

Allocation rules of ISCO-08 and ISCO-88 (COM) 3-digit codes to ESEG-Revised

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Introduction

Our goal is to assign ISCO08 3-digit codes to European Social Economic Groups (ESEGs) so that each group can be assigned to one social class according to the European Socio-Economic Class schema. The final ISCO-08 assignment to ESEG-Revised can be found in Table 18 and the ISCO-88 (COM) to ESEG-Revised assignment can be found in Table 20.

There are two main obstacles. First, ESEG is based on 2-digit ISCO codes while ESEC is based on 3-digit ISCO codes. This necessitates splitting up some ESEG groups when 3-digit codes embedded in an ESEG form coherent groups with separate class destinations. Additionally, we are forced to assign certain 3-digit ISCO codes to ESEGs which deviate from their original ESEG to ensure collapsibility of ESEG into ESEC. The second obstacle concerns the additional variables that ESEG and ESEC use. ESEG assigns occupations to groups based on self-employment status. ESEC is based on self-employed, the number of employees and supervision status. Therefore, some new rules are introduced to assign ISCO codes to ESEGs based on the number of employees and supervision status.

Assignment of Employee ESEGs and 3-digit ISCO codes to ESEG-Revised.

In this section I detail why and how original ESEGs of employees are split up and to which ESEG-Revised groups individual ISCO codes are assigned. The section is organized by original ESEG and lists all isco08 codes that are originally in that ESEG and their final destinations.

We assign all ISCO08 3-digit codes their original ESEG unless there are 3-digit ISCO codes within an ESEG which are routed to different classes. In this case, the ISCO codes which are most frequent in the European Social Survey (Rounds 1-9) retain their original ESEG number. The deviant 3-digit ISCO codes are assigned to an ESEG that is routed to the appropriate class. We strive to assign these ISCO codes to an ESEG-Revised group with similar occupations but some deviant ISCO codes are assigned to a residual ESEG-Revised group (i.e. 20,30,50,72). In a few cases it was possible and appropriate to create new ESEG-Revised groups. This occurred when an ESEG group could be split into two ESEG-Revised groups such that the occupations formed a coherent occupational group and had a sample size comparable to other ESEGs.

ESEG 13 “Higher Manager Employees”

The majority of ISCO codes in the original ESEG 13 are assigned to ESEG-Rev 13 “Higher Manager Employees” and ESEC-1. Two deviant codes ISCO 131 and 132 are assigned to ESEC-Rev 14 “Lower Manager Employees”.

Table 1: Re-assignment of ISCO Codes in ESEG 13

ISCO08	ISCO label	ESEG-Rev	ESEC
10	Managers	13	1
11	Chief execs, senior officials and legislators	13	1
110	Legislators and senior officials	13	1
111	Managing directors and chief execs	13	1
112	Admin and commercial managers	13	1
120	Business services and admin managers	13	1
121	Sales, marketing and development managers	13	1
122	Production and specialized services managers	13	1
130	Production Manager in agriculture, fishing, forestry	13	1
131	Manufacturing, mining, construction and distribution managers	13	2
132	ICT service managers	14	2
133	Professional service managers	14	1
134	Managers	13	1

ESEG 14 “Lower Manager Employees”

All isco codes in the original ESEG 14 are included in ESEG-Rev 14 “Lower Manager Employees”. Note that this category is larger in ESEG-Rev as it also includes ISCOs with supervision status promoted to ESEC-2. See section 2 for allocation rules.

ESEG 21 “Science, Engineering and ICT”

The majority of ESEG 21 isco codes are assigned to ESEC1. Thus ESEG-Revised 21 is routed to ESEC-1. One isco code in the original ESEG 21 is re-assigned to ESEG 31 “Technicians” which are associate professional physical science and engineering occupations assigned to ESEC-2.

Table 2: Re-assignment of ISCO Codes in ESEG 21

ISCO08	ISCO label	ESEG-Rev	ESEC
210	Science and engineering professionals	21	1
211	Physical and earth science professionals	21	1
212	Mathematicians, actuaries and statisticians	21	1
213	Life science professionals	21	1
214	Engineering professionals	21	1
215	Electrotechnology professionals	21	1
216	Architects, planners, surveyors and designers	21	1
250	ICT Professionals	21	1
251	Software and applications developers	21	1
252	Database and network professionals	31	2

ESEG 22 “Health Professionals”

Health professionals assigned to ESEC-1 were most frequent in the original ESEG 22. Thus, ESEG-Revised group 22 is routed to ESEC-1 and any ISCO code within the original ESEG which are to be routed to another class are re-assigned to another group.

ESEG 22 was split into ESEG-Revised 22 “Health Professionals”, 32 “Health Associate Professionals” and 60 “Skilled Supervisors”. ESEG-Revised 32 contains other Health Associate Professionals which are assigned to ESEC 3. ESEG-Revised 60 contains “Skilled Labour Supervisors” assigned to ESEC-6. It includes mostly skilled blue-collar and personal services supervisors, making up supervisors of traditional “working class” occupations. It also includes four isco codes which are assigned ESEC-6 when employees. The Paramedical practitioners (224) is one of these isco codes. The other ESEG-Revised group assigned to ESEC-6 is reserved for clerical (44X,42X) and customer services (52X) supervisors.

Table 3: Re-assignment of ISCO Codes in ESEG 22

ISCO08	ISCO label	ESEG-Revised	ESEC
220	Health professionals	22	1
221	Medical doctors	22	1
222	Nursing and midwifery professionals	32	3
223	Traditional and complementary medicine professionals	32	3
224	Paramedical practitioners	60	6
225	Veterinarians	22	1
226	Other health professionals	22	1

ESEG 23 “Business Professionals”

The majority of isco codes in ESEG-Rev 23 “Business Professionals” are assigned to ESEC-1. However, one isco08 3-digit code is assigned ESEC-2. This deviant isco code is assigned to the residual ESEG-Rev 33 “Associate Business Professionals”.

Table 4: Re-assignment of ISCO Codes in ESEG 23

ISCO08	ISCO label	ESEG-Revised	ESEC
240	Business and administrative professionals	23	1
241	Finance professionals	23	1
242	Administration professionals	33	2
243	Sales, marketing and PR professionals	23	1

ESEG 24 “Legal and Social Professionals”

The original ESEG 24 includes isco that were assigned to ESEC-1 and ESEC-2. The most frequent ISCO codes retained the ESEG 24 code and label. As a result, this ESEG was renamed to Social Professionals, as the ISCO code for legal professionals is now assigned to ESEG 20, a residual category for professionals assigned to ESEC-1. We could not create a separate category for legal professionals as their number is too small, nor is there another appropriate ESEG-Rev for them. Social and religious professionals were assigned to ESEG-Rev 20 for the same reasons.

Table 5: Re-assignment of ISCO Codes in ESEG 24

ISCO08	ISCO label	ESEG-Revised	ESEC
260	Legal, social and cultural professionals	24	2
261	Legal professionals	20	1
262	Librarians, archivists and curators	24	2
263	Social and religious professionals	20	1
264	Authors, journalists and linguists	24	2
265	Creative and performing artists	24	2

ESEG 25 “Teaching Professionals”

The original ESEG 25 was split into two ESEG-Rev categories. The 25 "Primary and Secondary Teaching Professionals" and 26 "Vocational, Tertiary and Other Education Professionals". These six ISCO codes account for a considerable percentage of cases and are not assigned to the same class. Therefore, we assigned them to their own ESEG-Revised groups.

Table 6: Re-assignment of ISCO Codes in ESEG 25

ISCO08	ISCO label	ESEG-Revised	ESEC
230	Teaching Professionals	26	1
231	University and HE teachers	26	1
232	Vocational Education teacher	26	1
233	Secondary education teachers	25	2
234	Primary and pre-primary teachers	25	2
235	Other teaching professionals	26	1

ESEG 31 “TECHNICIANS”

The isco codes that contain 85% of observations in the original ESEG 31 are assigned to ESEC-2. Thus, these occupations retained the ESEG label in ESEG-Revised. The remaining we reassigned based on their ESEC assignment. Isco codes 35X are assigned to ESEG-Rev 50, This group contains other technical and associate professions assigned to ESEC-3. Isco code 313 (employees) are assigned to ESEG-Rev 60. This is a group of blue-collar supervisors and some isco codes assigned to ESEC-6.

Table 7: Re-assignment of ISCO Codes in ESEG 31

ISCO08	ISCO label	ESEG-Revised	ESEC
310	Science and engineering ass profs	31	2
311	Physical and engineering science technicians	31	2
312	Mining, manufacturing and construction technicians	31	2
313	Process control technicians	60	6
314	Life science and related technicians	31	2
315	Ship and aircraft controllers and technicians	31	2
350	Information and communications technicians	50	3
351	ICT Ops and user support technicians	50	3
352	Telcoms and broadcast technicians	50	3

ESEG 32 “Health Associate Professionals”

The majority of ISCO codes in the original ESEG 32 are routed to ESEC-2. Deviant isco codes are 324,325 and 320. Isco codes 324 and 325 are assigned to ESEG-Rev 50. This group contains other technical and associate professions assigned to ESEC-3. Isco code 320 (employees and supervisors) are assigned to ESEG-Rev 60. This is a group of blue-collar supervisors and some employee ISCO codes assigned to ESEC-6.

Table 8: Re-assignment of ISCO Codes in ESEG 32

ISCO08	ISCO label	ESEG-Revised	ESEC
320	Health associate professionals	60	6
321	Medical and pharmaceutical technicians	32	2
322	Nursing and midwifery associate professionals	32	2
323	Traditional and complementary medicine ass profs	32	2
324	Veterinary technicians and assistants	50	3
325	Other health associate professionals	50	3

ESEG 33 “Business Associate Professionals”

Most cases in the original ESEG 33 are assigned ESEC-1. However, ESEG 23 “Business Professionals” is already assigned to ESEC-1. Additionally, there are a substantive number of cases within these two ESEGs that need to be assigned to ESEC-2, particularly in the ISCO88-com variant. Therefore, ESEG-Rev 33 will be assigned to ESEC-2. Deviant ISCO codes in ESEG-Rev 33 go to ESEG-Rev 23 if assigned ESEC1. Lastly, the ISCO code 334 which is assigned ESEC-3 will be assigned to ESEG-Rev 51 which includes other clerks and secretaries.

Table 9: Re-assignment of ISCO Codes in ESEG 33

ISCO08	ISCO label	ESEG-Rev	ESEC
330	Business and administration associate professionals	23	1
331	Financial and mathematical ass profs	23	1
332	Sales and purchasing agents and brokers	23	1
333	Business service agents	33	2
334	Administrative and specialized secretaries	51	3
335	Government regulatory associate professionals	33	2

ESEG 34 “Legal/Social Associate Professionals”

All employees in the original ESEG 34 are assigned to ESEG-Rev 34. These employees are upgraded to ESEC-2 if they are supervisors, in this case they are assigned to ESEC-Rev 24 “Social Professionals”.

Table 10: Re-assignment of ISCO Codes in ESEG 34

ISCO08	ISCO label	ESEG-Rev	ESEC
340	Legal, social, cultural and related associate professionals	34	3
341	Legal, social and religious associate professionals	34	3
342	Sports and fitness workers	34	3
343	Artistic, cultural and culinary associate professionals	34	3

ESEG 35 “Non-Commissioned Officers”

ESEG 35 consists of ISCO08 codes 020 and 021 “Non-Commissioned Officers” and are assigned to ESEC-3. These isco codes are assigned to ESEG-Rev 35 “Non-Commissioned Officers”

ESEG 51 “General Clerks”

The majority of isco codes in the original ESEG 51 are assigned to ESEC-3. One deviant isco code (432) is reassigned to ESEG 52 “Customer services clerks”.

Table 11: Re-assignment of ISCO Codes in ESEG 51

ISCO08	ISCO label	ESEG-Rev	ESEC
410	General and keyboard clerks	51	3
411	General office clerks	51	3
412	Secretaries (general)	51	3
413	Keyboard operators	51	3
430	Numerical and material recording clerks	51	3
431	Numerical clerks	51	3
432	Material recording and transport clerks	52	7
440	Other clerical support workers	51	3
441	Other clerical support workers	51	3

ESEG 52 “Customer services clerks”

All isco codes in the original ESEG 52 are assigned to ESEG-Rev 52 and routed to ESEC-7.

Table 12: Re-assignment of ISCO Codes in ESEG 52

ISCO08	ISCO label	ESEG-Rev	ESEC
420	Customer services clerks	52	7
421	Tellers, money collectors and related	52	7
422	Client information workers	52	7

ESEG 53 “Personal Care Employees”

All isco codes in the original ESEG 53 are assigned to ESEG-Rev 53 “Personal Care Employees” and routed to ESEC-7.

Table 13: Re-assignment of ISCO Codes in ESEG 53

ISCO08	ISCO label	ESEG-Rev	ESEC
530	Personal Care Workers	53	7
531	Child Care Workers and Teachers' Aides	53	7
532	Personal Care Workers in Health Services	53	7

ESEG 54 “PROTECTIVE Services”

The original ESEG 54 is split between ESEG-Rev 35 “Non-Commissioned Officers” and ESEG-Rev 54 “Protective Services” because of different class assignment.

Table 14: Re-assignment of ISCO Codes in ESEG 54

ISCO08	ISCO label	ESEG-Rev	ESEC
30	armed forces other ranks	35	3
31	armed forces other ranks	35	3
540	Protective Services Workers	54	7
541	Protective Service Workers	54	7

ESEG 61 to 64

All ISCOs in the original ESEGs 61 “Building Employees”, 62 “Food Processing”, 63 “Metal/Machinery” and 64 “Stationary Plant Operators” are assigned their original ESEG in ESEG-Rev. The only exception is ISCO 742, originally in ESEG 63, which is assigned to ESEG-Rev 60 as it is assigned ESEC-6.

ESEG 65 “MOBILE PLANT Operator”

The majority of respondents in the original ESEG 65 are assigned to ESEG-REV 65 and ESEC-8. The deviant isco codes 832 and 834 are assigned to the residual ESEG-Rev 72 “Blue Collar Employees” where other isco codes with ESEC-9 destination are collected. Originally, ESEG 72 is diverse and includes all types of elementary occupations.

Table 15: Re-assignment of ISCO Codes in ESEG 65

ISCO08	ISCO label	ESEGRev_no	ESEC
830	Drivers and Mobile Plant Operators	65	8
831	Locomotive Engine drivers and Related Workers	65	8
832	Car, Van and Motorcycle Drivers	72	9
833	Heavy Truck and Bus Drivers	65	8
834	Mobile Plant Operators	72	9
835	Ships' Deck Crews and Related Workers	65	8

ESEG 72 “Blue Collar Employees”

All isco codes in the original ESEG 72 are assigned to ESEG-Rev 72. Note however that group 72 is substantially larger in ESEG-Rev, as it also serves as a residual group for deviant isco codes assigned to ESEC-9.

ESEG 73 “Cleaners and Helpers”

All isco codes in the original ESEG 73 are assigned to ESEG-REV 73 “Cleaners and Helpers” and ESEC-9.

ESEG 74 “AGRICULTURAL Employees”

The ISCO codes in the original ESEG 74 “Agricultural employees” are assigned to three different classes. The ISCO level 6 codes keep their original ESEG label in ESEG-Rev. The 63X ISCO codes are assigned to the ESEG-Rev 41 for “Self-employed agricultural and related workers” which is routed to ESEC-5. The 92X ISCO codes are re-assigned to the residual ESEG-Rev 72 “Blue Collar employees” and is routed to ESEC-9.

Table 16: Re-assignment of ISCO Codes in ESEG 32

ISCO08	ISCO label	ESEG-Rev	ESEC
600	Skilled Agricultural, Forestry and Fishery Workers	74	8
610	Market-oriented Skilled Agricultural Workers	74	8
611	Market Gardeners and Crop Growers	74	8
612	Animal Producers	74	8
613	Mixed Crop and Animal Producers	74	8
620	Market-oriented Skilled Forestry, Fishery and Hunting Workers	74	8
621	Forestry and Related Workers	74	8
622	Fishery Workers, Hunters and Trappers	74	8
631	Subsistence Farmers, Fishers, Hunters and Gatherers	41	5
632	Subsistence Crop Farmers	41	5
633	Subsistence Livestock Farmers	41	5
634	Subsistence Mixed Crop and Livestock Farmers	41	5
920	Agricultural, forestry and fishery Labourers	72	9
921	Agricultural, forestry and fishery labourers	72	9

Incorporating Number of Employees and Supervision Status

Our goal is to group ISCO codes into ESEGs that can collapse to ESEC. Therefore, we use the ESEC logic (in terms of supervision and self-employment) to assign occupations to groups. In ESEC, occupations are assigned to a class and promoted based on the supervision status, employment status (self-employed or employee) and the number of employees.

To accommodate the upgrading of ISCO codes we apply these rules.

1. ISCO codes promoted to ESEC-1 due to their self-employment status with 1 or more employees are assigned to ESEG-Revised 11 “HIGHER MANAGERS SELF-EMPLOYED”.
2. ISCO codes promoted to ESEC-1 due to their supervision status are assigned to ESEG-Rev 13 “HIGHER MANAGER EMPLOYEES”
3. ISCO codes promoted to ESEC-2 due to their supervision status are assigned to ESEG-Rev 14. “LOWER MANAGER EMPLOYEES”

4. ISCO codes in (Associate) Professional (2xx 3xx), Skilled manual (7xx, 8xx, 9xx) and Personal Services (53x, 54x) which are promoted to ESEC-6 due to their supervision status are assigned to ESEG-Rev 60. "Skilled Supervisors"
5. ISCO codes of Customer Service Clerks (42X) and Sales Workers (52X) who are promoted to ESEC-6 due to their supervision status are assigned to ESEG-Rev 59. "White-collar Supervisors"
6. ISCO Codes at major group 1 and 2 with self-employment status and assigned to ESEC-4 are assigned to ESEG-Rev 40 "Small entrepreneurs".
7. ISCO Codes at major group 3, 4 and 5 with self-employment status and assigned to ESEC-4 are assigned to ESEG-Rev 42 "Self-Employed Technicians".
8. ISCO Codes at major group 7, 8 and 9 with self-employment status and assigned to ESEC-4 are assigned to ESEG-Rev 43 "Self-Employed Craft".
9. ISCO codes in major group 6 with employment or self-employment status and assigned to ESEC-5 are assigned to ESEG 41 "Agricultural Self-employed"

Note that the rules 1 through 6 apply only to ISCO codes that are promoted, that is where their ESEC assignment between employee status and other status differs. When there is no conflict in ESEC assignment, occupation based ESEG-Rev allocation takes president over employment status ESEG-Rev allocation.

Major Changes between ESEG and ESEG-Revised

Rule 3 re-assigns a significant number of respondents in the ESS from their original ESEG to a managerial ESEG-Rev while rules 1 and 2 have a marginal impact on differences between ESEG and ESEG-Rev assignment. The primary causes is that ESEC assignment is the same regardless of self-employment and supervision in major group 2 (Professionals) and some major group 3 (Technicians and associate professionals) occupations. However, occupations are often promoted to ESEC-1 or ESEC-2 at ISCO major level 3 and 4 due to self-employment or supervision status. Rules 5, 6 and 9 also assign a significant number of respondents in the ESS to another ESEG-Rev than their original ESEG.

Note that there is no rule to assign any self-employed to a "lower self-employed manager" ESEG-Rev despite its existence in the original ESEG. The reason of its absence is because the implementation of such a rule would not apply to any ISCO codes. ESEC does not assign ESEC-2 to self-employed respondents unless they are in major group 2 or 3. In these cases the occupation is coded to ESEC-2 as employee also and therefore is coded as the ESEG from their employee status. Respondents originally in ESEG "Lower Manager Self-Employed" are re-assigned to ESEG-Rev "Higher manager Self-employed" or "Entrepreneur".

Table 17: Distribution of ESEG-Revised groups in ESS R1-9

ESEG-Revised	Freq.	Percent	Valid	Cum.
10 Managers	182	0.04	0.05	0.05
11 Higher Manager Self-employed	3613	0.86	0.97	1.01
13 Higher Manager Employees	11750	2.79	3.14	4.16
14 Lower Manager Employees	11699	2.77	3.13	7.28
20 Professionals N.E.C.	3647	0.86	0.97	8.26
21 Science/ICT Prof.	11639	2.76	3.11	11.37
22 Health Professionals	4652	1.1	1.24	12.61
23 Business Prof.	11991	2.84	3.21	15.82
24 Social Prof.	7714	1.83	2.06	17.88

Table 17: Distribution of ESEG-Revised groups in ESS R1-9

ESEG-Revised	Freq.	Percent	Valid	Cum.
25 Primary and Secondary Teaching PROF.	15255	3.62	4.08	21.96
26 Vocational, Tertiary and other education PROF.	5886	1.4	1.57	23.53
30 Associate Professional Emp. N.E.C.	2066	0.49	0.55	24.08
31 Technicians	11584	2.75	3.1	27.18
32 Health Ass. Prof.	11797	2.8	3.15	30.33
33 Business Ass. Prof.	10419	2.47	2.79	33.12
34 Legal/Social Ass.Pro	2827	0.67	0.76	33.87
35 Non-Commissioned Officers	196	0.05	0.05	33.93
40 Small Entrepreneurs	7160	1.7	1.91	35.84
41 Agricultural. Self-Employed	8186	1.94	2.19	38.03
42 Self-Employed Technicians	10529	2.5	2.81	40.84
43 Craft Etc. Self-Emp.	9532	2.26	2.55	43.39
50 Associate Professionals And Technicians N.E.C.	3219	0.76	0.86	44.25
51 General Clerks	25433	6.03	6.8	51.05
52 Customer Service Cl.	9239	2.19	2.47	53.52
53 Personal Care Emp.	12238	2.9	3.27	56.79
54 Protective Services	3533	0.84	0.94	57.73
59 White-Collar Supervisors	6373	1.51	1.7	59.44
60 Skilled Labour Supervisors	23363	5.54	6.25	65.68
61 Building Employees	13668	3.24	3.65	69.34
62 Food Processing Etc.	7876	1.87	2.11	71.44
63 Metal/Machinery Etc.	10328	2.45	2.76	74.2
64 Stationary Plant Op.	13295	3.15	3.55	77.76
65 Mobile Plant Op.	3548	0.84	0.95	78.7
71 Service/Sales Emp.	24073	5.71	6.43	85.14
72 Blue Collar Emp.	31125	7.38	8.32	93.46
73 Cleaners And Helpers	20514	4.86	5.48	98.94
74 Agricultural Emp.	3958	0.94	1.06	100.00
Total	374107	88.69	100.00	
Missing	47708	11.31		
Total	421815	100		

Table 18: ESEG-Revised Assignment based on ISCO-08 Codes

ISCO-08	ISCO Label	Self-Employed			Emplpye.	
		10+	1-9	0	S	E
10	Commissioned armed forces officers	13	13	13	13	13
011	Commissioned armed forces officers	13	13	13	13	13
021	NCOs	35	35	35	30	35
030	Armed forces other ranks	35	35	35	30	35
031	Armed forces other ranks	35	35	35	30	35
100	Managers	10	40	40	10	10
110	Chief execs, senior officials and legislators	11	11	11	13	13
111	Legislators and senior officials	11	11	11	13	13
112	Managing directors and chief execs	11	11	11	13	13
120	Admin and commercial managers	11	40	40	13	13
121	Business services and admin managers	11	40	40	13	13
122	Sales, marketing and development managers	11	40	40	13	13
130	Production and specialized services managers	11	40	40	13	13
131	PM in agriculture, fishing, forestry	11	41	41	14	14

Table 18: ESEG-Revised Assignment based on ISCO-08 Codes

ISCO-08	ISCO Label	Self-Employed			Empley.	
		10+	1-9	0	S	E
	Manufacturing, mining, construction and distribution					
132	managers	11	40	40	14	14
133	ICT service managers	11	40	40	13	13
134	Professional service managers	11	40	40	13	13
140	Hospitality, retail and other services	11	40	40	14	14
141	Hotel and restaurant managers	11	40	40	14	14
142	Retail and wholesale trade managers	11	40	40	14	14
143	Other services managers	11	40	40	14	14
200	Professionals	20	20	20	20	20
210	Science and engineering professionals	21	21	21	21	21
211	Physical and earth science professionals	21	21	21	21	21
212	Mathematicians, actuaries and statisticians	21	21	21	21	21
213	Life science professionals	21	21	21	21	21
214	Engineering professionals	21	21	21	21	21
215	Electrotechnology professionals	21	21	21	21	21
216	Architects, planners, surveyors and designers	21	21	21	21	21
220	Health professionals	22	22	22	22	22
221	Medical doctors	22	22	22	22	22
222	Nursing and midwifery professionals	22	32	32	32	32
223	Traditional and complementary medicine professionals	22	32	32	32	32
224	Paramedical practitioners	22	40	40	60	60
225	Veterinarians	22	22	22	22	22
226	Other health professionals	22	22	22	22	22
230	Teaching Professionals	26	26	26	26	26
231	University and HE teachers	26	26	26	26	26
232	Vocational Education teacher	26	26	26	26	26
233	Secondary education teachers	26	25	25	25	25
234	Primary and pre-primary teachers	26	25	25	25	25
235	Other teaching professionals	26	26	26	26	26
240	Business and administrative professionals	23	23	23	23	23
241	Finance professionals	23	23	23	23	23
242	Administration professionals	23	33	33	33	33
243	Sales, marketing and PR professionals	23	23	23	23	23
250	ICT Professionals	21	21	21	21	21
251	Software and applications developers	21	21	21	21	21
252	Database and network professionals	21	31	31	31	31
260	Legal, social and cultural professionals	20	24	24	24	24
261	Legal professionals	20	20	20	20	20
262	Librarians, archivists and curators	11	24	24	24	24
263	Social and religious professionals	20	20	20	20	20
264	Authors, journalists and linguists	11	24	24	24	24
265	Creative and performing artists	11	24	24	24	24
300	Technicians and associate professionals	11	42	42	14	50
310	Science and engineering ass profs	11	31	31	31	31
311	Physical and engineering science technicians	11	31	31	31	31
312	Mining, manufacturing and construction technicians	11	31	31	31	31
313	Process control technicians	11	42	42	31	60
314	Life science and related technicians	11	31	31	31	31

Table 18: ESEG-Revised Assignment based on ISCO-08 Codes

ISCO-08	ISCO Label	Self-Employed			Empley.	
		10+	1-9	0	S	E
315	Ship and aircraft controllers and technicians	11	31	31	31	31
320	Health associate professionals	11	42	42	60	60
321	Medical and pharmaceutical technicians	11	32	32	32	32
322	Nursing and midwifery associate professionals	11	32	32	32	32
323	Traditional and complementary medicine ass profs	11	32	32	32	32
324	Veterinary technicians and assistants	11	42	42	60	50
325	Other health associate professionals	11	42	42	32	50
330	Business and administration associate professionals	23	23	23	23	23
331	Financial and mathematical ass profs	23	23	23	23	23
332	Sales and purchasing agents and brokers	23	23	23	23	23
333	Business service agents	23	33	33	33	33
334	Administrative and specialized secretaries	11	42	42	33	51
335	Government regulatory associate professionals	33	33	33	33	33
340	Legal, social, cultural and related associate professionals	11	42	42	24	34
341	Legal, social and religious associate professionals	11	24	24	24	34
342	Sports and fitness workers	11	42	42	24	34
343	Artistic, cultural and culinary associate professionals	11	42	42	24	34
350	Information and communications technicians	11	42	42	31	50
351	ICT Ops and user support technicians	11	42	42	31	50
352	Telcoms and broadcast technicians	11	42	42	31	50
400	Clerical support workers	11	42	42	14	51
410	General and keyboard clerks	11	42	42	14	51
411	General office clerks	11	42	42	14	51
412	Secretaries (general)	11	42	42	14	51
413	Keyboard operators	11	42	42	14	51
420	Customer services clerks	11	42	42	59	52
421	Tellers, money collectors and related	11	42	42	59	52
422	Client information workers	11	42	42	59	52
430	Numerical and material recording clerks	11	42	42	14	51
431	Numerical clerks	11	42	42	14	51
432	Material recording and transport clerks	11	42	42	14	52
440	Other clerical support workers	11	42	42	59	51
441	Other clerical support workers	11	42	42	59	51
500	Services and sales workers	11	42	42	60	71
510	Personal services workers	11	42	42	60	71
511	Tavel attendants, conductors and guides	11	42	42	60	71
512	Cooks	11	42	42	60	71
513	Waiters and bartenders	11	42	42	60	71
514	Hairdressers, beauticians and related workers	11	42	42	60	71
515	Building and housekeeping supervisors	11	42	42	60	71
516	Other personal service workers	11	42	42	60	71
520	Sales workers	11	42	42	59	71
521	Street and Market Salespersons	11	42	42	71	72
522	Shop Salespersons	11	42	42	59	71
523	Cashiers and Ticket Clerks	11	42	42	59	71
524	Other Sales Workers	11	42	42	59	71
530	Personal Care Workers	11	42	42	60	53
531	Child Care Workers and Teachers' Aides	11	42	42	60	53

Table 18: ESEG-Revised Assignment based on ISCO-08 Codes

ISCO-08	ISCO Label	Self-Employed			Empley.	
		10+	1-9	0	S	E
532	Personal Care Workers in Health Services	11	42	42	60	53
540	Protective Services Workers	35	35	35	60	54
541	Protective Service Workers	35	35	35	60	54
600	Skilled Agricultural, Forestry and Fishery Workers	11	41	41	60	74
610	Market-oriented Skilled Agricultural Workers	11	41	41	60	74
611	Market Gardeners and Crop Growers	11	41	41	60	74
612	Animal Producers	11	41	41	60	74
613	Mixed Crop and Animal Producers	11	41	41	60	74
	Market-oriented Skilled Forestry, Fishery and Hunting					
620	Workers	11	41	41	60	74
621	Forestry and Related Workers	11	41	41	60	74
622	Fishery Workers, Hunters and Trappers	11	41	41	60	74
630	Subsistence Farmers, Fishers, Hunters and Gatherers	41	41	41	41	41
631	Subsistence Crop Farmers	41	41	41	41	41
632	Subsistence Livestock Farmers	41	41	41	41	41
633	Subsistence Mixed Crop and Livestock Farmers	41	41	41	41	41
634	Subsistence Fishers, Hunters, Trappers and Gatherers	41	41	41	41	41
700	Craft and Related Trades Workers	11	43	43	60	61
710	Building and Related Trades Workers (exc Electricians)	11	43	43	60	61
711	Building Frame and Related Trades Workers	11	43	43	60	61
712	Building Finishers and Related Trades Workers	11	43	43	60	61
	Painters, Building Structure Cleaners and Related Trades					
713	Workers	11	43	43	60	61
720	Metal, Machinery and Related Trades Workers	11	43	43	60	63
	Sheet and Structural Metal Workers, Moulders and					
721	Welders, and Related Workers	11	43	43	60	63
722	Blacksmiths, Toolmakers and Related trades Workers	11	43	43	60	63
723	Machinery Mechanics and Repairers	11	43	43	60	63
730	Handicraft and Printing Workers	11	43	43	60	63
731	Handicraft Workers	11	43	43	60	63
732	Printing Trades Workers	11	43	43	60	63
740	Electrical and Electronics Trades Workers	11	43	43	60	63
741	Electrical Equipment Installers and Repairers	11	43	43	60	63
	Electronics and Telecommunications Installers and					
742	Repairers	11	43	43	60	60
	Food Processing, Wordworking, Garment and Other Craft					
750	and Related trades Workers	11	43	43	60	62
751	Food processing and Related Trades Workers	11	43	43	60	62
752	Wood Treaters, Cabinet-makers and related Trades Workers	11	43	43	60	62
753	Garment and Related Trades Workers	11	43	43	60	62
754	Other Craft and Related Workers	11	43	43	60	62
800	Plant and Machine Operators and Assemblers	11	43	43	60	64
810	Stationary Plant and Machine Operators	11	43	43	60	64
811	Mining and Mineral Processing Plant Operators	11	43	43	60	64
812	Metal Processing and Finishing Plant Operators	11	43	43	60	64
	Chemical and Photographic Products Plant and Machine					
813	Operators	11	43	43	60	64
814	Rubber, Plastic and Paper Products Machine Operators	11	43	43	60	64

Table 18: ESEG-Revised Assignment based on ISCO-08 Codes

ISCO-08	ISCO Label	Self-Employed			Empley.	
		10+	1-9	0	S	E
815	Textile, fur and leather products machine operators	11	43	43	60	64
816	Food and related products machine operators	11	43	43	60	64
817	Wood-processing and papermaking plant operators	11	43	43	60	64
818	Other Stationary Plant and Machine Operators	11	43	43	60	64
820	Assemblers	11	43	43	60	64
821	Assemblers	11	43	43	60	64
830	Drivers and Mobile Plant Operators	11	43	43	60	65
831	Locomotive Engine drivers and Related Workers	11	43	43	60	65
832	Car, Van and Motorcycle Drivers	11	43	43	60	72
833	Heavy Truck and Bus Drivers	11	43	43	60	65
834	Mobile Plant Operators	11	43	43	60	72
835	Ships' Deck Crews and Related Workers	11	43	43	60	65
900	Elementary Occupations	11	43	43	60	72
910	Cleaners and Helpers	11	43	43	60	73
911	Domestic, Hotel and Office Cleaners and Helpers	11	43	43	60	73
912	Vehicle, Window, Laundry and other hand cleaning workers	11	43	43	60	73
920	Agricultural, forestry and fishery Labourers	11	41	41	60	72
921	Agricultural, forestry and fishery labourers	11	41	41	60	72
930	Labourers in mining, construction, manufacturing and transport	11	43	43	60	72
931	Mining and construction labourers	11	43	43	60	72
932	Manufacturing labourers	11	43	43	60	72
933	Transport and storage labourers	11	43	43	60	72
940	Food preparation assistants	11	43	43	60	72
941	Food preparation assistants	11	43	43	60	72
950	Street and related sales and services workers	11	43	43	60	73
951	Street and related services workers	11	43	43	60	73
952	Street vendors (excluding Food)	11	43	43	60	73
960	Refuse and other elementary workers	11	43	43	60	72
961	Refuse workers	11	43	43	60	72
962	Other elementary workers	11	43	43	60	72

Allocation rules of ISCO-88 (COM) 3-digit codes to ESEG-Revised

Assigning ISCO-88 (COM) codes to ESEG-Rev groups was based on the ISCO-08 coding. ISCO-88 (COM) codes were matched to ISCO-08 codes and given their appropriate ESEG-Rev Group. Table 20 shows the ESEG-Rev assignment based on ISCO-88 (COM) codes and Employment Status.

A limitation of this approach is that some ESEG groups differ in size between ISCO-08 and ISCO-88 (COM). ISCO-08 is more detailed in the ISCO major group 1 and 2 than ISCO-88 (COM) and less detailed in ISCO major group 8 and 9. Table 19 below shows the size of each ESEG-Revised group in the ESS data when based on ISCO-88 (Rounds 1-5) and ISCO-08 codes (Rounds 6-9).

ESEG-Rev “Blue-Collar Employees” is larger in ISCO-88 (COM) compared to ISCO-08. This is because some of the ISCO-88 83X codes are more frequent in data using ISCO-88 (COM).

ESEG-Rev “Mobile Operators” is much smaller in ISCO-88. The ISCO codes are assigned the same ESEC between ISCO-88 and ISCO-08 but their relative size changed.

ESEG-Rev “Associate Professionals N.E.C.” is much larger because ISCO-88 includes associate teaching occupations which are not present in ISCO-08. They had no comparable ESEG-Rev as associate teaching occupations are assigned ESEC-3 instead of ESEC-1 or ESEC-2 like other teaching related isco-08 code.

ESEG-Rev “Business Professionals” is much smaller in ISCO-88 because there are fewer ISCO codes for these occupations in major group 2. Additionally, ISCO major group 3 business associate professionals are also allocated to this ESEG-Rev in ISCO-08, as these are assigned ESEC-1. However, the same occupations are assigned ESEC-2 in ISCO-88 (COM). Therefore, most business agent occupations in ISCO-88 (COM) are assigned to ESEG-Rev 33 “Business Associate Professionals”.

ESEG-Rev “NCOs” did not occur in the ISCO-88 data. ISCO-08 has more detailed armed forces codes, the most frequent of which are assigned to ESEC-2 and are assigned ESEG-Rev 35. In ISCO-88 the most frequent armed forces codes are assigned to ESEC-1 and promoted to Higher Manager Employees.

Table 19: ESEG-Revised Frequencies and Percentages derived from ISCO-08 and ISCO-88 in the ESS

ESEG-Revised	ISCO-88	ISCO-08
MANAGERS	76	106
%	0.04	0.06
HIGHER MG. SELF-EMP.	1697	1916
%	0.81	1.16
HIGHER MG. EMPLOYEES	6011	5739
%	2.89	3.46
LOWER MG. EMPLOYEES	6800	4899
%	3.26	2.96
PROFESSIONALS N.E.C.	1008	2639
%	0.48	1.59
SCIENCE/ICT PROFESSIONAL	5579	6060
%	2.68	3.66
HEALTH PROFESSIONALS	2329	2323
%	1.12	1.4
BUSINESS PROFESSIONAL	3506	8485
%	1.68	5.12

Table 19: ESEG-Revised Frequencies and Percentages derived from ISCO-08 and ISCO-88 in the ESS

ESEG-Revised	ISCO-88	ISCO-08
SOCIAL PROFESSIONAL	5099	2615
%	2.45	1.58
Primary and Secondary Teaching PROFESSIONAL	8877	6378
%	4.26	3.85
Vocational, Tertiary and Other Education Professionals	2335	3551
%	1.12	2.14
PROFESSIONAL EMP. N.E.C.	1897	169
%	0.91	0.1
TECHNICIANS	5835	5749
%	2.8	3.47
HEALTH ASSOCIATE PROFESSIONAL	7223	4574
%	3.47	2.76
BUSINESS ASSOCIATE PROFESSIONAL	5178	5241
%	2.49	3.16
SOCIAL ASSOCIATE PROFESSIONAL	1243	1584
%	0.60	0.96
NCOS	0	196
%	0	0.12
SMALL ENTREPRENEURS	4863	2297
%	2.33	1.39
AGRIC. SELF-EMPLOYED	5035	3151
%	2.42	1.9
SELF-EMPLOYED TECHN.	5612	4917
%	2.69	2.97
CRAFT ETC. SELF-EMP.	5342	4190
%	2.56	2.53
Associate Professionals and Technicians N.E.C.	1691	1528
%	0.81	0.92
GENERAL CLERKS	16470	8963
%	7.91	5.41
CUSTOMER SERVICE CL.	5531	3708
%	2.65	2.24
PERSONAL CARE EMP.	7090	5148
%	3.4	3.11
PROTECTIVE SERVICES	1785	1748
%	0.86	1.05
White-Collar Supervisors	3717	2656
%	1.78	1.6
Skilled Labour Supervisors	14079	9284
%	6.76	5.6
BUILDING EMPLOYEES	9602	4066
%	4.61	2.45
FOOD PROCESSING ETC.	4686	3190
%	2.25	1.92
METAL/MACHINERY ETC.	4423	5905
%	2.12	3.56
STATIONARY PLANT OP.	7697	5598
%	3.69	3.38
MOBILE PLANT OP.	476	3072

Table 19: ESEG-Revised Frequencies and Percentages derived from ISCO-08 and ISCO-88 in the ESS

ESEG-Revised	ISCO-88	ISCO-08
%	0.23	1.85
SERVICE/SALES EMP.	9428	14645
%	4.53	8.83
BLUE COLLAR EMP.	18901	12224
%	9.07	7.37
CLEANERS AND HELPERS	14710	5804
%	7.06	3.5
AGRICULTURAL EMP.	2501	1457
%	1.2	0.88
Total	208332	165775
%	100	100

Table 20: ESEG-Revised Assignment Based on ISCO-88 (COM)

ISCO-88 (COM)	ISCO Label	Self-Employed			Employee	
		10+	1-9	0	S	E
010	Armed forces (officers)	13	13	13	13	13
011	Armed forces (other ranks)	35	35	35	30	35
100	Legislators, senior officials and managers	11	40	40	10	10
110	Legislators and senior officials	11	11	11	13	13
111	Legislators and senior government officials	11	11	11	13	13
114	Senior officials of special interest organisations	11	11	11	13	13
120	Other corporate managers	11	40	40	13	13
121	Directors and chief executives	11	40	40	13	13
122	Production and operations managers	11	40	40	14	14
123	Other specialist managers	11	40	40	13	13
130	Managers of small enterprises nes	11	40	40	14	14
131	Managers of small enterprises	11	40	40	14	14
200	Professionals	20	20	20	20	20
210	Phys, math, engin science professionals	21	21	21	21	21
211	Physicists, chemists and related professionals	21	21	21	21	21
212	Mathematicians, statisticians and related professionals	21	21	21	21	21
213	Computing professionals	21	21	21	21	21
214	Architects, engineers and related professionals	21	21	21	21	21
220	Life science and health professionals	22	22	22	22	22
221	Life science professionals	22	22	22	22	22
222	Health professionals (exc. nursing)	22	22	22	22	22
223	Nursing and midwifery professionals	22	32	32	32	32
230	Teaching Professionals	11	25	25	25	25
231	College, university and HE teaching professionals	26	26	26	26	26
232	Secondary education teaching professionals	11	25	25	25	25
233	Primary and pre-primary education teaching professionals	11	25	25	25	25
234	Special education teaching professionals	11	25	25	25	25
235	Other teaching professionals	26	26	26	26	26
240	Other professionals	23	23	23	23	23
241	Business professionals	23	23	23	23	23
242	Legal professionals	20	20	20	20	20
243	Archivists, librarians and related information professionals	11	24	24	24	24
244	Social science and related professionals	11	24	24	24	24

Table 20: ESEG-Revised Assignment Based on ISCO-88 (COM)

ISCO-88 (COM)	ISCO Label	Self-Employed			Employee	
		10+	1-9	0	S	E
245	Writers and creative performing artists	11	24	24	24	24
246	Religious professionals	11	24	24	24	24
247	Public service administrative professionals	11	24	24	24	24
300	Technicians and associate professionals	11	42	42	14	50
310	Physical, engineering & science ass professionals	11	31	31	31	31
311	Physical and engineering science technicians	11	31	31	31	31
312	Computer associate professionals	11	31	31	31	31
313	Optical and electronic equipment operators	11	42	42	31	60
314	Ship and aircraft controllers and technicians	11	31	31	31	31
315	Safety and quality inspectors	11	42	42	60	60
320	Life science and health associate professionals	11	32	32	32	32
321	Life science technicians and related associate professionals	11	32	32	32	32
322	Health associate professionals (exc. Nursing)	11	32	32	32	32
323	Nursing and midwifery associate professionals	11	32	32	32	32
330	Teaching associate professionals	11	42	42	25	50
331	Primary education teaching associate professionals	11	42	42	25	50
332	Pre-primary education teaching associate professionals	11	42	42	25	50
333	Special education teaching associate professionals	11	42	42	25	50
334	Other teaching associate professionals	11	25	25	25	25
340	Other associate professionals	33	42	42	33	50
341	Finance and sales associate professionals	33	42	42	33	51
342	Business service agents and trade brokers	33	33	33	33	33
343	Administrative associate professionals	33	42	42	33	51
344	Customs, tax and related government associate professionals	33	33	33	33	33
345	Police inspectors and detectives	30	30	30	30	30
346	Social work associate professionals	11	42	42	24	34
347	Artistic, entertainment and sports associate professionals	11	42	42	24	34
348	Religious associate professionals	11	24	24	24	24
400	General Clerks	11	42	42	30	51
410	Office Clerks	11	42	42	30	51
411	Secretaries and keyboard operators	11	42	42	30	51
412	Numerical clerks	11	42	42	30	51
413	Material-recording and transport clerks	11	42	42	59	52
414	Library, mail and related clerks	11	42	42	59	72

Table 20: ESEG-Revised Assignment Based on ISCO-88 (COM)

ISCO-88 (COM)	ISCO Label	Self-Employed			Employee	
		10+	1-9	0	S	E
419	Other office clerks	11	42	42	14	51
420	Customer services clerks	11	42	42	14	51
421	Cashiers, tellers and related clerks	11	42	42	59	52
422	Client information clerks	11	42	42	59	52
500	Service, shop, market sales workers	11	42	42	60	71
510	Personal and protective service workers	11	42	42	60	71
511	Travel attendant and related workers	11	42	42	60	71
512	Housekeeping and restaurant service workers	11	42	42	60	73
513	Personal care and related workers	11	42	42	60	53
514	Other personal services workers	11	42	42	60	53
516	Protective service workers	50	50	50	60	54
520	Models, salespersons and demonstrators	11	42	42	59	54
521	Fashion and other models	11	42	42	14	30
522	Shop, stall and market salespersons and demonstrators	11	42	42	59	71
600	Agricultural and fisheries workers	11	41	41	60	74
610	Skilled agriculture and fisheries workers	11	41	41	60	74
611	Market gardeners and crop growers	11	41	41	60	74
612	Animal producers and related workers	11	41	41	60	74
613	Crop and animal producers	11	41	41	60	74
614	Forestry and related workers	11	41	41	60	74
615	Fishery workers, hunters and trappers	11	41	41	60	74
621	Subsistence agriculture and fishing workers	41	41	41	41	41
700	Craft and related workers	11	43	43	60	61
710	Extraction and building trades workers	11	43	43	60	61
711	Miners, shotfirers, stonecutters, carvers	11	43	43	60	61
712	Building frame and related trades workers	11	43	43	60	61
713	Building finishers and related trades workers	11	43	43	60	61
714	Painters, building structure cleaners and related trades	11	43	43	60	61
720	Metal, machinery and related trades	11	43	43	60	61
721	Metal moulders, welders, sheet-metal workers etc	11	43	43	60	61
722	Blacksmiths, tool makers and related trades	11	43	43	60	61
723	Machinery mechanics and fitters	11	43	43	60	63
724	Electrical and electronic equipment mechanics and fitters	11	43	43	60	63
730	Precision, handicraft, craft printing and related workers	11	43	43	60	60

Table 20: ESEG-Revised Assignment Based on ISCO-88 (COM)

ISCO-88 (COM)	ISCO Label	Self-Employed			Employee	
		10+	1-9	0	S	E
731	Precision workers in metal and related materials	11	43	43	60	60
732	Potters, glass makers and related trades	11	43	43	60	63
733	Handicraft workers in wood, textile, leather and related materials	11	43	43	60	63
734	Craft printing and related trades workers	11	43	43	60	63
740	Other craft and related workers	11	43	43	60	62
741	Food processing and related trades workers	11	43	43	60	62
742	Wood treaters, cabinet makers and related trades	11	43	43	60	62
743	Textile, garment and related trades	11	43	43	60	62
744	Pelt, leather and shoemaking trades	11	43	43	60	62
800	Plant and machine operators and assemblers	11	43	43	60	64
810	Stationary plant and related operators	11	43	43	60	64
811	Mining and mineral-processing plant operators	11	43	43	60	64
812	Metal-processing plant operators	11	43	43	60	64
813	Glass, ceramics and related plant operators	11	43	43	60	64
814	Wood-processing and papermaking plant operators	11	43	43	60	64
815	Chemical-processing plant operators	11	43	43	60	64
816	Power production and related plant operators	11	43	43	60	64
817	Industrial robot operators	11	43	43	60	64
820	Machine operators and assemblers	11	43	43	60	64
821	Metal and mineral products machine operators	11	43	43	60	64
822	Chemical products machine operators	11	43	43	60	64
823	Rubber and plastic products machine operators	11	43	43	60	64
824	Wood products machine operators	11	43	43	60	64
825	Printing, binding and paper products machine operators	11	43	43	60	62
826	Textile, fur and leather products machine operators	11	43	43	60	64
827	Food and related products machine operators	11	43	43	60	64
828	Assemblers	11	43	43	60	64
829	Other machine operators nec	11	43	43	60	64
830	Drivers and mobile plant operators	11	43	43	60	72
831	Locomotive engine drivers and related workers	11	43	43	60	65
832	Motor vehicle drivers	11	43	43	60	72
833	Agricultural and other mobile plant operators	11	43	43	60	72
834	Ships deck crews	11	43	43	60	65
900	Elementary occupations general	11	43	43	60	72
910	Sales and services elementary occupations	11	43	43	60	72

Table 20: ESEG-Revised Assignment Based on ISCO-88 (COM)

ISCO-88 (COM)	ISCO Label	Self-Employed			Employee	
		10+	1-9	0	S	E
911	Street vendors and related workers	11	43	43	60	71
912	Shoe cleaning and other street services elementary occupations	11	43	43	60	73
913	Domestic and related helpers, cleaners and launderers	11	43	43	60	73
914	Building caretakers, window and related cleaners	11	43	43	60	73
915	Messengers, porters, doorkeepers and related workers	11	43	43	60	72
916	Garbage collectors	11	43	43	60	72
920	Agricultural, fishery and related labourers	11	41	41	60	72
921	Agricultural, fishery and related labourers	11	41	41	60	72
930	Labourers in mining, construction, manufacturing, transport	11	43	43	60	72
931	Mining and construction labourers	11	43	43	60	72
932	Manufacturing labourers	11	43	43	60	72
933	Transport labourers and freight handlers	11	43	43	60	72