

Researching Graduate Careers Seven Years On
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Research paper No. 6

SOC (HE):
**A classification of occupations for studying the graduate
labour market**

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Introduction

As part of a programme of research on graduate career paths¹, a measure of the utilisation of highly qualified labour within the UK labour market was required. Such a measure had to have a number of properties. First and most obviously, it should relate both to the type of work typically performed in a job and the extent to which such work makes use of the skills and knowledge imparted via higher education. Second, it should be relatively easy to construct, requiring no specific data collection activity over and above that associated with the collection of information for national statistical purposes. Third, it should facilitate the creation of time-series indicators from this measure, enabling better monitoring of the changing structure of the UK labour market and the utilisation of highly educated people within this structure. In this paper we describe how we developed an aggregate classification of occupations for this purpose and describe tests we have undertaken to determine how well it meets the criteria specified above.

Given the requirement that this measure should be derived from national statistics and relate to the type of work performed in a job, the most appropriate basis is the national occupational classification. The 2000 version of the Standard Occupational Classification (SOC2000) is, like its predecessor (SOC90), based upon the concepts of skill levels and skill specialisation, concept which are operationalised in terms of the length of time it takes to become competent and proficient in performing the associated tasks within an occupation and with the nature of the body of knowledge that is required for competence (Elias *et al.* 2000, Elias and McKnight, 2001). We show how we have derived an aggregate classification of occupations for our purpose from both SOC2000 and SOC90.

Resources and methods

In developing a classification of occupations relevant to the outputs of higher education, we made use of a number of resources. First, and most importantly, we compiled information from nine quarterly Labour Force Surveys (Spring 2001 to Spring 2003) covering more than

¹ 'Seven Years On: Graduate careers seven years after graduation', a project jointly funded by the Economic and Social Research Council and the Higher Education Careers Services Unit.

half a million occupations classified to SOC2000. These data were analysed to show the percentage of those in employment holding a first degree within each of the 353 unit groups of SOC2000. This information was derived for two age groups, those between 21 and 35 years and those aged 40-54 years. Most graduates within the younger group would have gained their first degrees between 1990 and 2003. Graduates within the older group are most likely to have gained their first degrees between 1968 and 1982. Examination of the changing proportion with degrees between the two age groups shows, *inter alia*, the change between the 1970s and the 1990s in the extent to which graduates have been recruited to the jobs classified within each unit group.

The second major resource we utilised was a special file prepared by the Office for National Statistics from the Winter 1996/7 quarter of the Labour Force Survey. This file contained dual coded occupational information (SOC2000 and SOC90), together with text descriptions of job titles, job descriptions and qualifications required for the job for more than 65,000 employed people. Thirdly, we made use of an array of materials about occupations which had been accumulated in the course of work conducted by the IER to create SOC2000 and the new National Statistics Socio-economic Classification (NSSEC) for the Office for National Statistics, notably the '371 database' for SOC90 (Elias and McKnight 1997).

Constructing the classification

The task we assigned ourselves was to allocate each of the 353 unit groups of the Standard Occupational Classification 2000 to 'graduate' or 'non-graduate' categories. Aggregating occupational information collected at this level of detail to a broad set of groups would, we felt, help us to understand better the nature of changes in occupational structure in the UK labour market and the impact of these changes on the demand for graduate skills and knowledge. However, accurate classification of occupations is dependent upon precise and relevant occupational descriptions, information that is not always available to those responsible for coding such data. Also, the heterogeneous nature of some of the unit groups of SOC2000 means that it is sometimes unclear how a particular occupational unit group should be classified.

Our approach to this problem is to identify a range categories, from those where we are certain of the relevance of a university education to the jobs classified within the unit groups, to categories where we are less clear about the utilisation of graduate skills and knowledge. A somewhat similar but cruder approach had been adopted when reporting results from the first sweep of this graduate cohort. Using Labour Force Survey information, McKnight 'scored' occupation unit groups of SOC90 according to the mean level of schooling of people classified to each unit group (Elias *et al.* 1999: 16-17). This led to the creation of a three-fold classification of occupations as graduate, non-graduate and 'graduate-track'. Our new approach recognises the changing nature of work and the utilisation of high level skills. We

also make use of the improved discrimination in relevant occupational areas developed for the new occupational classification, SOC2000, to identify four categories of graduate occupations. Two of these consist of occupations for which employers typically require that the post holder possesses a degree given the nature of the tasks to be performed. We distinguish here between 'traditional' graduate occupations (e.g. solicitors, doctors, scientists, lecturers, secondary school teachers) and 'modern' graduate occupations - the newer professions which graduates have been entering since the expansion of higher education in the 1960s (e.g. senior managers in large organisations, IT professionals, primary school teachers) . The third category consists of occupations for which graduates have increasingly been recruited in large numbers, where employers are requiring significant numbers of recruits to these posts to have relevant degrees and in which the nature of the work performed provides ample scope for the exercise of degree level skills and knowledge. Many such occupations fall within new areas of employment as identifies by SOC2000. We term them 'new' graduate jobs. Examples include occupational therapists, quantity surveyors, medical radiographers, public relations officers and management accountants.

The fourth category marks the boundary between jobs which we classify as 'graduate' jobs and 'non graduate' jobs. As with any boundary based upon a statistical classification, the distinction is not clear cut. We made much use of our range of source materials here in deciding whether or not there was scope for graduates within these occupational areas to make good use of their degree level skills and knowledge. The heterogeneous nature of many of the occupation unit groups of SOC2000 makes for considerable difficulty in deciding whether or not a unit group should be regarded as a graduate or non graduate category. For this reason we refer to this set of unit groups as '*niche*' graduate occupations. The name is intended to reflect the fact that, although the majority of those employed in this occupational area do not have degrees, and most of the jobs classified within the unit group do not normally require a degree, there are undoubtedly significant groups of occupations within them that do require degrees or provide ample scope for the exercise of degree level skills and knowledge. Examples include planning and quality control engineers, hotel and accommodation managers and nurses.

Occupations not classified to one of these four categories are termed 'non-graduate occupations'. This title is not meant to imply that an incumbent is inappropriately placed within the labour market. Instead, it indicates that the majority of jobs classified to the constituent unit groups of SOC2000 in national statistical sources are jobs for which a graduate level education is inappropriate.

In many cases the task of allocating the unit group of SOC2000 to this classification was relatively straightforward. For our examination of the information from the 2001-2003 Labour Force surveys (see Table 2) we adopted a set of rules which assisted in this process:

- Traditional: The SOC2000 unit group shows that the proportion of employed people in 2001-2003 holding a first degree is greater than 60% in the older age group and generally considerably higher than this in the younger age group.
- Modern: The SOC2000 unit group has not been classified as a 'Traditional graduate occupation' and the proportion of employed people in 2001-2003 holding a first degree is greater than or equal to 40% in the 40-54 age group and greater than or equal to 50% in the 21-35 age group.
- New: The SOC2000 unit group shows that the proportion of employed people in 2001-2003 in the younger age group is greater than or equal to 40%, the unit group has not been classified as 'traditional graduate occupations' or 'modern graduate occupations', and the proportion with a degree in the younger age group is 10 or more percentage points higher than in the older age group.

Each unit group so allocated was checked to ensure that we were not including any unit groups of SOC2000 in the classification of graduate jobs simply on the basis of there being a high proportion of graduates in the unit group. The source we addressed for this purpose was the text descriptions from the 1996/97 dual coded Labour Force Survey, which indicated whether or not possession of a degree was a prerequisite for all or most of the occupations listed within each unit group.

Certain occupations were not allocated to any of these three groups on the basis of the rules shown above. These are:

1111 Senior officials in national government
2317 Registrars & senior administrators (educational establishments)
1172 Police officers (inspectors & above)

The first of these unit groups is allocated to 'Modern graduate occupations' although the proportion holding degrees in the younger age group is only 27 per cent. This reflects the fact that admission to the occupations within the unit group is predominantly on the basis of seniority, a fact that is apparent from the small cell size associated with the younger age group. The remaining two are allocated to 'Niche graduate occupations', recognising that there are significant numbers of jobs within these categories for which degree-level skills and knowledge are appropriate and where graduates have been explicitly sought as recruits.

This approach is insufficient to allocate all unit groups of SOC2000 to the four graduate categories of SOC (HE). 'Crowding' can occur if graduates seek and accept employment in areas of work for which a degree is neither a pre-requisite nor contributes in any way to efficient performance of the associated tasks. As indicated previously, the difficult distinction we had to make was between the *niche* occupations, where a significant proportion of jobs were appropriate for and made use of high level qualifications, and non-graduate occupations. Here we relied more upon the information about qualifications required for the job as reported in the Labour Force Survey text response file and other information we had collected in the course of developing SOC2000. For example, among people classified to the

SOC2000 category 'nurses' (unit group 3211), the proportion holding a degree among the younger age group was 19%, compared with 14% for the older age group. Within nursing there now exist routes through which a degree can lead directly into the profession, and these relate to areas within nursing that make use of such high level skills and knowledge.

We term the resulting classification the Standard Occupational Classification (Higher Education), abbreviated to SOC (HE). The four categories of SOC (HE) are shown in Table 1, together with a short description of the nature of each category and some examples. Full details of the relationship between SOC (HE) and SOC2000 are shown in Appendix Table A1.

Table 1 SOC (HE): a classification of graduate occupations

SOC(HE) category		Description	Examples
1.	Traditional graduate occupations	The established professions, for which, historically, the normal route has been via an undergraduate degree programme.	Solicitors Medical practitioners HE and secondary education teachers Biological scientists/biochemists
2.	Modern graduate occupations	The newer professions, particularly in management, IT and creative vocational areas, which graduates have been entering since educational expansion in the 1960s.	Directors, chief executives (major organisations) Software professionals, computer programmers Primary school and nursery teachers Authors/writers/journalists
3.	New graduate occupations	Areas of employment, many in new or expanding occupations, where the route into the professional area has recently changed such that it is now via an undergraduate degree programme.	Marketing & sales managers Physiotherapists, occupational therapists Management accountants Welfare, housing, probation officers, Countryside/park rangers

<p>4. Niche graduate occupations</p>	<p>Occupations where the majority of incumbents are not graduates, but within which there are stable or growing specialist <i>niches</i> which require higher education skills and knowledge.</p>	<p>Leisure and sports managers Hotel, accommodation managers Nurses, midwives Retail managers</p>
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Validating the classification

We distinguish here between criterion validation – does the measure what it purports to measure (Carmines and Zeller 1979), and construct validation – does it relate to other measures in a way which is consistent with theoretically derived hypotheses concerning the concepts that are being measured?

Criterion validation

The conceptual basis of the five fold classification of work is that the jobs classified within the first four of these categories consist predominantly of task for which a university level education is appropriate. That is, the work involved makes use of the skills and knowledge imparted via a degree course, and that a highly qualified job holder makes use of his/her skills and knowledge imparted via their degree level education.

To test whether or not this is the case, we make use of a three questions asked in the *7 Years On* survey. These are:

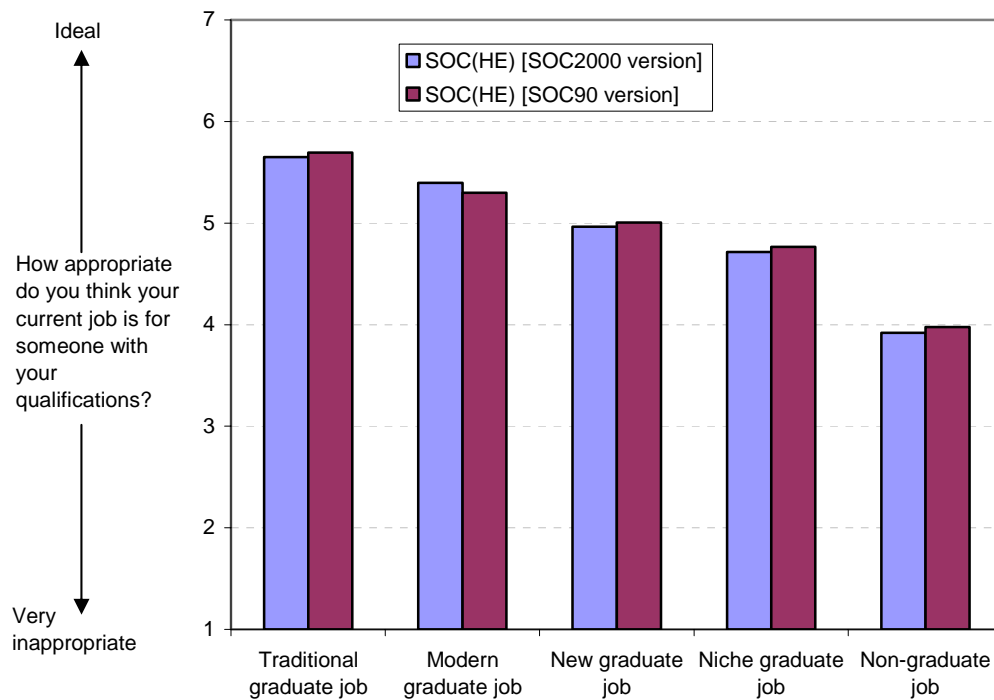
On a scale of 1-7, where 1 means very inappropriate and 7 means ideal, how appropriate do you think your current job is for someone with your qualifications?

Do you make use of the subject/discipline knowledge you acquired on your 1995 course?

Do you use the skills developed on your 1995 degree course?

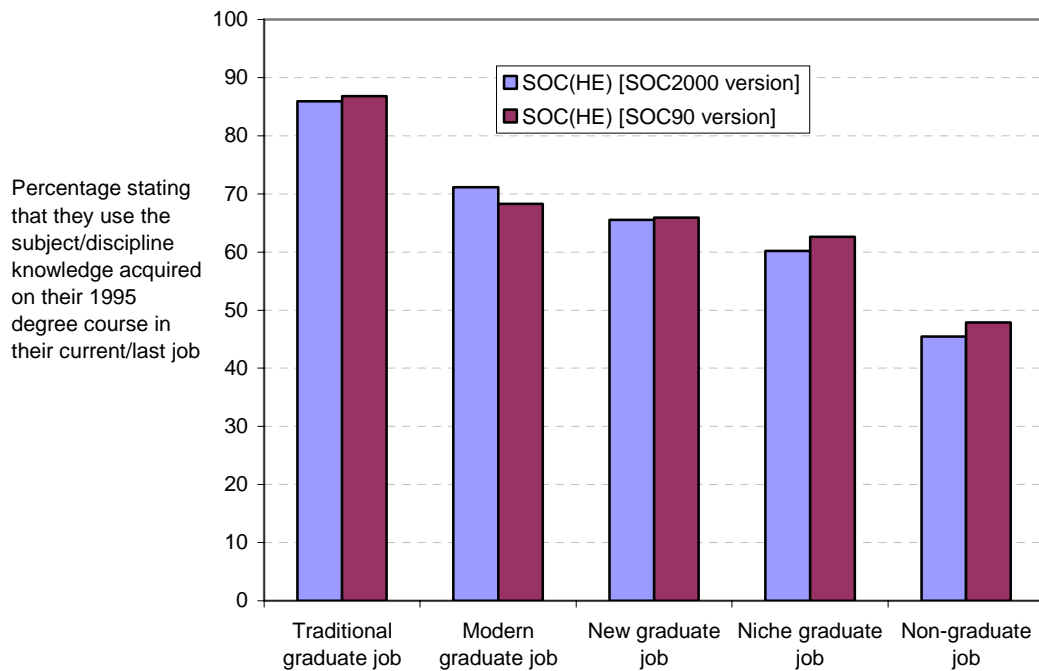
Each question taps directly into the conceptual basis of SOC (HE). Figures 1, 2 and 3 reveal the variation in responses to these questions.

Figure 1 Mean scores on scale measuring appropriateness of job given qualifications held, by SOC (HE)



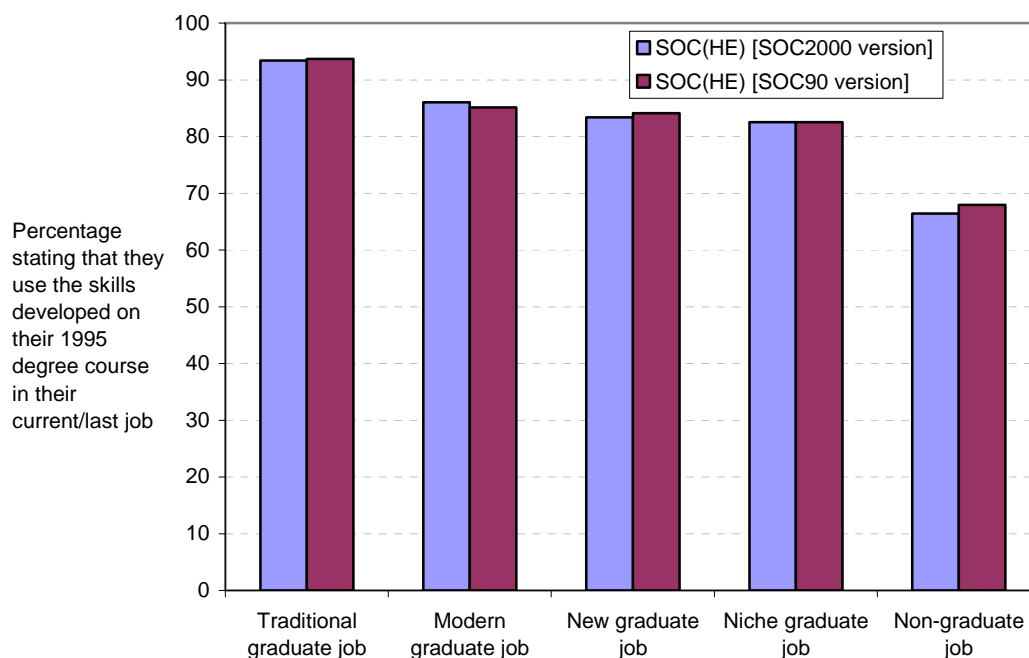
Source: *Seven Years On Survey (2002/03)*

Figure 2 Use of subject/discipline knowledge acquired on 1995 degree course, by SOC (HE)



Source: *Seven Years On Survey (2002/03)*

Figure 3 Use of skills developed on 1995 degree course in current/most recent job, by SOC (HE)



Source: *Seven Years On Survey (2002/03)*

Figure 1 indicates that there is a clear gradient in terms of the extent to which respondents classified via SOC (HE) regard their jobs as ‘appropriate for someone with their qualifications’. Figures 2 and 3 show that the four categories of graduate jobs constitute two groups in terms of the use of degree level subject knowledge and the use of skills developed via a first degree programme. Traditional graduate jobs do make more use of subject knowledge and skills than modern graduate jobs, new graduate jobs and niche graduate jobs. Importantly, both groups make more use of degree level knowledge and skills than is the case for graduates classified to the group we term non graduate jobs.

Construct validation

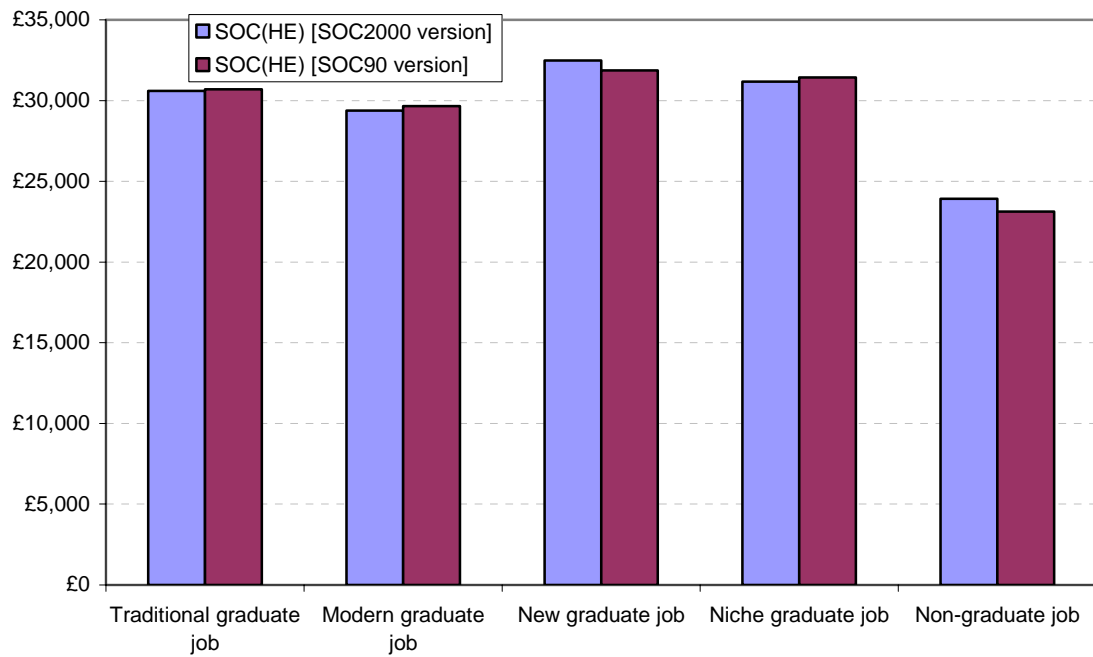
To test whether SOC (HE) relates to other measures of graduate employment in a way which is consistent with its conceptual basis, we examine its relationship with graduate earnings and an indicator of the quality of the job². Neither earnings nor job quality relate directly to the conceptual basis of the classification, but we hypothesise that graduates in non graduate jobs will earn less, on average, than graduates in graduate jobs. We assume also that graduates in non graduate jobs will report fewer positive aspects about their jobs (from which the measure of ‘job quality’ is constructed) than graduates in graduate jobs. Figure 4 shows the

² For details of the method of constructing the indicator of job quality, see Elias *et al.* (*op. cit.* p. 21)

variation in annual gross earnings for 1995 graduates in full-time employment in 2002/03, by the four graduate categories and for those we classify to non graduate jobs. Figure 5 shows the mean value of our indicator of job quality (minimum value zero and maximum value six) for the SOC (HE) categories.

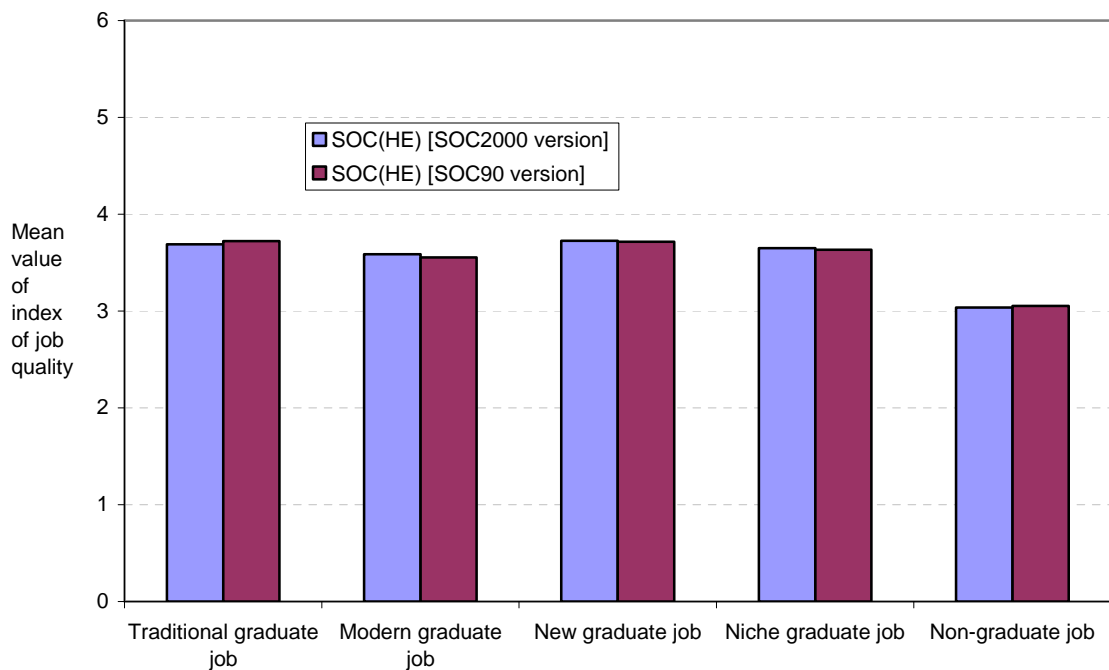
These figures show that the classification distinguishes well between graduate and non graduate jobs, both in terms of earnings and job quality. There is some variation between the graduate categories, but the major distinction lies between these groups and the graduates classified to unit groups of SOC2000 we have categorised as non graduate jobs.

Figure 4 Average annual gross earnings of 1995 graduates in full-time employment in 2002/03, by SOC (HE)



Source: *Seven Years On Survey (2002/03)*

Figure 5 Index of job quality by SOC (HE)



Source: *Seven Years On Survey (2002/03)*

Using SOC (HE) to understand the graduate labour market

One of the main requirements of SOC (HE) is that it should facilitate the creation of time-series indicators, allowing us to monitor of the changing structure of the UK labour market and the utilisation of highly educated people within this structure. However, we have based SOC (HE) on SOC2000, itself only introduced as the new national occupational classification in 2001³. The previous classification, SOC90, does not identify many of the new areas of employment within which new graduate and niche graduate occupations have been identified. Nevertheless, if we wish to use this classification to study the changing nature of the graduate labour market, we must derive a version which relates to SOC90.

To achieve this task, we made use of the dual coding of job titles available in the winter quarter of the 1996/7 Labour Force Survey. Table 3 shows how each unit group of SOC90 relates to SOC2000, selecting the unit group of SOC2000 which constitutes the largest unit group of SOC2000 coded within the SOC90 unit group. This cross classification guided us in allocating the unit groups of SOC90 in a manner which was most compatible with the classification of SOC2000 to SOC (HE). In a number of cases the cross classification was so heterogeneous that we resorted to similar methods to those used in the construction of SOC (HE) from SOC2000. Again we took the Labour Force Survey, but this time for the nine quarters immediately prior to the introduction of SOC2000 (1999 – 2001), showing the changing proportion of degree holders in each unit group of SOC90 for the two age groups. The final allocation of each SOC90 unit group to SOC (HE) is shown in Table 4.

Table 5 shows the results obtained by taking the dual-coded data from the Winter 1996/97 quarter of the Labour Force Survey and applying the SOC90 converter to SOC (HE) to the SOC90 three digit occupation codes, contrasting this with the application of the SOC2000 converter to SOC (HE) to the SOC2000 four digit codes. This reflects the fact that many of the unit groups of SOC2000 do not correspond directly with equivalent unit groups in SOC90. For example, ICT related occupations are located across seven unit groups within SOC2000 compared with five in SOC90. As a consequence, care must be exercised when comparing results through time obtained from SOC90 as opposed to SOC2000. SOC (HE) has been defined in terms of SOC2000, given that this classification yields better discrimination among occupations in a variety of occupational areas which are related to university education. The SOC90 version of SOC (HE) has been generated to facilitate an historical view of the nature of change in the demand for graduate level skills and knowledge.

³ For details of the introduction of SOC2000 within national statistical sources, see http://www.statistics.gov.uk/methods_quality/ns_sec/soc2000.asp

Table 5 Cross classification of SOC (HE) based on SOC2000 with SOC(HE) based on SOC90, all employed persons, Winter 1996/97 Labour Force Survey

(row percentages)

SOC (HE) based on SOC2000	SOC (HE) based on SOC90				
	Traditional graduate occupations	Modern graduate occupations	New graduate occupations	Niche graduate occupations	Non graduate occupations
Traditional graduate occupations	87.0%	3.4%	6.3%	2.3%	1.0%
Modern graduate occupations	3.1%	76.4%	7.0%	11.1%	2.5%
New graduate occupations	1.2%	6.5%	66.7%	14.9%	10.6%
Niche graduate occupations	0.8%	3.6%	9.6%	71.3%	14.7%
Non graduate occupations	0.1%	0.7%	1.0%	3.7%	94.5%

Table 6 gives equivalent information from the dual coded Labour Force Survey, but restricted to employees who have a first degree or higher degree. This shows a similar misallocation between the categories of SOC (HE) due to the change in the structure of the national occupational classification. In many areas of employment, SOC2000 gives a sharper definition of skill levels than was the case with SOC90. Most of the misclassification relates to the new and niche graduate occupation categories⁴. However, only a small proportion of non graduate occupations as defined via SOC2000 are reclassified to graduate occupations via the SOC90 version of SOC (HE).

Table 6 Cross classification of SOC (HE) based on SOC2000 with SOC (HE) based on SOC90, all employed persons with at least a first degree, Winter 1996/97 Labour Force Survey

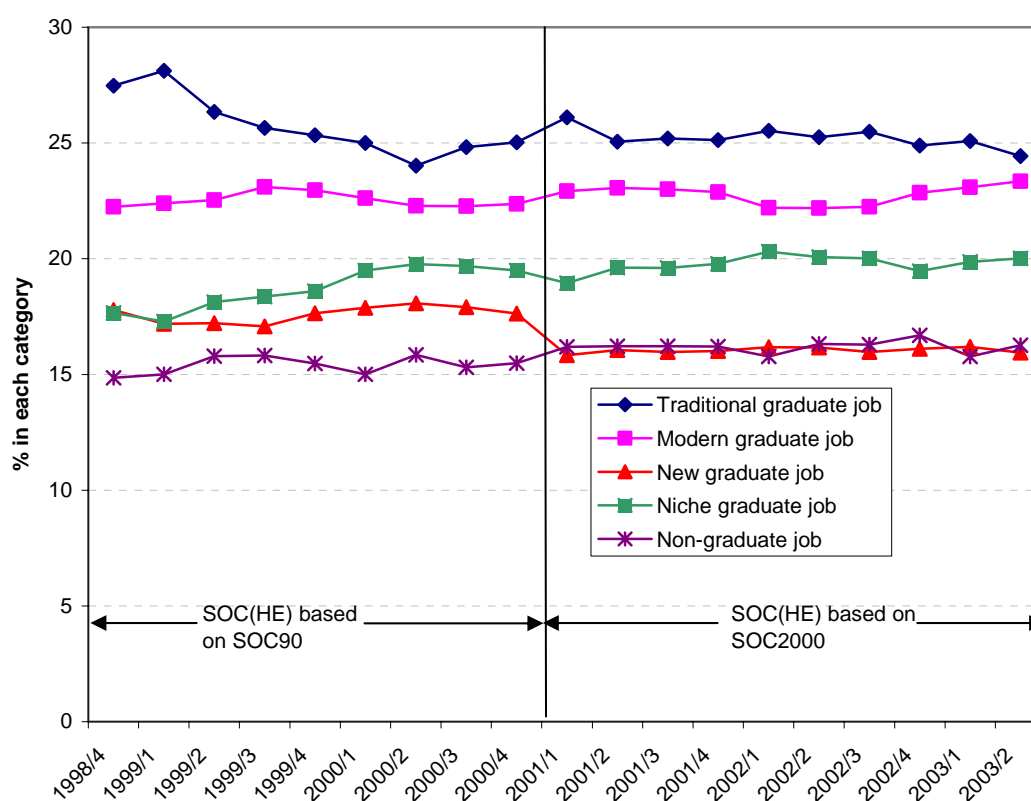
(row percentages)

SOC (HE) based on SOC2000	SOC (HE) based on SOC90				
	Traditional graduate occupations	Modern graduate occupations	New graduate occupations	Niche graduate occupations	Non graduate occupations
Traditional graduate occupations	90.0%	2.8%	4.7%	1.8%	.6%
Modern graduate occupations	3.8%	81.8%	6.4%	7.1%	.9%
New graduate occupations	2.2%	9.0%	69.3%	13.6%	5.9%
Niche graduate occupations	2.4%	7.5%	15.0%	66.8%	8.3%
Non graduate occupations	.8%	5.2%	5.0%	10.5%	78.6%

⁴ Examples include the job title 'Administrator', coded to SOC90 139 'Other financial institution and office managers n.e.c.' and to SOC2000 4150 'General office assistants/clerks'; 'Assistant librarian' coded to SOC90 421 'Library assistants/clerks' and to SOC2000 2451 'Librarians'; 'Residential social worker' coded to SOC90 293 'Social workers, probation officers' and to SOC2000 6115 'Care assistants and home carers'; 'Trainee accountant' coded to SOC90 410 'Account and wages clerks, book-keepers, other financial clerks' and to SOC2000 2421 'Chartered and certified accountants'.

Having constructed a SOC90 version of SOC (HE), it remains to be shown that this version performs in much the same way as the SOC2000 version. In terms of criterion and construct validity, figures 1 to 5 illustrate the variation in these validation measures according to the SOC90 version of SOC (HE). As can be seen, the results are similar to those obtained with the SOC2000 version of SOC (HE). Nonetheless, the SOC90 version may not be continuous with the SOC2000 version. To illustrate this, we reclassify the Labour Force survey to SOC (HE), bridging the period of classification change.

Figure 6 A comparison of SOC (HE) based on SOC90 with SOC (HE) based on SOC2000



Source: Labour Force Surveys, 1984 (Winter quarter) to 2003 (Summer quarter)

Figure 6 shows the result obtained by classifying the occupations held by graduates in the Labour Force Survey, spanning the period when the classification of occupations in the Labour Force Survey switched from SOC90 to SOC2000. This shows some evidence of a discontinuity in the classification between the Winter quarter of 2000 and the Spring quarter of 2001, the first quarter to be coded to SOC2000. This affects the proportion of graduates classified to new graduate jobs, with the percentage dropping by about two percentage points following the introduction of SOC2000. Interestingly though, the steady upward trend in the

proportion of graduates employed in *niche* graduate jobs continues in evidence in both periods. There is little evidence of any significant upward trend in the proportion of graduates employed in what we define as non graduate occupations throughout this five year period.

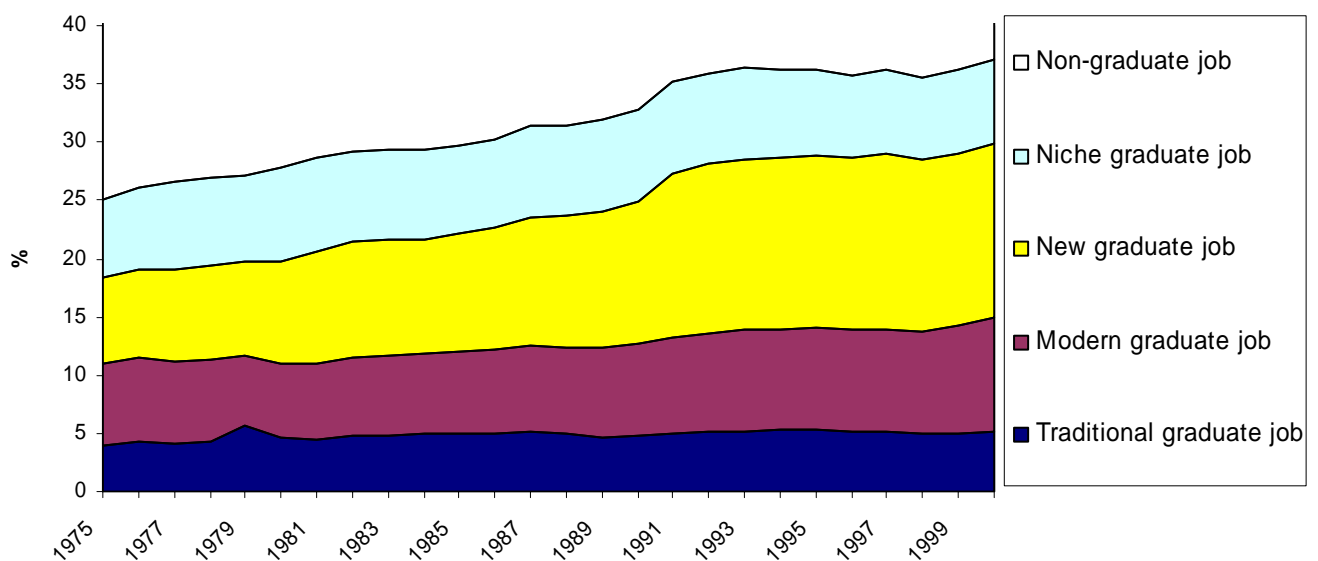
Monitoring labour market trends

Having shown that SOC (HE) is a valid indicator of the extent to which graduate level skills and knowledge are used within the labour market, and with evidence that both the SOC90 and SOC2000 versions are reasonably comparable through time, we employ the classification to monitor trends in the labour market.

To obtain a long run view of occupational change, we make use of information from the New Earnings Survey, a survey which has remained relatively unchanged since 1975.

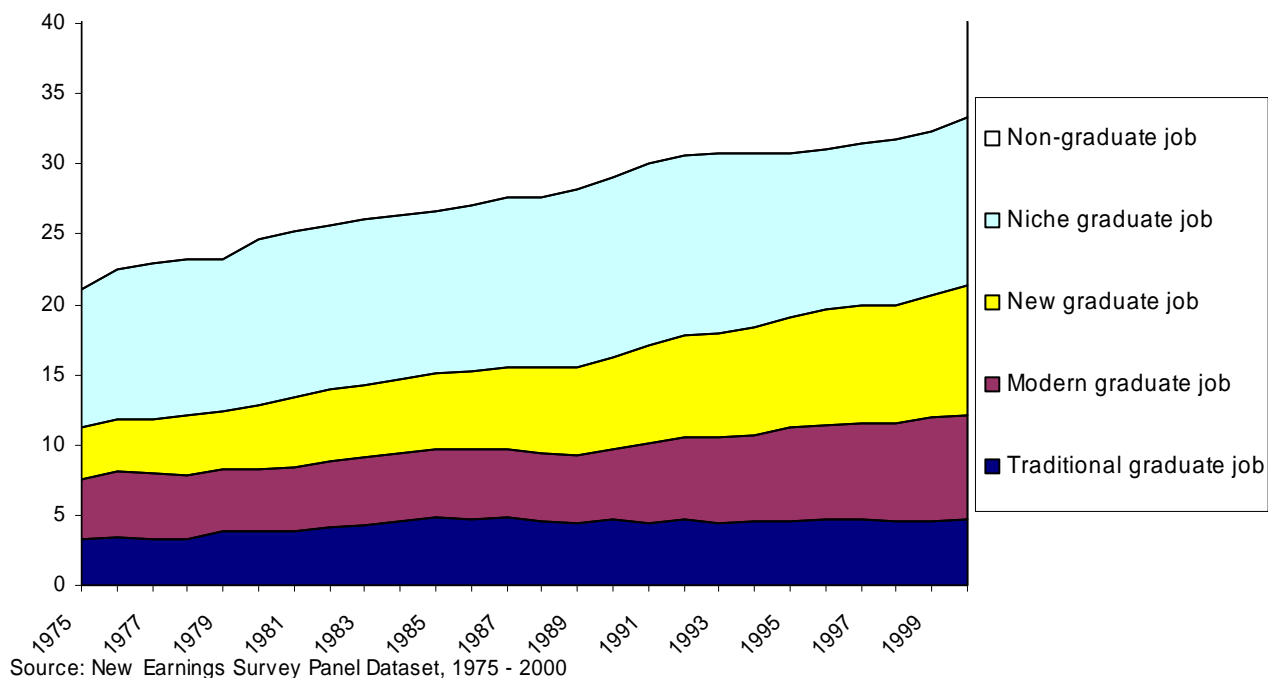
Occupational information in the New Earnings Survey was classified to the Key List of Occupations for Statistical purposes (KOS) until 1990, then to SOC90 after this period. Using cross classified data from the 1990 survey, we firstly converted the KOS classification to SOC90 for the pre 1990 period, then converted the individual level SOC90 codes to SOC (HE).

Figure 7 Changing occupational structure of male employees in employment, 1975 to 2000 by SOC (HE)



Source: New Earnings Survey Panel Dataset, 1975 - 2000

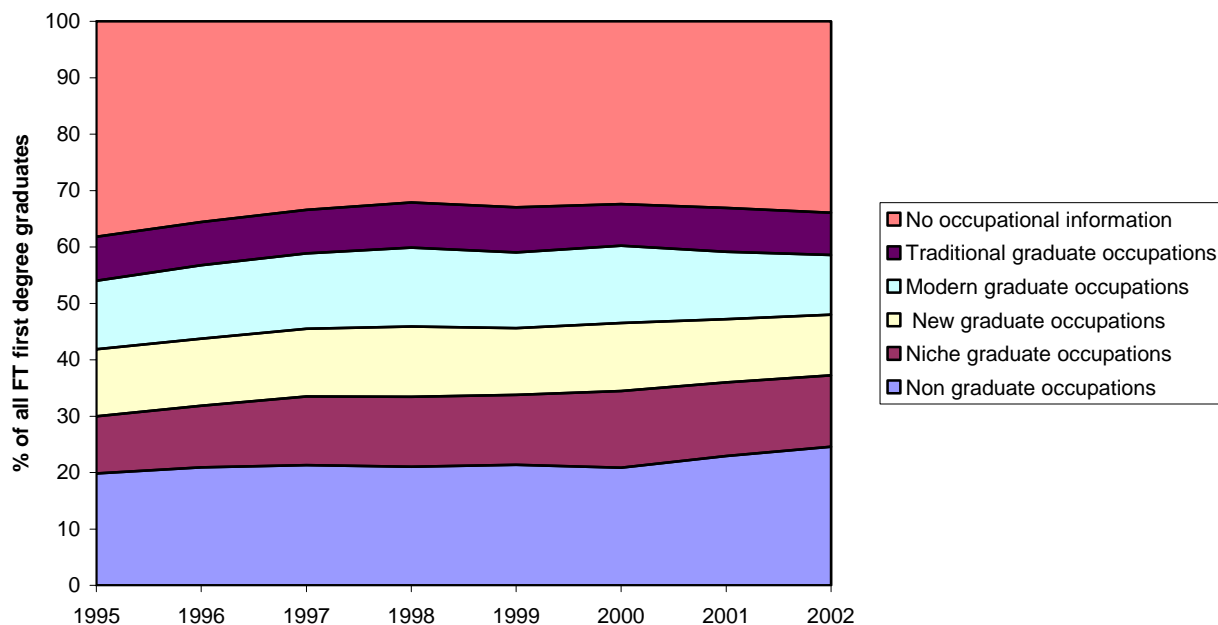
Figure 8 Changing occupational structure of female employees in employment, 1975 to 2000 by SOC (HE)



Figures 7 and 8 show how the occupational structure of employment (specifically, employees in employment) has changed over this 25 year period. While there is some evidence of a classification discontinuity for males, associated with the change from the KOS classification to SOC90 in 1990, the trends revealed in these graphs are reasonably continuous. Both new graduate and modern graduate categories have shown significant growth over this period, as indicated by the rising proportion of both male and female employment classified to these categories. The proportion of employment in the traditional graduate categories has remained virtually constant throughout this period.

Finally we use SOC (HE) to reveal how the first destinations of graduates have changed in recent years. To achieve this we reclassify the first destination statistics collected by the Higher Education statistics Agency to SOC (HE) from SOC (FDS), the version of SOC90 used by the agency to code the occupational information provided by graduates six months after completion of their studies. Figure 9 indicates that, in the last two years for which data are available, there has been a slight increase in the proportion of first degree holders who report that they are in non graduate jobs six months after completing their first degree.

Figure 9 Occupations held by first degree graduates six months after graduation



Source: Higher Education Statistics Agency, First Destination Surveys, 1994/5 to 2001/02

Conclusion

Classifications in the social sciences tend to be relatively blunt instruments: attempts to organise a range of different items into taxonomies which identify and distinguish similarities within categories and differences between them as aids to understanding and analysis. In particular, social classifications deal with highly complex, already-grouped component data where boundaries between groups are inherently fuzzy and often ambiguous. Occupational classification for comparative statistical analysis has to be done on the basis of limited information; normally job titles, with very little further detail about the work context or role played. Although we have been able to draw upon considerably more comprehensive sources to enable us to construct this classification, SOC (HE) can only be evaluated in terms of its utility in analysing the relationship between higher education and occupational and labour market change.

SOC (HE) has been developed over the last two years through a series of rigorous and increasingly painstaking analyses of existing occupational data, testing the evolving model with national datasets and our own survey data. It draws on our experience of researching and analysing socio-economic and labour market change, employing statistical, economic

and sociological sources and methods. In the end, it has been necessary to take difficult but well-researched decisions about precisely where the boundaries should be set. The preceding evidence substantiates our conviction that it provides a more useful tool than has hitherto been available to monitor change in the graduate labour market and in the occupational structure more widely. In the same way as SOC2000 is a more useful occupational classification for studying the labour market of the early twenty-first century than its predecessors, we believe that SOC (HE) provides a sophisticated classification that takes account of change in the relationship between higher education and employment and facilitates more accurate analysis of occupational change.

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Table A1 The relationship between SOC (HE) and the Standard Classification of Occupations 2000: percentage of degree holders in various age groups, Labour Force Survey, 2001 – 2003

SOC (HE)	SOC2000 unit group		% holding a first degree or higher			
			21-35 years	N	40-54 years	N
1	2216	Veterinarians	94.2	69	94.5	73
1	2212	Psychologists	94.1	153	81.6	163
1	2314	Secondary education teaching professionals	93.7	1976	80.8	3679
1	2113	Physicists, geologists & meteorologists	93.1	131	89.8	147
1	2311	Higher education teaching professionals	92.1	456	92.6	1030
1	2214	Ophthalmic opticians	90.8	142	75.2	105
1	2322	Social science researchers	85.9	71	84.8	66
1	2432	Town planners	85.6	104	73.4	154
1	2112	Bio scientists and biochemists	85.4	698	59.0	417
1	2444	Clergy	84.4	96	70.3	303
1	2411	Solicitors & lawyers, judges & coroners	84.4	838	77.5	938
1	2329	Researchers nec.	82.7	358	61.6	185
1	2213	Pharmacists & pharmacologists	82.1	224	88.1	210
1	2321	Scientific researchers	81.9	116	83.5	91
1	1182	Pharmacy managers	77.9	68	84.6	52
1	2211	Medical practitioners	77.2	992	75.9	1203
1	2111	Chemists	76.6	235	66.7	174
1	2215	Dental practitioners	76.4	212	88.8	240
1	2431	Architects	76.0	233	60.1	371
1	1137	Research and development managers	75.6	270	61.8	471
1	3551	Conservation & environ protection officers	73.7	133	73.2	127
1	2451	Librarians	73.6	91	64.7	283
1	2313	Education officers, school inspectors	70.9	55	78.3	217
1	2423	Management consultants, actuaries, economists & statisticians	68.7	903	60.6	923
1	2312	Further education teaching professionals	61.9	394	64.1	1313
2	2315	Prim & nursery education teaching profs	91.2	2112	52.0	3541
2	3215	Chiropodists	91.2	68	41.8	98
2	3223	Speech and language therapists	83.0	106	54.3	81
2	2125	Chemical engineers	83.0	47	56.1	57
2	2452	Archivists and curators	80.4	56	57.3	82
2	1114	officials spec interest orgs	75.6	45	54.1	183
2	2419	Legal professionals nec.	74.1	112	46.8	124
2	1212	Natural environ & conservation managers	72.2	18	46.3	54
2	1113	Senior officials in local government	71.8	39	56.9	232

2	3431	Journalists, newspaper & period eds	70.0	453	49.9	345
2	3412	Authors, writers	69.0	300	56.5	317
2	2316	Special needs education teaching profs	68.6	188	57.7	840
2	3432	Broadcasting associate professionals	67.0	373	51.7	205
2	3411	Artists	62.5	128	47.4	211
2	2126	Design and development engineers	62.3	472	42.7	482
2	2319	Teaching professionals nec.	62.3	424	54.7	928
2	1134	Advertising & public relations managers	60.1	376	44.0	275
2	2121	Civil engineers	57.2	418	41.8	450
2	3229	Therapists nec.	56.8	176	44.0	423
2	2131	IT strategy and planning professionals	55.7	1014	46.3	848
2	3564	Careers advisers & vocation guidance specialists	55.3	132	54.6	196
2	1181	Hospital and health service managers	54.8	168	44.5	578
2	1112	Directors & chief execs of major orgs	54.7	95	53.2	511
2	2132	Software professionals	54.6	3203	44.2	1444
2	2442	Social workers	54.5	363	43.2	777
2	3416	Arts officers, producers and directors	54.3	230	43.4	136
2	1184	Social services managers	52.9	104	44.0	425
2	1136	Info & communication technology managers	51.5	1567	41.0	1921
2	1111	Senior officials in national government	26.7	15	56.0	193
3	3221	Physiotherapists	78.5	237	27.6	214
3	3214	Medical radiographers	74.3	113	16.9	154
3	3222	Occupational therapists	71.5	239	39.5	215
3	3552	Countryside and park rangers	70.5	44	36.7	49
3	3433	Public relations officers	70.2	292	38.0	179
3	2434	Chartered surveyors (not quantity surveyors)	61.7	337	32.5	397
3	3568	Environmental health officers	61.7	94	32.9	76
3	2124	Electronics engineers	60.2	241	39.8	254
3	2443	Probation officers	59.6	52	29.5	105
3	3543	Marketing associate professionals	55.4	1249	35.0	543
3	2422	Management accountants	54.1	556	23.7	375
3	3415	Musicians	53.2	173	35.7	154
3	2433	Quantity surveyors	52.1	292	31.4	245
3	2129	Engineering professionals nec.	51.9	509	25.5	522
3	1171	Officers in armed forces	51.8	191	35.2	196
3	1135	Personnel training & industrial relations managers	51.0	719	33.1	1110
3	3539	Business & related assoc profs nec.	50.9	827	27.3	473
3	1222	Conference and exhibition managers	50.0	88	22.9	70
3	1123	Managers in mining and energy	48.5	33	23.3	103
3	3422	Product, clothing & related designers	47.2	345	32.8	287
3	2122	Mechanical engineers	46.7	304	29.2	425
3	3512	Aircraft pilots and flight engineers	46.3	82	27.0	148

3	2421	Chartered and certified accountants	46.1	999	26.1	912
3	3561	Public service associate professionals	45.3	256	30.5	607
3	1131	Financial managers & chartered secretaries	45.0	964	33.2	1640
3	3414	Dancers and choreographers	45.0	20	0.0	17
3	3232	Housing and welfare officers	44.4	647	27.0	1059
3	3121	Archit technologists & town plan technicians	44.1	145	9.2	98
3	3567	Occupational hygienists & health safety offs	42.9	98	28.5	298
3	2127	Production and process engineers	42.3	300	15.7	324
3	3111	Laboratory technicians	42.3	565	14.8	481
3	3449	Sports and fitness occupations nec.	42.2	45	26.1	23
3	1235	Recycling and refuse disposal managers	41.7	24	4.5	44
3	1132	Marketing and sales managers	41.4	3219	26.3	3501
4	2317	Registrars & senior administrators ed establish	47.2	125	46.5	331
4	1141	Quality assurance managers	46.9	145	39.0	377
4	2441	Public service administrative profs	46.8	94	43.5	299
4	3535	Taxation experts	46.8	156	42.9	266
4	5414	Tailors and dressmakers	45.5	33	7.7	78
4	1172	Police officers (inspectors & above)	44.0	25	48.5	169
4	3212	Midwives	39.6	164	22.3	412
4	3565	Inspectors factories, utils & trading standards	39.1	46	40.5	111
4	4114	Officers non-government organisations	38.7	256	20.6	340
4	1231	Property, housing and land managers	38.5	343	23.4	796
4	3562	Personnel & industrial relations offs	37.7	1357	23.0	626
4	2128	Planning and qlty control engineers	36.7	196	18.7	284
4	3421	Graphic designers	36.4	884	35.3	346
4	3534	Fin. & invest. analyst & advisers	35.7	1307	17.5	890
4	2123	Electrical engineers	35.5	234	24.0	308
4	3231	Youth and community workers	35.1	535	26.6	674
4	3566	Statutory examiners	34.5	58	21.5	121
4	1133	Purchasing managers	34.3	230	28.0	243
4	3520	Legal associate professionals	33.7	300	17.4	236
4	4137	Market research interviewers	33.6	116	17.0	141
4	3123	Building inspectors	33.3	18	12.8	39
4	3537	Financial and accounting techs	33.0	224	16.0	175
4	3563	Vocational & indust trainers & instructors	33.0	748	22.0	1091
4	3413	Actors, entertainers	32.9	164	25.3	154
4	3115	Quality assurance technicians	32.8	180	13.4	149
4	3132	IT user support technicians	31.9	808	24.1	257
4	3532	Brokers	31.5	426	20.9	263
4	1225	Leisure and sports managers	30.1	359	14.8	270
4	4111	Civil Service executive officers	29.9	559	16.0	812
4	1151	Financial institution managers	29.1	947	18.1	1133

4	1183	Healthcare practice managers	28.6	42	19.0	226
4	3319	Protective services associate professionals nec.	28.3	173	24.2	178
4	3541	Buyers and purchasing officers	27.8	562	12.1	439
4	3114	Build & civil eng technicians	27.3	150	18.8	229
4	3119	Science & eng technicians nec.	27.1	358	15.7	312
4	1121	Prod. works & maintenance managers	27.0	1525	24.1	3801
4	1185	Residential and day care managers	25.7	206	8.8	624
4	1142	Customer care managers	25.4	582	15.0	534
4	1122	Managers in construction	25.3	720	12.9	1700
4	3442	Sports coaches, instructors & officials	25.3	297	5.8	154
4	3434	Photo. & audio-visual equip operators	25.2	405	15.4	293
4	3536	Importers, exporters	24.6	57	21.9	73
4	3544	Estate agents, auctioneers	24.5	163	16.7	180
4	1173	Senior officers fire, ambulance, prison et al	24.0	25	14.8	183
4	1152	Office managers	23.9	1370	14.9	1891
4	3542	Sales representatives	22.8	2099	10.1	1381
4	1239	Managers and prop. In other services nec.	22.5	828	21.3	1404
4	3533	Insurance underwriters	21.7	207	11.1	81
4	3531	Estimators, valuers and assessors	21.5	442	17.4	447
4	3218	Medical and dental technicians	20.7	232	9.1	252
4	5245	Comp engineer, installation & maintenance	19.3	420	10.8	204
4	3211	Nurses	19.0	3063	14.0	4163
4	3312	Police officers (sergeant and below)	17.6	1236	7.2	1188
4	1221	Hotel and accommodation managers	14.0	186	10.2	362
4	1226	Travel agency managers	13.8	87	8.7	69
4	1162	Storage and warehouse managers	13.1	459	9.9	504
4	1163	Retail and wholesale managers	12.5	2713	10.1	2566
5	4215	Personal assists & other secretaries	12.5	2374	4.0	3393
4	3113	Engineering technicians	12.2	476	6.9	548
4	1224	Publicans & managers licensed premises	11.9	352	2.2	369
4	1211	Farm managers	8.4	83	6.7	180
5	8138	Routine laboratory testers	35.9	78	6.5	77
5	4135	Library assistants & clerks	31.7	243	20.5	376
5	3131	IT operations technicians	29.1	1222	17.6	624
5	3511	Air traffic controllers	29.0	62	14.1	71
5	6219	Leisure & travel service occupations nec.	26.5	83	1.4	73
5	3122	Draughtspersons	25.8	392	4.7	318
5	3216	Dispensing opticians	25.6	43	15.6	64
5	4136	Database assistants & clerks	21.3	773	4.7	548
5	4131	Filing & other records assists & clerks	21.3	1254	5.7	1121
5	3443	Fitness instructors	18.7	289	23.0	122
5	6214	Air travel assistants	18.6	323	9.5	189
5	6212	Travel agents	18.3	541	7.7	196

5	4112	Civil Service admin officers and assists	17.5	1702	8.8	1540
5	4122	Accounts wages clerk, bookkeeper	17.5	4214	5.6	4084
5	1174	Security managers	16.7	84	12.9	139
5	5112	Horticultural trades	16.7	114	10.7	178
5	7211	Call centre agents & operators	15.9	754	6.7	282
5	5499	Hand craft occupations nec.	15.8	95	8.5	142
5	4213	School secretaries	15.8	165	5.6	787
5	4113	Local government clerical offs & assists	15.5	1326	8.0	1695
5	4150	General office assistants or clerks	15.5	4385	7.3	4456
5	5496	Floral arrangers, florists	15.4	78	1.0	100
5	9259	Elementary sales occupations nec.	15.3	176	0.0	138
5	7129	Sales related occupations nec.	14.7	856	4.6	632
5	4214	Company secretaries	14.6	137	10.5	382
5	6124	Educational assistants	14.1	1322	9.7	2999
5	9249	Elementary security occupation nec.	14.0	100	3.1	97
5	5411	Weavers and knitters	13.8	29	0.0	72
5	6211	Sports and leisure assistants	13.3	354	1.5	132
5	7212	Customer care occupations	13.1	2560	4.2	1364
5	5242	Telecommunications engineers	12.9	388	3.6	503
5	5244	TV, video and audio engineers	12.9	101	2.1	96
5	9226	Leisure and theme park attendants	12.5	96	0.0	42
5	1219	Manager animal husbandry, forestry, fish nec.	12.3	73	11.5	96
5	4132	Pensions and insurance clerks	12.3	929	6.4	407
5	7113	Telephone salespersons	11.8	782	2.2	275
5	3441	Sports players	11.7	120	0.0	15
5	4123	Counter clerks	11.5	1741	2.6	1476
5	9224	Waiters, waitresses	11.4	945	2.1	373
5	6215	Rail travel assistants	11.4	114	7.4	94
5	4142	Communication operators	11.2	267	5.8	207
5	1161	Transport and distribution managers	11.1	407	9.8	762
5	9225	Bar staff	11.1	1484	2.1	474
5	4134	Transport and distribution clerks	10.8	507	4.4	388
5	5494	Musical instrument makers and tuners	10.7	28	0.0	22
5	1234	Shopkeepers, wholesale & retail dealers	10.5	724	10.1	1667
5	6123	Playgroup leaders & assistants	10.5	354	9.1	485
5	6114	Houseparents and residential wardens	10.3	117	5.8	325
5	9112	Forestry workers	10.1	69	11.7	77
5	4212	Legal secretaries	9.9	547	4.8	462
5	9221	Hospital porters	9.8	82	0.0	131
5	4217	Typists	9.7	134	1.9	262
5	1223	Restaurant and catering managers	9.5	1045	4.8	1021
5	4141	Telephonists	9.3	279	1.5	269
5	4216	Receptionists	9.0	1372	1.5	2008

5	9229	Elementary personal services occupations nec.	9.0	144	2.0	100
5	3112	Electrical & electronic technicians	9.0	234	7.4	256
5	4211	Medical secretaries	8.8	306	3.7	648
5	3313	Fire service officers (leading officer & below)	8.8	319	3.3	396
5	5419	Text, garment & related trades nec.	8.8	57	1.3	80
5	7121	Collector salespersons and credit agents	8.5	94	6.3	190
5	7125	Merchandisers and window dressers	8.4	143	0.0	162
5	7112	Ret cashiers and check-out operator	8.3	1532	0.3	1475
5	4133	Stock control clerks	8.3	918	4.3	817
5	5249	Electrical & electronic engineer nec.	8.2	721	4.0	768
5	4121	Credit controllers	8.2	441	4.7	342
5	6291	Undertakers and mortuary assistants	8.2	49	3.4	89
5	5433	Fishmongers, poultry dressers	7.9	76	0.0	85
5	7111	Sales and retail assistants	7.8	7092	1.9	5661
5	5111	Farmers	7.6	288	6.3	697
5	5421	Originators, composers & print preps	7.2	83	8.1	123
5	8218	Air transport operatives	7.2	97	0.0	102
5	7123	Rounds(wo)men and van salespersons	7.1	112	0.0	217
5	6139	Animal care occupations nec.	7.1	226	0.6	166
5	9241	Security guards and related occupations	7.0	842	3.4	1031
5	3213	Paramedics	7.0	86	2.8	108
5	6213	Travel and tour guides	6.7	45	15.7	89
5	8133	Routine inspectors and testers	6.4	545	2.2	768
5	9219	Elementary office occupations nec.	6.2	291	1.8	227
5	9251	Shelf fillers	6.1	736	2.5	562
5	5491	Glass & ceramic maker, decorators, finishers	6.0	151	8.7	161
5	8143	Rail construction & maintenance operatives	5.8	69	0.0	116
5	5119	Agriculture and fishing trades nec.	5.7	229	1.9	161
5	6131	Veterinary nurses and assistants	5.7	141	12.0	25
5	6115	Care assistants and home carers	5.6	3324	2.2	4465
5	9133	Printing machine minders and assist	5.5	236	0.0	183
5	6111	Nursing auxiliaries and assistants	5.4	1284	2.3	1978
5	6112	Ambulance staff (excluding paramedics)	5.2	135	1.0	97
5	9111	Farm workers	5.0	380	2.8	361
5	5492	Furniture maker, other craft woodworkers	4.9	284	4.3	327
5	6231	Housekprs and related occupations	4.9	143	1.4	435
5	7124	Market and street traders and assist	4.7	64	4.5	178
5	6122	Childminders and related occupations	4.4	881	3.4	804
5	5113	Gardeners and grounds(wo)men	4.4	801	5.1	990
5	8139	Assemblers and routine operatives nec.	4.1	518	1.8	487
5	9119	Fishing & agric related occupations nec.	3.9	204	5.2	194
5	8119	Process operatives nec.	3.9	230	0.0	199

5	6232	Caretakers	3.8	184	1.8	619
5	8124	Energy plant operatives	3.7	27	5.7	88
5	8114	Chemical and related process operatives	3.6	366	1.2	510
5	3314	Prison service officers (below principal officer)	3.5	201	1.3	311
5	9121	Labourers build & woodworking trades	3.4	1102	2.0	918
5	5495	Goldsmiths, silversmiths, precious stone workers	3.4	58	2.4	42
5	9211	Post workers, mail sorters, messengers, courier	3.4	1146	2.3	1551
5	5319	Construction trades n.e.c.	3.3	797	5.4	1532
5	5311	Steel erectors	3.3	92	3.9	76
5	9223	Kitchen and catering assistants	3.2	1819	0.4	2260
5	5432	Bakers, flour confectioners	3.2	218	0.0	163
5	3513	Ship and hovercraft officers	2.9	69	11.5	165
5	8215	Driving instructors	2.8	72	7.3	286
5	9141	Stevedores, dockers and slingers	2.8	36	0.0	54
5	8149	Construction operatives nec.	2.8	508	1.9	627
5	5224	Precision instrument makers & repairers	2.6	151	0.8	247
5	9139	Labourers process & plant operations nec.	2.6	541	1.0	523
5	6222	Beauticians and related occupations	2.5	316	1.4	147
5	9132	Industrial cleaning process occupations	2.3	128	0.0	162
5	9222	Hotel porters	2.3	43	0.0	45
5	5241	Electricians, electrical fitters	2.3	1557	0.8	1589
5	3311	NCOs and other ranks	2.3	700	6.1	131
5	7122	Debt, rent and other cash collectors	2.3	220	1.9	258
5	5434	Chefs, cooks	2.2	1740	1.1	1670
5	5412	Upholsterers	2.2	90	7.4	217
5	8214	Taxi, cab drivers and chauffeurs	2.2	679	3.5	1358
5	5422	Printers	2.2	274	1.3	311
5	9149	Other good handling & storage occup nec	2.2	2661	0.8	2472
5	9234	Launderers, dry cleaners, pressers	2.2	185	0.0	297
5	8219	Transport operatives nec.	2.1	94	3.8	156
5	8111	Food, drink & tobacco process operatives	2.1	1100	1.1	1148
5	5413	Leather and related trades	1.9	53	0.0	64
5	9233	Cleaners, domestics	1.8	2450	0.3	4956
5	8131	Assemblers (electrical products)	1.8	612	0.6	659
5	8136	Clothing cutters	1.7	58	0.0	58
5	8212	Van drivers	1.5	1157	1.9	1241
5	5423	Bookbinders and print finishers	1.4	141	2.2	229
5	1232	Garage managers and proprietors	1.4	147	0.4	453
5	6121	Nursery nurses	1.4	1106	2.0	763
5	5315	Carpenters and joiners	1.3	1488	1.2	1608
5	5223	Metal working prod & maintenance fitter	1.3	1321	1.3	2044
5	5216	Pipe fitters	1.3	78	0.0	126
5	5316	Glaziers, window fabric and fitters	1.2	481	1.6	306

5	9134	Packers, bottlers, canners, fillers	1.2	974	1.3	1040
5	3217	Pharmaceutical dispensers	1.2	171	7.5	199
5	8216	Rail transport operatives	1.1	87	6.4	109
5	8141	Scaffolders, staggers, riggers	1.1	184	0.0	133
5	8123	Quarry workers and related operatives	1.0	96	2.1	96
5	8129	Plant and machine operatives nec.	1.0	289	0.5	373
5	8137	Sewing machinists	1.0	386	1.6	607
5	5243	Lines repairers and cable jointers	1.0	102	0.0	97
5	5231	Motor mechanics, auto engineers	0.9	1384	0.2	1475
5	5323	Painters and decorators	0.9	659	2.3	1053
5	8125	Metal working machine operatives	0.9	561	0.5	800
5	9244	School mid-day assistants	0.9	343	0.6	885
5	5431	Butchers, meat cutters	0.9	232	0.0	243
5	5312	Bricklayers, masons	0.8	647	0.8	632
5	8222	Fork-lift truck drivers	0.6	698	0.5	587
5	6221	Hairdressers, barbers	0.6	1229	0.0	616
5	6113	Dental nurses	0.6	353	2.1	142
5	5314	Plumb, heating & ventilating engineers	0.4	909	1.3	1266
5	5213	Sheet metal workers	0.4	242	1.8	220
5	5321	Plasterers	0.4	253	0.4	262
5	9129	Labourers and other const trades nec.	0.4	254	0.0	164
5	8213	Bus and coach drivers	0.4	524	1.5	1074
5	5322	Floorers and wall tilers	0.3	299	0.0	320
5	8132	Assemblers (vehicle and metal goods)	0.2	424	0.2	470
5	8211	Heavy goods vehicle drivers	0.2	1360	0.3	2834
5	5221	Metal mach setter & setter-operator	0.2	468	1.2	748
5	1233	Hairdressers & beauty salon manager & props	0.0	246	1.1	187
5	3514	Train drivers	0.0	100	0.0	166
5	5211	Smiths and forge workers	0.0	50	3.3	61
5	5212	Moulders, core makers, die casters	0.0	34	0.0	82
5	5214	Metal plate workers, shipwrights, riveters	0.0	87	0.0	142
5	5215	Welding trades	0.0	537	0.5	733
5	5222	Tool makers, tool fitters & markers-out	0.0	143	0.8	262
5	5232	Vehicle body builders and repairers	0.0	244	0.0	208
5	5233	Auto electricians	0.0	57	0.0	78
5	5234	Vehicle spray painters	0.0	191	0.0	136
5	5313	Roofers, roof tilers and slaters	0.0	320	0.0	166
5	5424	Screen printers	0.0	39	8.3	24
5	5493	Pattern makers (moulds)	0.0	16	0.0	22
5	6292	Pest control officers	0.0	29	0.0	36
5	8112	Glass and ceramics process operatives	0.0	75	0.0	134
5	8113	Textile process operatives	0.0	176	0.5	194
5	8115	Rubber process operatives	0.0	105	4.2	144

5	8116	Plastics process operatives	0.0	424	1.9	422
5	8117	Metal making & treating process operatives	0.0	108	0.4	246
5	8118	Electroplaters	0.0	51	0.0	17
5	8121	Paper and wood machine operatives	0.0	377	0.0	401
5	8122	Coal mine operatives	0.0	16	0.0	39
5	8126	Water and sewerage plant operatives	0.0	34	0.0	96
5	8134	Weighers, graders, sorters	0.0	63	2.4	127
5	8135	Tyre, exhaust and windscreen fitters	0.0	152	5.7	88
5	8142	Road construction operatives	0.0	166	0.0	190
5	8217	Seafarer (m navy), barge, light, boat	0.0	46	0.0	98
5	8221	Crane drivers	0.0	66	0.0	150
5	8223	Agricultural machinery drivers	0.0	56	0.0	92
5	8229	Mobile machine drivers & operatives	0.0	260	0.5	410
5	9131	Labourers in foundries	0.0	36	0.0	24
5	9231	Window cleaners	0.0	177	0.0	172
5	9232	Road sweepers	0.0	43	0.0	87
5	9235	Refuse and salvage occupations	0.0	102	1.1	174
5	9239	Elementary cleaning occupations nec.	0.0	56	2.4	83
5	9242	Traffic wardens	0.0	33	0.0	45
5	9243	School crossing patrol attendants	0.0	28	0.0	87
5	9245	Car park attendants	0.0	38	3.8	52

Table A2 The relationship between SOC (HE) and the 1990 Standard Classification of Occupations, percentage of degree holders in various age groups, Labour Force Survey, 1998 - 2000

SOC(HE)	SOC90 unit group		% holding a first degree or higher			
			21-35 years	N	40-54 years	N
2	100	General administrators; nation government (Assistant Secretary/Grade 5 & above)	89.7%	29	52.6%	192
2	101	General managers; large companies & organisations	43.9%	189	43.8%	1058
4	102	Local government officers (administrative & executive functions)	34.6%	407	28.7%	1208
3	103	General administrators; national government (HEO to Senior Principal/Grade 6)	48.4%	221	32.5%	656
4	110	Production, works & maintenance managers	27.4%	1960	19.4%	3528
4	111	Managers in building & contracting	22.3%	698	11.9%	1476
4	112	Clerks of works	0.0%	7	4.8%	21
3	113	Managers in mining & energy industries	31.3%	48	37.0%	165
3	120	Treasurers & company financial managers	46.3%	641	31.8%	1175
3	121	Marketing & sales managers	38.9%	4369	23.2%	4295
4	122	Purchasing managers	33.5%	218	17.2%	308
2	123	Advertising & public relations managers	54.1%	643	34.5%	394
3	124	Personnel, training & industrial relations managers	44.4%	1101	33.0%	1022
3	125	Organisation & methods & work study managers	48.1%	79	30.5%	95
2	126	Computer systems & data processing managers	44.0%	1362	37.2%	1613
5	127	Company secretaries	29.0%	210	12.5%	505
5	130	Credit controllers	12.3%	300	5.6%	378
4	131	Bank, Building Society & Post Office managers (except self-employed)	24.2%	596	14.1%	724
4	132	Civil Service executive officers	23.7%	427	13.2%	735
4	139	Other financial institution & office managers nec	26.2%	2677	14.1%	2913
5	140	Transport managers	10.4%	376	8.1%	693
5	141	Stores controllers	18.8%	442	9.1%	482
4	142	Managers in warehousing & other materials handling	8.1%	384	8.9%	527
3	150	officers in UK armed forces	62.9%	170	33.5%	185
3	151	Officers in foreign & Commonwealth armed forces	4.8%	21	62.5%	16
4	152	Police officers (inspector & above)	88.9%	9	30.8%	195
4	153	Fire service officers (station officer & above)	20.0%	10	0.8%	120
4	154	Prison officers (principal officer 7 above)	0.0%	5	19.0%	42
4	155	Customs & excise, immigration service officers (customs: chief preventive officer)	100.0%	3	0.0%	16
5	160	Farm owners & managers, horticulturists	7.5%	589	6.3%	1117
5	169	Other managers in farming, horticulture, forestry & fishing nec	12.4%	202	12.4%	186

4	170	Property & estate managers	26.0%	269	21.0%	624
5	171	Garage managers & proprietors	8.8%	205	0.6%	505
5	172	Hairdressers' & barbers' managers & proprietors	0.7%	566	0.0%	512
4	173	Hotel & accommodation managers	11.9%	243	7.1%	481
5	174	Restaurant & catering managers	11.4%	1017	4.7%	976
4	175	Publicans, innkeepers & club stewards	8.4%	239	1.0%	395
4	176	Entertainment & sports managers	39.3%	506	19.3%	353
4	177	Travel agency managers	12.7%	268	4.0%	177
5	178	Managers & proprietors of butchers & fishmongers	1.1%	90	2.7%	150
4	179	Managers & proprietors in service industries nec	12.7%	4358	10.2%	5282
3	190	Officials of trade associations, trade unions, professional bodies & charities	48.2%	141	36.4%	376
4	191	Registrars & administrators of educational establishments	59.7%	129	45.9%	329
4	199	Other managers & administrators nec	27.1%	1250	19.2%	2146
1	200	Chemists	76.1%	309	64.0%	200
1	201	Biological scientists & biochemists	81.5%	572	61.3%	486
1	202	Physicists, geologists & meteorologists	91.7%	157	70.4%	135
1	209	Other natural scientists nec	79.9%	219	76.4%	178
2	210	Civil, structural, municipal, mining & quarry engineers	58.6%	534	42.7%	583
3	211	mechanical engineers	55.5%	357	37.2%	465
4	212	Electrical engineers	38.8%	209	21.1%	279
3	213	Electronic engineers	55.6%	322	42.9%	231
2	214	Software engineers	60.3%	1794	52.6%	1050
2	215	Chemical engineers	63.6%	77	63.5%	74
2	216	Design & development engineers	55.0%	665	33.1%	593
3	217	Process & production engineers	55.6%	205	15.1%	166
4	218	Planning & quality control engineers	34.5%	284	18.4%	457
3	219	Other engineers & technologists nec	54.4%	507	36.8%	516
1	220	Medical practitioners	78.7%	1067	81.7%	1113
1	221	Pharmacists/pharmacologists	80.3%	315	82.8%	204
1	222	Ophthalmic opticians	64.1%	92	52.9%	70
1	223	Dental practitioners	91.0%	156	93.4%	229
1	224	Veterinarians	91.0%	111	88.1%	67
1	230	University & polytechnic teaching professionals	89.3%	598	89.9%	1229
1	231	Higher & further education teaching professionals	60.5%	372	65.6%	1411
1	232	Education officers, school inspectors	55.8%	43	77.2%	320
1	233	Secondary (& middle school deemed secondary) education teaching professionals	96.4%	1962	77.7%	4466
2	234	Primary (& middle school deemed primary) & nursery education teaching	91.2%	2279	47.6%	4253
2	235	Special education teaching professionals	73.9%	153	52.7%	763
2	239	Other teaching professionals nec	35.7%	580	43.3%	864
1	240	Judges & officers of the court	70.0%	10	35.5%	31

1	241	Barristers & advocates	87.3%	102	72.6%	157
1	242	Solicitors	90.6%	880	73.3%	884
3	250	Chartered & certified accountants	50.4%	1574	24.5%	1390
3	251	Management accountants	40.9%	381	31.7%	281
1	252	Actuaries, economists & statisticians	77.3%	379	55.7%	183
1	253	Management consultants, business analysts	64.3%	532	53.3%	634
1	260	Architects	68.2%	242	59.2%	331
1	261	Town planners	82.3%	164	66.9%	151
3	262	Building, land, mining & 'general practice' surveyors	54.6%	458	24.9%	486
1	270	Librarians	78.3%	83	77.7%	278
2	271	Archivists & curators	77.3%	75	66.4%	119
1	290	Psychologists	95.2%	124	91.4%	105
1	291	Other social & behavioural scientists	96.2%	26	85.7%	35
1	292	Clergy	64.5%	121	56.8%	400
2	293	Social workers, probation officers	48.5%	689	32.3%	1177
3	300	Laboratory technicians	36.7%	660	23.5%	553
4	301	Engineering technicians	10.6%	444	3.6%	330
5	302	Electrical/electronic technicians	20.3%	64	0.0%	91
3	303	Architectural & town planning technicians	10.3%	233	2.2%	182
4	304	Building & civil engineering technicians	37.4%	123	6.2%	97
4	309	Other scientific technicians nec	27.5%	477	10.4%	548
5	310	Draughtspersons	21.2%	358	8.3%	421
4	311	Building inspectors	55.0%	20	24.0%	50
3	312	Quantity surveyors	50.1%	391	11.3%	300
3	313	Marine, insurance & other surveyors	61.5%	13	3.8%	53
2	320	Computer analyst/programmers	49.4%	3455	38.6%	1455
5	330	Air traffic planners & controllers	14.3%	49	9.1%	33
3	331	Aircraft flight deck officers	47.4%	97	39.1%	138
5	332	Ship & hovercraft officers	8.9%	56	9.4%	212
4	340	Nurses	13.8%	3518	11.2%	4438
4	341	Midwives	23.5%	268	14.5%	337
3	342	Medical radiographers	64.7%	119	13.3%	158
3	343	Physiotherapists	59.0%	249	12.0%	191
2	344	Chiropodists	33.3%	48	32.6%	89
5	345	Dispensing opticians	13.2%	53	0.0%	28
5	346	Medical technicians, dental auxiliaries	9.7%	414	14.1%	382
3	347	Occupational & speech therapists, psychotherapists, therapists nec	66.7%	508	41.1%	627
3	348	Environmental health officers	65.4%	107	32.1%	140
5	349	Other health associate professionals nec	17.5%	269	20.0%	190
4	350	Legal service & related occupations	35.7%	308	19.7%	361
4	360	Estimators, valuers	25.7%	191	7.4%	270
4	361	Underwriters, claims assessors, brokers, investment analysts	30.5%	1778	14.9%	1064
4	362	Taxation experts	54.0%	161	25.5%	255

4	363	Personnel & industrial relations officers	38.7%	581	15.2%	343
3	364	Organisation & methods & work study officers	55.8%	294	32.7%	284
5	370	Matrons, houseparents	12.4%	275	6.4%	754
3	371	Welfare, community & youth workers	30.9%	1430	22.5%	1691
2	380	Authors, writers, journalists	68.3%	734	49.3%	741
4	381	Artists, commercial artists, graphic designers	41.8%	1259	31.8%	620
3	382	Industrial designers	53.6%	192	34.7%	101
3	383	Clothing designers	68.0%	100	25.9%	54
2	384	Actors, entertainers, stage managers, producers & directors	49.0%	682	31.7%	338
3	385	Musicians	48.9%	221	40.6%	160
4	386	Photographers, camera, sound and video equipment operators	24.3%	395	16.8%	310
4	387	Professional athletes, sports officials	15.1%	371	7.1%	183
3	390	Information officers	53.8%	199	37.6%	271
4	391	Vocational & industrial trainers	29.8%	758	26.1%	914
2	392	Careers advisers & vocational guidance specialists	63.8%	116	54.2%	212
5	393	Driving instructors (excluding HGV)	2.0%	100	3.9%	337
4	394	Inspectors of factories, utilities & trading standards	50.0%	36	39.6%	91
4	395	Other statutory & similar inspectors nec	46.9%	49	12.5%	88
3	396	Occupational hygienists & safety officers (health & safety)	42.0%	143	26.3%	236
3	399	Other associate professional & technical occupations nec	42.0%	450	24.3%	284
5	400	Civil Service administrative officers & assistants	19.2%	1885	10.5%	1580
5	401	Local government clerical officers & assistants	12.1%	1263	8.2%	1442
5	410	Accounts & wages clerks, book-keepers, other financial clerks	14.0%	5869	4.7%	5003
5	411	Counter clerks & cashiers	10.1%	2799	2.4%	2082
5	412	Debt, rent & other cash collectors	9.7%	206	2.5%	239
5	420	Filing, computer & other records clerks (inc. legal conveyancing)	16.7%	2556	5.6%	2117
5	421	Library assistants/clerks	42.3%	189	16.0%	312
5	430	Clerks (nec)	13.9%	6001	5.6%	4744
5	440	Stores, despatch & production control clerks	5.8%	480	2.9%	448
5	441	Storekeepers & warehousemen/women	2.2%	2992	1.3%	2274
5	450	Medical secretaries	4.4%	248	4.5%	465
5	451	Legal secretaries	4.4%	504	1.9%	482
5	452	Typists & word processor operators	10.2%	333	1.8%	443
5	459	Other secretaries, personal assistants, typists, word processor operators nec	9.8%	3552	3.8%	4364
5	460	Receptionists	7.3%	1216	2.6%	1562
5	461	Receptionist/telephonists	10.7%	281	0.3%	361
5	462	Telephone operators	13.2%	387	2.9%	383
5	463	Radio & telegraph operators, other office communication system operators	11.6%	181	0.7%	151
5	490	Computer operators, data processing operators, other office machine operators	15.6%	1388	3.2%	740

5	491	Tracers, drawing office assistants	66.7%	6	0.0%	3
5	500	Bricklayers, masons	0.5%	657	0.9%	555
5	501	Roofers, slaters, tilers, sheeters, cladders	0.0%	390	2.1%	237
5	502	Plasterers	0.7%	298	0.0%	234
5	503	Glaziers	4.8%	125	0.0%	89
5	504	Builders, building contractors	1.0%	573	3.7%	1215
5	505	Scaffolders, staggers, steeplejacks, riggers	0.0%	221	0.0%	110
5	506	Floorers, floor coverers, carpet fitters & planners, floor & wall tilers	0.0%	253	0.0%	179
5	507	Painters & decorators	0.7%	743	1.3%	1027
5	509	Other construction trades nec	2.3%	554	2.2%	644
5	510	Centre, capstan, turret & other lathe setters & setter-operators	0.0%	122	0.0%	152
5	511	Boring & drilling machine setters & setter-operators	0.0%	6	0.0%	23
5	512	Grinding machine setters & setter-operators	4.5%	44	0.0%	60
5	513	Milling machine setters & setter-operators	0.0%	37	7.7%	65
5	514	Press setters & setter-operators	0.0%	8	0.0%	57
5	515	Tool makers, tool fitters & markers-out	0.0%	159	2.5%	203
5	516	Metal working production & maintenance fitters	2.6%	2112	1.2%	2757
5	517	Precision instrument makers & repairers	6.5%	217	1.0%	202
5	518	Goldsmiths, silversmiths, precious stone workers	12.5%	64	19.8%	86
5	519	Other machine tool setters & setter-operators nec (inc CNC setter-operators)	1.0%	203	0.0%	272
5	520	Production fitters (electrical/electronic)	9.9%	152	4.9%	143
5	521	Electricians, electrical maintenance fitters	1.5%	1820	2.0%	1820
5	522	Electrical engineers (not professional)	2.0%	51	3.2%	63
5	523	Telephone fitters	1.6%	315	1.7%	408
5	524	Cable jointers, lines repairers	0.0%	130	5.0%	100
5	525	Radio, TV & video engineers	7.0%	128	2.9%	173
4	526	Computer engineers, installation & maintenance	24.5%	632	11.6%	277
5	529	Other electrical/electronic trades nec	7.3%	754	6.1%	591
5	530	Smiths & forge workers	0.0%	33	6.1%	82
5	531	Moulders, core makers, die casters	0.0%	48	0.0%	108
5	532	Plumbers, heating & ventilating engineers & related trades	1.0%	898	1.0%	1433
5	533	Sheet metal workers	0.0%	238	0.0%	254
5	534	Metal plate workers, shipwrights, riveters	0.0%	76	0.0%	161
5	535	Steel erectors	1.0%	99	2.1%	94
5	536	Barbenders, steel fixers	0.0%	56	14.8%	27
5	537	Welding trades	0.2%	652	0.1%	767
5	540	Motor mechanics, auto engineers (inc. road patrol engineers)	0.1%	1408	0.5%	1311
5	541	Coach & vehicle body builders	0.0%	128	0.0%	89
5	542	Vehicle body repairers, panel beaters	0.0%	163	0.0%	144
5	543	Auto electricians	0.0%	86	0.0%	69
5	544	Tyre & exhaust fitters	0.0%	82	0.0%	47

5	550	Weavers	0.0%	45	0.0%	69
5	551	Knitters	0.0%	30	0.0%	53
5	552	Warp preparers, bleachers, dyers & finishers	3.1%	65	0.0%	76
5	553	Sewing machinists, menders, darners & embroiderers	1.3%	714	0.8%	927
5	554	Coach trimmers, upholsterers & mattress makers	0.0%	124	0.7%	150
5	555	Shoe repairers, leather cutters & sewers, footwear lasters, makers & finishers,	0.0%	103	0.0%	121
4	556	Tailors & dressmakers	16.2%	37	5.8%	120
5	557	Clothing cutters, milliners, furriers	0.0%	87	0.0%	73
5	559	Other textiles, garments & related trades nec	5.0%	119	4.3%	115
5	560	Originators, compositors & print preparers	14.9%	87	1.9%	158
5	561	Printers	0.0%	150	11.5%	139
5	562	Bookbinders & print finishers	6.5%	77	0.0%	116
5	563	Screen printers	0.0%	78	6.1%	49
5	569	Other printing & related trades nec	1.2%	481	2.6%	429
5	570	Carpenters & joiners	0.8%	1656	2.0%	1877
5	571	Cabinet makers	3.1%	128	2.6%	189
5	572	Case & box makers	0.0%	43	0.0%	20
5	573	Pattern makers (moulds)	0.0%	19	25.0%	20
5	579	Other woodworking trades nec	1.4%	138	4.9%	102
5	580	Bakers, flour confectioners	0.3%	294	1.0%	195
5	581	Butchers, meat cutters	0.0%	375	0.0%	215
5	582	Fishmongers, poultry dressers	0.0%	81	0.0%	50
5	590	Glass product & ceramics makers	1.4%	220	3.0%	231
5	591	Glass product & ceramics finishers & decorators	17.0%	100	2.7%	75
5	592	Dental technicians	6.5%	46	0.0%	28
5	593	Musical instrument makers, piano tuners	0.0%	17	15.0%	20
5	594	Gardeners, groundsmen/groundswomen	4.5%	851	3.5%	996
5	595	horticultural trades	6.0%	150	1.2%	172
5	596	Coach painters, other spray painters	0.5%	369	0.0%	212
5	597	Face trained coalmining workers, shotfirers & deputies	0.0%	19	0.0%	47
5	598	Other machinery mechanics	6.7%	60	0.0%	49
5	599	Other craft & related occupations nec	3.5%	199	4.3%	161
5	600	NCOs & other ranks, UK armed forces	0.8%	901	2.6%	192
5	601	NCOs & other ranks, foreign & Commonwealth armed forces	1.4%	148	0.0%	26
4	610	Police officers (sergeant & below)	15.4%	1504	6.8%	1153
5	611	Fire service officers (leading fire officer & below)	3.3%	363	2.1%	329
5	612	Prison service officers (below principal officer)	3.6%	335	3.4%	383
4	613	Customs & excise officers, immigration officers (customs: below chief preventive officer; excise: below surveyor)	16.7%	66	21.6%	74
5	614	Traffic wardens	0.0%	20	0.0%	29
5	615	Security guards & related occupations	9.6%	864	4.0%	1052

5	619	Other security & protective service occupations nec	10.7%	159	4.4%	271
5	620	Chefs, cooks	1.4%	1943	0.9%	1563
5	621	Waiters, waitresses	10.2%	998	0.2%	471
5	622	Bar staff	9.9%	1580	1.1%	635
5	630	Travel & flight attendants	12.4%	490	5.4%	242
5	631	Railway station staff	5.6%	72	0.0%	59
5	640	Assistant nurses, nursing auxiliaries	3.7%	908	0.3%	1119
5	641	Hospital ward assistants	3.9%	152	3.6%	249
5	642	Ambulance staff	6.2%	258	2.4%	207
5	643	Dental nurses	0.0%	372	1.9%	208
5	644	Care assistants & attendants	4.2%	3483	1.8%	4625
5	650	Nursery nurses	2.6%	1209	2.4%	764
5	651	Playgroup leaders	5.6%	124	7.7%	271
5	652	Educational assistants	9.7%	854	5.8%	2336
5	659	Other childcare & related occupations nec	3.9%	1771	3.0%	2002
5	660	Hairdressers, barbers	0.3%	965	0.0%	240
5	661	Beauticians & related occupations	3.3%	299	0.0%	91
5	670	Domestic housekeepers & related occupations	0.0%	82	0.0%	231
5	671	Housekeepers (non domestic)	6.0%	67	0.6%	178
5	672	Caretakers	10.3%	155	0.7%	723
5	673	Launderers, dry cleaners, pressers	0.0%	210	0.0%	326
5	690	Undertakers	3.4%	29	0.0%	64
5	691	Bookmakers	17.8%	118	0.0%	109
5	699	Other personal & protective service occupations nec	9.8%	523	5.6%	288
4	700	Buyers (retail trade)	41.0%	144	0.0%	39
4	701	Buyers & purchasing officers (not retail)	26.8%	477	3.4%	351
4	702	Importers & exporters	37.2%	43	27.7%	65
4	703	Air, commodity & ship brokers	14.6%	41	11.1%	36
4	710	Technical & wholesale sales representatives	20.5%	1765	9.5%	1563
5	719	Other sales representatives nec	15.9%	1405	6.3%	1043
5	720	Sales assistants	6.8%	8585	2.1%	6710
5	721	Retail cash desk & check-out operators	3.3%	1230	0.8%	1172
5	722	Petrol pump forecourt attendants	1.1%	87	0.0%	59
5	730	Collector salespersons & credit agents	4.9%	123	8.9%	169
5	731	Roundsmen/women & van salespersons	1.2%	161	1.5%	338
5	732	Market & street traders & assistants	0.0%	102	1.8%	171
3	733	Scrap dealers, scrap metal merchants	0.0%	5	0.0%	25
5	790	Merchandisers	20.6%	126	1.0%	102
5	791	Window dressers, floral arrangers	2.7%	183	4.9%	122
5	792	Telephone salespersons	12.4%	1125	3.1%	262
5	800	Bakery & confectionery process operatives	0.4%	265	4.0%	276
5	801	Brewery & vinery process operatives	0.0%	32	0.0%	61
5	802	Tobacco process operatives	0.0%	5	0.0%	23

5	809	Other food, drink & tobacco process operatives nec	2.0%	1017	1.9%	862
5	810	Tannery production operatives	0.0%	10	0.0%	18
5	811	Preparatory fibre processors	0.0%	18	0.0%	28
5	812	Spinners, doublers, twisters	0.0%	42	0.0%	44
5	813	Winders, reelers	0.0%	8	0.0%	31
5	814	Other textiles processing operatives	1.2%	84	0.0%	71
5	820	Chemical, gas & petroleum process plant operatives	4.1%	338	3.0%	493
5	821	Paper, wood & related process plant operatives	3.7%	164	1.2%	172
5	822	Cutting & slitting machine operatives (paper products etc)	0.0%	43	0.0%	54
5	823	Glass & ceramics furnace operatives, kilnsetters	0.0%	45	0.0%	30
5	824	Rubber process operatives, moulding machine operatives, tyre builders	0.0%	195	0.0%	139
5	825	Plastics process operatives, moulders & extruders	1.3%	602	0.0%	544
5	826	Synthetic fibre makers	0.0%	9	0.0%	21
5	829	Other chemicals, paper, plastics & related process operatives nec	0.0%	84	0.0%	100
5	830	Furnace operatives (metal)	0.0%	38	0.0%	60
5	831	Metal drawers	0.0%	24	0.0%	18
5	832	Rollers	0.0%	10	0.0%	15
5	833	Annealers, hardeners, temperers (metal)	0.0%	11	0.0%	22
5	834	Electroplaters, galvanisers, colour coaters	0.0%	82	0.0%	72
5	839	Other metal making & treating process operatives nec	2.6%	114	0.0%	157
5	840	Machine tool operatives (inc CNC machine tool operatives)	1.4%	554	0.2%	555
5	841	Press stamping & automatic machine operatives	0.0%	163	0.0%	192
5	842	Metal polishers	0.0%	39	0.0%	42
5	843	Metal dressing operatives	7.7%	26	0.0%	48
5	844	Shot blasters	0.0%	20	0.0%	5
5	850	Assemblers/lineworkers (electrical/electronic goods)	1.9%	882	0.3%	695
5	851	Assemblers/lineworkers (vehicles & other metal goods)	0.4%	458	1.9%	537
5	859	Other assemblers/lineworkers nec	0.9%	423	2.4%	295
5	860	Inspectors, viewers & testers (metal & electrical goods)	3.8%	400	2.5%	642
5	861	Inspectors, viewers, testers & examiners (other manufactured goods)	12.5%	273	4.1%	339
5	862	Packers, bottlers, canners, fillers	2.3%	1324	1.3%	1118
5	863	Weighers, graders, sorters	5.1%	99	0.0%	102
5	864	Routine laboratory testers	11.7%	77	11.0%	118
5	869	Other routine process operatives nec	4.4%	160	0.0%	201
5	870	Bus inspectors	0.0%	11	0.0%	25
5	871	Road transport depot inspectors & related occupations	9.8%	51	0.0%	73
5	872	Drivers of road goods vehicles	1.1%	3081	1.3%	4132
5	873	Bus & coach drivers	1.1%	567	0.6%	1064

5	874	Taxi, cab drivers & chauffeurs	2.7%	696	3.1%	1457
5	875	Bus conductors	0.0%	15	0.0%	14
5	880	Seafarers (merchant navy); barge, lighter & boat operatives	0.0%	46	0.0%	79

5	881	Rail transport inspectors, supervisors & guards	2.7%	74	4.6%	65
5	882	Rail engine drivers & assistants	0.0%	144	0.0%	124
5	883	Rail signal operatives & crossing keepers	8.7%	23	0.0%	44
5	884	Shunters & points operatives	0.0%	25	0.0%	17
5	885	Mechanical plant drivers & operatives (earth moving & civil engineering)	0.7%	290	0.0%	323
5	886	Crane drivers	0.0%	91	0.0%	153
5	887	Fork lift & mechanical truck drivers	0.0%	764	0.0%	683
5	889	Other transport & machinery operatives nec	3.8%	159	0.0%	173
5	890	Washers, screeners & crushers in mines & quarries	0.0%	3	0.0%	6
5	891	Printing machine minders & assistants	0.0%	215	0.0%	239
5	892	Water & sewerage plant attendants	7.7%	39	0.0%	82
5	893	Electrical, energy, boiler & related plant operatives & attendants	3.3%	30	0.0%	88
5	894	Oilers, greasers, lubricators	0.0%	26	0.0%	33
5	895	Mains & service pipe layers, pipe jointers	0.0%	128	0.0%	99
5	896	Construction & related operatives	1.5%	453	1.8%	552
5	897	Woodworking machine operatives	0.0%	212	3.0%	197
5	898	Mine (excluding coal) & quarry workers	0.0%	88	0.0%	100
5	899	Other plant & machine operatives nec	3.6%	578	0.9%	541
5	900	Farm workers	6.7%	505	0.7%	558
5	901	Agricultural machinery drivers & operatives	0.0%	79	3.1%	96
5	902	All other occupations in farming & related	2.7%	259	0.6%	168
5	903	Fishing & related workers	1.4%	71	0.0%	45
5	904	Forestry workers	4.9%	61	4.9%	81
5	910	Coal mine labourers	0.0%	22	0.0%	17
5	911	Labourers in foundries	0.0%	44	0.0%	21
5	912	Labourers in engineering 7 allied trades	2.8%	109	0.0%	118
5	913	Mates to metal/electrical & related fitters	2.9%	105	0.0%	67
5	919	Other labourers in making & processing industries nec	0.8%	241	0.0%	203
5	920	Mates to woodworking trades workers	5.1%	39	0.0%	15
5	921	Mates to building trades workers	3.4%	89	0.0%	43
5	922	Rail construction & maintenance workers	0.0%	65	0.0%	53
5	923	Road construction & maintenance workers	0.0%	194	0.6%	173
5	924	Paviors, kerb layers	0.0%	71	0.0%	17
5	929	Other building & civil engineering labourers nec	1.8%	956	0.2%	612
5	930	Stevedores, dockers	0.0%	56	0.0%	46
5	931	Goods porters	1.6%	569	2.8%	497
5	932	Slings	0.0%	3	0.0%	22
5	933	Refuse & salvage collectors	0.0%	151	1.4%	140
5	934	Driver's mates	0.0%	42	0.0%	16
5	940	Postal workers, mail sorters	4.2%	1179	1.8%	1342
5	941	Messengers, couriers	5.2%	286	0.9%	321

5	950	Hospital porters	8.3%	108	0.0%	143
5	951	Hotel porters	4.0%	50	0.0%	31
5	952	Kitchen porters, hands	2.6%	657	0.8%	918
5	953	Counterhands, catering assistants	2.9%	1230	0.3%	1455
5	954	Shelf fillers	2.5%	609	0.3%	331
5	955	Lift & car park attendants	0.0%	22	9.3%	54
5	956	Window cleaners	1.0%	203	0.0%	204
5	957	Road sweepers	3.4%	29	0.0%	108
5	958	Cleaners, domestics	1.1%	2952	0.6%	5436
5	959	Other occupations in sales & services nec	7.9%	152	1.0%	98
5	990	All other labourers & related workers	1.7%	594	0.7%	551
5	999	All others in miscellaneous occupations nec	20.8%	77	3.0%	66

Table A3 The relationship between unit groups of SOC90 and SOC2000

SOC90	Corresponds most closely with SOC2000	Total no. employed in SOC90 unit group	% of SOC90 unit group in indicated SOC2000 unit group	SOC2000 unit group is allocated to SOC(HE)
100	1111	19	52.63	2
101	1112	229	45.41	2
102	4113	212	14.15	5
103	3561	140	57.14	3
110	1121	860	66.16	4
111	1122	299	58.19	4
112	1122	13	92.31	4
113	1123	35	37.14	3
120	1131	281	55.52	3
121	1132	1297	47.80	3
122	1133	78	60.26	4
123	1134	154	31.82	2
124	1135	255	51.37	3
125	1121	17	23.53	4
126	1136	311	59.49	2
127	4214	162	69.75	5
130	4121	90	76.67	5
131	1151	206	72.33	4
132	4111	198	81.82	4
139	1152	734	32.70	4
140	1161	130	53.85	5
141	4133	165	47.27	5
142	1162	164	38.41	4
150	1171	55	83.64	3
151	1171	5	60.00	3
152	1172	31	96.77	4
153	1173	24	70.83	4
154	1173	6	66.67	4
155	1173	1	100.00	4
160	5111	408	72.30	5
169	1219	49	46.94	5
170	1231	148	67.57	4
171	1232	89	67.42	5
172	6221	139	74.82	5
173	1221	175	78.29	4
174	1223	356	82.30	5
175	1224	233	96.57	4
176	1225	125	58.40	4
177	1226	49	42.86	4
178	1234	46	28.26	5
179	1163	1443	45.25	4
190	4215	90	24.44	5
191	2317	58	60.34	4
199	1239	469	14.71	4
200	2111	73	52.05	1
201	2112	126	66.67	1
202	2113	45	57.78	1
209	2321	53	39.62	1
210	2121	174	68.97	2
211	2122	146	43.84	3
212	2123	91	31.87	4
213	2124	74	32.43	3

214	2131	251	43.43	2
215	2125	18	61.11	2
216	2126	214	64.95	2
217	2127	69	65.22	3
218	2128	133	42.11	4
219	2129	159	61.64	3
220	2211	314	93.95	1
221	2213	93	76.34	1
222	2214	22	77.27	1
223	2215	66	87.88	1
224	2216	22	95.45	1
230	2311	281	81.85	1
231	2312	314	77.71	1
232	2313	27	51.85	1
233	2314	918	92.37	1
234	2315	861	93.50	2
235	2316	130	77.69	2
239	2319	205	65.37	2
240	2411	14	42.86	1
241	2411	27	77.78	1
242	2411	236	91.95	1
250	2421	417	70.74	3
251	2422	49	48.98	3
252	2423	64	56.25	1
253	2423	140	59.29	1
260	2431	66	83.33	1
261	2432	33	75.76	1
262	2434	134	82.84	3
270	2451	41	95.12	1
271	2452	19	68.42	2
290	2212	24	91.67	1
291	2322	11	81.82	1
292	2444	95	97.89	1
293	2442	294	48.98	2
300	3111	216	54.17	3
301	3113	115	24.35	4
302	3112	65	50.77	5
303	3121	31	70.97	3
304	3114	30	43.33	4
309	3119	174	58.05	4
310	3122	139	79.14	5
311	3123	8	50.00	4
312	2433	86	87.21	3
313	2434	10	50.00	3
320	2132	531	71.94	2
330	3511	20	60.00	5
331	3512	39	97.44	3
332	3513	64	89.06	5
340	3211	1257	93.64	4
341	3212	100	95.00	4
342	3214	42	83.33	3
343	3221	78	89.74	3
344	3215	31	90.32	2
345	3216	22	50.00	5
346	3217	74	52.70	5
347	3222	140	37.14	3
348	3568	29	65.52	3
349	6131	39	58.97	5
350	3520	94	75.53	4
360	3531	65	70.77	4
361	3534	384	26.56	4
362	3535	60	66.67	4

363	3562	147	73.47	4
364	2423	88	32.95	1
370	6114	160	50.63	5
371	3232	372	44.62	3
380	3431	252	41.67	2
381	3421	246	46.34	4
382	3422	47	78.72	3
383	3422	23	82.61	3
384	3432	156	33.97	2
385	3415	69	95.65	3
386	3434	106	72.64	4
387	3442	99	47.47	4
390	2451	91	32.97	1
391	3563	230	79.13	4
392	3564	64	43.75	2
393	8215	84	91.67	5
394	3565	24	58.33	4
395	3566	26	65.38	4
396	3567	50	66.00	3
399	2329	108	13.89	1
400	4112	487	84.60	5
401	4113	432	54.86	5
410	4122	1604	58.54	5
411	4123	816	73.16	5
412	7122	84	79.76	5
420	4131	697	26.11	5
421	4135	80	86.25	5
430	4150	1578	49.43	5
440	4133	133	41.35	5
441	9149	878	77.33	5
450	4211	105	96.19	5
451	4212	136	96.32	5
452	4217	184	60.33	5
459	4215	1335	85.84	5
460	4216	443	93.00	5
461	4216	118	67.80	5
462	4141	99	82.83	5
463	4142	63	77.78	5
490	4136	364	60.99	5
491	3122	5	80.00	5
500	5312	217	92.63	5
501	5313	82	90.24	5
502	5321	75	97.33	5
503	5316	40	77.50	5
504	5319	305	81.64	5
505	8141	47	85.11	5
506	5322	69	71.01	5
507	5323	350	96.00	5
509	9121	151	27.81	5
510	5221	52	84.62	5
511	5221	10	60.00	5
512	5221	25	84.00	5
513	5221	24	66.67	5
514	5221	13	84.62	5
515	5222	79	81.01	5
516	5223	843	60.50	5
517	5224	65	64.62	5
518	5495	12	75.00	5
519	5221	83	85.54	5
520	5241	40	40.00	5
521	5241	576	72.74	5
522	5241	24	54.17	5

523	5242	102	79.41	5
524	5243	30	73.33	5
525	5244	73	54.79	5
526	5245	95	48.42	4
529	5249	187	26.74	5
530	5211	31	74.19	5
531	5212	35	60.00	5
532	5314	359	75.77	5
533	5213	73	69.86	5
534	5214	37	81.08	5
535	5311	37	67.57	5
536	5319	7	71.43	5
537	5215	263	87.45	5
540	5231	490	83.27	5
541	5232	30	90.00	5
542	5232	53	84.91	5
543	5233	34	79.41	5
544	8135	20	80.00	5
550	5411	18	77.78	5
551	5411	25	56.00	5
552	8113	38	36.84	5
553	8137	328	84.76	5
554	5412	50	84.00	5
555	5413	66	42.42	5
556	5414	30	83.33	4
557	8136	27	74.07	5
559	5419	17	29.41	5
560	5421	59	69.49	5
561	5422	58	77.59	5
562	5423	31	77.42	5
563	5424	21	71.43	5
569	5422	173	24.86	5
570	5315	567	93.30	5
571	5492	65	67.69	5
572	8121	5	60.00	5
573	5493	9	77.78	5
579	5492	30	56.67	5
580	5432	76	85.53	5
581	5431	93	91.40	5
582	5433	19	52.63	5
590	5491	82	36.59	5
591	5491	32	71.88	5
592	3218	23	95.65	4
593	5494	5	100.00	5
594	5113	300	88.00	5
595	5112	63	49.21	5
596	5234	90	65.56	5
597	8122	20	85.00	5
598	5249	17	76.47	5
599	5499	57	28.07	5
600	3311	182	84.07	5
601	3311	26	80.77	5
610	3312	345	97.68	4
611	3313	104	98.08	5
612	3314	81	97.53	5
613	3319	27	81.48	4
614	9242	13	92.31	5
615	9241	353	88.10	5
619	9243	87	43.68	5
620	5434	556	94.06	5
621	9224	455	92.97	5
622	9225	462	97.19	5

630	6213	103	48.54	5
631	6215	19	47.37	5
640	6111	422	86.26	5
641	6111	68	72.06	5
642	6112	62	61.29	5
643	6113	84	97.62	5
644	6115	1191	94.54	5
650	6121	229	86.90	5
651	6123	77	79.22	5
652	6124	341	92.38	5
659	6122	658	46.96	5
660	6221	223	95.52	5
661	6222	65	78.46	5
670	6231	64	78.13	5
671	6231	37	97.30	5
672	6232	169	93.49	5
673	9234	102	91.18	5
690	6291	20	85.00	5
691	1239	19	89.47	4
699	6211	176	34.66	5
700	3541	33	75.76	4
701	3541	118	88.98	4
702	1132	16	31.25	3
703	3532	12	66.67	4
710	3542	590	63.90	4
719	7129	317	35.33	5
720	7111	3174	85.66	5
721	7112	575	88.70	5
722	7112	26	76.92	5
730	7121	64	29.69	5
731	7123	106	74.53	5
732	7124	76	75.00	5
733	1235	9	88.89	3
790	7125	45	82.22	5
791	5496	43	69.77	5
792	7113	152	76.32	5
800	8111	81	86.42	5
801	8111	9	100.00	5
802	8111	6	66.67	5
809	8111	272	93.75	5
810	8114	7	42.86	5
811	8114	6	50.00	5
812	8113	14	92.86	5
813	8113	11	81.82	5
814	8113	46	54.35	5
820	8114	164	74.39	5
821	8121	54	74.07	5
822	8121	26	69.23	5
823	8112	18	77.78	5
824	8115	44	86.36	5
825	8116	184	77.17	5
826	8114	9	55.56	5
829	8114	46	32.61	5
830	8117	21	85.71	5
831	8117	10	60.00	5
832	8117	7	85.71	5
833	8117	11	90.91	5
834	8118	26	69.23	5
839	8117	45	46.67	5
840	8125	201	60.20	5
841	8125	65	78.46	5
842	8125	30	90.00	5

843	8125	10	100.00	5
844	8125	7	100.00	5
850	8131	276	86.23	5
851	8132	168	68.45	5
859	8139	149	53.69	5
860	8133	153	84.31	5
861	8133	115	85.22	5
862	9134	478	89.75	5
863	8134	52	88.46	5
864	8138	34	67.65	5
869	8133	61	49.18	5
870	8219	8	75.00	5
871	8219	21	38.10	5
872	8211	1106	60.49	5
873	8213	229	95.20	5
874	8214	403	87.84	5
875	6219	3	66.67	5
880	8217	18	77.78	5
881	6215	15	73.33	5
882	3514	43	86.05	5
883	8216	12	83.33	5
884	8216	5	100.00	5
885	8229	97	85.57	5
886	8221	47	93.62	5
887	8222	246	84.15	5
889	9139	47	31.91	5
890	8123	5	60.00	5
891	9133	107	50.47	5
892	8126	18	77.78	5
893	8124	22	86.36	5
894	5223	7	42.86	5
895	8149	31	64.52	5
896	8149	174	41.95	5
897	8121	70	87.14	5
898	8123	24	83.33	5
899	8129	217	29.95	5
900	9111	230	84.78	5
901	8223	32	78.13	5
902	6139	90	55.56	5
903	5119	19	63.16	5
904	9112	38	71.05	5
910	8122	7	100.00	5
911	9131	9	66.67	5
912	9139	32	56.25	5
913	9139	37	59.46	5
919	9139	72	47.22	5
920	9121	11	54.55	5
921	9121	32	90.63	5
922	8143	19	73.68	5
923	8142	50	68.00	5
924	8142	5	80.00	5
929	9121	227	75.33	5
930	9141	34	88.24	5
931	9149	156	77.56	5
932	9141	5	80.00	5
933	9235	33	72.73	5
934	9149	8	87.50	5
940	9211	340	94.41	5
941	9211	198	90.40	5
950	9221	42	92.86	5
951	9222	27	92.59	5
952	9223	339	92.04	5

953	9223	559	89.98	5
954	9251	251	94.82	5
955	9245	25	76.00	5
956	9231	66	96.97	5
957	9232	21	85.71	5
958	9233	1780	91.69	5
959	9239	45	17.78	5
990	9139	186	37.10	5
999	9229	11	27.27	5