

Appendix

A1. Full Gelbach decomposition. An illustration for two contrasted occupations

We illustrate here the decomposition of the Gelbach-estimated contribution Gelbach, 2016 of education δ^{Educ} to lowering the magnitude of the correlation between occupation and the risk of being in poor health. We consider two a priori contrasted main occupations “Food Preparation Assistants” (FPA) and “Chief Executives, Senior Officials and Legislators” (CEO), bearing in mind the reference profession is “Business and Associate Professionals”.

Table 5 (results for male respondents) shows that $\delta^{Education}$ is .01158 for “Food preparation assistants” and -.01528 for “Chief Executives, senior officials and legislators”. As our education variable consists of a series of ISCED¹ dummies, for each considered occupation, $\delta^{Educ} = \sum_l \delta^{ISCED_l}$, $l = 0, 1, 2, 3, 5, 6$ (ref.= 4). Following eq.(??) each δ^{ISCED_l} is the cross-product of the γ^{ISCED_l} ’s (reported in Tables 3 and 4) by occupation \times ISCED-specific ρ ’s. More precisely:

- FPA’s

$$\underbrace{.01158}_{\delta^{Educ}} = \underbrace{.23764 \times .022}_{\rho^{ISCED0} \times \gamma^{ISCED0}} + \underbrace{-.01932 \times .026}_{\rho^{ISCED1} \times \gamma^{ISCED1}} + \underbrace{-.07331 \times .029}_{\rho^{ISCED2} \times \gamma^{ISCED2}} + \underbrace{.12980 \times .009}_{\rho^{ISCED3} \times \gamma^{ISCED3}} + \underbrace{-.16606 \times -.046}_{\rho^{ISCED5} \times \gamma^{ISCED5}} + \underbrace{-0.00234 \times -.113}_{\rho^{ISCED6} \times \gamma^{ISCED6}}$$

Note the role of $\rho^{ISCED3} = .12980$ (i.e. a higher propensity to be *ISCED* 3) and $\rho^{ISCED5} = -.16606$ (i.e. a lower propensity to be *ISCED* 5) in contributing to $\delta > 0$.

¹See the [International Standard classification of Education](#).

- CEO's

$$\begin{aligned}
\underbrace{-.01528}_{\delta^{Educ}} = & \underbrace{.00008 \times .022}_{\rho^{ISCED\,0} \times \gamma^{ISCED\,0}} + \underbrace{-.00644 \times .026}_{\rho^{ISCED\,1} \times \gamma^{ISCED\,1}} + \underbrace{-.05863 \times .029}_{\rho^{ISCED\,2} \times \gamma^{ISCED\,2}} + \\
& \underbrace{-.13735 \times .009}_{\rho^{ISCED\,3} \times \gamma^{ISCED\,3}} + \underbrace{.21522 \times -.046}_{\rho^{ISCED\,5} \times \gamma^{ISCED\,5}} + \underbrace{.02032 \times -.113}_{\rho^{ISCED\,6} \times \gamma^{ISCED\,6}}
\end{aligned}$$

Note the role of $\rho^{ISCED\,3} = -.13735$ (i.e. a lower propensity to be *ISCED* 3) and $\rho^{ISCED\,5} = .21522$ (i.e. a much high propensity to be *ISCED* 5) in contributing to $\delta < 0$.

A2: Tables & Figures

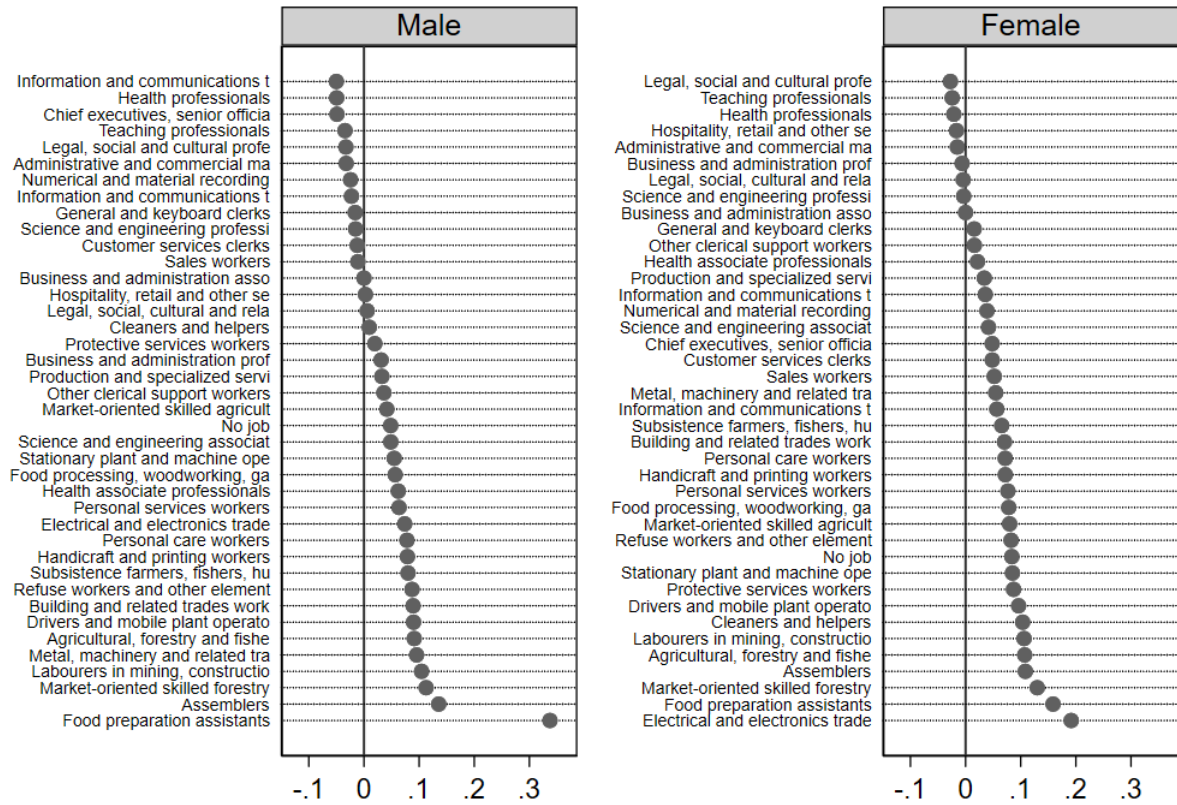


Figure 1: Regression coefficients by sex between jobs and poor health

The figure shows the coefficient of the regression (??) with the main job as the occupation variable controlling for age and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

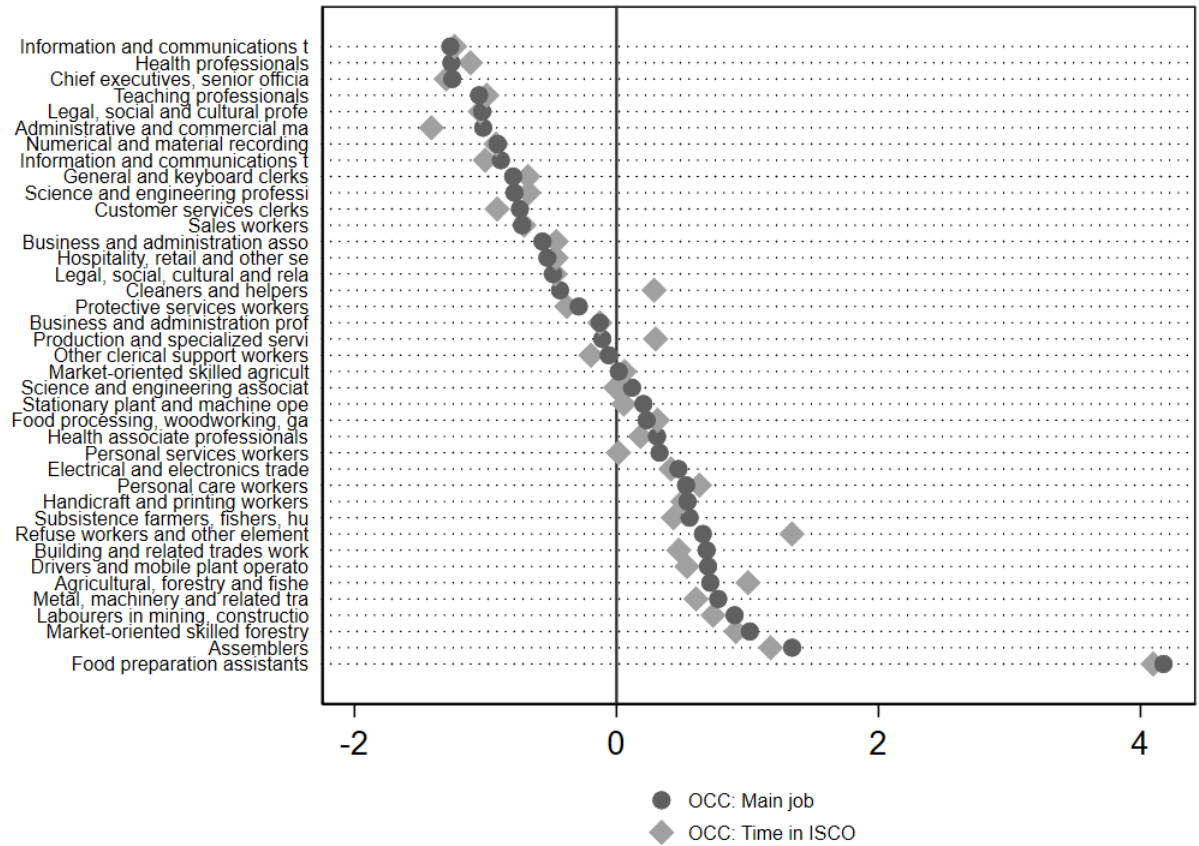


Figure 2: Correlation between coefficients (standardized) with main job and time in each ISCO code as an independent variable - Male

The figure shows the correlation of the coefficients of the regression (??) with the main job or time in each ISCO code as the occupation variable controlling for age and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

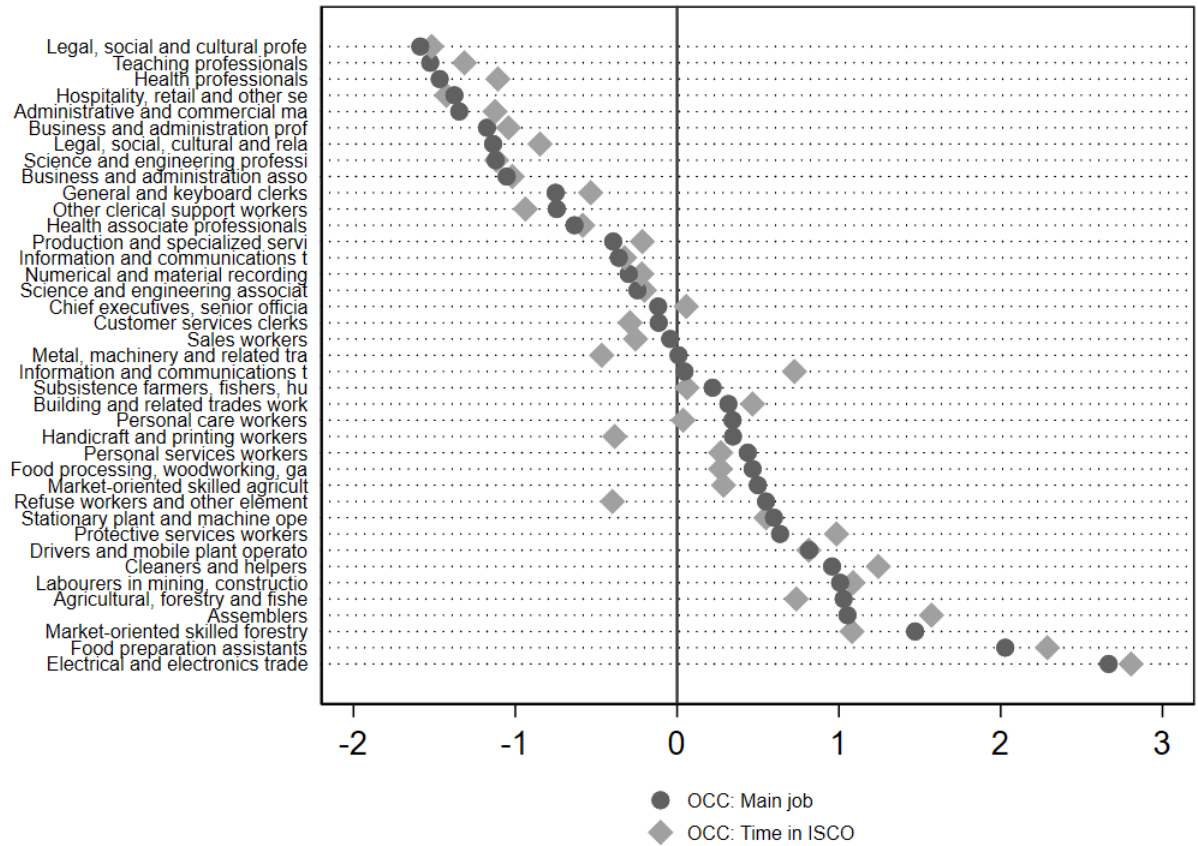


Figure 3: Correlation between coefficients (standardized) with main job and time in each ISCO code as an independent variable - Female

The figure shows the correlation of the coefficients of the regression (??) with main job or time in each ISCO code as the occupation variable controlling for age and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

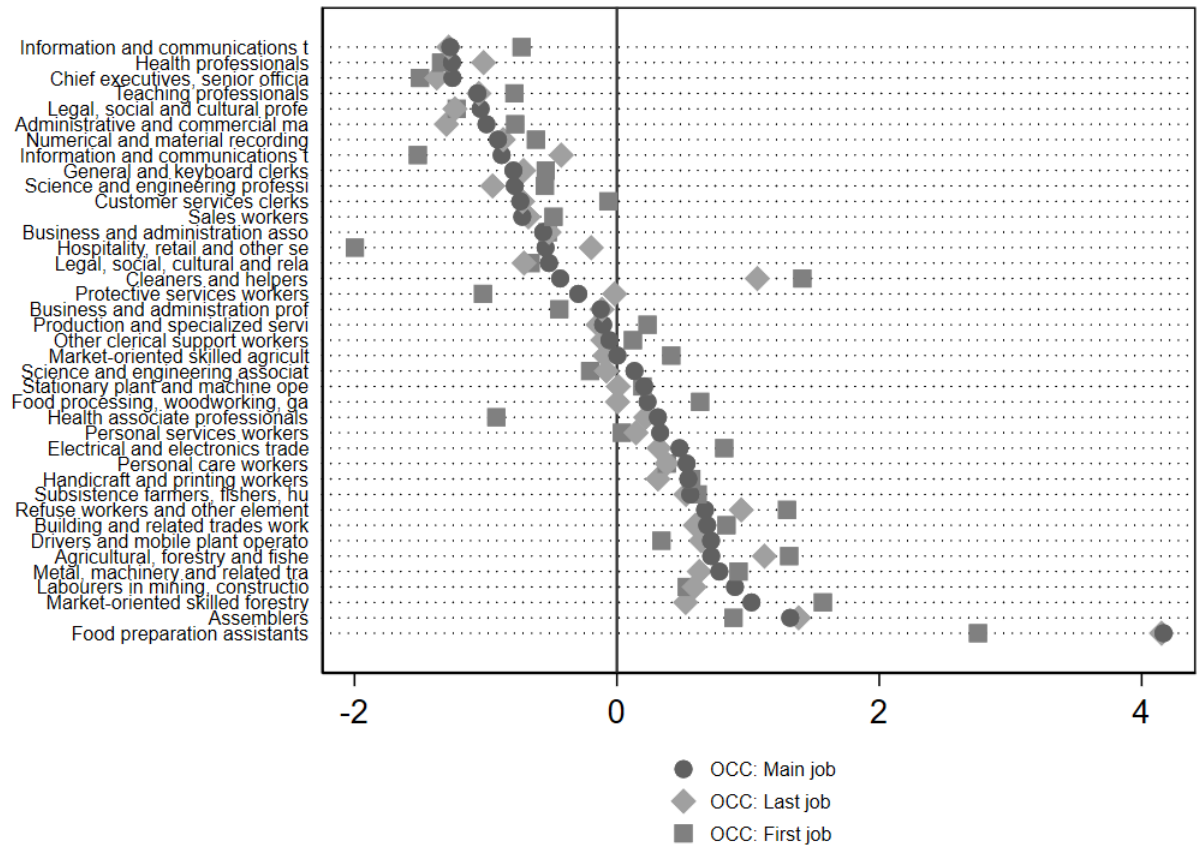


Figure 4: Correlation between coefficients (standardized) with first, main and last job as an independent variable - Male

The figure shows the correlation of the coefficients of the regression (??) with main job, first job or last job as the occupation variable controlling for age and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

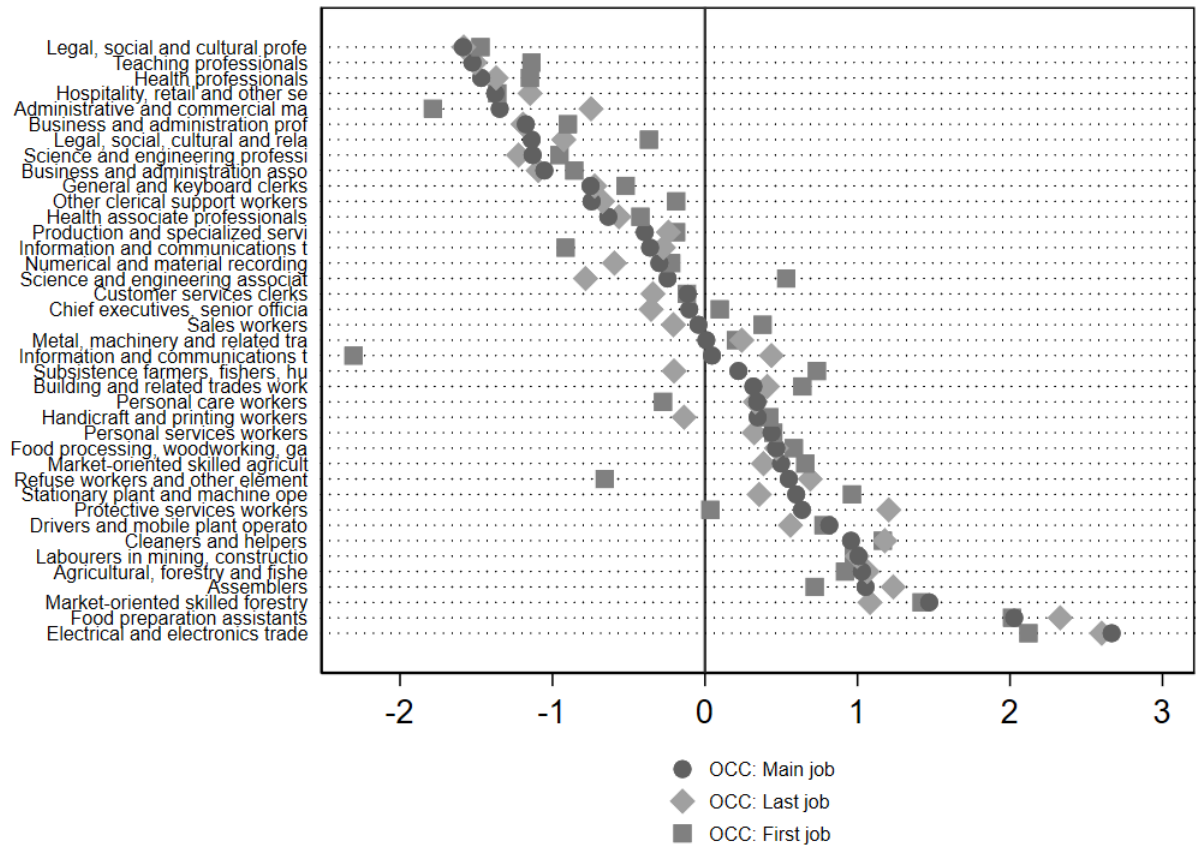


Figure 5: Correlation between coefficients (standardized) with first, main and last job as an independent variable - Female

The figure shows the correlation of the coefficients of the regression (??) with main job, first job or last job as the occupation variable controlling for age and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

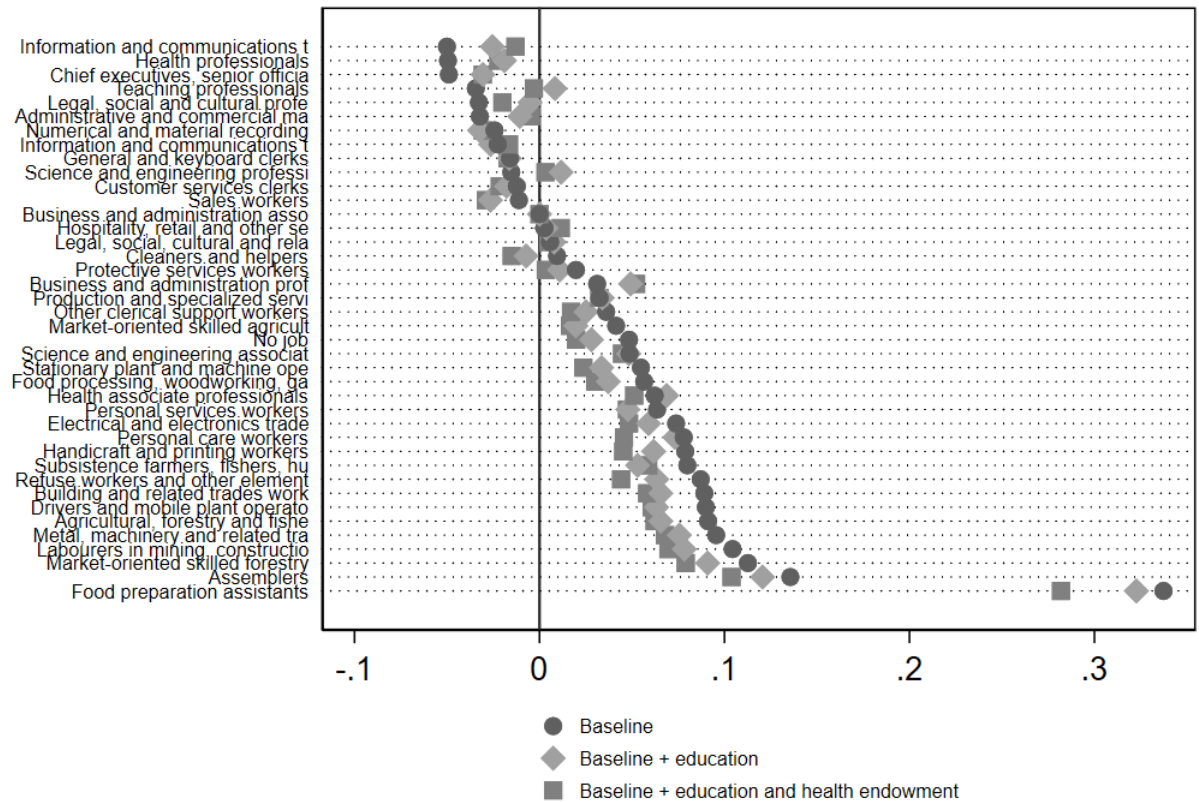


Figure 6: Reduction of the coefficients across the different regressions - Male

The figure shows the correlation of the coefficients of the regression (??) with main job as the occupation variable controlling for 1) age and country fixed effects 2) age and education and country fixed effects 3) age, education, childhood variables and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

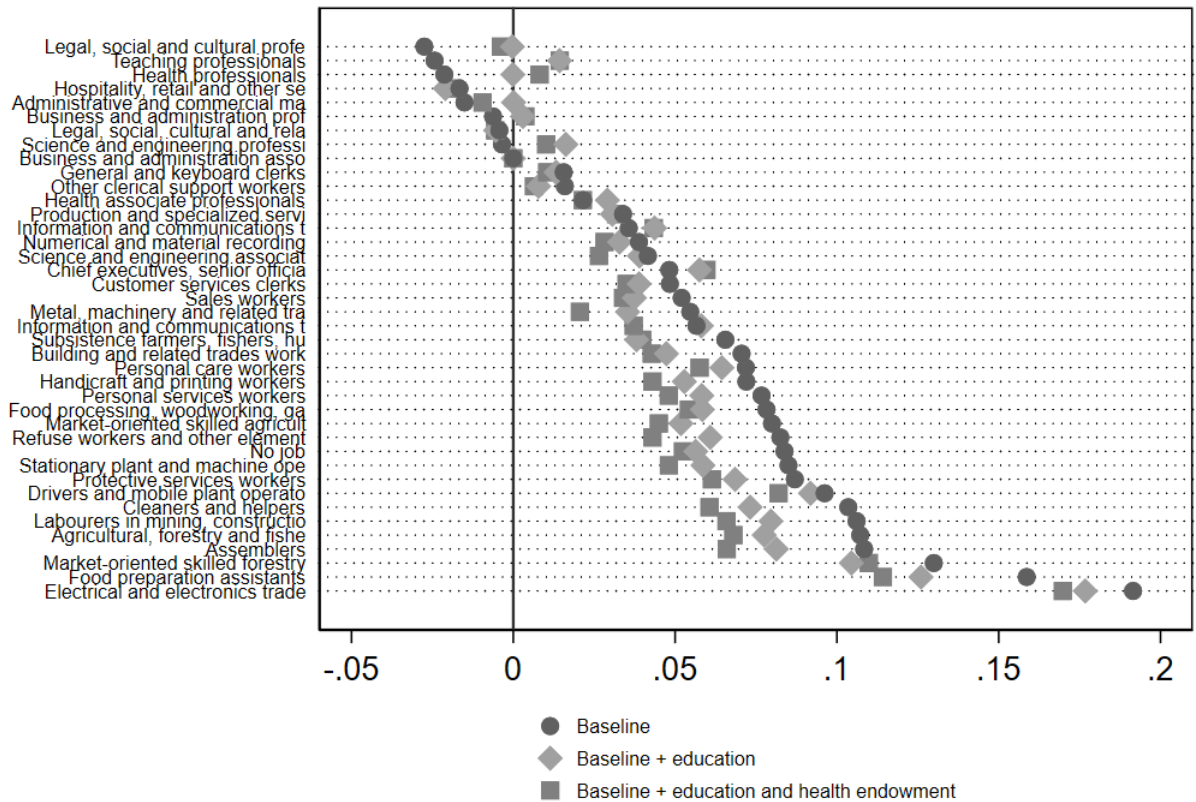


Figure 7: Reduction of the coefficients across the different regressions - Female

The figure shows the correlation of the coefficients of the regression (??) with main job as the occupation variable controlling for 1) age and country fixed effects 2) age and education and country fixed effects 3) age, education, childhood variables and country fixed effects. Data are from the 7th wave of the SHARE survey after dropping incomplete data for the full specification.

Table 1: Health statistics

	Observations	Percent
Excellent	3058	6.11 %
Very Good	7745	15.49 %
Good	18212	36.42 %
Fair	14690	29.37 %
Poor	6307	12.61 %
N	50 012	

Table 2: Descriptive statistics

Main job	Obs	Prop Male	Mean age	Mean health	Mean educa- tion
Chief executives, senior officials and legislators	679	.69	67.86	.74	3.94
Administrative and commercials managers	568	.52	66.51	.68	4.08
Production and specialized services managers	678	.59	69.02	.77	3.39
Hospitality, retail and other services managers	321	.51	66.74	.74	3.26
Science and engineering professionals	1566	.67	68.25	.74	4.17
Health professionals	1496	.21	65.61	.70	4.16
Teaching professionals	2960	.28	66.93	.70	4.64
Business and administration professionals	831	.35	66.14	.75	3.78
Information and communications technology professionals	356	.54	64.32	.67	4.03
Legal, social and cultural professionals	1105	.35	66.21	.70	4.26
Science and engineering associate professionals	1890	.71	67.59	.79	3.29
Health associate professionals	727	.23	66.20	.76	3.64
Business and administration associate professionals	2556	.36	66.71	.73	3.30
Legal, social, cultural and related associate professionals	458	.38	65.14	.73	3.33
Information and communications technicians	192	.70	66.07	.74	3.47
General and keyboard clerks	2350	.21	66.16	.71	3.18
Customer services clerks	652	.26	66.58	.76	2.98
Numerical and material recording clerks	1177	.30	66.99	.78	3.03
Other clerical support workers	790	.33	65.97	.76	2.96
Personal services workers	1934	.25	65.70	.80	2.57
Sales workers	2518	.24	65.82	.77	2.63
Personal care workers	1375	.06	64.87	.77	2.99
Protective services workers	573	.78	66.21	.75	2.88

Market-oriented skilled agricultural workers	1268	.46	70.87	.84	1.96
Market-oriented skilled forestry, fishery and hunting workers	284	.68	67.93	.85	2.35
Subsistence farmers, fishers, hunters and gatherers	782	.46	67.83	.90	2.20
Building and related trades workers (excluding electricians)	2120	.90	66.56	.82	2.35
Metal, machinery and related trades workers	2281	.90	66.81	.83	2.68
Handicraft and printing workers	712	.45	68.43	.83	2.48
Electrical and electronics trades workers	823	.90	66.19	.81	2.96
Food processing, woodworking, garment and other craft and related trades workers	2219	.31	67.19	.83	2.42
Stationary plant and machine operators	1727	.45	67.17	.84	2.29
Assemblers	341	.52	66.24	.85	2.49
Drivers and mobile plant operators	2093	.91	67.00	.85	2.54
Cleaners and helpers	1342	.04	66.72	.84	1.82
Agricultural, forestry and fishery labourers	391	.36	70.85	.88	1.86
Labourers in mining, construction, manufacturing and transport	1523	.56	66.58	.84	2.20
Food preparation assistants	257	.04	66.92	.91	2.035
Refuse workers and other elementary workers	365	.53	66.91	.85	2.46
No job	3732	.11	70.56	.82	1.65
<i>N</i>	50 012				

Comments: The data are from the SHARE Wave 7. Mean age (resp. health) refers to the mean age (resp. health) at the time of the interview. Health equals to 1 means that the individual is in less than very good health. Mean education is the mean of the ISCED code (0 to 6).

Table 3: Regression coefficients - Male

	(1)	(2)	(3)
	Model 1	Model 2	Model 3
Age	0.008*** (0.000)	0.008*** (0.000)	0.006*** (0.000)
Chief executives, senior officials and legislators	-0.049* (0.027)	-0.031 (0.027)	-0.031 (0.027)
Administrative and commercial managers	-0.032 (0.031)	-0.011 (0.031)	-0.005 (0.030)
Production and specialized services managers	0.032 (0.028)	0.034 (0.028)	0.032 (0.027)
Hospitality, retail and other services managers	0.003 (0.039)	0.004 (0.039)	0.011 (0.038)
Science and engineering professionals	-0.015 (0.021)	0.012 (0.022)	0.003 (0.021)
Health professionals	-0.049* (0.030)	-0.019 (0.030)	-0.022 (0.030)
Teaching professionals	-0.034 (0.022)	0.008 (0.023)	-0.003 (0.022)
Business and administration professionals	0.031 (0.032)	0.049 (0.032)	0.052* (0.031)
Information and communications technology professionals	-0.050 (0.036)	-0.025 (0.036)	-0.013 (0.036)
Legal, social and cultural professionals	-0.033 (0.029)	-0.005 (0.029)	-0.020 (0.028)
Science and engineering associate professionals	0.049** (0.020)	0.048** (0.020)	0.045** (0.020)
Health associate professionals	0.062* (0.020)	0.069* (0.020)	0.051 (0.020)

	(0.038)	(0.038)	(0.037)
Legal, social, cultural and related associate professionals	0.006	0.008	0.005
	(0.038)	(0.038)	(0.037)
Information and communications technicians	-0.023	-0.026	-0.017
	(0.043)	(0.043)	(0.042)
General and keyboard clerks	-0.016	-0.016	-0.017
	(0.026)	(0.026)	(0.026)
Customer services clerks	-0.012	-0.018	-0.021
	(0.037)	(0.037)	(0.036)
Numerical and material recording clerks	-0.024	-0.032	-0.031
	(0.030)	(0.030)	(0.029)
Other clerical support workers	0.036	0.025	0.017
	(0.034)	(0.034)	(0.033)
Personal services workers	0.064**	0.048*	0.047*
	(0.027)	(0.027)	(0.026)
Sales workers	-0.011	-0.027	-0.029
	(0.025)	(0.025)	(0.025)
Personal care workers	0.078	0.073	0.046
	(0.056)	(0.056)	(0.055)
Protective services workers	0.020	0.011	0.003
	(0.028)	(0.028)	(0.027)
Market-oriented skilled agricultural workers	0.041*	0.020	0.017
	(0.025)	(0.026)	(0.025)
Market-oriented skilled forestry, fishery and hunting workers	0.113***	0.091**	0.079**
	(0.038)	(0.038)	(0.037)
Subsistence farmers, fishers, hunters and gatherers	0.080***	0.053*	0.059**
	(0.029)	(0.029)	(0.029)
Building and related trades workers (excluding electricians)	0.089***	0.066***	0.058***
	(0.019)	(0.019)	(0.019)

Metal, machinery and related trades workers	0.095*** (0.019)	0.076*** (0.019)	0.068*** (0.019)
Handicraft and printing workers	0.079*** (0.031)	0.062** (0.031)	0.045 (0.030)
Electrical and electronics trades workers	0.074*** (0.023)	0.059*** (0.023)	0.048** (0.023)
Food processing, woodworking, garment and other craft and related trades workers	0.057** (0.024)	0.037 (0.024)	0.030 (0.024)
Stationary plant and machine operators	0.055** (0.023)	0.034 (0.023)	0.024 (0.023)
Assemblers	0.136*** (0.039)	0.121*** (0.039)	0.104*** (0.038)
Drivers and mobile plant operators	0.090*** (0.019)	0.063*** (0.020)	0.061*** (0.019)
Cleaners and helpers	0.010 (0.075)	-0.007 (0.075)	-0.015 (0.074)
Agricultural, forestry and fishery labourers	0.091** (0.044)	0.066 (0.044)	0.062 (0.043)
Labourers in mining, construction, manufacturing and transport	0.104*** (0.023)	0.078*** (0.023)	0.070*** (0.022)
Food preparation assistants	0.337** (0.151)	0.323** (0.151)	0.282* (0.148)
Refuse workers and other elementary workers	0.087** (0.038)	0.063* (0.038)	0.044 (0.038)
No job	0.048* (0.030)	0.028 (0.030)	0.020 (0.029)
ISCED 0		0.029 (0.024)	0.022 (0.023)
ISCED 1		0.038**	0.026

	(0.018)	(0.018)
ISCED 2	0.034**	0.029*
	(0.017)	(0.017)
ISCED 3	0.011	0.009
	(0.015)	(0.015)
ISCED 5	-0.057***	-0.046***
	(0.016)	(0.016)
ISCED 6	-0.124***	-0.113***
	(0.034)	(0.034)
Health childhood		0.162***
		(0.007)
Father: Premature dead		0.088***
		(0.012)
Father: Normal dead		0.072***
		(0.012)
Mother: Premature dead		0.025***
		(0.010)
Mother: Normal dead		0.017*
		(0.010)
Father profession:		
Senior managers and professionals		-0.003
		(0.013)
Technicians and associate professionals and armed forces		-0.028*
		(0.015)
Skilled agricultural and fishery workers		-0.003
		(0.013)
Craftsmen and skilled workers		0.006
		(0.012)
Elementary occupations and unskilled workers		0.006
		(0.013)

Unknown			-0.002 (0.014)
_cons	0.135*** (0.033)	0.171*** (0.036)	0.150*** (0.037)
N	15 221	15 221	15 221
R^2	11.30 %	12.15 %	15.77 %

The table shows the result of regression (??). Model 1 includes age as control, Model 2 adds education and Model 3 the childhood circumstances. Our coefficients are reduced when we include more control variables. The job coefficients show a clear gradient with low-arduous occupations, like Teachers, and highly arduous occupations, like Refuse workers. Standard errors are in parentheses; *: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$.

Table 4: Regression coefficients - Female

	(1)	(2)	(3)
	Model 1	Model 2	Model 3
Age	0.008*** (0.000)	0.008*** (0.000)	0.006*** (0.000)
Chief executives, senior officials and legislators	0.048 (0.032)	0.058* (0.032)	0.060* (0.032)
Administrative and commercial managers	-0.015 (0.029)	0.000 (0.029)	-0.009 (0.029)
Production and specialized services managers	0.034 (0.028)	0.031 (0.028)	0.032 (0.027)
Hospitality, retail and other services managers	-0.017 (0.036)	-0.021 (0.036)	-0.019 (0.035)
Science and engineering professionals	-0.004 (0.022)	0.016 (0.022)	0.010 (0.022)
Health professionals	-0.021 (0.017)	-0.000 (0.017)	0.008 (0.017)
Teaching professionals	-0.024* (0.015)	0.014 (0.015)	0.014 (0.015)
Business and administration professionals	-0.006 (0.022)	0.003 (0.022)	0.004 (0.022)
Information and communications technology professionals	0.036 (0.037)	0.044 (0.037)	0.043 (0.036)
Legal, social and cultural professionals	-0.027 (0.020)	-0.000 (0.020)	-0.004 (0.020)
Science and engineering associate professionals	0.042* (0.022)	0.039* (0.022)	0.026 (0.022)
Health associate professionals	0.022	0.029	0.021

	(0.021)	(0.021)	(0.021)
Legal, social, cultural and related associate professionals	-0.004	-0.005	-0.006
	(0.029)	(0.029)	(0.028)
Information and communications technicians	0.057	0.058	0.037
	(0.059)	(0.058)	(0.057)
General and keyboard clerks	0.016	0.013	0.010
	(0.015)	(0.015)	(0.015)
Customer services clerks	0.048**	0.039*	0.035
	(0.023)	(0.023)	(0.023)
Numerical and material recording clerks	0.039**	0.033*	0.028
	(0.019)	(0.019)	(0.019)
Other clerical support workers	0.016	0.008	0.006
	(0.022)	(0.022)	(0.022)
Personal services workers	0.077***	0.058***	0.048***
	(0.016)	(0.016)	(0.016)
Sales workers	0.052***	0.037**	0.034**
	(0.015)	(0.015)	(0.015)
Personal care workers	0.072***	0.064***	0.058***
	(0.017)	(0.016)	(0.016)
Protective services workers	0.087**	0.069*	0.061
	(0.040)	(0.040)	(0.039)
Market-oriented skilled agricultural workers	0.080***	0.052**	0.045**
	(0.021)	(0.021)	(0.021)
Market-oriented skilled forestry, fishery and hunting workers	0.130***	0.104**	0.110**
	(0.046)	(0.046)	(0.045)
Subsistence farmers, fishers, hunters and gatherers	0.066***	0.038	0.040*
	(0.025)	(0.025)	(0.024)
Building and related trades workers (excluding electricians)	0.071**	0.047	0.043
	(0.032)	(0.032)	(0.031)

Metal, machinery and related trades workers	0.055*	0.035	0.021
	(0.032)	(0.032)	(0.031)
Handicraft and printing workers	0.072***	0.053**	0.043*
	(0.026)	(0.026)	(0.026)
Electrical and electronics trades workers	0.192***	0.177***	0.170***
	(0.049)	(0.049)	(0.048)
Food processing, woodworking, garment and other craft and related trades workers	0.078***	0.058***	0.054***
	(0.016)	(0.016)	(0.016)
Stationary plant and machine operators	0.085***	0.059***	0.048***
	(0.018)	(0.019)	(0.018)
Assemblers	0.108***	0.081**	0.066*
	(0.038)	(0.038)	(0.037)
Drivers and mobile plant operators	0.096***	0.092***	0.082**
	(0.034)	(0.034)	(0.034)
Cleaners and helpers	0.104***	0.073***	0.061***
	(0.017)	(0.017)	(0.017)
Agricultural, forestry and fishery labourers	0.107***	0.078**	0.068**
	(0.032)	(0.032)	(0.031)
Labourers in mining, construction, manufacturing and transport	0.106***	0.080***	0.066***
	(0.021)	(0.021)	(0.020)
Food preparation assistants	0.159***	0.126***	0.114***
	(0.031)	(0.031)	(0.030)
Refuse workers and other elementary workers	0.083**	0.061*	0.043
	(0.036)	(0.036)	(0.036)
No job	0.084***	0.056***	0.052***
	(0.015)	(0.015)	(0.015)
No education		0.058***	0.053***
		(0.019)	(0.019)
ISCED 1		0.057***	0.043***

	(0.015)	(0.015)
ISCED 2	0.043***	0.035***
	(0.014)	(0.014)
ISCED 3	0.011	0.007
	(0.013)	(0.012)
ISCED 5	-0.044***	-0.033***
	(0.014)	(0.013)
ISCED 6	-0.181***	-0.159***
	(0.038)	(0.037)
Health childhood		0.156***
		(0.006)
Father: Premature dead		0.067***
		(0.010)
Father: Normal dead		0.061***
		(0.010)
Mother: Premature dead		0.054***
		(0.008)
Mother: Normal dead		0.034***
		(0.008)
Father profession:		
Senior managers and professionals		-0.040***
		(0.011)
Technicians and associate professionals and armed forces		-0.014
		(0.012)
Skilled agricultural and fishery workers		-0.003
		(0.011)
Craftsmen and skilled workers		-0.009
		(0.010)
Elementary occupations and unskilled workers		0.001
		(0.010)

Unknown			-0.010 (0.011)
_cons	0.121*** (0.025)	0.169*** (0.028)	0.175*** (0.029)
N	20 614	20 614	20 614
pseudo R^2	13.10 %	13.58 %	17.39 %

The table shows the result of regression (??). Model 1 includes age as control, Model 2 adds education and Model 3 childhood circumstances. Our coefficients are reduced when we include more control variables. The job coefficients show a clear gradient with low-arduous occupations, like Teachers, and highly arduous occupations, like Refuse workers. Standard errors are in parentheses; *: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$.

Table 5: Gelbach decomposition - Male

	$\delta_{Education}$	$\delta_{Father's\ occupation}$	$\delta_{Init.Health}$
Chief executives, senior officials and legislators	-0.01528	0.00051	-0.00352
Administrative and commercial managers	-0.01772	-0.00039	-0.00947
Production and specialized services managers	-0.00159	-0.00055	-0.00227
Hospitality, retail and other services managers	-0.00092	0.00108	-0.00897
Science and engineering professionals	-0.02217	-0.00031	0.00394
Health professionals	-0.02601	-0.00048	-0.00076
Teaching professionals	-0.03568	-0.00021	0.00449
Business and administration professionals	-0.01460	-0.00078	-0.00569
Information and communications technology professionals	-0.01990	-0.00157	-0.01560
Legal, social and cultural professionals	-0.02284	-0.00044	0.01058
Science and engineering associate professionals	0.00021	0.00023	0.00357
Health associate professionals	-0.00555	-0.00067	0.01725
Legal, social, cultural and related associate professionals	-0.00182	-0.00070	0.00348
Information and communications technicians	0.00300	0.00095	-0.01005
General and keyboard clerks	0.00059	0.00083	0.00013
Customer services clerks	0.00438	0.00103	0.00378
Numerical and material recording clerks	0.00654	0.00031	-0.00047
Other clerical support workers	0.00869	0.00195	0.00837
Personal services workers	0.01248	0.00204	0.00176
Sales workers	0.01215	-0.00003	0.00575
Personal care workers	0.00405	-0.00123	0.02948
Protective services workers	0.00709	0.00124	0.00798
Market-oriented skilled agricultural workers	0.01682	-0.00031	0.00841
Market-oriented skilled forestry, fishery and hunting workers	0.01715	0.00092	0.01556
Subsistence farmers, fishers, hunters and gatherers	0.02165	-0.00034	-0.00011

Building and related trades workers (excluding electricians)	0.01873	0.00289	0.00929
Metal, machinery and related trades workers	0.01585	0.00239	0.00941
Handicraft and printing workers	0.01396	0.00357	0.01627
Electrical and electronics trades workers	0.01207	0.00254	0.01088
Food processing, woodworking, garment and other craft and related trades workers	0.01545	0.00249	0.00855
Stationary plant and machine operators	0.01693	0.00271	0.01151
Assemblers	0.01217	0.00287	0.01675
Drivers and mobile plant operators	0.02137	0.00238	0.00557
Cleaners and helpers	0.01296	0.00204	0.00956
Agricultural, forestry and fishery labourers	0.01936	0.00252	0.00703
Labourers in mining, construction, manufacturing and transport	0.02057	0.00203	0.01208
Food preparation assistants	0.01158	-0.00228	0.04611
Refuse workers and other elementary workers	0.01879	0.00169	0.02252
No job	0.01587	0.00137	0.01140

The table shows the Gelbach (2016) decomposition. The $\Delta_{Education}$ is the part due to education of the change between the occupation coefficients of columns 1 and 3 in Table 3.

Table 6: Gelbach decomposition - Female

	$\delta_{Education}$	$\delta_{Father's\ occupation}$	$\delta_{Init.Health}$
Chief executives, senior officials and legislators	-0.00717	- 0.00855	0.00426
Administrative and commercial managers	-0.01181	-0.00255	0.00874
Production and specialized services managers	0.00268	-0.00492	0.00439
Hospitality, retail and other services managers	0.00348	- 0.00055	-0.00102
Science and engineering professionals	-0.01535	-0.00524	0.00693
Health professionals	-0.01634	-0.00284	-0.01017
Teaching professionals	-0.02983	-0.00381	-0.00501
Business and administration professionals	-0.00728	-0.00212	-0.00056
Information and communications technology professionals	-0.00619	-0.00212	0.00059
Legal, social and cultural professionals	-0.02105	-0.00467	0.00208
Science and engineering associate professionals	0.00212	-0.00111	0.01409
Health associate professionals	-0.00585	-0.00129	0.00723
Legal, social, cultural and related associate professionals	0.00110	-0.00109	0.00128
Information and communications technicians	-0.00073	0.00285	0.01726
General and keyboard clerks	0.00183	0.00021	0.00305
Customer services clerks	0.00756	-0.00001	0.00580
Numerical and material recording clerks	0.00466	0.00024	0.00573
Other clerical support workers	0.00636	0.00023	0.00294
Personal services workers	0.01446	0.00254	0.01166
Sales workers	0.01133	0.00178	0.00498
Personal care workers	0.00593	0.00089	0.00750
Protective services workers	0.01511	0.00354	0.00697
Market-oriented skilled agricultural workers	0.02278	0.00312	0.00906
Market-oriented skilled forestry, fishery and hunting workers	0.02023	0.00153	-0.00164
Subsistence farmers, fishers, hunters and gatherers	0.02218	0.00391	-0.00041

Building and related trades workers (excluding electricians)	0.01868	0.00245	0.00663
Metal, machinery and related trades workers	0.01535	0.00156	0.01719
Handicraft and printing workers	0.01521	0.00193	0.01188
Electrical and electronics trades workers	0.01169	-0.00270	0.01271
Food processing, woodworking, garment and other craft and related trades workers	0.01546	0.00192	0.00659
Stationary plant and machine operators	0.02092	0.00298	0.01304
Assemblers	0.02155	0.00309	0.01784
Drivers and mobile plant operators	0.00349	0.00273	0.00802
Cleaners and helpers	0.02416	0.00353	0.01518
Agricultural, forestry and fishery labourers	0.02368	0.00235	0.01315
Labourers in mining, construction, manufacturing and transport	0.02090	0.00280	0.01649
Food preparation assistants	0.02581	0.00208	0.01654
Refuse workers and other elementary workers	0.01733	0.00117	0.02106
No job	0.02219	0.00123	0.00796

The table shows the Gelbach (2016) decomposition. The $\Delta_{Education}$ is the part due to education of the change between the occupation coefficients of column 1 and 3 in Table 4.

Table 7: Variance decomposition - Male

Part of the variance				
	All	High	Middle	Low
Education	5.56% (1.056)	8.18% (2.275)	2.81% (1.498)	3.66% (1.341)
Occupations	7.07% (1.717)	14.76% (4.083)	6.57% (4.523)	6.10% (3.871)
Age	15.94% (1.490)	13.76% (2.605)	19.37% (2.846)	16.31% (2.288)
Country	35.18% (1.874)	21.67% (3.280)	30.95% (3.382)	44.97% (4.039)
Childhood conditions	35.80% (1.900)	40.81% (4.359)	39.88% (3.871)	28.32% (3.312)
Father's occupation	0.45% (0.575)	0.83% (1.136)	0.42% (1.037)	0.65% (1.294)
Difference Occ High-Middle:	8.05**	(3.811)		
Difference Occ High-Low:	8.45**	(3.790)		
Difference Occ Middle-Low:	0.40	(3.029)		

The table shows the part of the variance explained by the different variables. The most important variables are childhood conditions and country.

Table 8: Variance decomposition - Female

Part of the variance				
	All	High	Middle	Low
Education	6.63% (1.081)	9.16% (1.887)	3.11% (1.394)	5.48 % (1.264)
Occupations	4.06% (1.264)	10.05% (2.818)	5.10% (2.464)	3.02% (2.766)
Age	18.82% (1.384)	17.28% (2.369)	23.37% (2.659)	18.82% (1.766)
Country	32.35% (1.624)	25.70% (2.655)	19.58% (2.161)	38.36% (3.057)
Childhood conditions	36.79% (1.793)	37.33% (3.280)	47.65% (2.882)	31.54% (3.063)
Father's occupation	1.36% (0.590)	0.49% (0.812)	1.18% (0.886)	2.78% (1.266)
Difference Occ High-Middle:	4.95**	(2.266)		
Difference Occ High-Low:	7.03***	(2.289)		
Difference Occ Middle-Low:	2.08	(2.091)		

The table shows the part of the variance explained by the different variables. The most important variables are childhood conditions and country.

Table 9: Retirement age differentiation for male

	Column 1	Column 2	Column 3
Food preparation assistants	-38.25	-41.52	-45.40
Assemblers	-15.38	-16.69	-18.25
Market-oriented skilled forestry, fishery and hunting workers	-12.77	-13.86	-15.16
Labourers in mining, construction, manufacturing and transport	-11.83	-12.85	-14.05
Metal, machinery and related trades workers	-10.82	-11.75	-12.85
Agricultural, forestry and fishery labourers	-10.33	-11.22	-12.27
Drivers and mobile plant operators	-10.19	-11.07	-12.10
Building and related trades workers (excluding electricians)	-10.10	-10.97	-11.99
Refuse workers and other elementary workers	-9.88	-10.72	-11.73
Subsistence farmers, fishers, hunters and gatherers	-9.06	-9.84	-10.76
Handicraft and printing workers	-8.93	-9.70	-10.60
Personal care workers	-8.84	-9.60	-10.49
Electrical and electronics trades workers	-8.37	-9.09	-9.94
Personal services workers	-7.21	-7.82	-8.56
Health associate professionals	-7.06	-7.66	-8.38
Food processing, woodworking, garment and other craft and related trades workers	-6.41	-6.96	-7.61
Stationary plant and machine operators	-6.22	-6.75	-7.38
Science and engineering associate professionals	-5.51	-5.98	-6.54
Market-oriented skilled agricultural workers	-4.70	-5.10	-5.78
Other clerical support workers	-4.09	-4.44	-4.85
Production and specialized services managers	-3.68	-4.00	-4.37
Business and administration professionals	-3.53	-3.83	-4.19
Protective services workers	-2.24	-2.43	-2.65

Cleaners and helpers	-1.08	-1.17	-1.28
Legal, social, cultural and related associate professionals	-0.65	-0.70	-0.77
Hospitality, retail and other services managers	-0.30	-0.33	-0.36
Sales workers	1.26	1.37	1.50
Customer services clerks	1.39	1.51	1.65
Science and engineering professionals	1.73	1.88	2.05
General and keyboard clerks	1.81	1.96	2.15
Information and communications technology professionals	2.56	2.78	3.04
Numerical and material recording clerks	2.76	2.99	3.27
Administrative and commercial managers	3.66	3.97	4.34
Legal, social and cultural professionals	3.71	4.03	4.41
Teaching professionals	3.91	4.24	4.64
Chief executives, senior officials and legislators	5.55	6.03	6.59
Health professionals	5.61	6.09	6.66
Information and communications technicians	5.68	6.16	6.74

The table shows the difference of retirement ages by profession for male. They are calculated based on the division of the main occupation coefficient by the age one. Column 1 is the calculus when we take the upper bound of the 95 % confidence interval of the age coefficient, Column 2 is the coefficient and Column 3 is the lower bound of the 95 % confidence interval.

Table 10: Retirement age differentiation for female

	Column 1	Column 2	Column 3
Electrical and electronics trades workers	-21.62	-22.99	-24.55
Food preparation assistants	-17.90	-19.04	-20.34
Market-oriented skilled forestry, fishery and hunting workers	-14.67	-15.60	-16.66
Assemblers	-12.24	-13.02	-13.90
Agricultural, forestry and fishery labourers	-12.10	-12.87	-13.74
Labourers in mining, construction, manufacturing and transport	-11.97	-12.73	-13.60
Cleaners and helpers	-11.68	-12.43	-13.27
Drivers and mobile plant operators	-10.86	-11.55	-12.33
Protective services workers	-9.82	-10.44	-11.15
Stationary plant and machine operators	-9.60	-10.21	-10.90
Refuse workers and other elementary workers	-9.31	-9.91	-10.58
Market-oriented skilled agricultural workers	-9.02	-9.59	-10.25
Food processing, woodworking, garment and other craft and related trades workers	-8.83	-9.39	-10.03
Personal services workers	-8.66	-9.21	-9.83
Handicraft and printing workers	-8.13	-8.64	-9.23
Personal care workers	-8.11	-8.63	-9.21
Building and related trades workers (excluding electricians)	-7.96	-8.47	-9.04
Subsistence farmers, fishers, hunters and gatherers	-7.40	-7.87	-8.40
Information and communications technicians	-6.39	-6.79	-7.25
Metal, machinery and related trades workers	-6.17	-6.56	-7.01
Sales workers	-5.87	-6.24	-6.67
Customer services clerks	-5.46	-5.81	-6.10
Chief executives, senior officials and legislators	-5.44	-5.79	-6.18
Science and engineering associate			

professionals	-4.69	-4.99	-5.33
Numerical and material recording clerks	-4.38	-4.66	-4.98
Information and communications technology professionals	-4.03	-4.28	-4.57
Production and specialized services managers	-3.83	-4.07	-4.35
Health associate professionals	-2.43	-2.59	-2.76
Other clerical support workers	-1.80	-1.91	-2.04
General and keyboard clerks	-1.76	-1.87	-2.00
Science and engineering professionals	0.40	0.42	0.45
Legal, social, cultural and related associate professionals	0.49	0.52	0.55
Business and administration professionals	0.71	0.75	0.80
Administrative and commercial managers	1.70	1.81	1.93
Hospitality, retail and other services managers	1.88	2.00	2.13
Health professionals	2.41	2.56	2.73
Teaching professionals	2.74	2.92	3.12
Legal, social and cultural professionals	3.10	3.30	3.53

The table shows the difference of retirement ages by profession for female. They are calculated based on the division of the main occupation coefficient by the age one. Column 1 is the calculus when we take the upper bound of the 95 % confidence interval of the age coefficient, Column 2 is the coefficient and Column 3 is the lower bound of the 95 % confidence interval.

Table 11: Robustness test - Male

	(1)	(2)	(3)
	All obs	< 70	ACP
Age	0.006*** (0.000)	0.007*** (0.000)	0.010*** (0.000)
Chief executives, senior officials and legislators	-0.031 (0.027)	-0.034 (0.036)	-0.020 (0.032)
Administrative and commercial managers	-0.005 (0.030)	-0.000 (0.041)	0.004 (0.036)

Production and specialized services managers	0.032 (0.027)	0.048 (0.039)	0.048 (0.032)
Hospitality, retail and other services managers	0.011 (0.038)	-0.004 (0.050)	-0.031 (0.046)
Science and engineering professionals	0.003 (0.021)	0.005 (0.029)	-0.020 (0.025)
Health professionals	-0.022 (0.030)	-0.044 (0.039)	0.023 (0.035)
Teaching professionals	-0.003 (0.022)	-0.002 (0.031)	0.009 (0.027)
Business and administration professionals	0.052* (0.031)	0.037 (0.043)	-0.012 (0.037)
Information and communications technology professionals	-0.013 (0.036)	-0.008 (0.044)	-0.010 (0.042)
Legal, social and cultural professionals	-0.020 (0.028)	-0.014 (0.038)	0.011 (0.034)
Science and engineering associate professionals	0.045** (0.020)	0.050* (0.027)	0.022 (0.024)
Health associate professionals	0.051 (0.037)	0.018 (0.048)	0.037 (0.044)
Legal, social, cultural and related associate professionals	0.005 (0.037)	0.026 (0.046)	0.014 (0.044)
Information and communications technicians	-0.017 (0.042)	-0.036 0.052	-0.017 (0.050)
General and keyboard clerks	-0.017 (0.026)	-0.028 (0.034)	-0.027 (0.031)
Customer services clerks	-0.021 (0.036)	0.026 (0.046)	0.026 (0.043)
Numerical and material recording clerks	-0.031	-0.013	0.027

	(0.029)	(0.039)	(0.035)
Other clerical support workers	0.017	0.047	-0.047
	(0.033)	(0.044)	(0.039)
Personal services workers	0.047*	0.074**	0.018
	(0.026)	(0.033)	(0.031)
Sales workers	-0.029	-0.035	-0.034
	(0.025)	(0.033)	(0.029)
Personal care workers	0.046	0.049	0.028
	(0.055)	(0.065)	(0.065)
Protective services workers	0.003	0.028	-0.025
	(0.027)	(0.035)	(0.032)
Market-oriented skilled agricultural workers	0.017	0.036	0.049
	(0.025)	(0.037)	(0.030)
Market-oriented skilled forestry, fishery and hunting workers	0.079**	0.097**	0.078*
	(0.037)	(0.049)	(0.044)
Subsistence farmers, fishers, hunters and gatherers	0.059**	0.062	0.077**
	(0.029)	(0.039)	(0.035)
Building and related trades workers (excluding electricians)	0.058***	0.067***	0.065***
	(0.019)	(0.025)	0.023
Metal, machinery and related trades workers	0.068***	0.090***	0.022
	(0.019)	(0.025)	(0.022)
Handicraft and printing workers	0.045	0.043	0.062*
	(0.030)	(0.040)	(0.036)
Electrical and electronics trades workers	0.048**	0.071**	0.079***
	(0.023)	(0.030)	(0.027)
Food processing, woodworking, garment and other craft and related trades workers	0.030	0.041	0.028
	(0.024)	(0.032)	(0.028)
Stationary plant and machine operators	0.024	0.043	0.054**

	(0.023)	(0.030)	(0.027)
Assemblers	0.104***	0.141***	0.117***
	(0.038)	(0.049)	(0.045)
Drivers and mobile plant operators	0.061***	0.078***	0.042*
	(0.019)	(0.026)	(0.023)
Cleaners and helpers	-0.015	0.030	0.129
	(0.074)	(0.088)	(0.088)
Agricultural, forestry and fishery labourers	0.062	0.088	0.021
	(0.043)	(0.064)	(0.051)
Labourers in mining, construction, manufacturing and transport	0.070***	0.085***	0.078***
	(0.022)	(0.029)	(0.027)
Food preparation assistants	0.282*	0.401*	0.256
	(0.148)	(0.238)	(0.176)
Refuse workers and other elementary workers	0.044	0.067	0.060
	(0.038)	(0.048)	(0.045)
No job	0.020	0.023	0.091***
	(0.029)	(0.040)	0.035
ISCED 0	0.022	0.013	0.118***
	(0.023)	(0.034)	(0.028)
ISCED 1	0.026	0.029	0.077***
	(0.018)	(0.025)	(0.021)
ISCED 2	0.029*	0.018	0.057***
	(0.017)	(0.022)	(0.020)
ISCED 3	0.009	-0.003	0.020
	(0.015)	(0.019)	(0.018)
ISCED 5	-0.046***	-0.060***	-0.011
	(0.016)	(0.021)	(0.019)
ISCED 6	-0.113***	-0.160***	-0.088**
	(0.034)	(0.047)	(0.040)
Health childhood	0.162***	0.191***	0.115***

	(0.007)	(0.009)	(0.008)
Father: Premature dead	0.088***	0.077***	0.046***
	(0.012)	(0.014)	(0.015)
Father: Normal dead	0.072***	0.066***	0.019
	(0.012)	(0.014)	(0.015)
Mother: Premature dead	0.025***	0.023**	0.016
	(0.010)	(0.011)	(0.011)
Mother: Normal dead	0.017*	0.008	0.006
	(0.010)	(0.012)	(0.012)
Father profession:			
Senior managers and professionals	-0.003	0.008	-0.025
	(0.013)	(0.018)	(0.016)
Technicians and associate professionals and armed forces	-0.028*	-0.011	-0.019
	(0.015)	(0.020)	(0.018)
Skilled agricultural and fishery workers	-0.003	-0.003	-0.012
	(0.013)	(0.018)	(0.015)
Craftsmen and skilled workers	0.006	0.010	-0.028**
	(0.012)	(0.016)	(0.014)
Elementary occupations and unskilled workers	0.006	0.016	0.003
	(0.013)	(0.017)	(0.015)
Unknown	-0.002	0.006	-0.046***
	(0.014)	(0.018)	(0.016)
_cons	0.150***	0.077	-0.288***
	(0.037)	(0.064)	(0.044)
<i>N</i>	15 221	9 807	15 221
<i>R</i> ²	15.77 %	16.44 %	11.71 %

The table shows the robustness of our results. The first column refers to our previous result, the second to an estimation based on a sample with only the observations younger than 70 and the third column uses another indicator of health. This indicator is obtained from a PCA on several questions related to health. Standard errors are in parentheses; *: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$.

Table 12: Variance decomposition (Male) - Robustness

Part of the variance			
	All	< 70	ACP
Education	5.56% (1.056)	5.83% (1.153)	5.23% (0.912)
Occupations	7.07% (1.717)	9.20% (2.461)	6.37% (2.137)
Age	15.94% (1.490)	6.76% (1.339)	33.70% (2.476)
Country	35.18% (1.874)	40.05% (2.379)	34.96% (2.193)
Childhood conditions	35.80% (1.900)	37.89% (2.375)	18.85% (2.122)
Father's occupation	0.45% (0.575)	0.27% (0.730)	0.89% (0.709)

The table shows the robustness of our results. The first column refers to our previous result, the second to an estimation based on a sample with only the observations younger than 70 and the third column uses another indicator of health. This indicator is obtained from a PCA on several questions related to health.

Table 13: Robustness test - Female

	(1)	(2)	(3)
	All obs	< 70	ACP
Age	0.006*** (0.000)	0.007*** (0.001)	0.011*** (0.000)
Chief executives, senior officials and legislators	0.060* (0.032)	0.077* (0.042)	-0.031 (0.039)
Administrative and commercial managers	-0.009 (0.029)	-0.008 (0.036)	-0.041 (0.035)
Production and specialized services managers	0.032 (0.027)	0.039 (0.038)	-0.013 (0.034)
Hospitality, retail and other services managers	-0.019 (0.035)	-0.045 (0.047)	0.020 (0.043)
Science and engineering professionals	0.010 (0.022)	-0.008 (0.031)	0.006 (0.027)
Health professionals	0.008 (0.017)	0.007 (0.022)	0.029 (0.021)
Teaching professionals	0.014 (0.015)	0.009 (0.020)	0.024 (0.019)
Business and administration professionals	0.004 (0.022)	-0.014 (0.029)	-0.003 (0.027)
Information and communications technology professionals	0.043 (0.036)	0.064 (0.047)	-0.010 (0.045)
Legal, social and cultural professionals	-0.004 (0.020)	0.006 (0.026)	0.000 (0.035)
Science and engineering associate professionals	0.026 (0.022)	0.050* (0.029)	0.020 (0.027)
Health associate professionals	0.021	0.014	-0.006

	(0.021)	(0.027)	(0.026)
Legal, social, cultural and related associate professionals	-0.006	-0.011	0.001
	(0.028)	(0.036)	(0.024)
Information and communications technicians	0.037	-0.009	-0.062
	(0.057)	(0.075)	(0.071)
General and keyboard clerks	0.010	0.002	-0.013
	(0.015)	(0.020)	(0.018)
Customer services clerks	0.035	0.055*	0.015
	(0.023)	(0.031)	(0.028)
Numerical and material recording clerks	0.028	0.029	0.017
	(0.019)	(0.025)	(0.023)
Other clerical support workers	0.006	-0.003	0.009
	(0.022)	(0.028)	(0.027)
Personal services workers	0.048***	0.050**	0.045**
	(0.016)	(0.021)	(0.020)
Sales workers	0.034**	0.022	0.030
	(0.015)	(0.020)	0.019
Personal care workers	0.058***	0.057***	0.041**
	(0.016)	(0.021)	(0.020)
Protective services workers	0.061	0.062	0.009
	(0.039)	(0.054)	(0.048)
Market-oriented skilled agricultural workers	0.045**	0.047	0.060**
	(0.021)	(0.031)	(0.025)
Market-oriented skilled forestry, fishery and hunting workers	0.110**	0.130*	0.075
	(0.045)	(0.069)	(0.056)
Subsistence farmers, fishers, hunters and gatherers	0.040*	0.037	0.128***
	(0.024)	(0.033)	(0.030)
Building and related trades workers (excluding electricians)	0.043	0.042	0.070*
	(0.031)	(0.041)	(0.039)

Metal, machinery and related trades workers	0.021 (0.031)	0.039 (0.041)	0.024 (0.039)
Handicraft and printing workers	0.043* (0.026)	0.059* (0.036)	0.062** (0.032)
Electrical and electronics trades workers	0.170*** (0.048)	0.198*** (0.061)	0.159*** (0.059)
Food processing, woodworking, garment and other craft and related trades workers	0.054*** (0.016)	0.061*** (0.022)	0.062*** (0.020)
Stationary plant and machine operators	0.048*** (0.018)	0.049** (0.025)	0.063*** (0.023)
Assemblers	0.066* (0.037)	0.048 (0.047)	0.103** (0.046)
Drivers and mobile plant operators	0.082** (0.034)	0.100** (0.044)	0.085** (0.042)
Cleaners and helpers	0.061*** (0.017)	0.073*** (0.022)	0.079*** (0.021)
Agricultural, forestry and fishery labourers	0.068** (0.031)	0.121*** (0.049)	0.086** (0.039)
Labourers in mining, construction, manufacturing and transport	0.066*** (0.020)	0.063** (0.027)	0.034 (0.025)
Food preparation assistants	0.114*** (0.030)	0.139*** (0.042)	0.105*** (0.038)
Refuse workers and other elementary workers	0.043 (0.036)	0.038 (0.048)	0.076* (0.044)
No job	0.052*** (0.015)	0.046** (0.021)	0.062*** (0.018)
ISCED 0	0.053*** (0.019)	0.084*** (0.030)	0.133*** (0.023)
ISCED 1	0.043***	0.092***	0.084***

	(0.015)	(0.021)	(0.018)
ISCED 2	0.035***	0.075***	0.071***
	(0.014)	(0.019)	(0.017)
ISCED 3	0.007	0.033**	0.030*
	(0.012)	(0.017)	(0.016)
ISCED 5	-0.033***	-0.019	-0.011
	(0.013)	(0.018)	(0.016)
ISCED 6	-0.159***	-0.217***	-0.027
	(0.037)	(0.050)	(0.046)
Health childhood	0.156***	0.186***	0.121***
	(0.006)	(0.008)	(0.007)
Father: Premature dead	0.067***	0.057***	0.031***
	(0.010)	(0.011)	(0.012)
Father: Normal dead	0.061***	0.045***	0.008
	(0.010)	(0.011)	(0.012)
Mother: Premature dead	0.054***	0.045***	0.028***
	(0.008)	(0.009)	(0.010)
Mother: Normal dead	0.034***	0.020**	-0.004
	(0.008)	(0.010)	(0.010)
Father profession:			
Senior managers and professionals	-0.040***	-0.041***	-0.041***
	(0.011)	(0.015)	(0.014)
Technicians and associate professionals and armed forces	-0.014	-0.019	-0.000
	(0.012)	(0.017)	(0.015)
Skilled agricultural and fishery workers	-0.003	-0.009	-0.030**
	(0.011)	(0.015)	(0.013)
Craftsmen and skilled workers	-0.009	-0.019	-0.023*
	(0.010)	(0.013)	(0.012)
Elementary occupations and unskilled workers	0.001	-0.002	-0.010
	(0.010)	(0.014)	(0.013)

Unknown	-0.010 (0.011)	-0.010 (0.015)	-0.013 (0.014)
_cons	0.175*** (0.029)	0.060 (0.049)	-0.374*** (0.036)
N	20 614	13 374	20 614
pseudo R^2	17.39 %	17.37 %	14.28 %

The table shows the robustness of our results. The first column refers to our previous result, the second to an estimation based on a sample with only the observations younger than 70 and the third column uses another indicator of health. This indicator is obtained from a PCA on several questions related to health. Standard errors are in parentheses; *: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$.

Table 14: Variance decomposition (Female) - Robustness

Part of the variance			
	All	< 70	ACP
Education	5.48 % (1.264)	7.62% (1.171)	6.98 % (1.158)
Occupations	3.02% (2.766)	4.79 % (1.418)	5.03% (1.364)
Age	18.82% (1.766)	7.95 % (1.407)	42.70% (2.171)
Country	38.36% (3.057)	40.38 % (1.909)	27.50% (1.438)
Childhood conditions	31.54% (3.063)	38.06 % (1.952)	17.54 % (1.599)
Father's occupation	2.78% (1.266)	1.20 % (0.674)	0.25% (0.417)

The table shows the robustness of our results. The first column refers to our previous result, the second to an estimation based on a sample with only the observations younger than 70 and the third column uses another indicator of health. This indicator is obtained from a PCA on several questions related to health.