Re-basing the NS-SEC on SOC2010:

A Report to ONS

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Summary

1. We have created a revised version of the National Statistics Socio-economic Classification (NS-SEC) using the new Standard Occupational Classification, SOC2010. Compared with the SOC2000 NS-SEC, a number of changes have resulted. Principally these affect (1) managers (2) professionals and (3) supervisors (including the supervisory employment status within the derivation matrix of some Occupational Unit Groups (OUGs)), all following from changes to SOC itself. The revision of SOC in these areas serves to improve the operationalisation of the NS-SEC, both through the tighter definition of managerial occupations and the creation of OUGs for some supervisory occupations. Beyond those changes induced by the SOC revision, we have made only some slight alterations to operational codes, as indicated below. In what follows, figure 1 provides information on the operational categories of NS-SEC (prefixed by L) and figure 2 to the analytic classes.

Managers

2. Managers are allocated to either Class 1.1 (L2) or Class 2 (L5) of the NS-SEC. Compared with SOC2000, SOC2010 has an even more refined and restricted definition of managerial occupations (Major Group (MG) 1 – see Elias and Birch 2008 and 2009). Some MG 1 OUGs in their entirety as well as elements of other managerial OUGs have been reallocated to MGs 2, 3, 4, 5 and 7. This has various consequences for the NS-SEC. First, we can no longer maintain the rule that only OUGs in MG1 may be allocated to L2 or L5. Second, there is some transfer of cases from L2 and L5 to L3 and L4, i.e. from managers to professionals. These do not greatly affect actual class allocations, of course, as explained in para 1.7 below. Third, the more refined definition of occupations in MG1 has allowed us to continue with (but not extend) the dispensation of the establishment size rule within the derivation matrix for some OUGs. That is, in certain cases we can allow OUG alone to determine allocation between L2 and L5, Classes 1 and 2 respectively. Finally, in the case of OUG 1131, we have changed the operational values for employers and the self-employed from L3.3 to L1, L8.1 and L9.1. OUG 1131 thus now conforms to the pattern of other OUGs in MG1. This change was effected on the assumption that self-employed and employer professionals previously in this OUG are now predominantly in OUGs 2429 and 3538.

Professionals

3. Some former managerial occupations in SOC2000 are now classified as professional in MG2 and MG3. Most of these are now classified in NS-SEC as professionals in L3 or L4. This is on the grounds that professional knowledge is likely to be a prerequisite of any managerial function and thus follows the spirit of the changes to SOC for these occupations.

4. The combined effect of these changes to the allocation of managerial and professional occupations is marginal in class terms. Mostly they involve transfers within classes, i.e. between L2 and L3 in Class 1 and L4 and L5 in Class 2.

Supervisors

5. Now that SOC2010 has some OUGs for supervisory positions, we have disallowed supervisory status for OUGs which directly relate to the new supervisory occupations. This has served to reduce the sizes of L6 and L10 through transfers to L7, L11, L12 and L13 and thus between Classes 2 and 3 and from Class 5 to Classes 6 and 7.

Intermediate clerical occupations

6. While undertaking the revision of NS-SEC, we realised there was an error in the SOC2000 matrix in respect of OUG 4150. Its NS-SEC operational value should have been 7.1 for employees and not 7.2. In SOC2010 most of 4150 goes to 4159 and this new OUG has now been given the correct operational code of 7.1. Again, this change does not affect class allocations.

1. Introduction

1.1 *Contents of this report.* This report provides a digest of the work undertaken in order to re-base the NS-SEC on the new version of the Standard Occupational Classification (SOC2010). This section summarizes our work. In section 2, we compare the SOC2000 NS-SEC with the recommended SOC2010 version. In section 3 we discuss further issues that relate to the NS-SEC revision.

1.2 *The process of creating SOC2010 NS-SEC.* In considering the allocation of OUG by employment status (ES) combinations to SOC2010 NS-SEC, we followed the same basic procedures as those used to create the SOC2000 NS-SEC (see Rose and Pevalin with O'Reilly 2005). That is, we explored the consequences for NS-SEC of SOC changes, created an initial matrix, examined 'service relationship scores' (SRS) derived from employment relations questions on the 1996/97 Labour Force Survey (LFS) (*ibid* : Appendix 7) and went through a number of iterations of this process. In addition, other sources of relevant information have been considered. These include: occupational (employment relations and conditions) information obtained from careers databases as well as academic books and papers. In what follows, we only report on and present the final results of the process.

1.3 *Creating the SOC2010 NS-SEC Matrix.* We first examined each SOC2010 OUG in terms of its relation to SOC2000 OUGs using *The Standard Occupational Classification 2010 (SOC2010) Structure Version 12.6* (the 'concordance' between SOC2000 and SOC2010). In most cases there appeared to be no major problems in allocating an operational version NS-SEC category to a SOC2010 OUG/ES combination. Only 88 SOC2010 OUGs (25 per cent) seemed at all problematic and thus requiring further detailed examination. Comparisons of the SOC2000 NS-SEC and the proposed SOC2010 version are given in section 2.

1.4 *Data used for this report: a cautionary reminder.* The ONS Census Division re-coded the 1996/97 LFS data to SOC2000. When in 1999/2000 we compared the SOC2000 coding with the SOC90 coding originally produced by the LFS interviewers, we discovered differences beyond those we would have expected on the basis of the SOC90 x SOC2000 OUG concordance provided to us by Census Division (*Framework of SOC2000*). This is not surprising, given what we know about inter-coder reliability on occupation. As with the SOC2000 re-basing, we have therefore sometimes worked with a dataset based on cases where coders have apparently agreed with the Census Division's SOC2000 coding, sometimes on the whole dataset, depending on our purpose. In addition, however, we have also been able to use the January-March 2007 (JM07) LFS data. This is further explained in the notes that precede the tables.

Employment relations (ER) data. No new employment relations data were collected for the re-basing of the NS-SEC from SOC2000 to SOC2010. The allocations of SOC2010 unit groups to NS-SEC categories were performed on the basis of information collected in the Labour Force Survey (LFS) during the period December 1996 to February 1997, the quarter in which the additional questions about employment relations were added to the LFS. These data were recoded record by record from SOC2000 to SOC2010. While these recoded records proved useful, they represent a compromise dictated by the lack of time and resources to repeat the questions asked on the LFS in 1996/97 on more recent quarters of the LFS. At some future time thought will need to be given not just to the timeliness of the data that are used to allocate unit groups of the SOC to the NS-SEC, but also to the nature of the questions to be asked in order to measure ER. Those used in 1996/7 may no longer be adequate as they stand.

1.5 *The changes summarized.* Changes to the NS-SEC which follow directly from those made to the SOC mainly affect managers, professionals and supervisors.

1.6 *Managers and professionals.* Strictly speaking, the theoretical model underlying NS-SEC makes no class distinctions between professionals and managers. While there is a functional, occupational difference between the two, nevertheless each is part of the service class, some in higher and some in lower positions, i.e. in Classes 1 or 2. Hence, the class distribution effects of many SOC changes are neutral and only appear at the NS-SEC operational level. However, since we did create managerial and professional sub-divisions of Class 1, for reasons given in Rose and Pevalin with O'Reilly (2005: 35-6) and more fully in Rose and Pevalin (2003: 14), SOC revision has led to some within class transfers between sub-Classes 1.1 and 1.2 (i.e. between L2 and L3) as well as similar transfers at the operational level within Class 2 (L5 and L4). In a few cases, there have been transfers of cases between classes 1 and 2, but they are small.

1.7 *Managers: changes induced by SOC2010.* Allocation to a managerial NS-SEC category is now mainly but no longer necessarily restricted to OUGs in SOC2010 MG 1. While many of the transfers from MG1 to other MGs could be considered to involve a reclassification of cases to professional, associate professional or administrative occupations in MGs 2, 3 and 4 respectively, there were a few cases where perforce OUGs no longer in MG1 had to be considered as having valid managerial employment status in NS-SEC terms. These are OUGs 4161 Office Managers, 5436 Catering and Bar Managers, 6240 Cleaning and Housekeeping Managers etc and 7220 Customer Services Managers etc. As with SOC2000 NS-SEC, we have continued to take advantage of the more refined nature of OUGs in MG1 in relation to the conceptual basis of the NS-SEC and its operationalization. Thus, size of establishment is not always the means for determining allocation to either L2 or L5, the higher and lower managerial categories in the operational version of NS-SEC (see figure 1).

1.8 *Supervisors.* For supervisors, the consequences of SOC revision are different. There are six supervisory OUGs in SOC2010. Following advice from ONS and the Warwick Institute for Employment Research with regard to those occupations for which these new supervisory groups are responsible, we have disallowed supervisory status for a number of OUGs. This has led to transfers principally from Class 2 to Class 3 and from Class 5 to Classes 6 and 7, i.e. in cases where LFS coding did not allocate them to a supervisory OUG (presumably because they were not examples of 'real' supervisors). There is one further change compared with SOC2000 NS-SEC. Previously supervisors in L6, Class 2 only supervised employees in L7, Class 3. As a result of changes to SOC, this is no longer the case. Some of those in L6 now also supervise employees in L12 and L13, Classes 6 and 7. This will require some revision of the User Manual description for L6 (see Paras 3.5-3.7 below).

2. NS-SEC SOC2000 and NS-SEC SOC2010 Compared

2.1 *Introduction.* This section examines the effects of changes arising from the re-basing of the NS-SEC on SOC2010 and the principal reasons for them. We do not intend to discuss in full detail the consequences of each and every change to the matrix as revealed in the data. However, we have, of course, examined all of them to ensure that they follow logically from the matrix changes.

2.2 *Overall agreement.* Tables 1a, 1b, 2a and 2b provide comparisons between the SOC2000 NS-SEC and the SOC2010 version at the operational level and tables 3a and 3b at the class level. The data in these tables thus offer an initial indication both of the changes induced by SOC2010 and those few others that we have made due to re-thinking, re-analysis and new information. The former far outweigh the latter. Of course, hidden within these figures are also some small, secular changes in the class structure to which we shall return. *Inter alia*, the tables show the level of agreement between the two versions of NS-SEC: 93 and 92 per cent

for the operational level and 95 and 94 per cent at the class level for the LFS 96/7 and JM07 data respectively.

2.3 *Principal changes.* For convenience and to avoid confusion, in what follows we shall refer only to the data in table 1b. Each block along the diagonal from top left to bottom right represents a class. Thus off diagonals in the context of the whole table indicate movements between classes. Within class movements are shown in the off diagonals within each class block. We can see the shifts from managerial to professional operational categories in the top left cells of the table. In the main these are class neutral changes, between L2 and L3, but a few involve movements from L2 to L4 or L5, Class 1 to Class 2. Other transfers from L2 to L10 and 12.2 are the consequence of SOC changes in the treatment of what are effectively supervisory positions. Similar patterns of change emerge for former managers in L5 who are now in L4.2, but again there are some cross class movements from L5 to 3.2, Class 2 to Class 1. Moving to the next cell on the diagonal, as would be expected many of those previously classified as higher supervisors in L6 are now employees in L7.1 and 7.2. The third diagonal cell provides no surprises. The only major change is internal, between L7.2 and L7.1, and is wholly the consequence of correcting the error in the SOC2000 matrix relating to OUG 4150, most of which is now in SOC2010 4159. For the small employers and self-employed in L8 and 9, there are a few transfers into the corresponding categories of L3 and 4, and thus movements from Class 4 to Classes 1 and 2. Again these are due to the re-designation of managerial occupations in SOC2010. Turning to L10, lower supervisors, again we would expect some churning as a result of the introduction of the new supervisory OUGs and the consequent effects for supervisory employment status in the matrix for other OUGs. Hence there are movements both from L12 and 13 into L10 and also from L10 into L5, 6, 7, 11, 12 and 13. Most of these are therefore cross class changes. Next, shifts from L12.2 to 11.1 relate to the new OUG for chefs, 5434. Those from L12.7 to 7.2 involve the new OUG for teaching assistants, 6125. Each of these changes is underpinned by SRS data. Tables 2a and b and 3a and b summarise the above results in terms of the operational and class categories respectively.

2.4 *Overall class distributions compared.* Table 4 provides the overall class distributions for SOC2000 and SOC2010 NS-SEC for each LFS dataset. In both 'all cases' and 'agreed coding' for the 96/7 dataset, when reading across the rows (and thus examining SOC induced changes), Classes 1, 3 and 7 have slightly increased in size, while Classes 2, 4 (very slightly) and 5 have fallen and Class 6 is unchanged (although it is slightly smaller in the JM07 data). The most marked changes are in Classes 5 and 7, largely due to the supervision changes to the matrix. The proportion of cases allocated to L10, and thus Class 5, has fallen from 5 per cent to 4 per cent; the proportion allocated to L5 has also fallen by a similar amount. While not readily apparent from the class distributions, an inspection of tables 2a and b shows that the proportions allocated to the managerial elements of Classes 1 and 2 (L2 and 5) have also fallen due to SOC change.

2.5 *Secular change to the class structure.* Since the SOC and derivation methods are the same for both time points, when we compare in the columns for the top and bottom sections of table 4 for all cases, we get an indication of class changes from 1996/7 to 2007. Over the decade, Classes 1, 3 and 5 have become smaller; Classes 2, 4 (very slightly), 6 and 7 are larger. Only Class 5 reaches so much as a 1 per cent change, however, and most of this is the result of SOC change for supervisors and the repercussive effects on the class matrix.

2.6 *Distribution of classes by sex.* Table 5 shows class distribution by sex. The data show the familiar pattern of male dominance in Classes 1, 4, 5 and 7 and female dominance in Classes 3 and 6. Interestingly, the proportion of women in the most favourable class positions, Classes 1 and 2, has slightly increased over time, with a corresponding fall in that for men. The reverse is true for the least favourable positions in Class 7 and to an extent in Class 6.

2.7 *Simplified, reduced and full derivation methods compared.* Tables 6-8 compare results for the simplified, reduced and full derivation methods for NS-SEC. Table 6 shows that the patterns for simplified class in the new version are similar to before. Classes 1, 3, 6 and 7 are over-estimated; classes 2, 4 and 5 are underestimated. In the case of reduced NS-SEC only Class 4 is much affected. This is because of small transfers in from Classes 1 and 2. However, these differences are very marginal because so few cases are affected by the establishment size rules for employers. Overall the level of agreement between full and reduced is 99 per cent (see table 7). Finally, table 8 indicates an 87 per cent agreement between simplified and full versions.

3. Further Issues Relating to the NS-SEC Matrix and the User Manual

3.1 *Matrix values for former managerial / new professional OUGs.* In order to be consistent with both the previous matrix and the implications of SOC changes, as well as the NS-SEC model, we have disallowed employee and supervisory statuses, but allowed managerial employment status for former managerial OUGs which are now classified by SOC as professional. This affects the following OUGs: 2133/4, 2150, 2424/36/62/73 and 3538/45. Similar considerations apply to 4161, 5436, 6240 and 7220, i.e. managerial occupations no longer in MG1 but which remain managerial in NS-SEC terms.

3.2 *New valid self-employment cells.* There are a number of OUGs for which self-employment is now a real-world possibility and so the self-employed with no employees ('seno') matrix cells have been made valid. These OUGs are 2317/8, 3319, 5330 and 6240. In addition we wonder if employer status may now be possible for any of these as well as for 2442. ONS may have some information on this.

3.3 *Other decisions.* Although it derives from the old OUG 4122 which was in L7, Class 3, SRS scores indicate that the new 4124 should be in L4, Class 2. Second, we have no ER/SRS data for the new OUG 3315 Police Community Support Officers. Having checked both occupational databases and various police websites, we decided to allocate this OUG to L12.2, Class 6.

3.4 *Priority rules.* The priority rules were created by ONS. In most cases they produce sensible outcomes. However, we are less happy with how they operate for invalid employer cells where the rules lead to these cells being given supervisory values. This makes no intuitive sense. The Simplified NS-SEC value would make more sense. The OUGs concerned are 3213, 3311-5, 4112/3, 6142-6, 6240 and 8231. We have not altered the matrix, but we ask ONS (and researchers) to consider this point.

3.5 *User manual.* It was not within our remit to review the *NS-SEC User Manual* and make recommendations for any revisions. However, two issues do arise as a result of the rebasing.

3.6 *Higher supervisors.* We noted earlier that higher supervisory occupations (L6, Class 2) can no longer be described as covering intermediate occupations in L7, Class 3. We suggest the description of L6 in the User Manual is changed to '…which primarily cover intermediate occupations in L7, but also some occupations in L11-13…etc'.

3.7 *Labels for L2, L5 and Classes 1 and 2.* For clarity's sake, we ask that the term 'administrative' is added to the labels for L2, L5, Class 1 (including 1.1) and Class 2, as indicated in figures 1 and 2 respectively.

Figure 1 Categories of the Operational Version of the National Statistics Socio-Economic Classification

L1 Employers in Large Establishments

L2 Higher Managerial and Administrative Occupations

L3 Higher Professional Occupations

- L3.1 'Traditional' employees
- L3.2 'New' employees
- L3.3 'Traditional' self-employed
- L3.4 'New' self-employed

L4 Lower Professional and Higher Technical Occupations

- L4.1 'Traditional' employees
- L4.2 'New' employees
- L4.3 'Traditional' self-employed
- L4.4 'New' self-employed

L5 Lower Managerial and Administrative Occupations

L6 Higher Supervisory Occupations

L7 Intermediate Occupations

- L7.1 Intermediate clerical and administrative occupations
- L7.2 Intermediate service occupations
- L7.3 Intermediate technical and auxiliary occupations
- L7.4 Intermediate engineering occupations

L8 Employers in Small Establishments

- L8.1 Employers in small establishments in industry, commerce, services, etc.
- L8.2 Employers in small establishments in agriculture

L9 Own Account Workers

- L9.1 Own account workers (non-professional)
- L9.2 Own account workers in agriculture

L10 Lower Supervisory Occupations

L11 Lower Technical Occupations

- L11.1 Lower technical craft occupations
- L11.2 Lower technical process operative occupations

L12 Semi-routine Occupations

- L12.1 Semi-routine sales occupations
- L12.2 Semi-routine service occupations
- L12.3 Semi-routine technical occupations
- L12.4 Semi-routine operative occupations
- L12.5 Semi-routine agricultural occupations
- L12.6 Semi-routine clerical occupations
- L12.7 Semi-routine childcare occupations

L13 Routine Occupations

- L13.1 Routine sales and service occupations
- L13.2 Routine production occupations
- L13.3 Routine technical occupations
- L13.4 Routine operative occupations
- L13.5 Routine agricultural occupations

L14 Never Worked and Long-term Unemployed

- L14.1 Never worked
- L14.2 Long-term unemployed

L15 Full-time Students

L16 Occupations not stated or inadequately described

L17 Not classifiable for other reasons

Figure 2 The National Statistics Socio-Economic Classification: Analytic Version

1	**Higher managerial, administrative and professional occupations**
	1.1 Large employers and higher managerial and administrative occupations
	1.2 Higher professional occupations
2	**Lower managerial, administrative and professional occupations**
3	**Intermediate occupations**
4	**Small employers and own account workers**
5	**Lower supervisory and technical occupations**
6	**Semi-routine occupations**
7	**Routine occupations**
8	**Never worked and long-term unemployed**

Collapsing operational version to NS-SEC:

L1+L2=1.1

L3=1.2 (hence L1, L2, L3=1)

L4+L5+L6=2

L7=3

L8+L9=4

L10+L11=5

L12=6

L13=7

L14=8

References

Elias, P. and Birch, M. (2009) *SOC2010: The Revision of the Standard Occupational Classification 2000*. Coventry: Warwick Institute for Employment Research, University of Warwick.

Elias, P. and Birch, M. (2008) *The redefinition and classification of managerial occupations in the 2010 revision of the Standard Occupational Classification.* Coventry: Warwick Institute for Employment Research, University of Warwick.

Rose, D. and Pevalin, D.J. (eds.) (2003) *A Researcher's Guide to the National Statistics Socio-Economic Classification.* London: Sage.

Rose, D. and Pevalin, D.J. with O'Reilly, K. (2005) *The National Statistics Socio-economic Classification: Origins, Development and Use.* Basingstoke: Palgrave Macmillan.

Notes on tables

For the rebasing we had two datasets available: (1) LFS Winter Quarter 1996-97 and (2) LFS January-March Quarter 2007.

(1) LFS quarter 1996-97 (LFS9697)

(i) A sample of 63,264 with SOC2010 OUGs and valid employment status. This was used to compare NS-SEC distributions (overall, allowing for coding error in both the SOC2000 and SOC2010 OUGs) and to assess the effectiveness of the reduced and simplified methods of deriving NS-SEC by comparing them to the full derivation method.

(ii) A subsample of 60,291 was determined by using the SOC concordance document. This subsample was used to compare distributions of NS-SEC from SOC2000 and from SOC2010 to determine which changes had been caused by changes to SOC.

(iii) Service relationship scale (SRS) scores were generated for each SOC2010 OUG – as per the SOC2000 rebasing.

(iv) Occupational category matrices and class matrices were checked against each other.

(2) LFS quarter 2007 (JM07)

The main sample had 62,413 cases and the SOC concordance subsample had 59,132 cases. Samples were used the same way as for the LFS9697 data (i), (ii) and (iv). No SRS variables were available in these data.

Table1a: NS-SEC occupational categories by full derivation method using LFS JM07 data on agreed coding subsample: from SOC2000 by from SOC2010

SOC2000	1	2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5	6	7.1	7.2	7.3	7.4	8.1
1	80																
2		1,042	65	410			47	53			4						
3.1			2,193	10	5		12										
3.2			98	710			7	179									
3.3					715				7								18
3.4					18	72				53							
4.1				4			6,999						79				
4.2								354						90			
4.3									868								
4.4										91							
5			43	505			60	193			3,346	27	39				
6							14					587	430	110		54	
7.1							40						4,028	9			
7.2							10						1,090	1,913			
7.3							35	15							835		
7.4																264	
8.1						4				3							1,246
8.2																	
9.1						38			7	28							
9.2											3	30					
10														4		3	
11.1																27	
11.2																	
12.1														40	20		
12.2											20						
12.3																	
12.4																	
12.5																	
12.6																	
12.7														572			
13.1																	
13.2																	
13.3																	
13.4											11						
13.5																	
Total	81	1042	2399	1639	740	116	7224	798	885	177	3384	645	5666	2740	855	348	1265

Note: print using “scale to fit paper” to compress onto A4 paper
Cells of value less than 3 have been suppressed

Table 1b: NS-SEC occupational categories by full derivation method using LFS 96/97 data on agreed coding subsample: from SOC2000 by from SOC2010

SOC2000	1	2	3.1	3.2	3.3	3.4	4.1	4.2	4.3	4.4	5	6	7.1	7.2	7.3	7.4	8.1
1	52																
2		1,332	63	647			41	53									
3.1			2,437				19										
3.2			36	751			4	121									
3.3					677				3	4							
3.4					3	70				43							
4.1							6,822					165	90	4			
4.2								579						153			
4.3									640								
4.4										104							
5			61	256			54	146			3,388	8	38				
6							10					674	650	54		83	
7.1							25						4,719	17			
7.2							13						964	1,557			
7.3							23								907		
7.4																332	
8.1						3			6								1,280
8.2																	
9.1						12			14	3							
9.2																	
10											3	6		8		6	
11.1																18	
11.2																	
12.1														41	11		
12.2											12						
12.3																	
12.4																	
12.5																	
12.6																	
12.7														140			
13.1																	
13.2																	
13.3																	
13.4																	
13.5																	
Total	52	1332	2597	1656	682	86	7011	900	663	154	3404	853	6461	1974	918	439	1282

Note: print using “scale to fit paper” to compress onto A4 paper
Cells of value less than 3 have been suppressed

Table 2a: NS-SEC operational categories from SOC2000 by from SOC2010; agreed coding (LFS 96/97 data)

NS-SEC operational categories by SOC2000	NS-SEC operational categories by SOC2010												
	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
L1	**52** *98.11* 100												
L2		**1,332** *62.18* 100	**710** *33.15* 14.14	**94** *4.39* 1.08							**6** *0.28* 0.21		
L3			**3,975** *95.28* 79.17	**194** *4.65* 2.22									
L4				**8,145** *95.1* 93.32		**165** *19.3* 4	**247** *2.88* 2.52		**5** *0.06* 0.11				
L5			**317** *8.01* 6.31	**200** *5.05* 2.29	**3,388** *85.58* 99.53	**8** *0.2* 0.94	**38** *0.96* 0.39					**6** *0.15* 0.05	
L6				**10** *0.68* 0.11		**674** *45.82* 79.02	**787** *53.5* 8.04						
L7				**62** *0.72* 0.71			**8,496** *99.28* 86.76						
L8			**3** *0.21* 0.06	**6** *0.42* 0.07				**1,431** *99.38* 99.86					
L9			**13** *0.27* 0.26	**17** *0.36* 0.19					**4,712** *99.37* 99.85				
L10					**3** *0.09* 0.09	**6** *0.18* 0.7	**14** *0.43* 0.14			**2,414** *73.33* 98.45	**340** *10.33* 12.16	**318** *9.66* 2.74	**197** *5.98* 2.43
L11							**18** *0.76* 0.18				**2,250** *94.42* 80.5	**114** *4.78* 0.98	**1** *0.04* 0.01
L12					**12** *0.1* 0.35		**192** *1.66* 1.96			**4** *0.03* 0.16	**197** *1.7* 7.05	**11,172** *96.31* 96.04	**23** *0.2* 0.28
L13										**14** *0.18* 0.57	**23** *0.29* 0.2	**7,876** *99.52* 97.27	
Total	**52** *0.09* 100	**1,332** *2.21* 100	**5,021** *8.33* 100	**8,728** *14.48* 100	**3,404** *5.65* 100	**853** *1.41* 100	**9,792** *16.24* 100	**1,433** *2.38* 100	**4,719** *7.83* 100	**2,432** *4.03* 100	**2,795** *4.64* 100	**11,633** *19.29* 100	**8,097** *13.43* 100

Note: N=bold; row %=italic; column %=normal
Cells of value less than 3 have been suppressed

Table 2b: NS-SEC operational categories from SOC2000 by from SOC2010; agreed coding (LFS JM07 data)

NS-SEC operational categories by SOC2000		NS-SEC operational categories by SOC2010												
		L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13
	L1	**80** *100* 98.77												
	L2		**1,042** *64.12* 100	**475** *29.23* 9.71	**100** *6.15* 1.1	**4** *0.25* 0.12						**4** *0.25* 0.17		
	L3			**3,823** *92.84* 78.12	**260** *6.31* 2.86				**18** *0.44* 1.35	**13** *0.32* 0.28				
	L4			**4** *0.05* 0.08	**8,314** *97.75* 91.52			**169** *1.99* 1.76		**5** *0.06* 0.11			**10** *0.12* 0.09	
	L5			**548** *12.94* 11.2	**253** *5.98* 2.79	**3,346** *79.03* 98.88	**27** *0.64* 4.19	**39** *0.92* 0.41			**4** *0.09* 0.19	**3** *0.07* 0.12	**14** *0.33* 0.12	
	L6				**16** *1.34* 0.18		**587** *49.04* 91.01	**594** *49.62* 6.18						
	L7				**102** *1.24* 1.12			**8,139** *98.65* 84.7					**9** *0.11* 0.08	
	L8			**4** *0.3* 0.08	**4** *0.3* 0.04				**1,318** *98.95* 98.58	**6** *0.45* 0.13				
	L9			**40** *0.84* 0.82	**35** *0.74* 0.39					**4,678** *98.42* 99.49				
	L10					**3** *0.1* 0.09	**30** *1.03* 4.65	**7** *0.24* 0.07			**2,059** *71.02* 96.17	**284** *9.8* 11.77	**318** *10.97* 2.74	**198** *6.83* 2.42
	L11							**27** *1.33* 0.28				**1,862** *91.45* 77.2	**140** *6.88* 1.21	**7** *0.34* 0.09
	L12					**20** *0.17* 0.59		**632** *5.24* 6.58				**259** *2.15* 10.74	**11,133** *92.36* 95.46	**10** *0.08* 0.12
	L13					**11** *0.14* 0.33					**29** *0.36* 1.35		**39** *0.48* 0.34	**7,970** *99.02* 97.37
	Total	**81** *0.14* 100	**1,042** *1.76* 100	**4,894** *8.28* 100	**9,084** *15.36* 100	**3,384** *5.72* 100	**645** *1.09* 100	**9,609** *16.25* 100	**1,337** *2.26* 100	**4,702** *7.95* 100	**2,094** *3.54* 100	**2,412** *4.08* 100	**11,663** *19.72* 100	**8,185** *13.84* 100

Note: N=bold; row %=italic; column %=normal
Cells of value less than 3 have been suppressed

Table 3a: NS-SEC 7 classes full derivation method: from SOC2000 by from SOC2010; agreed coding, LFS96/97 data.

	SOC2010							
SOC2000	1	2	3	4	5	6	7	Total
1	**6,070**	**288**		**3**	**6**			**6,367**
	95.34	*4.52*		*0.05*	*0.09*			*100*
	94.77	2.22		0.05	0.11			10.56
2	**319**	**12,590**	**1,072**	**6**		**6**		**13,995**
	2.28	*89.96*	*7.66*	*0.04*		*0.04*		*100*
	4.98	96.96	10.95	0.10		0.05		23.21
3		**62**	**8,496**					**8,558**
		0.72	*99.28*					*100*
		0.48	86.76					14.19
4	**16**	**23**		**6,143**				**6,182**
	0.26	*0.37*		*99.37*				*100*
	0.25	0.18		99.85				10.25
5		**9**	**32**		**5,004**	**432**	**198**	**5,675**
		0.16	*0.56*		*88.18*	*7.61*	*3.49*	*100*
		0.07	0.33		95.37	3.72	2.45	9.41
6		**12**	**192**		**20121**	**11,172**	**23**	**11,600**
		0.10	*1.66*		*1.73*	*96.31*	*0.20*	*100*
		0.09	1.96		3.85	96.04	0.28	19.24
7					**14**	**23**	**7,876**	**7,914**
					0.18	*0.29*	*99.52*	*100*
					0.27	0.20	97.27	13.13
Total	**6,405**	**12,985**	**9,792**	**6,152**	**5,227**	**11,633**	**8,097**	**60,291**
	10.62	*21.54*	*16.24*	*10.20*	*8.67*	*19.29*	*13.43*	
	100	100	100	100	100	100	100	

Note: N=bold; row %=italic; column %=normal 95.09% of cases allocated to same class.
Cells of value less than 3 have been suppressed

Table 3b: NS-SEC 7 classes full derivation method: from SOC2000 by from SOC2010; agreed coding, LFS JM07 data

	SOC2010							
SOC2000	1	2	3	4	5	6	7	Total
1	**5,421**	**365**		**31**	**4**			**5,823**
	93.1	*6.27*		*0.53*	*0.07*			*100*
	90.09	2.78		0.51	0.09			9.85
2	**552**	**12,543**	**802**	**6**	**9**	**24**		**13,936**
	3.96	*90.00*	*5.75*	*0.04*	*0.06*	*0.17*		*100*
	9.17	95.65	8.35	0.1	0.2	0.21		23.57
3		**102**	**8,139**			**9**		**8,250**
		1.24	*98.65*			*0.11*		*100*
		0.78	84.7			0.08		13.95
4	**44**	**39**		**6,002**				**6,085**
	0.72	*0.64*		*98.64*				*100*
	0.73	0.30		99.39				10.29
5		**33**	**34**		**4,205**	**458**	**205**	**4,935**
		0.67	*0.69*		*85.21*	*9.28*	*4.15*	*100*
		0.25	0.35		92.36	3.94	2.50	8.35
6		**20**	**632**		**259**	**11,133**	**10**	**12,054**
		0.17	*5.24*		*2.15*	*92.36*	*0.08*	*100*
		0.15	6.58		5.75	95.46	0.12	20.38
7		**11**			**29**	**39**	**7,970**	**8,049**
		0.14			*0.36*	*0.48*	*99.02*	*100*
		0.08			0.64	0.34	97.37	13.61
Total	**6,017**	**13,113**	**9,609**	**6,039**	**4,506**	**11,663**	**8,185**	**59,132**
	10.18	*22.18*	*16.25*	*10.21*	*7.62*	*19.72*	*13.84*	
	100	100	100	100	100	100	100	

Note: N=bold; row %=italic; column %=normal. 93.63% of cases allocated to same class.
Cells of value less than 3 have been suppressed

Table 4: Distribution of NS-SEC 7 classes using full derivation method

Data	LFS 96/97							
Sample	ALL CASES				AGREED CODING			
SOC	soc2010		soc2000		soc2010		soc2000	
NS-SEC	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	6,936	10.96	6,883	10.88	6,405	10.62	6,367	10.56
2	14,318	22.63	15,092	23.86	12,985	21.54	13,995	23.21
3	10,297	16.28	9,011	14.24	9,792	16.24	8,558	14.19
4	6,276	9.92	6,322	9.99	6,152	10.20	6,182	10.25
5	5,400	8.54	6,131	9.69	5,227	8.67	5,675	9.41
6	11,746	18.57	11,732	18.54	11,633	19.29	11,600	19.24
7	8,291	13.11	8,093	12.79	8,097	13.43	7,914	13.13
Total	63,264	100	63,264	100	60,291	100	60,291	100

Data	LFS JM07							
Sample	ALL CASES				AGREED CODING			
SOC	soc2010		soc2000		soc2010		soc2000	
NS-SEC	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	6,564	10.52	6,329	10.14	6,017	10.18	5,823	9.85
2	14,596	23.39	15,286	24.49	13,113	22.18	13,936	23.57
3	10,048	16.1	8,628	13.82	9,609	16.25	8,250	13.95
4	6,233	9.99	6,314	10.12	6,039	10.21	6,085	10.29
5	4,708	7.54	5,300	8.49	4,506	7.62	4,935	8.35
6	11,848	18.98	12,303	19.71	11,663	19.72	12,054	20.38
7	8,416	13.48	8,253	13.22	8,185	13.84	8,049	13.61
Total	62,413	100	62,413	100	59,132	100	59,132	100

Table 5: NS-SEC from full derivation method by sex

Data	LFS 96/97			LFS JM07		
NS-SEC	Men	Women	Total	Men	Women	Total
1	5,306	1,630	6,936	4,392	2,172	6,564
	15.76	*5.51*	*10.96*	*14.16*	*6.92*	*10.52*
2	7,334	6,984	14,318	6,640	7,956	14,596
	21.78	*23.60*	*22.63*	*21.40*	*25.34*	*23.39*
3	2,862	7,435	10,297	2,515	7,533	10,048
	8.50	*25.13*	*16.28*	*8.11*	*24.00*	*16.10*
4	4,589	1,687	6,276	4,393	1,840	6,233
	13.63	*5.70*	*9.92*	*14.16*	*5.86*	*9.99*
5	4,208	1,192	5,400	3,548	1,160	4,708
	12.50	*4.03*	*8.54*	*11.44*	*3.70*	*7.54*
6	4,761	6,985	11,746	4,556	7,292	11,848
	14.14	*23.60*	*18.57*	*14.69*	*23.23*	*18.98*
7	4,615	3,676	8,291	4,978	3,438	8,416
	13.70	*12.42*	*13.11*	*16.05*	*10.95*	*13.48*
Total	33,675	29,589	63,264	31,022	31,391	62,413
Col. %	*100*	*100*	*100*	*100*	*100*	*100*

Table 6: Distributions of NS-SEC using SOC2010 by simplified, reduced and full derivation methods

Data	LFS 96/97					
Method	Simplified		Reduced		Full	
NS-SEC	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	7,520	11.89	6,962	11.00	6,936	10.96
2	13,123	20.74	14,235	22.50	14,318	22.63
3	11,551	18.26	10,297	16.28	10,297	16.28
4	4,749	7.51	6,333	10.01	6,276	9.92
5	4,088	6.46	5,400	8.54	5,400	8.54
6	13,113	20.73	11,746	18.57	11,746	18.57
7	9,120	14.42	8,291	13.11	8,291	13.11
Total	63,264	100	63,264	100	63,264	100

Data	LFS JM07					
Method	Simplified		Reduced		Full	
NS-SEC	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	7,243	11.60	6,584	10.55	6,564	10.52
2	13,649	21.87	14,498	23.23	14,596	23.39
3	11,193	17.93	10,048	16.1	10,048	16.1
4	4,623	7.41	6,311	10.11	6,233	9.99
5	3,683	5.90	4,708	7.54	4,708	7.54
6	13,060	20.93	11,848	18.98	11,848	18.98
7	8,962	14.36	8,416	13.48	8,416	13.48
Total	62,413	100	62,413	100	62,413	100

Table 7: NS-SEC 7 classes from SOC2010: Reduced by full derivation methods

LFS 96/97								
	Reduced method							
Full	1	2	3	4	5	6	7	Total
1	**6,598**	281		57				6,936
2	364	**13,954**						14,318
3			**10,297**					10,297
4				**6,276**				6,276
5					**5,400**			5,400
6						**11,746**		11,746
7							**8,291**	8,291
Total	6,962	14,235	10,297	6,333	5,400	11,746	8,291	63,264
							% same	98.89

LFS JM07								
	Reduced method							
Full	1	2	3	4	5	6	7	Total
1	**6,270**	216		78				6,564
2	314	**14,282**						14,596
3			**10,048**					10,048
4				**6,233**				6,233
5					**4,708**			4,708
6						**11,848**		11,848
7							**8,416**	8,416
Total	6,584	14,498	10,048	6,311	4,708	11,848	8,416	62,413
							% same	99.03

Table 8: NS-SEC 7 classes from SOC2010: Simplified by full derivation methods

LFS 96/97								
	Simplified method							
Full	1	2	3	4	5	6	7	Total
1	**6,756**	147	6	21			4	6,936
2	551	**12,483**	800	472	12			14,318
3			**10,199**	98				10,297
4	213	493	546	**3,260**	510	415	839	6,276
5				47	**3,544**	1,160	649	5,400
6				188	20	**11,538**		11,746
7				663			**7,628**	8,291
Total	7,520	13,123	11,551	4,749	4,088	13,113	9,120	63,264
							% same	87.58

LFS JM07								
	Simplified method							
Full	1	2	3	4	5	6	7	Total
1	**6,410**	132	3	13		3		6,564
2	534	**13,061**	599	366	36			14,596
3			**9,960**	88				10,048
4	299	456	631	**2,996**	559	451	841	6,233
5				62	**3,039**	1,054	553	4,708
6				249	47	**11,552**		11,848
7				849			**7,567**	8,416
Total	7,243	13,649	11,193	4,623	3,683	13,060	8,962	62,413
							% same	87.49

Cells of value less than 3 have been suppressed