Early-life circumstances and late-life incomes

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Abstract

 This paper aims at evaluating and comparing across European countries the influence of early-life circumstances, like childhood disparities and educational attainments, on incomes in later life. Using life-history data from SHARELIFE, country-specific structural relationships among childhood socio-economic status, education and incomes at the first and the last job are investigated by means of recursive models, controlling for individual covariates. Poorer childhood socio-economic conditions are associated with higher differentials in years of full-time education and higher income inequalities. The extent of these results varies across countries.

Key Words: Childhood conditions, Education, Incomes, Recursive models

1. Introduction

Parental background or childhood status can provide long-lasting effects into adult life on occupational outcomes, such as employment status, earnings, productivity, etc. The extent to which individuals move (up or down) the social ladder relative to their parents is known as intergenerational social mobility. In a relatively immobile society individual outcomes, such as education, occupation or incomes, tend to be strongly related to those of their parents. On the one hand, in less mobile societies human skills may be wasted or misallocated. On the other hand, the motivations, the effort, the individual productivity may be affected by the lack of equal economic opportunities. These in turn may affect the overall efficiency and growth potential of a country. Even though no single indicator can summarize such a puzzling picture, a general pattern that emerges is that Mediterranean countries show a low intergenerational social mobility, while Nordic countries tend to be relatively mobile. Assessing the different cross-country patterns in intergenerational social mobility might help to better understand the role that public policies might play in removing obstacles to this mobility and promoting equality of opportunity across individuals.

Recently, intergenerational mobility constitutes one of the key research areas for both economists and sociologists, as witnessed by the special NBER volume edited by Gruber (2009) on the "Problems of Disadvantaged Youth: An Economic Perspective" and the recent special issue of European Societies (2011) devoted to the study of career mobility. As recalled by Barone and Schizzerotto (2011), social mobility research has for a long time focused on the relationship between social origins, education and occupational destinations, the so-called O-E-D triangle.

The influence of parental socio-economic and financial status on the descendants' education, incomes and occupation has been widely investigated and documented in the literature (Hill and Sandfort, 1995; Solon, 2002; Corak, 2004). While education has invariably emerged as the main determinant of occupational attainment in modern countries, "the role of the family is crucial to the formation of learning skills, and government interventions at an early age that mend the harm done by dysfunctional families have proven to be highly effective" (Heckman, 2000). Using two US longitudinal studies (the National Longitudinal Survey of the High School Class of 1972 and High School and Beyond) and studying

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earnings in the mid-1980s, Murnane et al. (2000) provide evidence that cognitive skills are important determinants of subsequent earnings, even though the effect of these cognitive skills is quite modest.

The environment in which individuals grow up plays a crucial role in determining their socioeconomic condition, regardless of their own abilities. However, while these childhood effects on educational and professional paths were expected to weaken over time, the importance of educational qualifications for labour market success was expected to increase (Blau and Duncan, 1967; Treiman, 1970; Bell, 1973). These two anticipated trends would have promoted social mobility (Ganzeboom et al., 1991; Wolbers et al., 2011). But, although there is evidence of a slight increase of social fluidity in some countries, social class returns to education look largely stable across cohorts or, if anything, tend to weaken.

Cavapozzi et al. (2011) study the relationship between childhood, schooling and the first income at the first job, using retrospective data from SHARELIFE. They provide descriptive evidence that financial and educational background of parental household plays an important role in determining individual socio-economic outcomes at the beginning of the working career. Both schooling and income inequality were shown to vary with environment in which individuals grew up. In particular, respondents living in better off and better education contexts, on average, remain in full time education longer and exhibit lower income inequality. Although this pattern is present in all countries, it is even more pervasive in Mediterranean countries. Moreover, countries where individuals remain in full-time education longer present lower income disparities, even after controlling for childhood background.

This paper aims at contributing to the above literature extending Cavapozzi et al.'s contribution by further investigating the relationship between inequalities in childhood, schooling and income mobility both at the beginning and at the end of the working career. It evaluates and compares across several European countries the influence of early-life circumstances (childhood disparities and educational attainments) on incomes in later life, by means of the specification and estimation of country-specific structural relationships. On the one hand, focusing on educational attainments and incomes at the beginning of the working career highlights the short-lasting influence of parental household status, because these outcomes are likely to take place close to childhood and youth. On the other hand, investigating incomes at the end of the working career emphasizes the long-lasting effects of childhood status into adult life, strongly related to decision of retirement or exit from the labour market. Public policy strategies to reduce income dispersions are expected to be different at each of these two career phases.

Data used in this contribution are presented in Section 2, while the model adopted for the analysis is introduced in Section 3. Section 4 discusses the main results of the country-specific model estimation. Section 5 ends the paper, summarizing the main findings of this work and presenting some concluding remarks.

2. Data

Data come from the SHARELIFE survey. It is the third wave of SHARE (Survey of Health, Ageing and Retirement in Europe) and constitutes its retrospective survey focusing on the life histories of the European population aged 50 and over across 13 European countries. The SHARELIFE questionnaire collects detailed information on several areas of the entire respondents' lives, from individual relationships to children, from work history to housing, until health and health care utilization. Data were collected in 2008 and 2009 (Börsch-Supan et al., 2011).

In this analysis we consider the cohort of respondents born in 1940 or later. This means

that their childhood status refers to the period after the Second World War, that is since the first half of the Fifties. According to this and other assumptions that will be detailed in the next sections, the final sample counts 6984 respondents living in 10 European countries (Belgium, Denmark, France, Germany, Greece, Italy, Spain, Sweden, Switzerland and the Netherlands). Overall, this sample is mainly composed by women, despite a larger share of male respondents in the Mediterranean countries. Sweden has the lowest number of male respondents.

The next sections will describe the main features of the variables used in the subsequent analysis.

2.1 Childhood conditions

The SHARELIFE questionnaire collects information about the socioeconomic condition of parental household of respondents that can be combined in order to describe the economic resources available during their childhood. In this paper, we focus our attention on three indicators:

1. The number of rooms per capita at the age of 10;

2. The availability of books in the respondent accommodation at the age of 10;

3. The type of occupation of the household's main breadwinner at the age of 10, grouped in high, medium, skilled or low qualification.

According to the questionnaire, the number of rooms considered in the first indicator excludes kitchen, bathrooms and hallways. The choice of a relative indicator (instead of the overall number of rooms for instance) follows the need to account for cross-country heterogeneity in the household size. Indeed, the average number of people living in the respondent's accommodation at the age of 10 varies from 4.75 in Sweden to 6.33 in the Netherlands.

The number of rooms per capita may be seen as an indicator of the availability of household economic resources during childhood (household financial status): low values of this ratio might suggest the presence of overcrowding in the childhood accommodation, which is an indicator of financial distress (the fewer rooms per capita, the more likely to be worse off); high values of this indicator are associated with the condition of oversupply of rooms, that however might hide inefficient allocations of the household economic resources (Kohli et al., 2008).

There is evidence of a high cross-country heterogeneity in the provision of rooms per person. In Belgium, the average number of rooms per capita is larger than 1 (that is, each household member at the age of 10 had about one room at his/her disposal), while in Denmark and Switzerland this ratio is between 0.9 and 1. Mediterranean countries show the highest risk of overcrowding: the average value of this indicator is equal to 0.55 in Greece, 0.59 in Italy and 0.66 in Spain. The remaining four countries are very similar, with an average number of rooms per capita around 0.82.

The second childhood indicator (availability of books in the respondent accommodation) is expected to be highly correlated with the cultural background of the household where respondents grew up. Indeed, it is derived from the SHARELIFE question that asks respondents to provide an estimate of the number of books (measured in terms of number of shelves/bookcases that can be filled and not in absolute values) available in their accommodation at the age of 10 (from "None or very few (0-10 books)" to "Enough to fill two or more bookcases (more than 200 books)"). Magazines, newspapers and school books are excluded.

This may be seen as an indicator of the childhood socio-economic status: the higher the number of books, the higher the expected average educational level of parents, siblings and other relatives in the household. In other words, the higher the number of books, the higher the chances to be better off.

Similarly to the number of per-capita rooms evidence, there is a high cross-country heterogeneity in the book availability. In Mediterranean countries, more than 70% of respondents report scarcity of books in their childhood (books were not able to fill one bookcase), with a peak in Italy of 85%. This percentage falls to less than 40% in Scandinavian countries. Slightly less than half of German and Dutch respondents spent their childhood in a place with few books. Overall, only 43.5% of respondents grew up in a better educated environment.

The type of occupation of the household's main breadwinner at the age of 10 may be seen as an indicator of the parental socio-economic status during respondents' childhood. It is derived from the SHARELIFE question that asks respondents to provide a description of their household's main breadwinner at the age of 10 (the categories range from "Legislator, senior official or manager" to "Elementary occupation" according to ISCO classification). The answers are then grouped in four categories (high, medium, skilled and low qualification occupation). This indicator is expected to be highly correlated with the socio-economic status of respondents' household: the higher the qualification level of the main breadwinner occupation, the higher the availability of income and wealth resources during childhood.

On the one hand, in all countries, but Belgium, the majority of the household's main breadwinners reports a skilled occupational qualification. On the other hand, high cross-country heterogeneity arises on the presence of high qualification: very low in Mediterranean countries (even less than 4% in Spain and Italy), very high in Scandinavian countries and the Netherlands (with percentages larger than 12%). In all countries, but Mediterranean ones, about one fourth of the household's main breadwinners during respondents' childhood had an occupation with a high or medium qualification level.

2.2 Incomes and educational attainments

Education is measured as the difference between the individual years of education and the compulsory years of full-time education in the country at the time of education, in order to capture the marginal effect of one extra year of education beyond compulsory schooling.

Nordic country respondents remained in full time education longer than all other countries (on average, more than 15 years). The opposite relationship applies for Mediterranean countries: the average value of years of education is lower than 12.5. In all countries, but Mediterranean ones, the first quantile is equal to or larger than 10 years.

Incomes are meant as both the first income of the first job (the monthly wage or earnings after taxes when respondent started doing his/her first job after the end of continuous full-time education) and the last income of the last job (the monthly wage or earnings after taxes at the end of the final job of his/her career, if the respondent had stopped working, or the current monthly wage or earnings after taxes, if the respondent was still working at the time of the interview).[1]

Real incomes in pre-Euro currencies using consumer price indices (base 2006) are computed. Changes in currencies, such as old versus new currencies (e.g. France, Greece), or the Euro introduction, are taken into account. Amounts in East-German marks were excluded from the final sample, because product price formation was centrally controlled in

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[1]Only respondents who report exact information on the amount, the currency and the timing of the income are included.

all Soviet bloc countries until the 1990s. For the same reason we decided to exclude Poland and the Czech Republic from our analysis, even if data were available.

2.3 Other variables

The set of individual covariates is completed by some job characteristics, such as the age at which the first (last) job was started, whether the first (last) job was as a self-employed, whether it was full-time, the type of occupation (high, medium, skilled or low qualification), the sector of occupation (agriculture, manufacturing, construction, wholesale, public administration, education and health and social work) both at the first and the last job, the total number of jobs in the working career and whether the respondent was still working at the time of the interview.

Four different cohort groups were created according to the respondent's year of birth (1940-1945; 1946-1950; 1951-1955; 1956 or more). The first three cohorts have similar sizes (around 30% of the overall sample). There is not a so large heterogeneity across countries on the distribution of these variables, apart from Greece (a larger number of respondents in the youngest cohort with a smaller number of respondents in the oldest cohort) and Sweden (just the opposite of Greece).

3. The model

The statistical solution adopted in this analysis is the estimation, for each country, of a recursive model with observed variables (Bollen, 1989):

$$y = By + \Gamma x + \zeta \tag{1}$$

where y is the vector of endogenous variables, x is the vector of explanatory variables, ζ is the vector of errors in the structural equation (uncorrelated with x) and B, Γ are matrices of parameters to be estimated. In particular, B is a lower triangular matrix and $E[\zeta\zeta'] = \Psi$ is a diagonal matrix.

The same model (i.e. with the same set of variables) is estimated for each country and results are then compared across countries. In our analysis, the vector of endogenous variables includes the number of years of education, the first income of the first job and the last income of the last job. The remaining variables (childhood conditions, first job characteristics, last job characteristics and cohort dummies) compose the set of explanatory variables, with only childhood conditions and cohort dummies affecting all endogenous variables. Consequently, in the final specification, Γ includes some exclusion restrictions which lead to estimate overidentified models. Figure 1 reports the generic path diagram of this recursive model.

Models are estimated by maximum likelihood, using the Lisrel software (Jöreskog and Sörbom, 2006).

4. Main results

The main results for each model estimations are reported from Table 1 to Table 5. Other findings (such as job characteristics and cohort estimates as well as indirect effects of some variables) are not reported, but are available upon request.

Table 1 reports some goodness of fit statistics used to evaluate the fit of the model to data for each country. There is abundance of fit indices to assess a model fit. However, there is also a large disagreement among researchers both on which indices to report and their cut-offs for judging a good rather than a poor model fit.
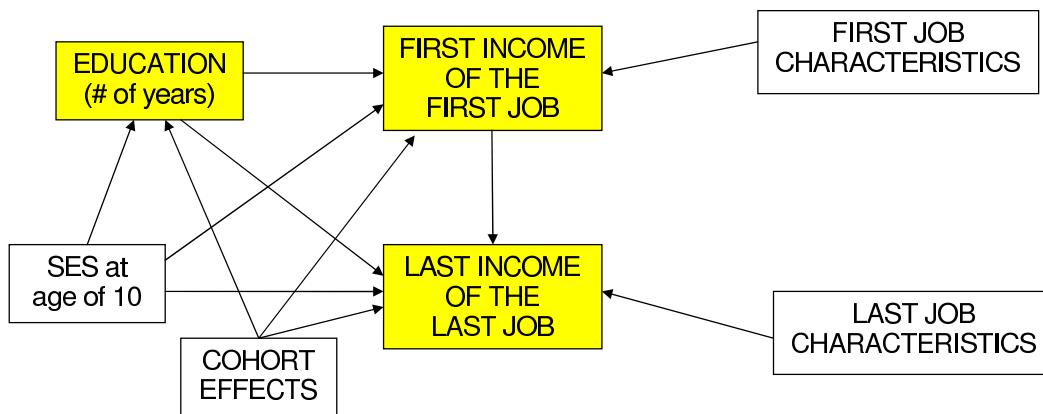
Figure 1: Path diagram of model (1) estimated for each country (the yellow boxes identify the endogenous variables)

Table 1: Goodness of fit statistics of country-specific model estimations (55 degrees of freedom)

Country	χ^2	χ^2/df	SRMR	CFI	RMSEA
Belgium	471.451	8.572	0.032	0.945	0.096
Denmark	377.664	6.867	0.030	0.953	0.091
France	270.806	4.924	0.024	0.974	0.073
Germany	384.105	6.984	0.036	0.919	0.116
Greece	208.300	3.787	0.027	0.981	0.072
Italy	487.609	8.866	0.030	0.959	0.093
Spain	179.032	3.255	0.024	0.976	0.070
Sweden	213.964	3.890	0.025	0.972	0.072
Switzerland	542.254	9.859	0.028	0.864	0.126
The Netherlands	568.077	10.329	0.037	0.944	0.104

The Chi-Square model is the traditional measure for evaluating the overall model fit, but there are severe limitations associated with its use. First, this test assumes multivariate normality. Severe deviations from normality may therefore induce models rejection even though they are properly specified. Then, the Chi-Square statistic is sensitive to sample size, in the sense that it almost systematically leads to the rejection of models when large samples are used (Bentler and Bonnet, 1980; Jöreskog and Sörbom, 1999). In order to minimise the impact of sample size on the Chi-Square model, Wheaton et al. (1977) propose a relative/normed Chi-Square χ^2/df. Unfortunately, there is no consensus regarding an acceptable ratio for this statistic, so that recommendations range from 5.0 (Wheaton et al., 1977) to 2.0 (Tabachnick and Fidell, 2007). Even though the Chi-Square model has many problems associated with it, several authors claim its reporting (Kline, 2005; Hayduk et al., 2007). At the same time, since different indices reflect a different aspect of model fit, a good practice is reporting a variety of indices (Boomsma, 2000; Kline, 2005). Hu and Bentler (1999) suggest to always report a couple of indices, where one of these is always the Standardised Root Mean Square Residual (SRMR), while the other could be the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), etc. For these reasons, the set of goodness of fit statistics reported in Table 1 includes the χ^2, χ^2/df,

Table 2: Childhood effect estimates - part 1 (s.e. in parentheses).

Country	Scarcity of books on			Per-capita number of rooms on		
	Education	First job income	Last job income	Education	First job income	Last job income
Belgium	-0.135 ***	-0.050	0.086	0.084 **	0.104	-0.104
	(0.021)	(0.076)	(0.061)	(0.037)	(0.128)	(0.102)
Denmark	-0.158 ***	-0.071	0.053	0.059	-0.031	0.199 ***
	(0.038)	(0.070)	(0.042)	(0.070)	(0.126)	(0.076)
France	-0.182 ***	-0.240 **	-0.084	0.196 ***	0.024	0.194 *
	(0.027)	(0.115)	(0.068)	(0.047)	(0.196)	(0.115)
Germany	-0.127 ***	-0.122	-0.054	0.233 ***	-0.026	0.210 *
	(0.041)	(0.085)	(0.068)	(0.077)	(0.155)	(0.126)
Greece	-0.249 ***	-0.092	0.033	0.498 ***	0.150	0.463 **
	(0.045)	(0.190)	(0.105)	(0.090)	(0.370)	(0.206)
Italy	-0.282 ***	0.289 *	-0.096	0.284 ***	0.518 **	- 0.023
	(0.048)	(0.164)	(0.148)	(0.062)	(0.210)	(0.192)
Spain	-0.267 ***	-0.405 **	-0.045	0.302 ***	-0.186	0.054
	(0.050)	(0.187)	(0.114)	(0.083)	(0.298)	(0.180)
Sweden	-0.286 ***	0.176	-0.124 ***	0.173	-0.197	0.030
	(0.071)	(0.157)	(0.040)	(0.117)	(0.255)	(0.065)
Switzerland	-0.124 ***	-0.050	0.130	0.134 **	0.176	0.461
	(0.031)	(0.160)	(0.208)	(0.058)	(0.288)	(0.382)
The Netherlands	-0.172 ***	-0.085	-0.001	0.263 ***	0.185	-0.114
	(0.026)	(0.065)	(0.063)	(0.054)	(0.131)	(0.126)

SRMR, CFI and RMSEA.

While the null hypothesis on the Chi-Square model is rejected for all countries, the relative Chi-Square indicator is lower than 5 in France, Greece, Spain and Sweden. However, in each estimation, model residuals are far from normality. For this reason, we prefer to look at the values of the SRMR indicator, whose definition is not related to any normality hypothesis. In all countries, the SRMR is lower than 0.04. The CFI is larger than 0.94 in all countries, apart from Switzerland and the Netherlands.

According to these results, model fit seems good for all countries.

4.1 Childhood conditions direct effects

Tables 2, 3 and 4 report the direct effects of the childhood conditions on the three dependent variables defined in Section 3.

As expected, the socio-economic status at the age of 10 has a direct effect on education in all countries. Overall, poorer SES conditions during childhood are associated with higher differentials in years of full-time education. The significance of the relationship between childhood conditions and education is mainly driven by the scarcity of books in the parental house and the presence of a high level of occupational qualifications of the household's main breadwinner.

In half of the countries of our sample (i.e. France, Italy, Spain, the Netherlands and

Sweden) there is evidence of some direct effects of childhood conditions on the first income at the first job. In France and Spain, the childhood condition that affects the most the level of the first job income (in a negative way) is the scarcity of books. The number of rooms per capita only plays a significant role in first job incomes in Italy. The level of qualification of the job of the main breadwinner of the childhood household only affects the level of the first job incomes for the Swedes and Dutch respondents. Hence, poorer SES conditions during childhood are associated with higher income disparities.

Surprisingly, there are also some direct effects of childhood conditions on the last job incomes, stronger in Nordic countries and weaker in some Central European countries (Germany and France) and Greece.

It is also interesting to note that in Nordic countries there is evidence of strong direct effects of childhood conditions on the last job incomes, but no indirect effect for the same relationship. The opposite finding (presence of indirect effects of childhood conditions on the last job incomes, but no direct effect for the same relationship) appears from Mediterranean countries like Italy and Spain. France is the only country which exhibits both direct and indirect effects on both income measures.

Finally, although not reported in the tables, our analysis shows that Central European countries (France, Germany, Belgium and the Netherlands) and Greece show some important indirect effects of childhood conditions on first job incomes. Moreover, in all countries but Denmark, Sweden and the Netherlands, childhood circumstances strongly and indirectly affect last incomes in last job. As will be demonstrated in the next section, these indirect effects are mainly channeled through education.

4.2 Education and income effects

Tables 5 shows the estimates of the B matrix for all countries.

Education shows a significant and positive relationship with the first job incomes in about half of the countries (Belgium, France, Germany, Greece, Spain and the Netherlands).

Model estimates highlight some direct effects of education on incomes at the last job. These effects are generally weaker than those on first job incomes, except for Italy and Switzerland. In Greece, France, Germany and Italy, there is a positive relationship between years of full time education and last incomes of the last job, while the relationship is surprisingly reversed in Switzerland.

There is also evidence of a positive and significant direct effect of first job incomes on last job incomes in all countries, but Denmark, Germany, Greece and Switzerland.

It is interesting to note that Denmark and Sweden have neither direct nor indirect effects of education on any income levels.

On the one hand, France is the only country that shows both a direct and an indirect effect of education on last job incomes. On the other hand, Belgium and the Netherlands report only indirect effects of education on last job incomes. In all the remaining countries, no indirect effect for such relationship appears.

Summarizing all findings, we find that first incomes are strongly indirectly affected by childhood conditions, while there are weak or no direct effects. The opposite is true for last job incomes that are significantly directly affected by childhood conditions and more weakly affected by educational attainment. As expected, though, last job incomes are significantly affected by first job incomes in all countries, except Germany, Greece and Swtzerland.

Ceteris paribus, our estimations also show that, in all countries, females have lower incomes than males and being self-employed in the last job is not a statistically significant variable. Keeping other things equal, in all countries but Switzerland the age of starting

Table 3: Childhood effect estimates - part 2 (s.e. in parentheses).

Country	High qualification hh breadw. on			Medium qualification hh breadw. on		
	Education	First job income	Last job income	Education	First job income	Last job income
Belgium	0.231 ***	0.019	0.077	0.130 ***	-0.074	-0.110
	(0.036)	(0.131)	(0.104)	(0.029)	(0.103)	(0.081)
Denmark	0.326 ***	0.091	-0.043	0.205 ***	-0.075	-0.027
	(0.064)	(0.123)	(0.073)	(0.069)	(0.127)	(0.074)
France	0.341 ***	0.092	0.248 **	0.156 ***	0.003	0.182 *
	(0.047)	(0.207)	(0.122)	(0.039)	(0.161)	(0.096)
Germany	0.486 ***	0.134	0.081	0.221 ***	0.166	0.054
	(0.088)	(0.190)	(0.155)	(0.067)	(0.136)	(0.111)
Greece	0.231 ***	-0.371	0.064	-0.009	0.185	0.064
	(0.084)	(0.351)	(0.195)	(0.073)	(0.293)	(0.164)
Italy	0.550 ***	0.240	0.537 *	0.291 ***	0.203	- 0.013
	(0.091)	(0.310)	(0.283)	(0.051)	(0.177)	(0.160)
Spain	0.209 *	0.662	0.359	0.194 ***	-0.054	-0.297 *
	(0.116)	(0.414)	(0.254)	(0.071)	(0.257)	(0.155)
Sweden	0.256 **	0.738 ***	0.083	0.034	0.264	0.058
	(0.101)	(0.223)	(0.058)	(0.121)	(0.265)	(0.067)
Switzerland	0.253 ***	-0.273	0.418	0.145 ***	0.036	0.365
	(0.059)	(0.310)	(0.403)	(0.054)	(0.274)	(0.356)
The Netherlands	0.295 ***	0.117	0.049	0.150 ***	0.051	0.108
	(0.043)	(0.108)	(0.105)	(0.045)	(0.109)	(0.105)

Table 4: Childhood effect estimates - part 3 (s.e. in parentheses).

Country	Skilled qualification hh breadw. on		
	Education	First job income	Last job income
Belgium	0.066 ***	-0.040	0.043
	(0.024)	(0.085)	(0.068)
Denmark	0.100 **	0.022	-0.007
	(0.043)	(0.078)	(0.046)
France	0.000	0.025	0.084
	(0.030)	(0.122)	(0.071)
Germany	0.126 **	0.147	-0.013
	(0.056)	(0.113)	(0.091)
Greece	-0.056	-0.030	-0.074
	(0.045)	(0.181)	(0.101)
Italy	0.055 *	-0.178	0.013
	(0.033)	(0.110)	(0.099)
Spain	0.054	0.011	0.116
	(0.045)	(0.160)	(0.096)
Sweden	0.085	0.113	0.055
	(0.077)	(0.168)	(0.044)
Switzerland	0.053	0.090	0.348
	(0.044)	(0.221)	(0.289)
The Netherlands	0.067 **	0.126 *	0.083
	(0.032)	(0.076)	(0.074)

Table 5: Estimates of the B matrix (s.e. in parentheses).

Country	Education on first job income	Education on last job income	First job income on last job income
Belgium	1.011 (0.119)***	0.142 (0.098)	0.277 (0.027)***
Denmark	-0.070 (0.067)	0.056 (0.040)	0.016 (0.021)
France	0.396 (0.149)***	0.179 (0.087)**	0.113 (0.021)***
Germany	0.465 (0.093)***	0.159 (0.077)**	0.054 (0.038)
Greece	0.594(0.170)***	0.340 (0.095)***	0.024 (0.023)
Italy	0.149 (0.108)	0.169 (0.098)*	0.198 (0.030)***
Spain	0.308 (0.160)*	0.086 (0.097)	0.147 (0.027)***
Sweden	0.015 (0.090)	0.016 (0.023)	0.026 (0.011)**
Switzerland	0.314 (0.238)	-0.805 (0.310)***	0.059 (0.060)
The Netherlands	0.273 (0.080)***	-0.080 (0.078)	0.138 (0.032)***

the last job is significantly (and positively) correlated with incomes, while apart from Italy and Greece, the occupational qualification of the last job is significantly (and positively) correlated with incomes. In the end, at the exception of very few cases, there are no statistically significant relationships between last job incomes and the sector of occupation of the last job, being still working at the time of the interview and the total number of jobs in the working career, ceteris paribus.

5. Conclusions

As underlined by Heckman (2000, page 50), "in evaluating a human capital investment strategy, it is crucial to consider the entire policy portfolio of interventions together - training programmes, school-based policies, school reform, and early interventions - rather than focusing on one type of policy in isolation from the others. The best evidence suggests that learning begets learning. Early investments in learning are effective".

In the spirit of Heckman, the aim of this work is to investigate whether (and in case, how) early life circumstances may affect later life outcomes. Results are surprising. Indeed, findings suggest that childhood conditions and education may play an important role in explaining the observed differences across countries on later-life income disparities. Individuals living in economically and culturally better off environments, on average, remain in full time education longer and exhibit lower income inequality throughout their life. Basically, relationships between early-life circumstances and last job incomes are stronger than those between early-life circumstances and first job incomes. However, the extent of these results varies across countries, particularly comparing Nordic and Mediterranean countries.

According to these findings, different public policies may be implemented at an early stage of the life-span of the individuals in order to reduce income dispersions at the exit from the labour market. For instance, a combination of institutional settings fostering access to education of students from disadvantaged households and reforms equalizing entry-level salaries, such as the ones implemented in Nordic countries, may contribute to reducing the early education and income gaps that tend to affect the degree of income disparities throughout life.

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6. Acknowledgements