEE
 - o Manager
 - o Foreman or Supervisor
 - o Apprentice or trainee
 - o Other employee

The majority of employees and of the working population as a whole fall into the "Other employee" category.

The SIE variable makes an important contribution to the definitions of categories in the occupation-based socio-economic classifications, such as Registrar General's Social Class according to Occupation and Socio-economic groups, which are widely used in social research in this country.

The Economic Sector and Industry

The need to distinguish Sector, Industry and Occupation

In early attempts to classify the economic activity status of individuals no sharp distinction was made between a person's "occupation", on the one hand, and the kind of product he or she produces or the sphere in which he or she works, on the other. We still often think in this way. For example, given the job title "coal face worker" and some general knowledge of the world of work we can deduce much about what is produced by the job incumbent and in what circumstances, as well as about the activities and skills required to produce it. In pre-industrial societies there are many jobs like this, such as "farm worker", "(village) baker" and so on and a simple, one-dimensional "Happy Families" classification of jobs and persons seems adequate for many purposes.

However, in complex societies there are actually many different questions to be asked and answered about how a job and its incumbent fit into the economic structure of the country. For example, we may think it important to know in which Sector of the economy the job is located (ie public, private, voluntary/ charitable); or to what Industry the enterprise providing the job mainly contributes. These are separate from questions about job activities and vocational skills.

The answers to questions about Sector and Industry are in most cases not clear from a job title. For example, a lorry driver may work for a coal-mining enterprise and therefore belong to the workforce of the coal industry; but equally he may work for a food manufacturer and therefore belong to the workforce of the food industry; and so on.

In labour force analysis variables indicating the "Sector" and the "Industry" to which jobs contribute are as important as variables indicating the skill level and skill specialism required ("Occupation"). Some surveys and censuses therefore need to collect information suitable for coding to Sector and Industry. This is particularly common in the case of business surveys (not covered by this Question Bank), but the need to allocate individual workers to industrial categories also occurs in household surveys concerned with employment, health, accidents etc.

The Standard Industrial Classification

In the UK the Standard Industrial Classification (SIC), is designed to categorise jobs according to the industry to which they contribute. SIC is very detailed and elaborately hierarchical in structure and focuses on distinguishing different types of industrial activity. It distinguishes at four different levels of detail, which are set out in published manuals plus a coding index, in a format broadly similar to that of the Standard Occupational Classification (see "Standard Industrial Classification of Industrial Activities", Central Statistical Office 1992). In the latest (1992) revision SIC was harmonised with an industrial classification developed for use in the European Union countries (NACE Rev 1).

Properly speaking SIC is a classification of the activities of industrial and commercial enterprises and establishments, rather than of individuals. In business surveys addressed to such establishments (not covered in this Question Bank) technical questions are often asked to establish exactly what activities the establishment carries on and what products or services it produces. It is then possible to allocate the establishment to an appropriate SIC category by coding the responses.

Establishments above a certain size have to register their existence and activities in various ways (eg for VAT registration and as employers). These details are processed for statistical purposes to produce registers providing Industry codes for

(in theory) all these larger establishments, together with their addresses and other information about them. From time to time registration information is supplemented by special enumerations such as the census of Employment. The most comprehensive register is the Interdepartmental Business Register (IDBR) compiled and held by the business surveys division of the Department for National Statistics. It is possible for non-government agencies to make use of this register within certain constraints and at a cost. Further information can be obtained by telephoning 01633 815 696.

The allocation of workers to categories of the industrial classification in the Census of Population is carried out in one of two ways. For each employed person the name and address of their employer is requested on the census household questionnaire. The information is then matched to an entry in IDBR (or its predecessor) which already classifies each employing establishment to SIC, so that an Industry code can be copied across. The matching is, however, successful in well under two thirds of cases, largely because of discrepancies in the address information used in matching. It is therefore necessary to have another system for assigning an Industry code to employees of non-matched establishments and also the self-employed.

This is done by asking the census form-filler, for each employed person, to "describe clearly what the employer (or the person if self-employed) makes or does..." 1991 census form. The verbatim information supplied is then coded by census office staff to SIC. It is not known to what extent this office coding using verbatim descriptions produces results which are consistent with the matching method using establishment codes. For the 2001 Census it is possible that all Industry coding will be done from the verbatim supplied by form-fillers, but using a computerised automatic coding system.

In sample surveys of individuals and their economic activity it is seldom possible for practical reasons to use the matching method, so all Industry coding on such surveys is normally done using verbatim answers supplied by household respondents to questions similar to the Census question. Links to Industry questions in LFS and GHS Recent work on the quality of clerical coding of Industry using SIC, and also Occupation using SOC, carried out in the context of the New Earnings Survey reference suggests that there is a similar level of coding error on both classifications for information supplied by employers. The estimate given is of about 10% of codings being in error at either the Major Group or the Minor Group level, but that is probably an underestimate.

Classification by Economic Sector

When we are dealing with relatively small samples, or are not concerned with the details of products and services, a broad classification by Sector may be appropriate. For example, it may be useful to distinguish enterprises (and hence the establishments they operate and the persons who work at those establishments) into broad groups according to ownership, as follows (example taken from the 1996 British Social Attitudes Survey).

1. Private sector firm or company (including limited companies and PLCs)
2. Nationalised industry/public corporation
3. Local Authority/Local Education Authority (including "opted out" schools)
4. Health Authority/NHS hospitals/NHS Hospital Trust (including GP surgeries)
5. Central government/Civil Service/Government Agency
6. Charity/Voluntary sector (including charitable companies)
7. Other organisation

Questions to enable a similar classification to be constructed are also asked in the Labour Force Survey (since 1993).

SIC distinguishes some industrial groups which are mainly or entirely in the public sector, but in general an accurate categorisation by Sector cannot be derived from SIC and it is necessary to ask a special question or questions, usually with a list of precoded responses corresponding to the above. The exact nature of the coding list depends on what distinctions it is desired to make and on how much employees can be expected to know about the exact legal status of the organisation for which they work.

The privatisation initiatives of the past 20 years have tended to blur some of the boundaries between private and public ownership of enterprises and have probably made the responses of respondents to questions about Sector, and the classifications based on such responses, rather less reliable.

Summary Industrial classification

One possible broad classification by major industrial activities which can be derived from the top hierarchical level of SIC is as follows.

1. Agriculture, forestry and fishing
2. Mining and quarrying
3. Manufacturing industries
 - food and drink
 - textiles
 - furniture
 - paper and printing
 - plastics
 - etc.
4. Energy and water supply
5. Construction
6. Wholesale and retail; hotels and restaurants
7. Transport, storage and communication
8. Financial intermediation, real estate, renting and business activities
9. Public administration and defence, social security
10. Education
11. Health and social work
12. Other community, social and personal service activities
13. Private households with employed persons
14. Extraterritorial organisations and bodies

Note that this summary Industrial classification, like the example of a sectorised classification, is not in any way definitive, but simply illustrates how a summary classification suitable for sample survey purposes may be derived from the detailed SIC system. Many other variants are possible.

With limited sample sizes the very detailed levels of SIC are not useful and the Industry variable in most surveys takes a summary form such as that shown above. However, as in the parallel case of SOC coding, it is not reliable to attempt to go straight from a verbatim response to the question about the activities of the employing establishment to a broad summary categorisation. Instead, it is best to code to at least the two-digit level of SIC and then the collapse the resulting codes into the desired summary classification.

1. [Standard Occupational Classification \(SOC\)](#).
2. [Thomas and Elias \(1990\)](#).

3. Standard Industrial Classification (SIC).

UK STANDARD OCCUPATIONAL CLASSIFICATION: MANUALS
[Scanned contents pages of SOC Manual vols. I-III)

Occupation Based Classifications

Background

The perception underlying socio-economic classification is that industrial societies are stratified into groups or classes (referred to generally as social classes), which differ systematically in their social norms and behaviour, in their social and economic power, in their health and life expectancy, in their social status and in other respects. Using the systems of socio-economic classification described below such mean differences between classes have been demonstrated empirically with great consistency. As a result some version of social class is generally reckoned to come after age and gender as a useful general device for mapping differences within society (though much variability between individuals within age, gender and class groups remains). On many social surveys, therefore, the main or only reason for asking questions about occupation is to allocate sample members to an appropriate category of an occupation-based socio-economic classification.

It was realised very early on that the kinds of jobs people did were amongst the best indicators of their position in society (social class). Other useful current indicators are, for example, possession of household durables, income, certain housing variables and level of education. Occupation was chosen in the UK as the best indicator on which to base measures of social class partly because occupational data were in any case collected for other purposes and partly on the basis of theories that social forces of an enduring kind link the distribution of wealth, power and status in society to position in relation to the labour market and the means of production.

Classifications in use

Standard classifications of this kind have been used in the UK since the early years of this century, for example in analysing vital statistics (births, deaths etc.) and the data collected by national censuses of population. The earliest established and possibly the best known is Registrar General's Social Classes (RGSC), which was developed in the decade 1911-21 and has been in use (though substantially modified in successive reviews) ever since.

Since the nineteen fifties other occupation-based social classifications have come into use. One much used in official statistics is Socio-economic Groups (SEG) and academic sociologists have developed others such as the Hope-Goldthorpe Social Class Schema and the Cambridge Scale. Each of the last two has a theoretical background and literature. SEG and particularly RGSC, on the other hand, have been criticised by sociologists for their lack of an explicit theoretical basis to underpin and explain their undoubted discriminative power in practice.

In the meantime the Social Grade classification, first devised in the nineteen thirties and developed since, has become a standard in the world of commercial market research and is also sometimes used in social research. This is often confused with, but is in detail quite different from, Registrar General's Social Class.

As a result of all this, the survey designer and analyst has a range of socio-economic classifications from which to choose. The choice is generally guided by some combination of theoretical preference and the desire to achieve

comparability with some other source of statistics (such as the census or major government or commercial surveys).

Features of classifications

All of the classifications mentioned above have three things in common.

1. All depend upon prior classification of a person's job using the Standard Occupational Classification, followed by a second-stage process of allocation to classes using SOC code plus additional information.
2. All are rule-derived and objective, in the sense that the category of a given socio-economic classification to which an individual is to be allocated is derived, using explicit combinatory rules, from his or her codes on SOC and other variables. These codes, in turn, are also allocated according to set rules and definitions. Thus RG Social Class, for example, is derived by relating Occupation, as classified using SOC, to Status in Employment.
3. All except the Cambridge Scale (which is coded as a continuous variable) have a much smaller number of categories (19 ranging down to 6) than full SOC, which has 371 categories. It is this that makes them usable in the analysis of data from surveys with limited sample sizes. (SOC itself has summary Major Group and Submajor Group levels of classification which are often used to summarise data on occupation, but they were not intended for use as a socio-economic classification.)

Ordered versus unordered classifications

The socio-economic classifications in use differ from one another in principle in that RG Social Class and Social Grade, for example, are intended as ordered classifications (e.g. Social Class I is "higher" than Social Class II, Social Class II is "higher" than Social Class III and so on). On the other hand SEG and the Goldthorpe Schema are, in their full forms, class typologies, in which one class is different from, but not necessarily higher or lower than, another.

In spite of this many users feel a strong desire for an ordered classification, reflecting what is assumed to be a hierarchical organisation of society. This desire is combined in many applications with a statistical need for a very succinct classification, with no more than six or seven categories and roughly equal proportions of the population falling into each (as in RGSC and Social Grade). As a result even SEG is often collapsed into a form which gives about six or seven categories which can be represented as ordered (and correspond quite closely to RG Social Classes).

This bias towards an ordered classification can cause artifacts and circularity, since the terms in which we envisage society are strongly influenced by the classificatory systems which we use to represent it. In common-sense terms there is no doubt that certain groups in society are more privileged than others and this is emphasised by comparisons between, say, RG Social Class I and RG Social Class V. However, it is important also to take account of subtleties, such as the fact that the "Professional" and "Managerial" classes (roughly RG Social Classes I and II), while both towards the more privileged end of the basic spectrum, are in fact ordered in different ways according to whether income or education is the criterion.

Deriving the classifications

The derivation of the socio-economic classifications which have mainly been used in government statistics, RG Social Class and Socio-economic Groups, is described in detail in Volume 3 of the SOC Manual reference.

To derive RGSC two source variables are required, namely, SOC code and code on Status in Employment sufficiently detailed to distinguish the self-employed from employees and, within employees, to distinguish those with managerial or supervisory status from those without such status.

To derive SEG a third source variable is also required, namely, information on whether the employing establishment has 25 and over, or under 25, employees.

It should be noted that accurate SOC coding already requires several other items of information not discussed here - see Standard Occupational Classification.

The key source for deriving the RGSC and SEG classifications in detail is a reference table a version of which is reproduced in Volume 3 of the SOC Manual. This version was the one used in deriving the socio-economic classifications when processing the 1991 Census data. By entering the table with a given SOC code and a given value of Status in Employment (and, in certain cases, size of employer) it is possible to read off the appropriate Social Class or SEG category identifier. This process can be and is computerised in many applications.

A feature of the table is that many cells are blank, indicating that particular combinations of SOC code and Status in Employment code are not recognised (i.e. assumed not to occur in the real world) for purposes of deriving Social Class and SEG. In practice such combinations do from time to time occur and the practice then is to assume a data error and to edit (change) one value (usually Status in Employment) so as to produce an allowable combination. There are, in fact, some quite frequently occurring data errors which can be corrected quite confidently, such as the tendency for directors of limited companies to be recorded as self-employed, rather than as employees of the company. Where the source of the inconsistency is not so obvious a conservative policy is to set the values for RGSC and SEG to "missing".

On the other hand, it must be remembered that the reference table and the incidence of blank (illegal) cells actually embody a set of assumptions about the structuring of occupations and employment. Such assumptions, like the occupational classification itself, tend to become out of date and require revision from time to time. Traditionally the table has been revised only once every ten years in preparation for the next census, but latterly inter-censal versions have been developed and used in ONS which differ slightly from the published version. It is likely that future published versions of the reference table will contain fewer blank cells (i.e. fewer combinations regarded as illegal). The source of information on this is the ONS Occupational Information Unit (Tel: 01329 842 511 ext. 3503).

Population coverage of occupation-based social classifications

Occupation-based classification systems necessarily depend upon their being an occupation to classify; but, at any given time, less than half of the total population of individuals (including children) has a paid job. In order to extend the socio-economic classifications to that part of the population various devices and conventions are adopted, as described under Standard Occupational Classification and Household/Family Reference Person.

Making social classification less laborious

Because occupational coding using the Standard Occupational Classification is itself a complex operation, there is a temptation to short-circuit the process by leaping directly from verbatim descriptions of jobs etc. to a social class allocation.

It is not in general possible to achieve consistent socio-economic classification by such methods, but efforts have been made to make the classificatory process less laborious and time-consuming.

For example, computer algorithms are now available to classify entered occupational titles automatically to SOC and then, given values for Status in Employment etc., proceed to allocate the individual to the appropriate category of one or several socio-economic classifications. The next technical step forward is likely to be the use of such algorithms in combination with computer-assisted interviewing to achieve allocation of survey subjects to a socio-economic classification at the point of data collection.

Another possible approach is to adopt a method of social classification not based on occupation.

Classifications NOT based on Occupation

Self-attributed social class

It is possible to outflank these complexities of classification involved in occupation-based socio-economic classification by asking people directly to which social class they think they belong. The measure obtained is useful for some sociological analysis, but is different from and not comparable with that produced in the Census of Population and other standard reference sources by the route of detailed occupational coding.

Household-level socio-economic classification

A different approach is to treat socio-economic status as an attribute of whole households, rather than of individuals. The method of doing this used in the census has been to classify the household on the basis of two variables collected for other reasons, namely, car ownership and housing tenure. Where the data source is richer than the census it is possible to develop the household-level indicator further by incorporating other variables, such as ownership of household durables. Individuals are then classified according to the type of household of which they are a member. Such methods seek to quantify the common-sense notion that some households and their members are better off than others in various material ways.

A major use of RGSC has been in accounting for variation in standardised mortality ratios (i.e. in the risk of death after the effects of age and sex have been controlled for). It turns out that a household-level typology based on housing tenure and car ownership is at least as successful as RGSC in accounting for such variation.

This household-level approach has a number of advantages. In the first place, it relies on household variables which are quite robust, simple and easy to measure (unlike occupation), and which are often measured in surveys for other reasons. Secondly, since all individuals can be allocated to households, it avoids the problem that only a minority of individuals have current paid jobs and enables all members of the general population to be classified in a straightforward way which is less prone to measurement error than occupation-based classification.

On the other hand the approach has been criticised for lack of theoretical rigour, for lack of a basis in enduring features of society and because the dimension measured is more like "Material affluence versus material deprivation", which is different from "Social Class" as classically conceived in the sociological literature.

Household or Family Reference Persons

A fundamental feature of society is that people tend to live together in interdependent groups. In many cases they consist of a married couple, with or without children or other relatives, and the group can be broadly described as a family. In other cases unrelated people live together, sometimes as a family even though there is no legal marriage, at other times as a convenient arrangement (as with student sharing accommodation, for example). Groups sharing living accommodation are referred to as households, and households can be divided into "family" and "non-family" households.

In classifying individuals it often makes sense to have regard to the characteristics of the households of which they are members (e.g. household income may be a better indicator of economic circumstances than individual income). This is more likely to be true of family than of non-family households.

In the case of socio-economic classification based on occupation, a problem arises in classifying individuals because only about 60-65% of adult men and 45-50% of adult women have a paid job at any given time (figures from the General Household Survey 1993 of the Office for National Statistics).

Two strategies exist for dealing with the problem. One is to rely on information about the individual's most recent job, even if they have not been employed for many years. This strategy does not work for children and others who have never had a job. Even for some of those who do have a paid job, it can be argued that their own job, now or in the past, does not indicate their actual socio-economic position as well as, say, their spouse's job.

The other strategy is to assess the socio-economic status of the family or household as a whole and attribute this status to all members. In practice no generally accepted method has been worked out for taking account of the occupations of several household members in assigning a socio-economic status to the household as a whole, so it is necessary to operate rules for selecting just one reference person for each household. The rules are framed in various ways. The underlying criteria are: that they should be easy to apply; that they should unfailingly select one person; and that the person selected should be likely to be an important determiner of the socio-economic circumstances of the household.

One set of rules traditionally used had the effect of selecting a senior adult male, where there is one present in the household. This has the advantage of requiring details of only the age and gender of household members, but has been objected to on grounds of sexism. Another method invokes the concept of a Householder, meaning a person in whose name the living accommodation is held or rented. This still requires a criterion for selecting between several people who fit the criterion. In market research the person said to be the highest earner is often selected. All these methods tend to select more men than women as household reference persons, reflecting the persisting inequality between men and women in labour market terms.

Compared with classifying each adult separately on the basis of his or her current or most recent job, classification of household or family members according to the occupation of a reference person has the effect of increasing the proportion of the population who can be assigned to a category of an occupation-based socio-economic classification. However, the procedure may be open to objection on the grounds that one person's occupation may not adequately represent the household and that the operational rules which are required to select a unique household reference person may be considered to be biased.

Written for the Question Bank in 1999 by Roger Thomas

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