

1 Skills (moving to SES data)

1.1 Preliminaries

Table 1: Number of jobs in occupation panel by dataset

Number of occupations	Occupation
In LFS	233
In SES (complete sample 2001-2017)	175

1.2 Skills chosen to proxy [Autor and Dorn \(2013\)](#)

Index composition: questions as they appear in the 2012 questionnaire. **Analytical skills:**

- **cpeople:** In your job, how important is dealing with people?
- **cteach:** How important is instructing, training or teaching people, individually or in groups?
- **cpersuad:** How important is persuading or influencing others?
- **cplanoth:** How important is planning the activities of others?
- **csolutn:** How important is thinking of solutions to problems? The problems could be with your own work, someone else's work or equipment.
- **canalyse:** How important is analysing complex problems in depth?
- **ccalca:** In your job, how important is adding, subtracting, multiplying or dividing numbers? (Note: using a calculator or computer if necessary)
- **cpercent:** How important are calculations using decimals, percentages or fractions? (Note: using a calculator or computer if necessary)
- **cwritelg:** How important is writing long documents with correct spelling and grammar (for example, long reports, manuals, articles or books)?
- **cwritesh:** How important is writing short documents (for example, short reports, letters or memos)?
- **clong:** How important is reading long documents such as long reports, manuals, articles or books?
- **cshort:** How important is reading short documents such as reports, letters or memos?

Routine: *main change: combined all indexes into only one*

- **brepeat**: How often does your work involve carrying out short, repetitive tasks? (I recoded this variable so that larger values). I recoded the variable so that larger values imply **less** repetitiveness in the job.
- **bvariety**: How much variety is there in your job?
- **cplanme**: In your job, how important is planning your own activities? (higher values imply less importance)

Manual: before I was using skphys (physical strength) but I realized that this a derived index that included cstreng, cstam, ctools and chand. I excluded skphys and put its components instead.

- **cstreng**: how important is physical strength?
- **cstam**: how important is physical stamina?
- **chands**: how important is skill or accuracy in using your hands or fingers (for example, to mend, repair, assemble, construct or adjust things)?
- **ctools**: how important is knowledge of how to use or operate tools, equipment or machinery?

cfaults in routine: tables ?? and ?? show top and bottom occupations according to the cfaults index. It is clear that at the bottom we have non-routine occupations. In my opinion the picture is murkier at the top.

Ranking examples: tables 3 to 5 show examples of occupations at top of each index.

1.3 Skill simplex

Skill indexes as simple averages: figures 2 and 3 show the density of the individuals in the skill simplex. I don't see much of a difference between GCSE A-C and A-levels.

Skill indexes with restricted factor analysis: figures 4 and 5 show the densities when I use factor analysis to construct the indexes. The composition of the indexes is the same as with the simple average, I just use factor analysis to find the loadings. I extract the first factor of each skill. They are qualitative similar to the simple average, maybe the density for Bachelor+ is smoother. The factor loading tables appear in tables

References

Autor, D. H. and Dorn, D. (2013). The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market. *American Economic Review*, 103(5):1553–1597.

A Appendix

Figure 1: LFS: employment shares by educational level

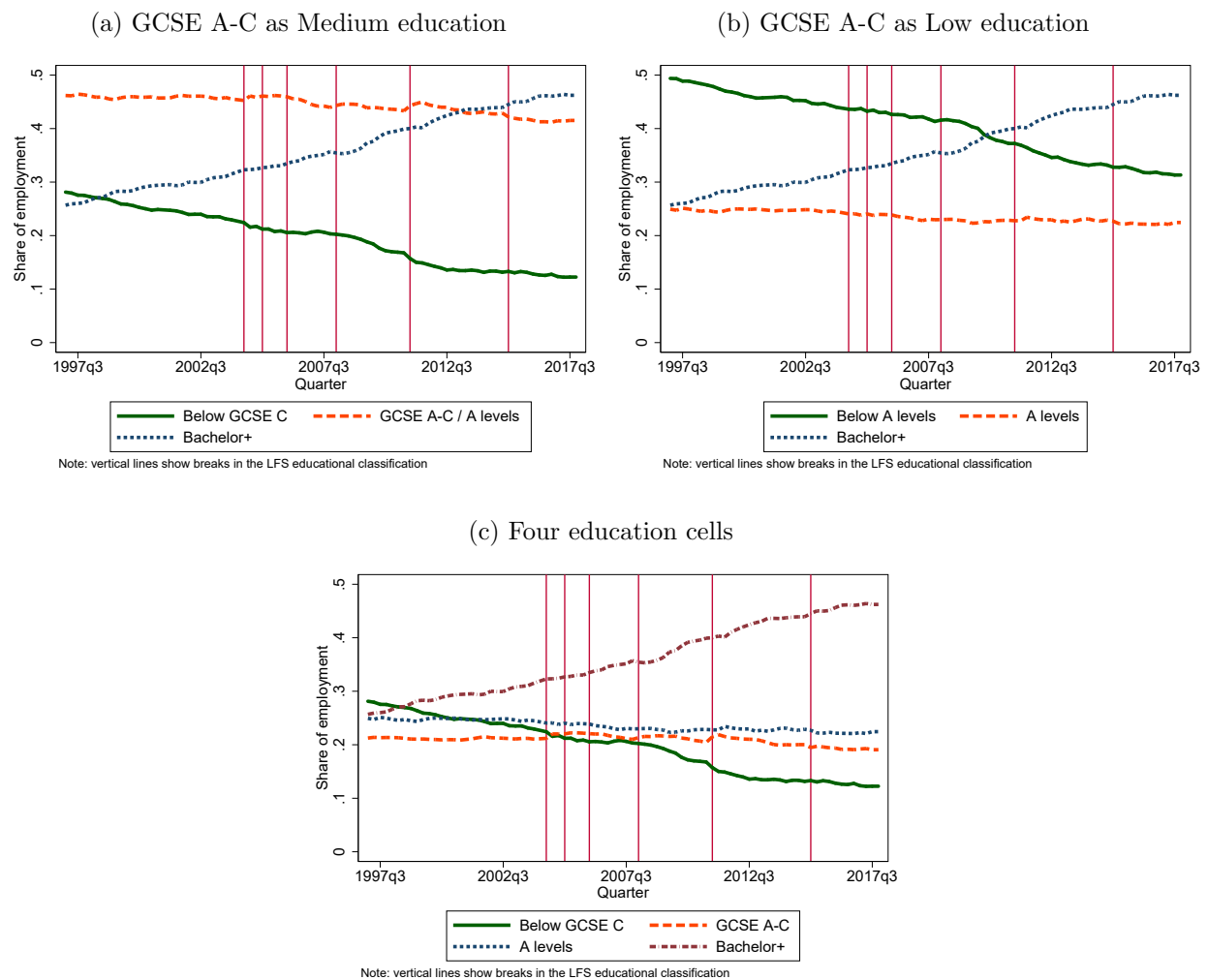


Figure 2: Skill simplex: [Autor and Dorn \(2013\)](#) indexes (simple average)

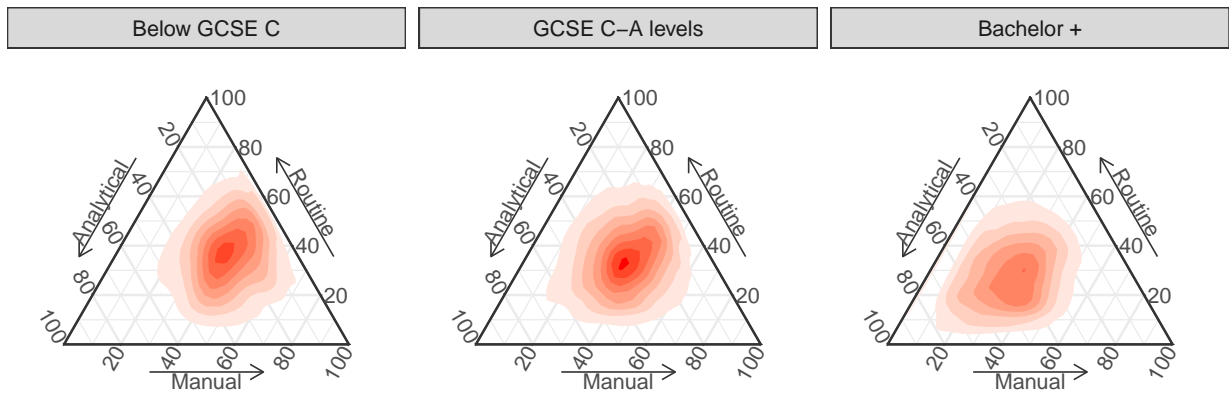
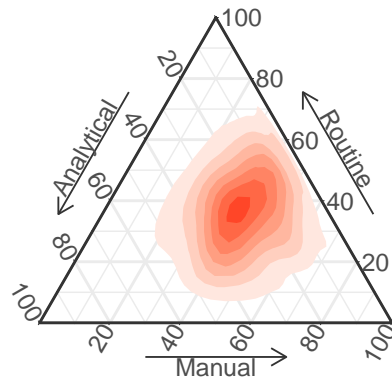
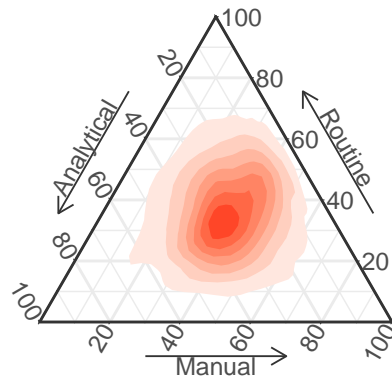


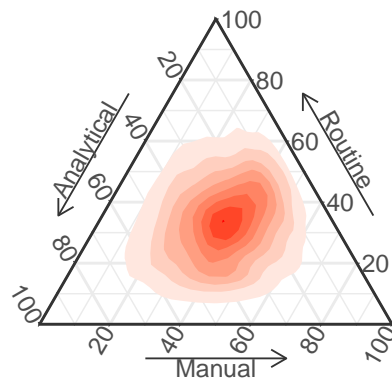
Figure 3: Skill simplex: [Autor and Dorn \(2013\)](#) indexes (simple average)



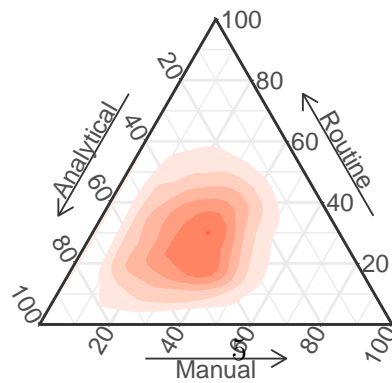
Below GCSE C



GCSE A-C



A-levels



Bachelor +

Figure 4: Skill simplex: [Autor and Dorn \(2013\)](#) indexes (factor)

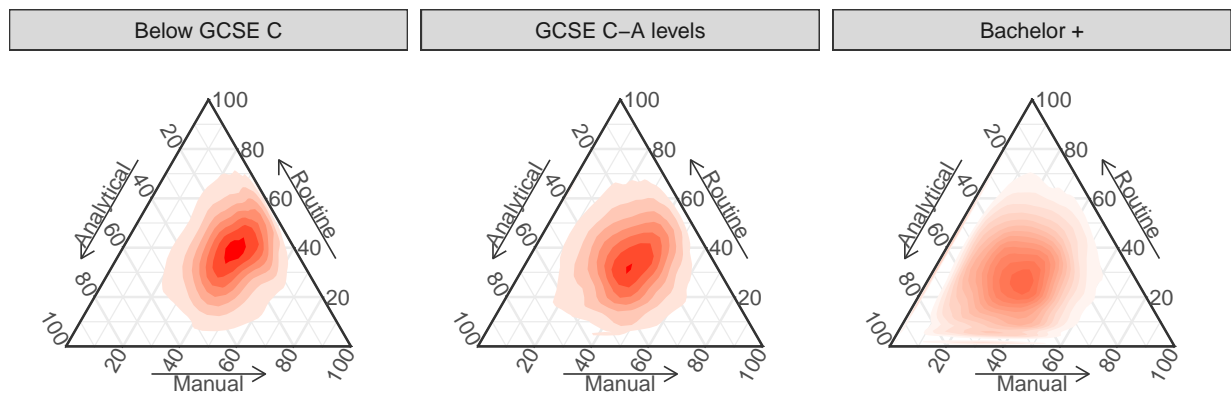
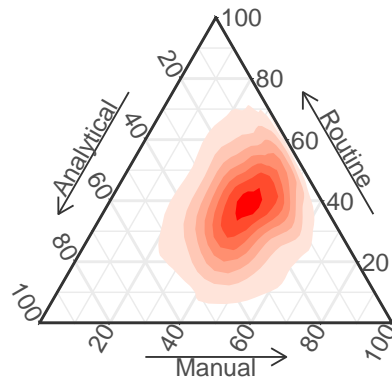
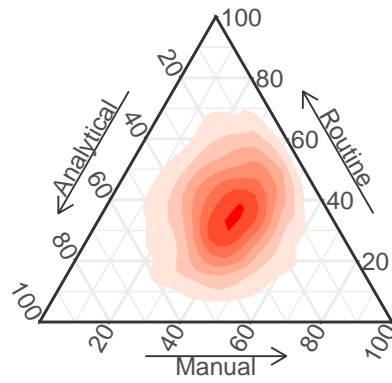


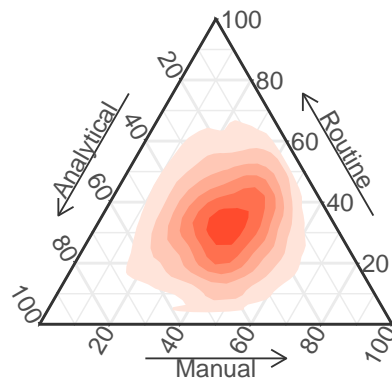
Figure 5: Skill simplex: [Autor and Dorn \(2013\)](#) indexes (factor)



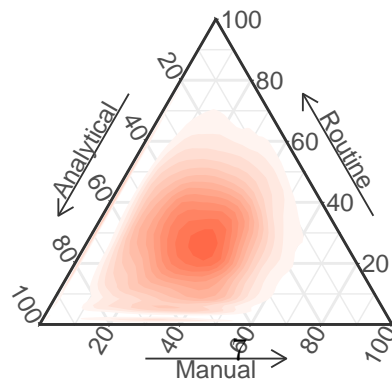
Below GCSE C



GCSE A-C



A-levels



Bachelor +

Figure 6: Reported skill use by education level, [Autor and Dorn \(2013\)](#) indexes

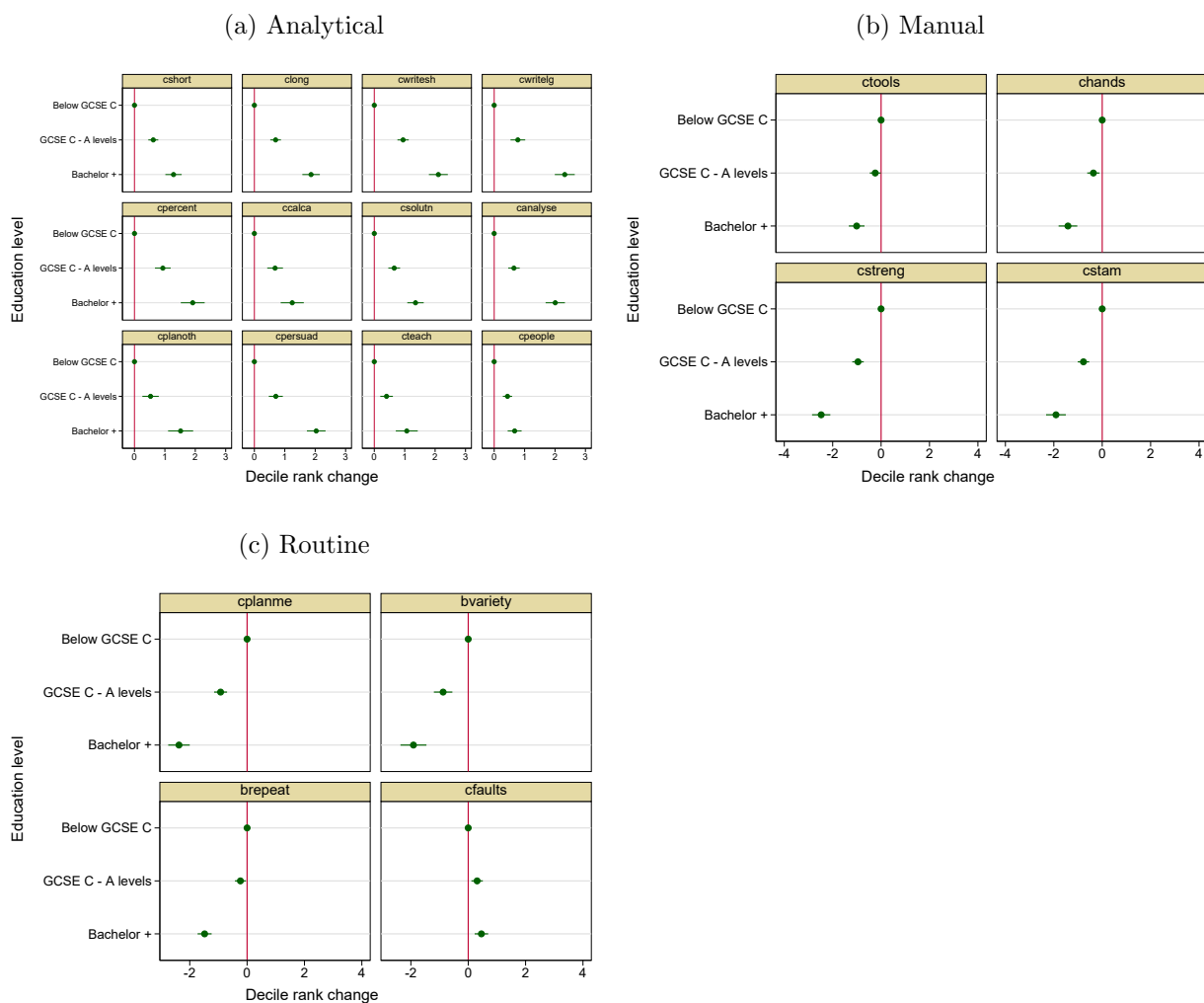


Table 2: Factor loadings

Variable	Loading
Analytical	
cpeople	0.394
cteach	0.527
cpersuad	0.624
cplanoth	0.554
canalyse	0.687
csoltn	0.577
ccalca	0.487
cpercent	0.539
cwritelg	0.727
cwritesh	0.757
clong	0.759
cshort	0.702
Manual	
cstamina	0.788
cstrengt	0.801
chands	0.710
ctools	0.626
Routine	
brepeat	0.412
bvariety	0.560
cplanme	0.451

Table 3: Analytical

bsoc00Agg	Mean observations
1112 directors & chief execs of maj orgs	18.0
1114 sen. officials spec interest orgs	18.0
1131 financial managers & chartered secs	128.0
1133 purchasing managers	26.0
1172 protective service officers	26.0
1181 healthcare and social service managers	99.0
2311 higher educ teaching prfsnals	73.0
2312 further educ teaching prfsnals	83.0
2314 secondary eductn teaching prfsnals	257.0
2315 prim & nurs eductn teaching profs	327.0
2316 spec needs educ teaching profs	41.0
2321 scientific researchers	21.0
2411 solic & lawyers, judges & coroners	77.0
2423 mngmnt cons, actuar, econs & statn	88.0
2431 architects	22.0
Total	86.9

Table 4: Routine

bsoc00Agg	Mean observations
5421 printing trades	54.0
5433 fishmongers, poultry dressers	7.0
7112 retail cashiers/check-out operators	127.0
8111 food, drink & tobac process operat	101.0
8112 glass and ceramics process oprties	10.0
8113 textile process operatives	14.0
8116 plastics process operatives	22.0
8119 process operatives n.e.c.	8.0
8131 assemblers (electrical products)	34.0
8132 assemblers (veh and metal goods)	30.0
8134 weighers, graders, sorters	4.0
8139 assemblers and routine oprtves nec.	57.0
9219 elementary office occupatns n.e.c.	11.0
9225 bar staff	86.0
9259 elementary sales occupations nec.	20.0
Total	39.0

Figure 7: Reported skill use by education level, [Autor and Dorn \(2013\)](#) indexes

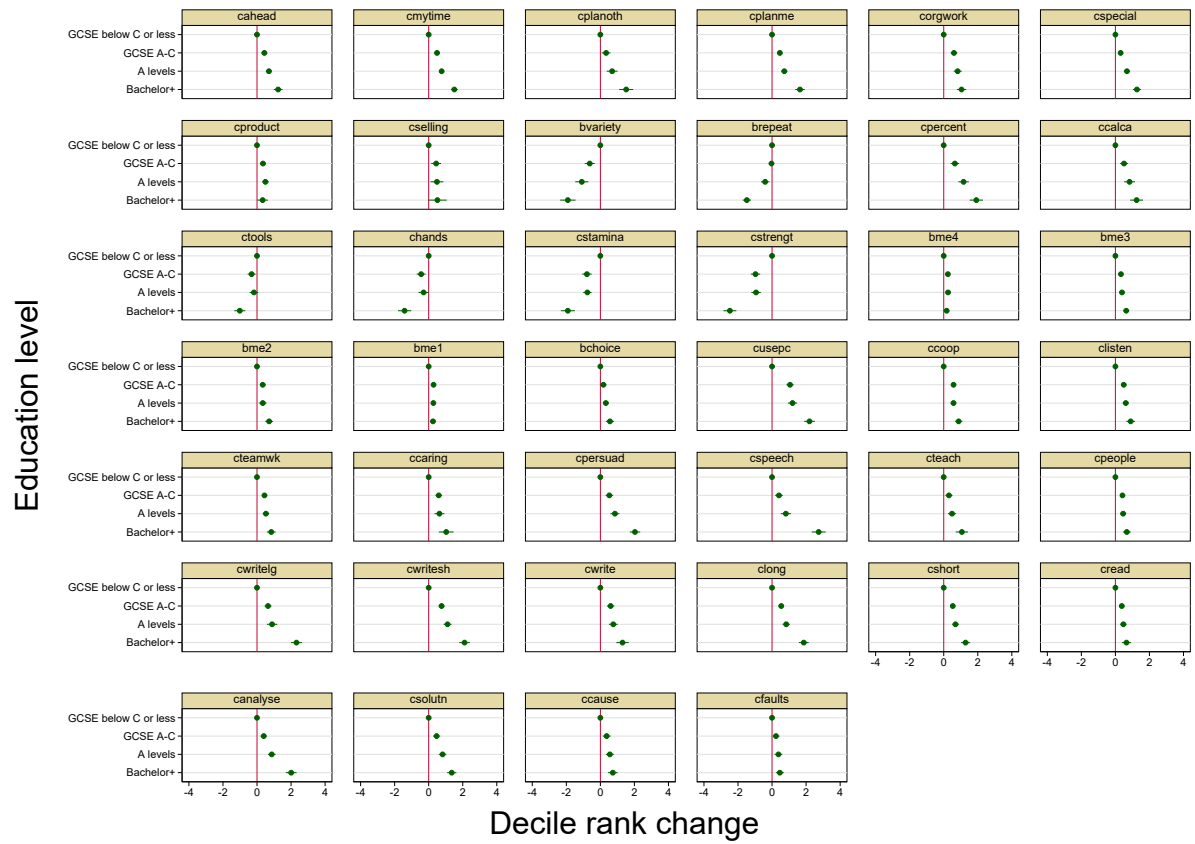


Table 5: Manual

bsoc00Agg	Mean observations
1211 farm managers	9.0
5111 Farmers, gardeners and ground women	130.0
5119 agricult and fishing trades n.e.c.	16.0
5213 Metal forming, welding and related trades	85.0
5231 Vehicle trades	131.0
5312 bricklayers, masons, roofers	441.0
5412 upholsterers	9.0
5431 butchers, meat cutters	21.0
5433 fishmongers, poultry dressers	7.0
8112 glass and ceramics process oprties	10.0
8119 process operatives n.e.c.	8.0
8141 scaffolders, staggers, riggers	11.0
8221 crane drivers	8.0
9121 labrers build & woodworking trades	81.0
9129 lab oth const trades n.e.c.	15.0
Total	65.5

Table 6: Top occupations: influence over quality standards

bsoc00Agg	Mean observations
1163 retail and wholesale managers	178.0
1221 Managers and proprietors in hospitality and leisure services	150.0
1234 shopkprs, wholesale & retail dealrs	65.0
2215 dental practitioners	15.0
2431 architects	22.0
2444 clergy	28.0
3421 graphic designers	55.0
3422 product, clothing & related dsgners	26.0
3442 Sports And Fitness Occupations	53.0
5111 Farmers, gardeners and ground women	123.0
5119 agricult and fishing trades n.e.c.	15.0
6221 Hairdressers And Related Occupations	106.0
8141 scaffolders, staggers, riggers	11.0
9231 window cleaners	20.0
9232 road sweepers	10.0
Total	58.5

Table 7: Bottom occupations: influence over quality standards

bsoc00Agg	Mean observations
4111 civil service officers and assistants	141.0
4142 communication operators	22.0
8116 plastics process operatives	19.0
8119 process operatives n.e.c.	8.0
8132 assemblers (veh and metal goods)	24.0
8134 weighers, graders, sorters	4.0
8139 assemblers and routine oprtves nec.	50.0
8213 bus and coach drivers	56.0
8221 crane drivers	8.0
9134 packers, bottlers, canners, fillers	81.0
9139 labrs process & plant opertns nec.	33.0
9211 post wrkr, mail sort, msngr, courir	82.0
9234 launderers, dry cleaners, pressers	15.0
9235 refuse and salvage occupations	15.0
9241 security guards and rel occupations	94.0
Total	43.5

Table 8: Top occupations: knowledge of products

bsoc00Agg	Mean observations
2111 chemists	10.0
2131 it strategy and planning prfsnals	80.0
2213 pharmacists & pharmacologists	20.0
2215 dental practitioners	15.0
2216 veterinarians	10.0
3422 product, clothing & related dsgrs	26.0
3541 sales representatives, marketing profs, estate agents, actioneers	232.0
5231 Vehicle trades	127.0
5433 fishmongers, poultry dressers	5.0
6221 Hairdressers And Related Occupations	106.0
7113 telephone salespersons	39.0
7122 Sales related occupations	99.0
7211 Customer sevice occupations	192.0
8119 process operatives n.e.c.	8.0
9226 leisure and theme park attendants	10.0
Total	65.3

Table 9: Bottom occupations: knowledge of products

bsoc00Agg	Mean observations
2314 secondary eductn teaching prfsnals	257.0
2315 prim & nurs eductn teaching profs	326.0
2329 researchers n.e.c.	43.0
2441 public service administrative profs	14.0
2444 clergy	28.0
3551 conservat & environ protection offs	14.0
4142 communication operators	22.0
6121 nursery nurses	110.0
6122 childminders, playgroup leaders and educational assistants	349.0
6219 leisure & travel serv occuptns nec.	5.0
8212 van drivers	118.0
9211 post wrkr, mail sort, msngr, courir	82.0
9233 cleaners, domestics	298.0
9235 refuse and salvage occupations	15.0
9244 school mid-day assistants	50.0
Total	115.4

Table 10: Top occupations: selling a product or service

bsoc00Agg	Mean observations
1132 marketing and sales managers	320.0
1163 retail and wholesale managers	178.0
1221 Managers and proprietors in hospitality and leisure services	150.0
1234 shopkprs, wholesale & retail dealrs	65.0
1239 mngers and prop. in other srvc nec	183.0
2431 architects	22.0
3422 product, clothing & related dsgners	26.0
5433 fishmongers, poultry dressers	5.0
7111 sales and retail assistants	527.0
7112 retail cashiers/check-out operators	110.0
7113 telephone salespersons	39.0
7122 Sales related occupations	99.0
8135 tyre, exhaust and windscrn fitters	5.0
9225 bar staff	70.0
9226 leisure and theme park attendants	10.0
Total	120.6

Table 11: Bottom occupations: selling a product or service

bsoc00Agg	Mean observations
2321 scientific researchers	21.0
2441 public service administrative profs	14.0
2443 probation officers	5.0
2451 librarians	16.0
4142 communication operators	22.0
6114 houseprnts, residential wardens, care assistants and home carers	500.0
6122 childminders, playgroup leaders and educational assistants	349.0
8117 mtl mkng & treating procss operative	12.0
8142 Road and ail construction operatives	28.0
8216 rail transport operatives	9.0
8229 mobile machine drivers & operatives	20.0
9121 labrers build & woodworking trades	70.0
9139 labrs process & plant opertns nec.	33.0
9233 cleaners, domestics	298.0
9244 school mid-day assistants	50.0
Total	96.5

Table 12: Skill indexes description

variableName	description
cfaults	importance of: spotting problems or faults
ccause	importance of: working out cause of problems/ faults
csolutn	importance of: thinking of solutions to problems
canalyse	importance of: analysing complex problems in depth
cread	importance of: reading written information (eg. forms, notices, signs)
cshort	importance of: reading short documents
clong	importance of: reading long documents
cwrite	importance of: writing materials such as forms, notices or signs
cwritesh	importance of: writing short documents
cwritelg	importance of: writing long documents
cpeople	importance of: dealing with people
cteach	importance of: teaching people (individuals or groups)
cspeech	importance of: making speeches/ presentations
cpersuad	importance of: persuading or influencing others
ccaring	importance of: counselling, advising or caring for customers or clients
cteamwk	importance of: working with a team
clisten	importance of: listening carefully to colleagues
ccoop	importance of: cooperating with colleagues
cusepc	importance of: using a computer/ pc/ other computerised equipment
bchoice	how much choice have over way in which do job
bme1	influence personally have on: how hard work
bme2	influence personally have on: what tasks to do
bme3	influence personally have on: how to do the task
bme4	influence personally have on: quality standards work to
cstrengt	importance of: physical strength
cstamina	importance of: physical stamina
chands	importance of: skill or accuracy in using hands/fingers
ctools	importance of: knowledge of use or operation of tools
ccalca	importance of: basic arithmetics
cpercent	Importance of: using fractions
brepeat	how often work involves short repetitive tasks
bvariety	how much variety in job
cselling	importance of: selling a product or service
cproduct	importance of: knowledge of particular products or services
cspecial	importance of: specialist knowledge or understanding
corgwork	importance of: knowledge of how organisation works
cplanme	importance of: planning own activities
cplanoth	importance of: planning the activities of others
cmytime	importance of: organising own time
cahead	importance of: thinking ahead