1 Definitions

Table 1: Number of core jobs by type and time in core threshold

	Years as core				
Core type	17	16	15	14	13
Below GCSE C	2	4	4	5	6
GCSE C to A lev.	10	13	15	16	18
Bachelor +	71	72	74	77	77
Below GCSE C - GCSE C to A lev.	17	24	30	34	36
Below GCSE C - Bach+	0	0	0	0	0
GCSE C to A lev. - Bach+	0	2	2	4	4
Total	100	115	125	136	141

Note: I force the intersection of the core and 4-2-3 transition definition to be empty. Table generated on 12 Jun 2020 at 12:36:13. Table generated with do file 4_lfsAnalysis/relaxing_core_jobs.do

Table 2: Effect of relaxing number of switches constraint

	Definition					
	3-3-3	2-4-3	4-2-3	5-5-7	4-6-7	6-4-7
Transition type	(1)	(2)	(3)	(4)	(5)	(6)
Low to Low-Mid	17	18	20	22	22	22
Mid to Low-Mid	1	1	1	1	1	2
Mid to Mid-High	0	0	1	1	1	1
Low-Mid to Mid	1	1	1	1	1	1
Mid-High to High	3	4	4	4	4	4
Total	22	24	27	29	29	30

Note: each column shows the breakdown by transition type when my definition of a transitioning job is the union all the current and previous columns. Table generated on 10 Jun 2020 at 17:59:46.

2 Effect of transitioning

The basic specification is given by:

$$y_{iot} = \lambda_o + \beta_1 e_i + \beta_2 1_{\{t>transition\_time\}} + \beta_3 e_i \times 1_{\{t>transition\_time\}} \qquad (1)$$

where λ_o denotes occupation fixed-effects, e_i is an education-level dummy. xpectation: $\beta_1 \neq 0$, $\beta_2 = \beta_3 = 0$. I try four different definitions of the transition

year:

- *First out*: first year out of the initial category.

- *Last out:* last year in initial category + 1.

- *First in:* first year in final category.

- *Last in:* latest year of transition into final category + 1.

Figure 1: Number of transitioned occupations by transition type
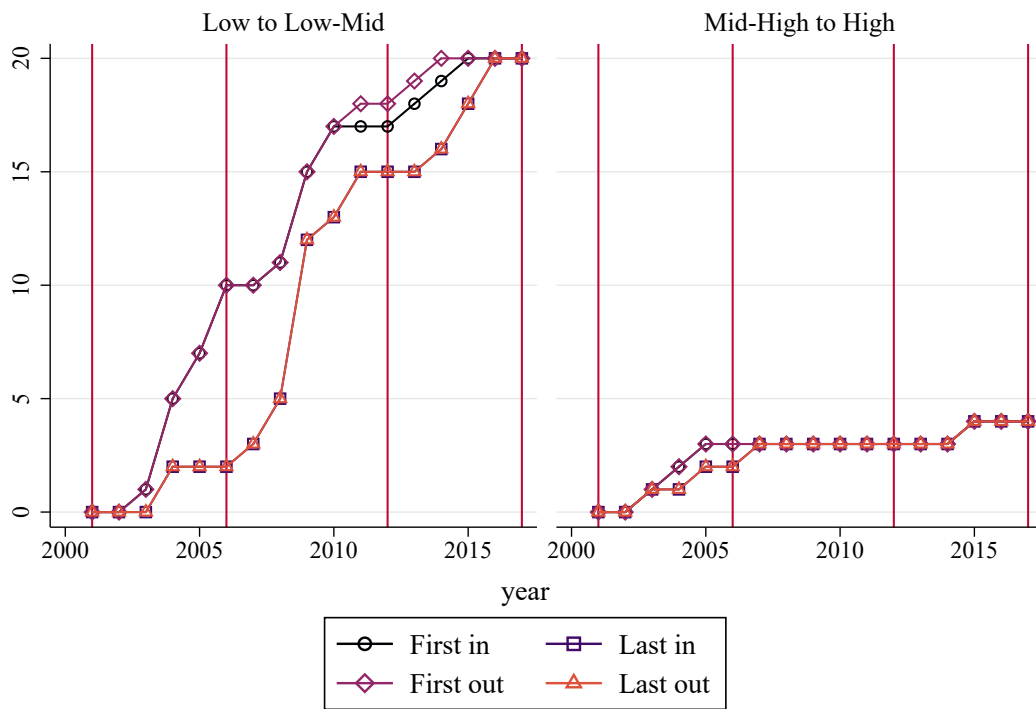
Graphs by restrictedType

Note: Transitions are defined as the union of 3-3-3, 4-2-3 and 2-4-3. Vertical lines indicate years for which I have SES data. Figure generated on 12 Jun 2020 at 15:09:22. Figure generated using the dofile 4_lfsAnalysis/transition_time_graphs.do.

Table 3: Dependent variable: analytical skill

Regressor	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Low to Low-Mid								
Mid	0.032	0.020	0.039*	0.026	0.032	0.020	0.039*	0.026
	(0.019)	(0.019)	(0.018)	(0.017)	(0.019)	(0.019)	(0.018)	(0.017)
First out	0.038	0.002						
	(0.021)	(0.034)						
Mid × First out	-0.003	0.015						
	(0.028)	(0.028)						
Last out			0.021	0.077				
			(0.023)	(0.047)				
Mid × Last out			-0.016	0.002				
			(0.031)	(0.030)				
First in					0.038	0.002		
					(0.021)	(0.034)		
Mid × First in					-0.003	0.015		
					(0.028)	(0.028)		
Last in							0.021	0.077
							(0.023)	(0.047)
Mid × Last in							-0.016	0.002
							(0.031)	(0.030)
Occupation FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE		✓		✓		✓		✓
Number of jobs	17	17	17	17	17	17	17	17
Observations	852	852	852	852	852	852	852	852
Mid-High to High								
High	0.052**	0.049**	0.052**	0.050**	0.052**	0.049**	0.052**	0.050**
	(0.018)	(0.018)	(0.017)	(0.017)	(0.018)	(0.018)	(0.017)	(0.017)
First out	-0.024	-0.061*						
	(0.020)	(0.029)						
High × First out	-0.004	-0.002						
	(0.024)	(0.024)						
Last out			-0.023	-0.052*				
			(0.020)	(0.026)				
High × Last out			-0.006	-0.003				
			(0.023)	(0.023)				
First in					-0.024	-0.061*		
					(0.020)	(0.029)		
High × First in					-0.004	-0.002		
					(0.024)	(0.024)		
Last in							-0.023	-0.052*
							(0.020)	(0.026)
High × Last in							-0.006	-0.003
							(0.023)	(0.023)
Occupation FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE		✓		✓		✓		✓
Number of jobs	4	4	4	4	4	4	4	4
Observations	621	621	621	621	621	621	621	621

Note: robust standard errors in parenthesis. The dependent variable ranges from 0 to 1. Columns differ in the fixed effect included and the definition of the transition year. Regressions pool observations from all years, but use observations from transitioning occupations only. I restrict observations to the education levels indicated in the panel subtitle. Table generated on 12 Jun 2020 at 17:15:22. Table generated with do file 3_sesAnalysis/create_did_regressions.do

Table 4: Dependent variable: manual skill

Regressor	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Low to Low-Mid								
Mid	0.011	0.009	0.004	0.001	0.011	0.009	0.004	0.001
	(0.019)	(0.019)	(0.017)	(0.017)	(0.019)	(0.019)	(0.017)	(0.017)
First out	0.045*	0.033						
	(0.021)	(0.034)						
Mid × First out	-0.016	-0.016						
	(0.028)	(0.028)						
Last out			0.031	0.032				
			(0.022)	(0.050)				
Mid × Last out			0.002	0.002				
			(0.029)	(0.030)				
First in					0.045*	0.033		
					(0.021)	(0.034)		
Mid × First in					-0.016	-0.016		
					(0.028)	(0.028)		
Last in							0.031	0.032
							(0.022)	(0.050)
Mid × Last in							0.002	0.002
							(0.029)	(0.030)
Occupation FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE		✓		✓		✓		✓
Number of jobs	17	17	17	17	17	17	17	17
Observations	852	852	852	852	852	852	852	852
Mid-High to High								
High	-0.091**	-0.090**	-0.087**	-0.086**	-0.091**	-0.090**	-0.087**	-0.086**
	(0.028)	(0.028)	(0.026)	(0.026)	(0.028)	(0.028)	(0.026)	(0.026)
First out	0.044	0.040						
	(0.033)	(0.045)						
High × First out	-0.047	-0.050						
	(0.038)	(0.038)						
Last out			0.055	0.058				
			(0.033)	(0.042)				
High × Last out			-0.060	-0.063				
			(0.038)	(0.038)				
First in					0.044	0.040		
					(0.033)	(0.045)		
High × First in					-0.047	-0.050		
					(0.038)	(0.038)		
Last in							0.055	0.058
							(0.033)	(0.042)
High × Last in							-0.060	-0.063
							(0.038)	(0.038)
Occupation FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE		✓		✓		✓		✓
Number of jobs	4	4	4	4	4	4	4	4
Observations	621	621	621	621	621	621	621	621

Note: robust standard errors in parenthesis. The dependent variable ranges from 0 to 1. Columns differ in the fixed effect included and the definition of the transition year. Regressions pool observations from all years, but use observations from transitioning occupations only. I restrict observations to the education levels indicated in the panel subtitle. Table generated on 12 Jun 2020 at 17:15:22. Table generated with do file 3_sesAnalysis/create_did_regressions.do

Table 5: Dependent variable: routine skill

Regressor	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Low to Low-Mid								
Mid	0.085	0.056	0.089*	0.055	0.085	0.056	0.089*	0.055
	(0.045)	(0.044)	(0.040)	(0.040)	(0.045)	(0.044)	(0.040)	(0.040)
First out	0.241***	0.019						
	(0.046)	(0.079)						
Mid × First out	-0.089	-0.052						
	(0.064)	(0.064)						
Last out			0.207***	-0.042				
			(0.049)	(0.114)				
Mid × Last out			-0.105	-0.064				
			(0.068)	(0.068)				
First in					0.241***	0.019		
					(0.046)	(0.079)		
Mid × First in					-0.089	-0.052		
					(0.064)	(0.064)		
Last in							0.207***	-0.042
							(0.049)	(0.114)
Mid × Last in							-0.105	-0.064
							(0.068)	(0.068)
Occupation FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE		✓		✓		✓		✓
Number of jobs	17	17	17	17	17	17	17	17
Observations	852	852	852	852	852	852	852	852
Mid-High to High								
High	-0.012	-0.006	-0.042	-0.034	-0.012	-0.006	-0.042	-0.034
	(0.059)	(0.059)	(0.056)	(0.056)	(0.059)	(0.059)	(0.056)	(0.056)
First out	0.010	0.088						
	(0.063)	(0.092)						
High × First out	-0.162*	-0.166*						
	(0.078)	(0.078)						
Last out			-0.002	0.095				
			(0.063)	(0.086)				
High × Last out			-0.118	-0.125				
			(0.078)	(0.078)				
First in					0.010	0.088		
					(0.063)	(0.092)		
High × First in					-0.162*	-0.166*		
					(0.078)	(0.078)		
Last in							-0.002	0.095
							(0.063)	(0.086)
High × Last in							-0.118	-0.125
							(0.078)	(0.078)
Occupation FE	✓	✓	✓	✓	✓	✓	✓	✓
Year FE		✓		✓		✓		✓
Number of jobs	4	4	4	4	4	4	4	4
Observations	621	621	621	621	621	621	621	621

Note: robust standard errors in parenthesis. The dependent variable ranges from 0 to 1. Columns differ in the fixed effect included and the definition of the transition year. Regressions pool observations from all years, but use observations from transitioning occupations only. I restrict observations to the education levels indicated in the panel subtitle. Table generated on 12 Jun 2020 at 17:15:22. Table generated with do file 3_sesAnalysis/create_did_regressions.do

3 Regressions of skill use at border jobs

Table 6: Relative skill use in border jobs across education groups (index with standardized variables)

	Analytical (1)	Manual (2)	Routine (3)
Below GCSE C / GCSE C-A lev. border			
GCSE C-A levels	0.042***	-0.008	0.066***
	(0.007)	(0.008)	(0.018)
Effect size	0.374	-0.040	0.387
Overall R^2	0.17	0.29	0.10
Observations	3,100.00	3,100.00	3,100.00
GCSE C to A lev. / Bachelor+ border			
Bachelor+	0.050***	-0.065***	-0.021
	(0.009)	(0.016)	(0.031)
Effect size	0.443	-0.327	-0.122
Overall R^2	0.10	0.22	0.06
Observations	961.00	961.00	961.00

Note: all skill indexes range between 0 and 1. Regressions use individual-level data. Robust standard errors in parenthesis. Coefficents represent the difference relative the lower education level. I use dummy of basic to moderate PC use complexity as measure of routineness. I pool data from all years. Regressions include occupation fixed-effects. Effect sizes are computed as the regression coefficient divided by the standard deviation in the occupation-level skill indexes. Table generated on 12 Jun 2020 at 15:55:03. Table generated with do file 3_sesAnalysis/createSESSkillRegressions.do

4 Pooled regressions

Table 7: Relative skill use in border jobs across education groups (simple average indexes)

Base level: Below GCSE C	Analytical (1)	Manual (2)	Routine (3)
Below GCSE C / GCSE C-A lev. border			
GCSE C-A levels	0.042***	-0.005	0.066***
	(0.007)	(0.008)	(0.018)
Bachelor+	0.063***	-0.054***	0.027
	(0.010)	(0.012)	(0.025)
Overall R^2	0.19	0.29	0.09
Observations	3,669	3,669	3,669
GCSE C to A lev. / Bachelor+ border			
GCSE C-A levels	0.050**	-0.096***	-0.096*
	(0.017)	(0.026)	(0.048)
Bachelor+	0.103***	-0.162***	-0.120*
	(0.017)	(0.025)	(0.048)
Overall R^2	0.11	0.26	0.05
Observations	1,076	1,076	1,076
Below GCSE C jobs			
GCSE C-A levels	0.022	0.011	0.081**
	(0.014)	(0.013)	(0.030)
Bachelor+	0.078**	-0.023	0.120
	(0.029)	(0.028)	(0.064)
Overall R^2	0.17	0.17	0.19
Observations	1,108	1,108	1,108
GCSE C-A lev. jobs			
GCSE C-A levels	0.020*	-0.050***	-0.007
	(0.009)	(0.012)	(0.022)
Bachelor+	0.054***	-0.099***	-0.108***
	(0.010)	(0.013)	(0.025)
Overall R^2	0.11	0.40	0.06
Observations	3,695	3,695	3,695
Bachelor+ jobs			
GCSE C-A levels	0.026*	-0.049*	-0.078*
	(0.012)	(0.020)	(0.033)
Bachelor+	0.067***	-0.122***	-0.167***
	(0.011)	(0.019)	(0.032)
Overall R^2	0.15	0.32	0.22
Observations	5,043	5,043	5,043

Note: all skill indexes range between 0 and 1. Regressions use individual-level data. Robust standard errors in parenthesis. I use dummy of basic to moderate use complexity as measure of routineness. I pool data from all years. Regressions include occupation fixed-effects. Effect sizes are computed as the regression coefficient divided by the standard deviation in the occupation-level skill indexes. Table generated on 12 Jun 2020 at 17:15:26. Table generated with do file 3_sesAnalysis/createSESSkillRegressionsFull.do

Table 8: Relative skill use in border jobs across education groups (index with standardized variables)

Base level: Below GCSE C	Analytical (1)	Manual (2)	Routine (3)
Below GCSE C / GCSE C-A lev. border			
GCSE C-A levels	0.041***	-0.006	0.066***
	(0.007)	(0.008)	(0.018)
Bachelor+	0.061***	-0.055***	0.027
	(0.009)	(0.012)	(0.025)
Overall R^2	0.19	0.28	0.09
Observations	3,669	3,669	3,669
GCSE C to A lev. / Bachelor+ border			
GCSE C-A levels	0.049**	-0.096***	-0.096*
	(0.016)	(0.026)	(0.048)
Bachelor+	0.099***	-0.162***	-0.120*
	(0.016)	(0.025)	(0.048)
Overall R^2	0.11	0.26	0.05
Observations	1,076	1,076	1,076
Below GCSE C jobs			
GCSE C-A levels	0.022	0.011	0.081**
	(0.014)	(0.013)	(0.030)
Bachelor+	0.077**	-0.023	0.120
	(0.028)	(0.028)	(0.064)
Overall R^2	0.16	0.17	0.19
Observations	1,108	1,108	1,108
GCSE C-A lev. jobs			
GCSE C-A levels	0.019*	-0.051***	-0.007
	(0.009)	(0.012)	(0.022)
Bachelor+	0.051***	-0.099***	-0.108***
	(0.010)	(0.013)	(0.025)
Overall R^2	0.11	0.40	0.06
Observations	3,695	3,695	3,695
Bachelor+ jobs			
GCSE C-A levels	0.025*	-0.050*	-0.078*
	(0.011)	(0.020)	(0.033)
Bachelor+	0.064***	-0.123***	-0.167***
	(0.011)	(0.019)	(0.032)
Overall R^2	0.15	0.32	0.22
Observations	5,043	5,043	5,043

Note: all skill indexes range between 0 and 1. Regressions use individual-level data. Robust standard errors in parenthesis. I use dummy of basic to moderate PC use complexity as measure of routineness. I pool data from all years. Regressions include occupation fixed-effects. Effect sizes are computed as the regression coefficient divided by the standard deviation in the occupation-level skill indexes. Table generated on 12 Jun 2020 at 17:15:26. Table generated with do file 3_sesAnalysis/createSESSkillRegressionsFull.do

Table 9: Relative skill use across education groups (simple average indexes)

	Analytical (1)	Manual (2)	Routine (3)
GCSE C-A levels	0.034***	-0.018**	0.043***
	(0.005)	(0.006)	(0.011)
Effect size	0.293	-0.090	0.254
Bachelor+	0.072***	-0.081***	-0.039**
	(0.005)	(0.007)	(0.013)
Effect size	0.618	-0.409	-0.227
Overall R^2	0.35	0.44	0.13
Observations	14,592	14,592	14,592

Note: all skill indexes range between 0 and 1. Regressions use individual-level data. Robust standard errors in parenthesis. Coefficents represent the difference relative the lower education level. I use dummy of basic to moderate PC use complexity as measure of routineness. I pool data from all years. Regressions include occupation fixed-effects. Effect sizes are computed as the regression coefficient divided by the standard deviation in the occupation-level skill indexes. Table generated on 12 Jun 2020 at 17:15:28. Table generated with do file 3_sesAnalysis/createSESSkillRegressionsPooled.do

5 Triangle graphs

Figure 2: Exploring weighting schemes (density plots)

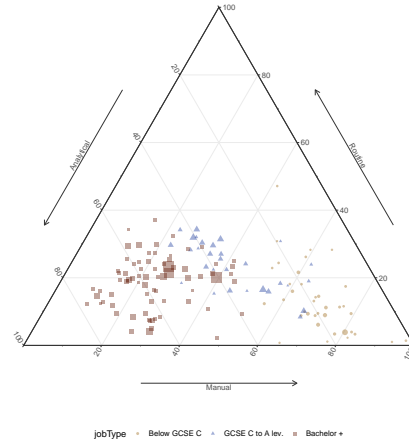(a) Observations in SES education-occupation-
job type cell
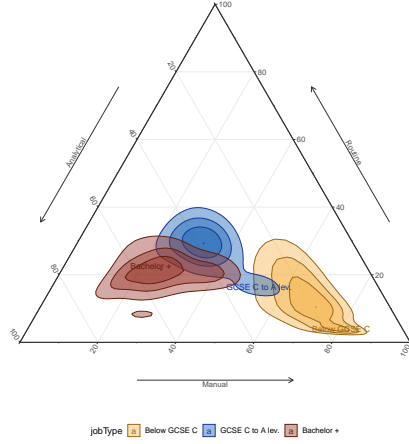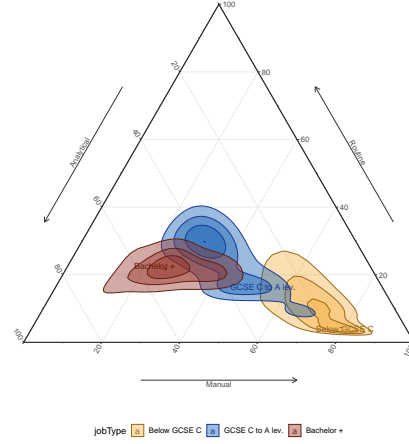
(b) $\sqrt{d_1 d_2} \times observations_{LFS}$

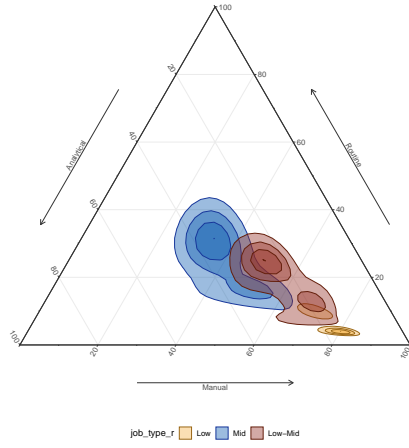(c) $\sqrt{d_1 d_2} \times observations_{LFS} \times observations_{SES}$
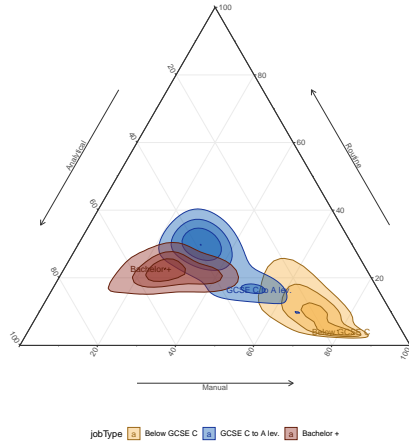
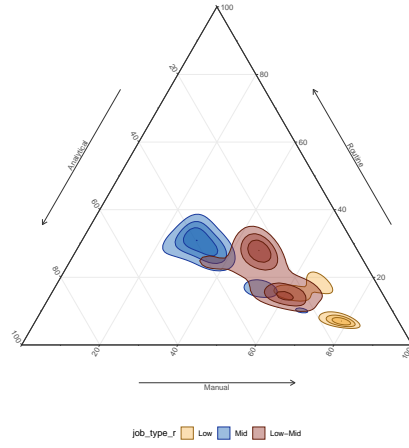(d) $\sqrt{d_1 d_2} \times observations_{SES}$
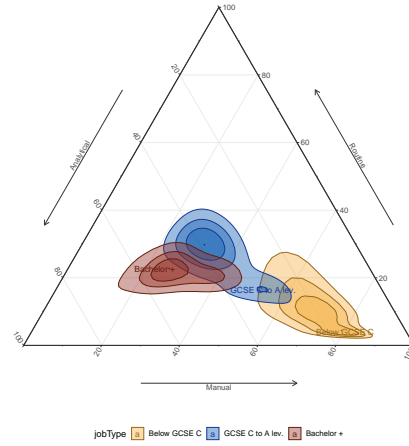
Note: figure based on occupation-level averages. Figure generated on 15 Jun 2020 at 16:04:16. Figure generated using the dofile 3_sesAnalysis/skillUseTriangles.do.
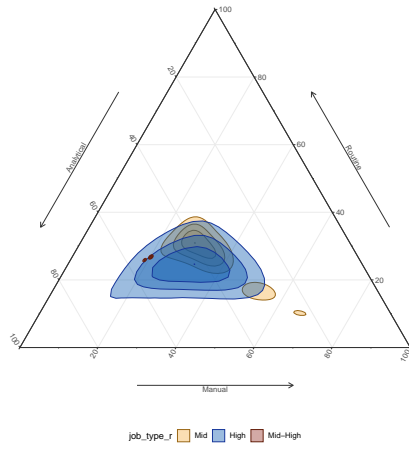
Figure 3: Exploring weighting schemes (scatterplots)

(a) Observations in SES education-occupation-job type cell

(b) $\sqrt{d_1 d_2} \times observations_{LFS}$

(c) $\sqrt{d_1 d_2} \times observations_{LFS} \times observations_{SES}$

(d) $\sqrt{d_1 d_2} \times observations_{SES}$

Note: figure based on occupation-level averages. Figure generated on 15 Jun 2020 at 16:04:16. Figure generated using the dofile 3_sesAnalysis/skillUseTriangles.do.

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Figure 4: Comparing core vs border jobs
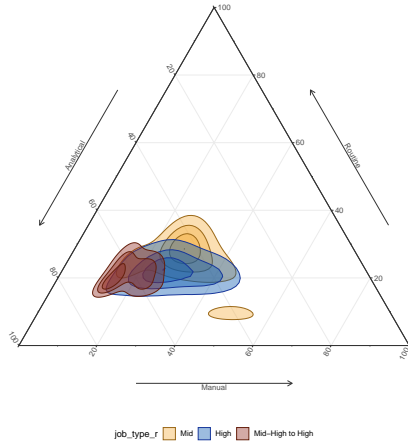
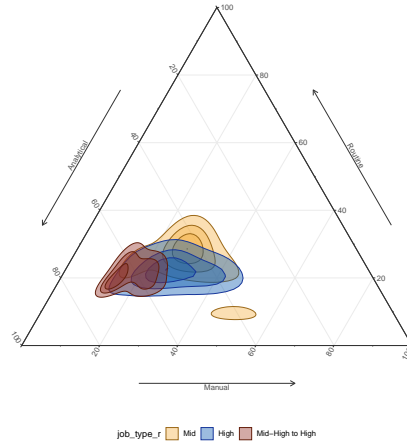(a) Low individuals   (b) Mid individuals

(c) Mid individuals   (d) High individuals

Note: graphs show occupation level averages. Observations weighted using $\sqrt{d_1 d_2 \times observations_{LFS} \times observations_{SES}}$ Figure generated on 15 Jun 2020 at 16:04:17. Figure generated using the dofile 3_sesAnalysis/skillUseTriangles.do.

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Figure 5: Comparing core vs transitioning jobs

(a) Low individuals
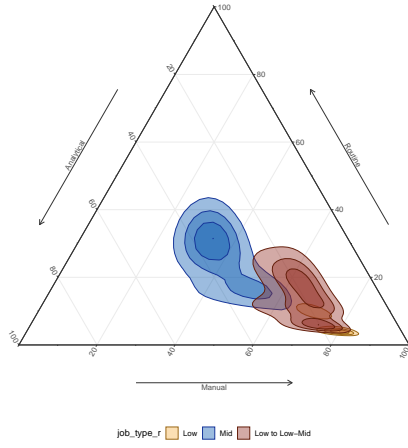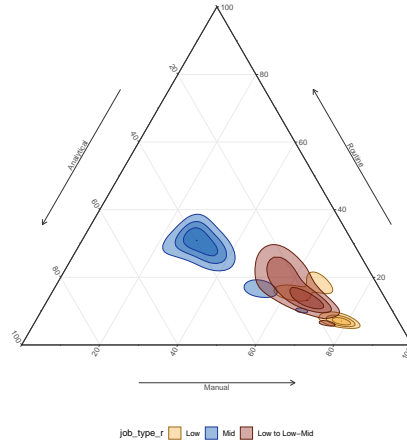
(b) Mid individuals

(c) Mid individuals

(d) High individuals

Note: graphs show occupation level averages. Observations weighted using $\sqrt{d_1 d_2 \times observations_{LFS} \times observations_{SES}}$ Figure generated on 15 Jun 2020 at 16:04:17. Figure generated using the dofile 3_sesAnalysis/skillUseTriangles.do.

6 Average use tables

Table 10: Average skill use in core vs border jobs

Job type	Analytical	Manual	Routine
Low-education individuals			
Low	0.36	0.64	0.35
Mid	0.59	0.49	0.74
Low-mid	0.50	0.66	0.62
Low-education individuals			
Low	0.38	0.66	0.48
Mid	0.62	0.44	0.76
Low-mid	0.55	0.65	0.71
Mid-education individuals			
Mid	0.62	0.44	0.76
High	0.71	0.38	0.62
Mid-High	0.72	0.25	0.70
High-education individuals			
Mid	0.66	0.37	0.64
High	0.77	0.37	0.60
Mid-High	0.78	0.20	0.62

Note: the table shows unweighted average skill use by job type. Table generated on 19 Jun 2020 at 13:29:36. Table generated with do file 3_sesAnalysis/create_average_use_table.do

Table 11: Average skill use in core vs transitioning jobs

Job type	Analytical	Manual	Routine
Low-education individuals			
Low	0.36	0.64	0.35
Low-mid	0.50	0.66	0.62
Low to Low-Mid	0.43	0.67	0.56
Low-education individuals			
Low	0.38	0.66	0.48
Low-mid	0.55	0.65	0.71
Low to Low-Mid	0.46	0.67	0.63
Mid-education individuals			
High	0.71	0.38	0.62
Mid-High	0.72	0.25	0.70
Mid-High to High	0.70	0.35	0.68
High-education individuals			
High	0.77	0.37	0.60
Mid-High	0.78	0.20	0.62
Mid-High to High	0.75	0.23	0.57

Note: the table shows unweighted average skill use by job type. Table generated on 19 Jun 2020 at 13:29:36. Table generated with do file 3_sesAnalysis/create_average_use_table.do

7 Masons

Entry requirements

Figure 6: Education employment shares: brick-layers vs population
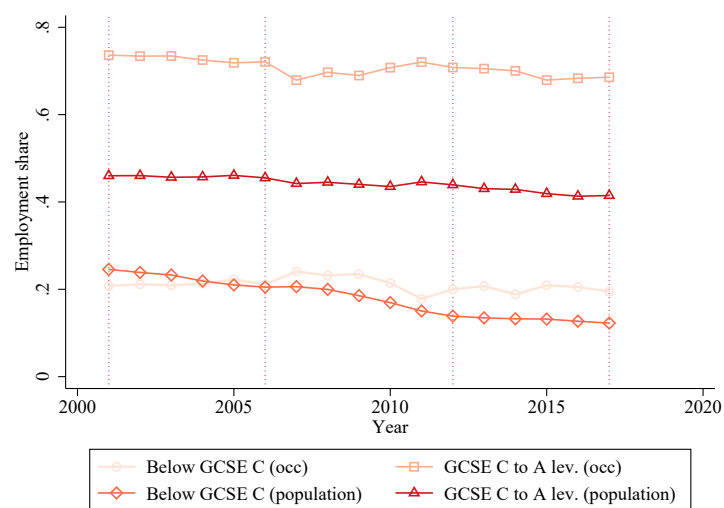
Note: vertical lines shows years with SES data. Figure generated on 19 Jun 2020 at 13:35:16. Figure generated using the dofile 4_lfsAnalysis/classifyJobs.do.

Figure 7: Various stats for brick layers

(a) Share of young brick-layers

(b) Share low-education by age group

(c) Share mid-education by age group
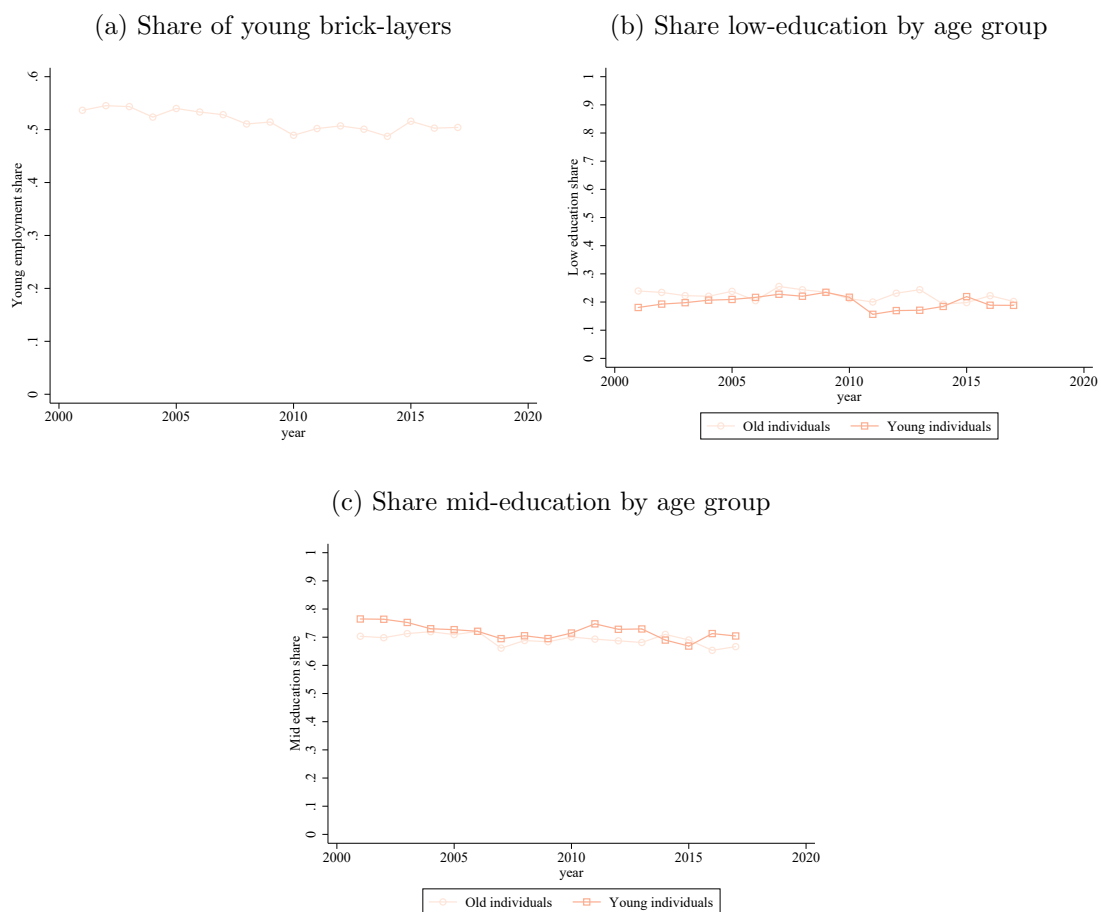
Note: vertical lines shows years with SES data. Figure generated on 19 Jun 2020 at 13:35:33. Figure generated using the dofile 4_lfsAnalysis/classifyJobs.do.
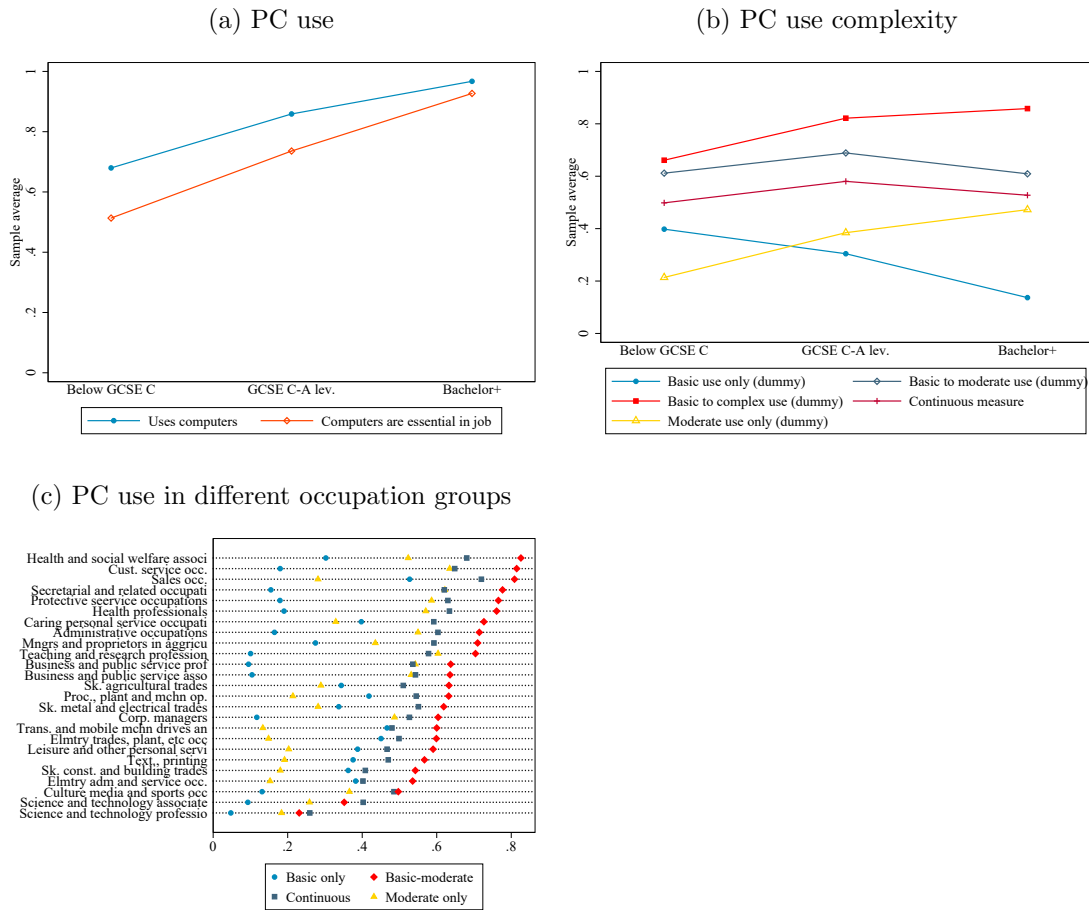
8   Other graphs

Figure 8: PC use complexitity across different occupation groups

(a) PC use

(b) PC use complexity

(c) PC use in different occupation groups

Note: basic use involves routine procedures such as printing and invoicing. Moderate use involves use of email and word processing and/or spreadsheets. Complex use involves use for statistical analysis. Figure generated on 12 Jun 2020 at 15:13:02. Figure generated using the dofile 3_sesAnalysis/occRoutinePCUse.do.