Occupational Mobility, Educational Mobility and Intergenerational Transmission of Disadvantages in Europe

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Occupational Mobility, Educational Mobility and Intergenerational Transmission of Disadvantages in Europe[1]

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Abstract

Empirical literature offers a number of studies suggesting that living conditions in childhood can significantly influence achievements and living conditions in adulthood. The aim of this paper is to answer the question: To what extent is the intergenerational transmission of poverty associated with social mobility (in terms of educational and occupational intergenerational mobility) in the European Union (and Iceland, Switzerland and Norway)? Our analyses are based on EU-SILC 2011, 'Intergenerational transmission of disadvantages' module microdata. Interpretations of the findings are based on the ordered logit models estimated at European and country levels. The results suggest that both educational and occupational mobility are in a statistically significant positive relationship with the intergenerational transmission of poverty (proxied by a change in the perceived financial stress of the household).

Keywords: *intergenerational transmission of poverty, social mobility, Europe, EU-SILC*

JEL Classification: I31, I32, Z13

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Introduction

It is obvious that the living conditions in childhood can significantly affect later achievements and the whole life of individuals, as has been discussed in a number of studies (see e.g. Bronfenbrenner, 1986; Lundberg, 1991; Luo and Waite, 2005). In other terms, parents with a higher standard of living tend to transmit better education, ability and non-cognitive skills to their children, providing them also with greater labour market success and, consequently, a higher income status (Blanden, Gregg and Macmillan, 2006).

There are a number of factors potentially affecting changes in living conditions throughout life. At the same time, there are more possibilities for how to describe the changes. Our study focuses on changes in the subjective perception of financial ease or stress of respondents' households, comparing the situation in their youth with current times. Using the 2011 module on intergenerational transmission of disadvantages, from the European Union Statistics on Income and Living Conditions (EU-SILC), we link the declarations on perceived financial difficulties with educational and occupational mobility between generations.

From the perspective of spatial coverage, the study focuses on European Union countries and Iceland, Norway and Switzerland. Taking into account the subjective nature of the phenomenon, international comparisons should reflect the cultural differences and changes in socio-economic conditions in the analysed countries. Regarding time, the sample covers the period of 1964 – 2003, depending on the age of respondents.

Based on the assumption that living conditions of people are correlated with the economic level of the country (proxied, e.g., by GDP), in general, it can be claimed that living standards of the EU population have increased over time. However, despite long-term economic growth in the EU, a general convergence of living standards has not been reached. Some of the countries are moreover affected by the relics of a past communist regime, which can significantly influence subjective perception of poverty (or living conditions in general). However, analysis of living conditions at aggregate level cannot be considered as satisfactory, and a better understanding of the phenomenon requires analyses performed at the individual level of persons and households.

The main research question addressed in the study is whether there is a relationship between the intergenerational transmission of disadvantages and social mobility (in terms of educational and occupational intergenerational mobility). We expect the relationship to be direct. The paper is divided as follows: the section 1 describes the background of our research, and the goal of the study is specified in a greater detail. The section 2 contains a detailed description of the methodology and transformations of the variables, and the main findings are

described and interpreted in section 3. Analyses of intergenerational transmission of disadvantages and social mobility assessed by an innovative approach are the main contribution of this study.

1. Background and Goal of Study

Intergenerational transmission of disadvantages can be looked upon as a complex of positive and negative factors that affect a child's chances of experiencing poverty in the future (Moore, 2005). The empirical literature offers various evidence suggesting that living conditions in the past (in childhood) can significantly affect living conditions in the future (in adulthood). Thus there is an obvious relationship between deprivation of a person in childhood resulting from parents' poverty and experiencing poverty in one's own youth (Filadelfiová, 2007), which can further predict poverty in the later phases of life, and a consecutive transmission of poverty to descendants. However, it cannot be generalised, as other factors such as family/household structure, environment, social isolation etc. can independently affect an individual's living conditions throughout their life cycle (Bird, 2007).

The literature suggests several potential factors for the intergenerational transmission of disadvantages, while social mobility (in terms of a person's education or occupation) can be considered as one of the most important, and a direct and indirect impact can be assumed. The direct impact works often through income: people with higher education and/or higher social status have higher incomes which enable them to assure better living conditions and education for their children, which again increases their chances for better living conditions in the future. An indirect impact can be observed: e.g. acting on children while their preferences are being created; or creating favourable conditions for their studies etc. (Feinstein, Duckworth and Sabates, 2004). Many studies further suggest a positive relationship between parents' education and their children's attainments (Ermisch and Pronzato, 2010) which, as already mentioned, increases their chance to escape poverty in the future.

Most of the studies on intergenerational transmission of disadvantages focus on analyses of the income situation of parents and their children.[2] Parents' income is considered as the best predictor of the future life chances of their parents – either directly, e.g. providing assets to children – or indirectly, e.g. creating better living conditions in childhood (D'Addio, 2007). Education is suggested to be the main factor of intergenerational income mobility, as it is connected to better status at work and an associated higher level of income, which is in direct

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[2] See e.g. Altonji and Dunn (2000) for USA analyses, and Björklund et al. (2002), Österbacka (2002) and Nicoletti and Ermisch (2008) for Eastern-European countries.

relationship with lower risk of poverty (Smith and Middleton, 2007). Education is closely associated with qualification and parents' occupational status. The previous research suggests that higher occupational status is directly associated with the educational attainments of their children, which increases children's chances for better living conditions in the future (Sylva et al., 2004).

The goal of our study is to answer the question regarding the relationship between intergenerational transmission of disadvantages and social mobility (in terms of educational and occupational mobility) in Europe. In accordance with Goldthorpe (2007), educational mobility is defined as movement between the educational level of parents and of their descendants. As Katrňák and Simonová (2011) point out, less attention is paid to educational mobility in comparison to occupational mobility. For our purposes, we adopt one of the standard approaches to the occupational mobility definition and focus on the movement between social classes indicated by the status in employment (Katrňák, 2012).

Our study differs from similar studies in at least two perspectives. The assessment of transmission of disadvantages is not based on income, but on a retrospective subjective evaluation of financial stress in youth (when the person was around 14 years old), and a similar evaluation at present. Our research hypothesis assumes that upward social (educational/occupational) mobility is associated with the positive change in the household's financial situation perception.

In contrast to previous studies based on analyses of both respondents' and their parents' characteristics, our study is based on the construction of simple individual variables reflecting intergenerational mobility directly. Indicators of intergenerational mobility regarding financial stress, educational and occupational status have three levels: 1. negative change; 2. no change; 3. positive change. *Negative change* depicts a situation in which the respondent perceives higher financial stress at present than in their youth. In terms of education the negative change occurs when the respondent's education is lower than the education of their parents, when the reference category is the education of the parent who attained a higher education. The same applies to occupational mobility. *No change* and *positive change* are defined in a similar way.

2. Methods

2.1. Source of Data

Analyses and results in the study are based on EU-SILC 2011 microdata (Eurostat, 2014) including an ad-hoc module on the intergenerational transmission of disadvantages. The data cover 27 European Union[3] countries, plus Iceland, Norway and Switzerland.

2.2. Transformation of the Key Variables[3]

The analysis of the relationship between the intergenerational transmission of disadvantages and social mobility is based on ordered logit; i.e. a model of logistic regression with an ordinal response variable. The response variable, intergenerational transmission of financial stress perception, is based on a comparison of subjective financial stress perception in the past and at present, using the following two EU-SILC questionnaire questions:

[Present]: Variable HS120: *'A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?'*

[Past]: Variable PT200: *'When you were around 14 years old, with how much difficulty or ease was your household able to make ends meet, that is, to pay for its usual necessary expenses?'*

In both cases the respondents had to choose one of the following responses: '1. *with great difficulty*; 2. *with difficulty;* 3. *with some difficulty;* 4. *fairly easily;* 5. *easily;* 6. *very easily.'*

Considering the fact that in the case of the HS120 variable the response given by the responding person is assigned to all household members, and question PT200 was asked of each household member aged 25 – 59, the analysis only focuses on the persons responding the household questionnaire. Adopting the principle of carefulness we assume that the person responding the household questionnaire generalises their perception of the present situation to the whole household, while some of the household members could perceive the present situation differently.

The resulting value of response variable (*y*) can have three categories and is based on the following transformation:

Let's denote the variable HS120 as y_1 and the variable PT200 as y_2, while $y_1, y_2 \in \{1, 2, ..., 6\}$. The transformed variable is defined:

$\forall (y_{1i} < y_{2i}): y_i = 1$, i.e. person *i* reckons that their present household is able to make ends meet *with greater difficulties* than household in which they lived when they were around 14 years old;

$\forall (y_{1i} = y_{2i}): y_i = 2$, i.e. person *i* reckons that her present household is able to make ends meet with (approximately) the same difficulties as household in which they lived when they were around 14 years old;

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[3] German microdata were not included in the dataset, as the German National Statistical Institute has not given permission to use the German microdata in this research project, and so German data are excluded from the analyses.

$\forall (y_{1i} > y_{2i}): y_i = 3$, i.e. person i reckons that her present household is able to make ends meet *with lower difficulties* than household in which they lived when they were around 14 years old.

A similar transformation is used also in case of the key explanatory variables: intergenerational educational and occupation mobility.

The respondent's education is given by variable PE040 (highest ISCED[4] level attained) and parents' education is given by variables PT110/PT120[5] (highest level of education attained by the mother/father). As the categories of the variables differ, the first transformation is aimed at unifying the categories. This was performed in accordance with Eurostat (2011) methodology: denote the variable PE040 as x_3, variable PT110 as x_4 and variable PT120 as x_5, and:

$$\forall x_{3i} \in \{0,\ 1,\ 2\}: x_{3i}^* = 1, \quad \forall x_{3i} \in \{3,\ 4\}: x_{3i}^* = 2, \quad \forall x_{3i} \in \{5,\ 6\}: x_{3i}^* = 3$$

$$\forall x_{4i} = 0: x_{4i}^* = 1, \quad \forall x_{5i} = 0: x_{5i}^* = 1; \quad \forall x_{4i} > 0: x_{4i}^* = x_{4i}, \quad \forall x_{5i} > 0: x_{5i}^* = x_{5i}$$

Educational mobility is the key variable and is denoted as x_1. The transformation is based on an assumption that the educational status of the household is given by the level of education attained by the parent whose educational attainment is higher. The resulting value of the variable is yielded by a transformation based on a comparison of the highest level of education attained by the respondent and the highest level of education attained by the parent who attained a higher level of education. This can be symbolically rewritten as:

$$\forall \left(x_{3i}^* < \max \left\{ x_{4i}^*,\ x_{5i}^* \right\} \right): x_{1i} = 1$$

$$\forall \left(x_{3i}^* = \max \left\{ x_{4i}^*,\ x_{5i}^* \right\} \right): x_{1i} = 2$$

$$\forall \left(x_{3i}^* > \max \left\{ x_{4i}^*,\ x_{5i}^* \right\} \right): x_{1i} = 3$$

A similar consideration is used also in the construction of the intergenerational occupation mobility variable. As our study focuses on a comparison of European countries, operationalisation of intergenerational occupational mobility is based on occupational status using the a-priori classification of occupations.

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[4] Variable with seven categories: 0: pre-primary education, 1: primary education; 2: lower secondary education; 3: (upper) secondary education; 4: post-secondary non-tertiary education; 5: first stage of tertiary education (not leading directly to an advanced research qualification); 6: second stage of tertiary education (leading to an advanced research qualification).

[5] Variables with four categories: 0: father/mother could neither read nor write in any language; 1: low level (pre-primary, primary or lower secondary education); 2: medium level (upper-secondary education and post-secondary non-tertiary education); 3: high level (first stage of tertiary education and second stage of tertiary education).

In accordance with Sopóci et al. (2011, p. 140) we assume that employment, working position and an individual's status in the labour market are the most common bases for determining their position in a social stratification system.

The occupation of the respondent is given by variable PL051, *'main occupation',* and the parents' occupation by variables PT150/PT180, *'main occupation of the father/mother'*. With respect to the structure of the data (ISCO-08 category is generally available at the first level – major group – only), it is not possible to perform the complete conversion from ISCO-08 to EseC (see e.g. Katrňák, 2012). This is why we had to perform a partial conversion based on the combination of ISCO-08 major groups and four ISCO skill levels (ILO, 2006).[6] As a result we get the following classification:[7]

T a b l e 1

Adjusted Classification of Occupational Classes

Class	ISCO-08 major groups	Skill level
1	1 – Managers, senior officials and legislators	3, 4
2	2 – Professionals	4
3	3 – Technicians and associate professionals	3
4	4 – Clerks 5 – Service and sales workers 6 – Skilled agricultural and fishery workers 7 – Craft and related trades workers 8 – Plant and machine operators, and assembler	2
5	9 – Elementary occupations	1

Source: Own table based on ILO (2006).

The transformation can be rewritten: denote the variable *main occupation of the respondent* as x_6, variable main occupation of the father as x_7 and variable main occupation of the mother as x_8, and perform the following transformations:

$$\forall x_{6i} = 1: x_{6i}^* = 1, \ \forall x_{7i} = 1: x_{7i}^* = 1, \ \forall x_8 = 1: x_{8i}^* = 1$$

$$\forall x_{6i} = 2: x_{6i}^* = 2, \ \forall x_{7i} = 2: x_{7i}^* = 2, \ \forall x_{8i} = 2: x_{8i}^* = 2$$

$$\forall x_{6i} = 3: x_{6i}^* = 3, \ \forall x_{7i} = 3: x_{7i}^* = 3, \ \forall x_{8i} = 3: x_{8i}^* = 3$$

$$\forall x_{6i} \in [4, \ 8]: x_{6i}^* = 4, \ \forall x_{7i} \in [4, \ 8]: x_{7i}^* = 4, \ \forall x_{8i} \in [4, \ 8]: x_{8i}^* = 4$$

$$\forall x_{6i} = 9: x_{6i}^* = 5, \ \forall x_{7i} = 9: x_{7i}^* = 5, \ \forall x_{8i} = 9: x_{8i}^* = 5$$

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[6] We are aware of problematic aspects associated with the conversions and transformations we used (see e.g. Sopóci et al., 2011; Katrňák, 2012; Maloutas, 2007; Rose and Harrison, 2007), caused by limitations in the data used.

[7] Regardless of skills level, the major group '1, Managers, senior officials and legislators' is considered as a sole class of the highest level.

Occupational mobility is the key variable, denote it as x_2 and again, the transformation is based on the assumption that the occupational social status of a household is given by the occupational status of the parent whose occupational status is higher. The resulting value of the variable is yielded by a transformation based on a comparison of the occupational status of the respondent with the occupational status of the parent with the higher occupational status; i.e.:

$$\forall \left(x_{6i}^{*} > \min\left\{ x_{7i}^{*},\ x_{8i}^{*} \right\} \right) : x_{2i} = 1$$

$$\forall \left(x_{6i}^{*} = \min\left\{ x_{7i}^{*},\ x_{8i}^{*} \right\} \right) : x_{2i} = 2$$

$$\forall \left(x_{6i}^{*} < \min\left\{ x_{7i}^{*},\ x_{8i}^{*} \right\} \right) : x_{2i} = 3$$

2.3. Description of the Model

The analysis of the relationship between the intergenerational transmission of disadvantages and intergenerational mobility (in terms of educational and occupational mobility) is based on an ordered logit model,[8] where the response variable intergenerational transmission of disadvantages (operationalised by the perception of financial stress of household) has three categories:

$y_i = 1$: the respondent *i* perceives a *higher* level of household's financial stress (at present in comparison to the past),

$y_i = 2$: the respondent *i* perceives *no change* in the level of household's financial stress (at present in comparison to the past),

$y_i = 3$: the respondent *i* perceives a *lower* level of household's financial stress (at present in comparison to the past).

Beyond the key explanatory variables (intergenerational social mobility in terms of educational/occupational mobility) described in the previous text, the following set of control variables is considered:

• gender (dummy variable with categories '1: *male*' (ref.) and '0: *female*');

• age at the end of income reference period;

• log of equivalent disposable household income;

• ability to face unexpected financial expenses (dummy variable with categories '1: *yes*' (ref.) and '0: *no*');

• indication of whether a person suffers from any chronic (long-standing) illness or condition (dummy variable with categories '1: *yes*' (ref.) and '0: *no*');

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[8] The ordered logit model is a regression model with an ordered response variable. The model is based on the cumulative probabilities of the response variable: the logit of each cumulative probability is assumed to be a linear function of the covariates, with regression coefficients constant across response categories (Grilli and Rampichini, 2014, p. 4510).

• current economic status (dummy variable with merged categories:[9] '1: *employed/self-employed person'* (ref.) and '0: *economically inactive person'*);

• indication of whether a person lives in a household with very low work intensity (dummy variable with categories '1: *yes'* and '0: *no'* (ref.));

• indication of whether a person lives in a severely materially deprived household (dummy variable with categories '1: *yes'* and '0: *no'* (ref.));

• indication of whether a person lives in an overcrowded household (dummy variable with categories '1: *yes'* and '0: *no'* (ref.)).

Four models are presented in the study:

1. model with a single explanatory variable: intergenerational occupational mobility;

2. model with a single explanatory variable: intergenerational educational mobility;

3. model with two explanatory variables: intergenerational occupational mobility, and intergenerational educational mobility;

4. model with the two key explanatory variables and a set of control variables.

The models are estimated at national level (i.e. 30 distinct models) and at European level, controlling for country fixed effects.

The aim of estimating four models is to demonstrate that after adding the control variables the effect of intergenerational social mobility (in terms of occupational and educational mobility) on intergenerational transmission of disadvantages is statistically significant (although weakened), and signs of the estimated regression coefficients do not change.

All calculations and estimations in the study were performed in an R environment (R Core Team, 2015). Assessment of models is based on Nagelkerke (1991) pseudo R^2 coefficient.

3. Results and Discussion

3.1. Description of the Key Variables

The number of people perceiving that they currently live in a household making ends meet with greater difficulty than a household in which they lived when they were around 14 years old (or shortly denoted as *people perceiving deterioration of their financial situation*) is, in most of the countries, higher than the number of people perceiving that they currently live in a household making ends meet with less difficulty than a household in which they lived when they were

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[9] The main rationale behind merging the categories was the fact that questions dealing with intergenerational transmission of disadvantages were only asked of persons aged 25 – 59.

around 14 years old (or shortly denoted as *people perceiving improvement of their financial situation*).

Share of People Perceiving Deterioration/Improvement/No Change in Financial Situation Intergenerationally, 2011
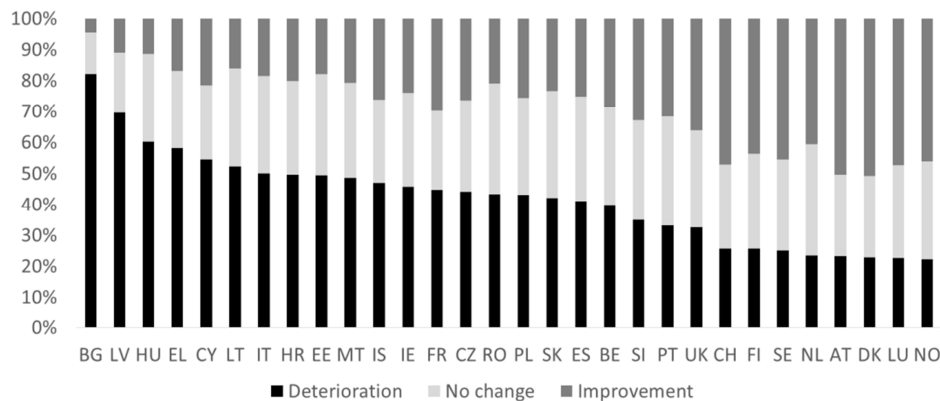
Note: See Appendix B for country codes abbreviations.

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

The largest difference between the number of people perceiving deterioration of their financial situation and the number of people perceiving an improvement in their financial situation is reported in the case of Bulgaria (almost 20 times more people perceived a deterioration than the number of people that perceived an improvement in their financial situation), Latvia (6 times more), Hungary (5 times more) and Greece (4 times more). The share of people perceiving that they currently live in a household making ends meet with approximately the same level of difficulty as a household in which they lived when they were around 14 years old (or shortly denoted as *people perceiving no change in their financial situation*), can be considered as relatively stable across countries, and its level is around 30% (see Figure 1).

The group of nine countries in which the number of people perceiving an improvement of financial situation is larger than the number of people perceiving a deterioration of their financial situation consists only of the Western European countries (Luxembourg, Austria, Norway, Sweden, Switzerland, Finland, Denmark, Netherlands and the United Kingdom). The exceptions are Italy and France, which score worse than the Czech Republic, Slovakia and Poland.

The results therefore suggest that most people in Western Europe perceive, on average, an improvement in their financial situation (at present, in comparison to period when they were around 14 years old), while for the Central/Eastern European countries the opposite is typical. At least two explanations can be

offered. The first is associated with the fact that the level of economic convergence is not reached as it was expected. The second explanation is connected to the effects of economic crisis, as it can be assumed that the overall lowered economic performance could have affected people's employment opportunities, and the living standards of certain groups of people could also have decreased. As a result those people perceived a negative change in the financial situation (in comparison to the past).

The division of respondents into two groups based on their age (1. not older than median age; and 2. older than median age) leads us to the conclusion that in the case of almost all countries (with the exception of Estonia), 'younger' respondents (i.e. the respondents who were approximately 14 years old between 1983 and 2003) perceive a deterioration in their financial situation to a larger extent than 'older' respondents (i.e. respondents who were approximately 14 years old before 1983). Portugal, Slovakia and the United Kingdom are countries with the most significant differences between 'older' and 'younger' respondents. More specifically, in the case of the 'younger' respondents a larger number perceive a deterioration in their financial situation than the number of respondents perceiving an improvement in their financial situation. And in the case of the 'older' respondents there's a larger number that perceive an improvement in their financial situation than those perceiving a deterioration of their financial situation.

As for occupational mobility, respondents without any change in social status intergenerationally (i.e. occupational status of respondents does not differ from occupational status of their parent[10]) form the largest group. The results further suggest that in most countries (21 out of 30) the number of people with upward occupational mobility is higher than the number of people with downward occupational mobility (see Figure 2).

Consideration of age (division of respondents to 'younger' and 'older' than the median age) suggests that in almost all countries (with the exception of Malta and Poland) the probability of upward occupational mobility is higher for 'older' respondents than for 'younger' respondents.[11] This could be explained by the fact that younger respondents can still achieve a higher occupational status in their future career.

The results further indicate that in general there is an upward mobility or stability. Respondents with no change between the highest attained level compared to their parents is the largest group (35 – 65%). Upward educational mobility (Figure 3) is typical of all countries with the most considerable change:

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[10] The respondent's status is compared to the parent whose social status was higher.

[11] Division of respondents into 'younger' and 'older' is based on the same principle as that described above.

in the case of Romania the number of respondents with upward educational mobility is 50 times larger than the number of respondents with downward educational mobility. Norway is the only country in which the number of 'younger' respondents with downward educational mobility is higher than respondents with upward educational mobility. The largest share of respondents with downward educational mobility is reported in Norway (22%), Denmark (20%), Iceland (17%) and Estonia (16%).

F i g u r e 2

Shares of People with Upward/Downward and No Change in Occupation Intergenerationally, 2011
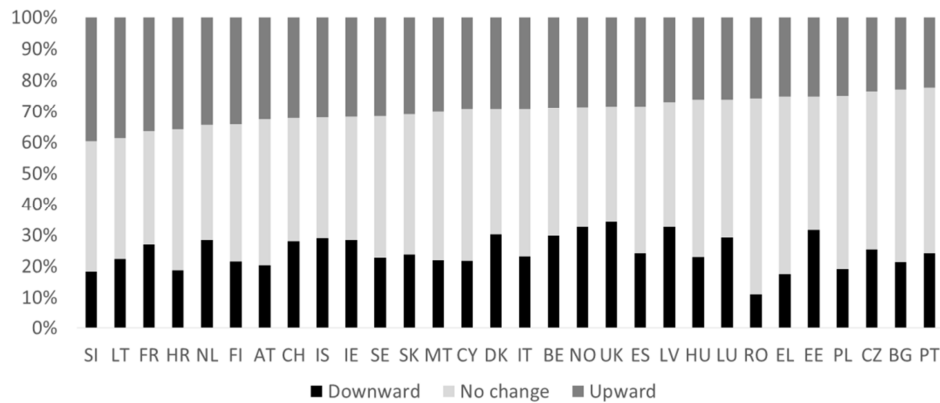
Note: See Appendix B for country codes abbreviations.

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

F i g u r e 3

Shares of People with Upward/Downward and No Change in Educational Level Intergenerationally, 2011
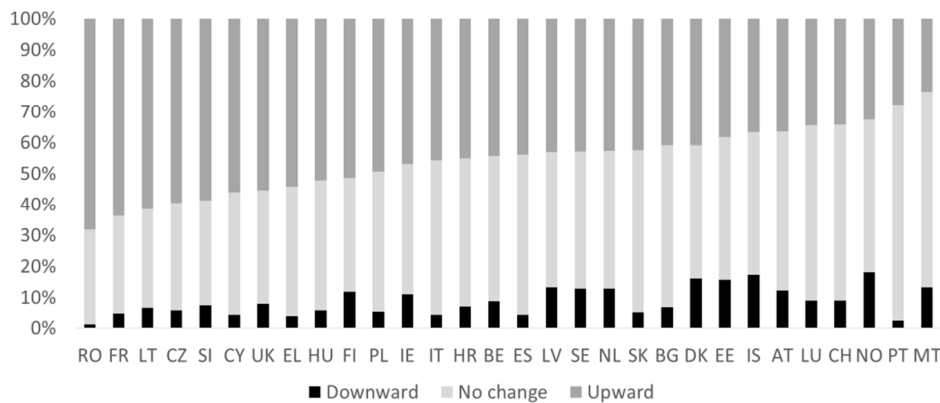
Note: See Appendix B for country codes abbreviations.

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

3.2. Correlation Analysis

Before proceeding to the main (regression) analysis we perform an analysis of relationship[12] between the values of response and the key explanatory variables at present and in the past (Table 2).

T a b l e 2
Relationship between Present and Past Values of Selected Variables
(Kendall's τ_B coefficient)

Country	Disadvantages	Education	Status	Country	Disadvantages	Education	Status
AT	0.146	0.318	0.247	IS	0.098	0.277	0.171
BE	0.231	0.420	0.266	IT	0.225	0.401	0.242
BG	0.188	0.484	0.330	LT	0.163	0.322	0.227
CY	0.188	0.394	0.240	LU	0.247	0.503	0.321
CZ	0.154	0.370	0.291	LV	0.097	0.294	0.232
DK	0.079	0.253	0.211	MT	0.232	0.336	0.285
EE	0.187	0.262	0.215	NL	0.136	0.324	0.223
EL	0.162	0.365	0.189	NO	0.129	0.297	0.203
ES	0.246	0.334	0.240	PL	0.193	0.374	0.278
FI	0.153	0.246	0.241	PT	0.314	0.352	0.235
FR	0.124	0.355	0.254	RO	0.260	0.402	0.331
HR	0.193	0.385	0.232	SE	0.118	0.291	0.249
HU	0.203	0.421	0.308	SI	0.197	0.325	0.288
CH	0.153	0.359	0.237	SK	0.219	0.353	0.272
IE	0.195	0.336	0.249	UK	0.160	0.309	0.211

Note: All estimates of coefficients are statistically significant ($p < 0.0001$). See Appendix B for country codes abbreviations.

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

The relationship is positive and statistically significant in the case of all variables. The values of Kendall's τ_B coefficient for the perception of financial stress in the past and in the present are between 0.079 (Denmark) and 0.314 (Portugal). The relationship between the parent's and the respondent's highest attained education is the strongest in all countries with values between 0.246 (Finland) and 0.503 (Luxembourg). Slightly lower values are reported when analysing occupational status: 0.171 (Iceland) and 0.331 (Romania).

The pattern of relationship is generally the same in all countries: the highest strength of relationship is reported in the case of educational status, and the lowest in the case of subjective perception of the financial stress of the household.

3.3. Regression Analysis

Odds ratios for the key explanatory variables (occupational and educational mobility) are reported in Table 3 (the model includes control variables describe in Section 2.3). From the partial models without control variables (Appendix A)

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[12] The strength of relationship is quantified by Kendall's τ_B coefficient.

it is obvious that both occupational and educational mobility are in a statistically significant relationship to the intergenerational transmission of disadvantages. Including control variables in the model, some of the coefficients become statistically insignificant, mainly in the case of educational mobility (e.g. results for Austria, Cyprus, Ireland, Iceland and Romania suggest that educational mobility does not have an impact on the perception of change in financial situation). In the case of occupational mobility, a statistically significant relationship can only not be assumed in Greece.

T a b l e 3
Odds Ratios for the Key Explanatory Variables

	(4)					
	Occupational mobility		**Educational mobility**			
Country	**= 2**	**= 3**	**= 2**	**= 3**	**Nag.**	**N**
EU	1.40***	1.66***	1.28***	1.46***	0.210	109 328
AT	1.57***	1.73***	0.99	1.18	0.159	3 600
BE	1.20*	1.67***	1.09	1.47**	0.124	2 834
BG	1.22	1.54*	1.76*	1.65	0.045	2 602
CY	1.12	1.40*	1.12	1.21	0.117	2 192
CZ	1.16*	1.44***	1.56**	2.26***	0.157	4 217
DK	1.47***	1.54***	0.82*	1.23*	0.147	2 522
EE	1.34**	1.60***	0.96	1.30*	0.158	2 664
EL	1.15	0.96	2.05**	1.84*	0.078	2 398
ES	1.20**	1.38***	1.54**	1.51**	0.128	6 439
FI	1.29**	1.80***	1.18	1.71***	0.173	2 858
FR	1.48***	2.04***	1.63***	1.80***	0.132	5 808
HR	1.62**	1.79***	2.39***	3.04***	0.137	1 628
HU	1.24**	1.28**	1.24*	1.43**	0.092	6 947
CH	1.75***	1.75***	1.08	1.59***	0.142	3 963
IE	1.47***	2.06***	1.00	1.01	0.150	1 974
IS	1.29*	1.48**	0.88	0.91	0.155	1 630
IT	1.40***	1.82***	1.64***	1.67***	0.151	8 720
LT	1.80***	1.96***	1.90*	2.65***	0.104	2 556
LU	1.26**	1.54***	1.47***	1.56***	0.128	3 617
LV	1.60***	1.65***	1.49*	1.78***	0.118	3 291
MT	1.21	1.48**	1.49*	1.74**	0.116	1 801
NL	1.34***	1.93***	1.18*	1.48***	0.175	4 193
NO	1.40***	1.46***	1.19	1.56***	0.200	2 471
PL	1.56***	1.80***	1.11	1.44**	0.176	7 187
PT	1.31**	1.55***	3.33***	1.98*	0.124	2 596
RO	1.25	1.52*	1.96	2.27	0.101	2 248
SE	1.11	1.74*	1.90*	1.38	0.179	568
SI	1.44***	1.78***	1.19	1.55**	0.138	3 453
SK	1.20*	1.34**	1.60*	2.04***	0.105	2 917
UK	1.45***	1.68***	1.17	1.49**	0.197	3 297

Notes: National models are controlled for control variables described in Section 2.3; the European model is furthermore controlled for country fixed effects. See Appendix B for country codes abbreviations.
Sig. levels: 0 *** 0.01 ** 0.05 * 0.1

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

The results further indicate that persons with upward occupational mobility have a higher chance of perceiving an improvement in financial situation than

persons with no change in occupational status. Analysis of educational mobility offers similar findings. Denmark is the only exception, where the people with unchanged educational status have a lower chance of perceiving an improved financial situation than people with downward educational mobility.

As is obvious from the previous section, inclusion of control variables in the models increase the goodness-of-fit measure (Nagelkerke's pseudo-R^2). Graphical representation of the summarised results is depicted in Figure 4. The bars represent the odds ratios for the model based on all observations (all countries in the sample controlling for country fixed effects), and the lines represent the minimum and maximum values of odds ratios calculated for distinct countries (only statistically significant odds ratios are taken into account). The following text discusses the relationship between control variables and the intergenerational transmission of disadvantages.

F i g u r e   4
Odds Ratios for Variables Included in Model
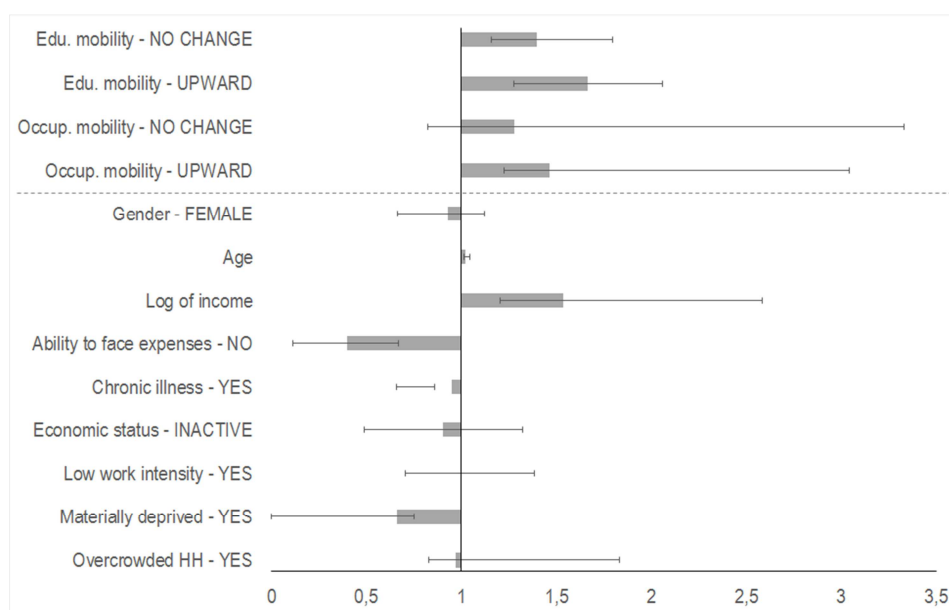
Note: Bars represent odds ratios for the model based on all observations (all countries in the sample controlling for country fixed effects) and lines represent minimum and maximum values of odds ratios calculated for distinct countries (only statistically significant odds ratios are taken into account).

Source: Own estimations based on EU-SILC 2011 microdata (Eurostat, 2014).

Gender – at the European level women have lower chances of perceiving improved financial situation than men, and a similar situation is reported for individual countries. Luxembourg is the only exception, where women have a higher chance of perceiving an improved financial situation than men.

Age – a statistically significant positive relationship between age and perception of improved financial situation is present in almost all countries (Bulgaria, Estonia, Iceland and Latvia are exceptions, where the relationship is not statistically significant). The findings are in accordance with the description of variables in Section 3.1, and it can be assumed that young people can still achieve higher occupational status as their careers develop over their working cycle, which can hence lead to a higher living standard for the respondents and so am improved perception of their financial situation in the future. The relationship of intergenerational transmission of disadvantages, occupational and educational mobility and age will be discussed in greater detail at the end of this section.

Income – can be considered as one of the most important determinants of perceiving change in financial situation, and its strong (direct) impact is reported at the European level, as well as at the level of individual countries (Lithuania and Romania are exceptions; the relationship is not statistically significant).

Ability to face unexpected financial expenses is in indirect relationship with the perception of change in the financial situation, and is the only control variable which is statistically significant at individual level in all countries. The relationship is negative; i.e. persons living in households not able to face unexpected financial expenses have, on average, considerably higher chance of perceiving deterioration in their financial situation (in comparison to persons living in households able to face unexpected financial expenses).

Perception of change in the financial situation is in indirect relationship also with the variables *suffering from a chronic (long-standing) illness* and *living in a severely materially deprived household*. As expected, people suffering from a chronic illness (statistically significant in the case of 10 countries), or people living in a severely materially deprived household (statistically significant in case of 25 countries), have, on average, a higher chance of perceiving a deterioration in their financial situation.

It is obvious that *economically inactive persons* (unemployed, pensioners and other inactive people) have, on average, a higher chance of perceiving a deteriorated financial situation than an *employed or self-employed persons*. This direction of relationship is statistically significant in the case of 11 countries. Romania is an exception and the findings suggest that employed/self-employed people have, in general, a higher chance of perceiving a deteriorated financial situation than economically inactive people.

The relationship between the variable *'overcrowded household'* and a change in perception of financial situation is reported as statistically significant in five countries, but the conclusions are not unambiguous. While for people living in overcrowded households in Romania and Slovakia (and similarly at the European

level) there is a higher chance of perceiving a deterioration in their financial situation, people not living in overcrowded households in Cyprus, Ireland and Sweden have a higher chance of perceiving a deterioration in their financial situation.

Very low work intensity is the only variable which is not statistically significant at the European level, but is significant at national level in a couple of countries. For example, people living in households with very low work intensity in Ireland have a higher chance of perceiving a deteriorated financial situation than people not living in households with very low work intensity. The opposite is true for Finland, Lithuania and Spain.

Based on the analyses of response, and key explanatory variables, it is necessary to take age into account when interpreting the findings. The graphical analysis of the results (Figure 5) suggests that predicted probability that respondents perceive a deterioration in their financial situation decreases with increased age.

F i g u r e 5

Predicted Probabilities for Different Levels of Educational/Occupational Mobility and Age
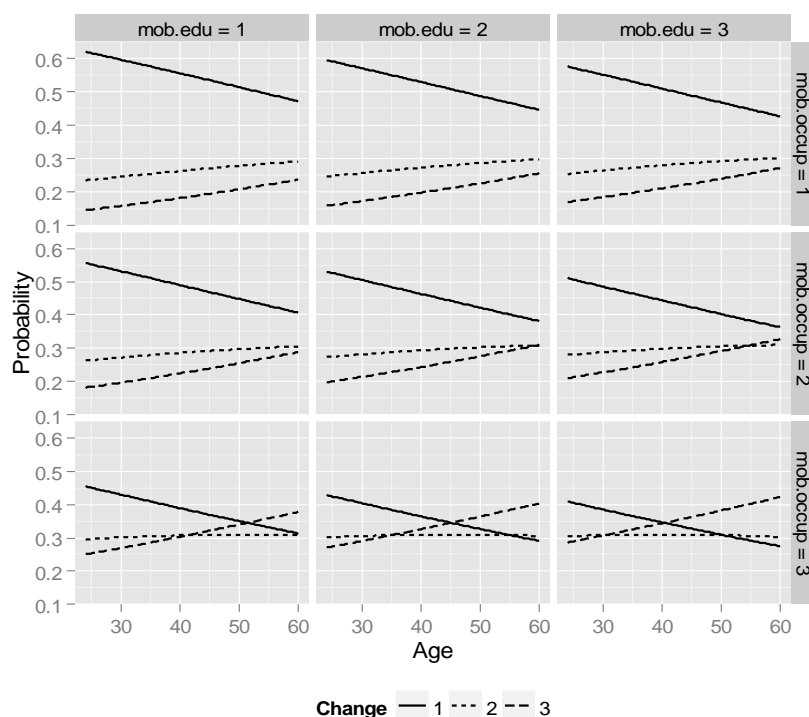
Notes: 'Change' denotes the perceived change in financial situation (i.e. intergenerational transmission of poverty) with levels: 1 – deterioration; 2 – no change; 3 – improvement. Levels of key explanatory variables: 1 – downward mobility; 2 – no change; 3 – upward mobility

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

The level of predicted probability is lowest for people who attained a higher educational and occupational status than their parents. On the other hand, the predicted probability that a respondent does not perceive an improvement in their financial situation increases with the increased age of respondent, and the highest values of probability are typical for persons who attained a higher educational and occupational status than their parents. As for the predicted probability for respondents 'without change', the results suggest a very low sensitivity to age, and this is also very weakly sensitive to the change in social status (in terms of educational as well as occupational mobility).

Conclusions

It is unquestionable that living conditions in youth can, to a considerable extent, determine living conditions in later periods of life. Comparative data of the 2011 EU-SILC module on intergenerational transmission of disadvantages show that Western Europeans mostly perceive an improvement in their financial situation (at present, in comparison to the period when they were around 14 years old), while for the Central/Eastern-European countries the opposite is typical. This can, to some extent, be explained by the fact that the level of economic convergence was not reached as expected and possibly also as a result of the effects of economic crisis (which were still strong in 2010/2011).

Our article strives to address the following question: To what extent can the intergenerational transmission of disadvantages (proxied by comparing subjective perception of ability to make ends meet when the respondent was around 14 years old and at present) be explained by intergenerational social mobility, in terms of occupational and educational mobility? To answer this question we estimated an ordered logit model, using the microdata mentioned above. The results are presented at two levels: the European level (controlling for country fixed effects); and at the national level for individual countries. The results suggest that both occupational and educational mobility between generations are in a statistically significant positive relationship with the intergenerational transmission of disadvantages. In the final model we control for variables such as gender, age, ability to face unexpected financial expenses, suffering from chronic illness, severe material deprivation, economic activity, overcrowded household and very low work intensity; i.e. all the variables which can be associated with the perception of financial stress of households.

While the inclusion of the mentioned variables resulted in a reduced effect of the key variables (occupational and educational mobility) on the intergenerational transmission of disadvantages, their direction of relationship and statistical

significance remained generally unchanged. Among the control variables, age is of utmost importance as shown by the considerable differences in perceiving financial stress (in respondent's youth against the present time) between the 'younger' and 'older' generations.

As assumed by theory and supported by other empirics, our main findings indicate that living conditions in youth determine living conditions in adulthood and, furthermore, intergenerational social mobility is associated with the intergenerational transmission of disadvantages. This is an important issue concerning the educational attainment, skills and competences of children coming from unfavourable economic conditions. In general terms, the issue is of social reproduction of disadvantages, which should be studied by economic research and targeted by educational and social policies.

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A p p e n d i x A

Partial Models without Control Variables (odds ratios)

	(1)		(2)		(3)			
	Occupational mobility		**Educational mobility**		**Occupational mobility**		**Educational mobility**	
	= 2	**= 3**	**= 2**	**= 3**	**= 2**	**= 3**	**= 2**	**= 3**
EU	1.50***	2.60***	1.53***	2.17***	1.41***	2.00***	1.35***	1.70***
AT	1.76***	2.60***	1.24*	1.85***	1.68***	2.38***	1.04	1.37**
BE	1.41***	2.32***	1.37*	2.20***	1.28**	2.05***	1.17	1.63***
BG	1.37*	1.98***	1.59*	1.80*	1.32*	1.90***	1.67*	1.69*
CY	1.33*	2.26***	1.56*	2.20**	1.27*	2.05***	1.42	1.66*
CZ	1.34***	2.19***	1.53**	2.32***	1.17*	1.85***	1.38*	1.88***
DE	1.63***	2.56***	1.60***	2.78***	1.52***	2.14***	1.35***	2.06***
DK	1.58***	2.22***	1.07	1.80***	1.51***	1.89***	0.96	1.43**
EE	1.28**	2.15***	1.25*	1.83***	1.26**	1.98***	1.07	1.38**
EL	1.33**	1.35*	2.42***	2.33***	1.28*	1.25*	2.33**	2.30**
ES	1.34***	1.79***	1.56***	1.92***	1.29***	1.66***	1.47**	1.71***
FI	1.66***	2.94***	1.58***	2.57***	1.46***	2.34***	1.39**	2.21***
FR	1.59***	2.61***	1.90***	2.44***	1.52***	2.45***	1.64***	1.88***
HR	1.93***	2.51***	2.46***	4.00***	1.62***	1.93***	2.11***	3.09***
HU	1.33***	1.70***	1.47**	1.92***	1.24***	1.50***	1.26*	1.55***
CH	1.78***	2.42***	1.52***	2.52***	1.68***	2.06***	1.25*	1.90***
IE	1.46***	2.15***	1.27*	1.58***	1.39**	2.04***	1.23	1.41*
IS	1.28*	1.69***	1.04	1.36*	1.26*	1.61***	1.00	1.13
IT	1.46***	2.31***	1.87***	2.50***	1.39***	2.10***	1.54***	1.86***
LT	1.94***	2.61***	1.99**	3.39***	1.78***	2.16***	2.02**	2.97***
LU	1.43***	2.21***	1.41**	1.89***	1.39***	2.05***	1.40**	1.58***
LV	1.80***	2.36***	1.70***	2.23***	1.66***	2.10***	1.57**	1.76***
MT	1.27*	1.94***	1.61***	2.25***	1.19	1.67***	1.52**	1.91***
NL	1.49***	2.62***	1.53***	2.60***	1.37***	2.15***	1.33**	1.85***
NO	1.55***	2.11***	1.52***	2.30***	1.45***	1.76***	1.39**	1.96***
PL	1.58***	2.84***	1.54***	2.36***	1.47***	2.50***	1.30*	1.74***
PT	1.40***	1.69***	3.68***	3.01***	1.36***	1.88***	3.18***	2.27**
RO	1.38*	2.08***	2.37*	3.23*	1.24	1.76***	1.58	2.10
SE	1.15	1.94**	1.31*	1.70***	1.08	1.92**	1.89**	1.61*
SI	1.68***	2.58***	1.63***	2.56***	1.50***	2.16***	1.17	1.52**
SK	1.26*	1.76***	1.94***	2.81***	1.15	1.52***	1.73**	2.27***
UK	1.55***	2.60***	1.30*	1.83***	1.49***	2.34***	1.23*	1.50***

Notes: (1) – model with a single explanatory variable: intergenerational occupational mobility; (2) – model with a single explanatory variable: intergenerational educational mobility; (3) – model with two explanatory variables: intergenerational occupational mobility and intergenerational educational mobility. EU model is controlled for country fixed effects. Sig. levels: 0 *** 0.01 ** 0.05 * 0.1.

Source: Own calculations based on EU-SILC 2011 microdata (Eurostat, 2014).

A p p e n d i x B

Country Codes

EU	– European Union				
AT	– Austria				
BE	– Belgium	FR	– France	MT	– Malta
BG	– Bulgaria	HR	– Croatia	NL	– Netherlands
CY	– Cyprus	HU	– Hungary	NO	– Norway
CZ	– Czech Republic	CH	– Switzerland	PL	– Poland
DK	– Denmark	IE	– Ireland	PT	– Portugal
EE	– Estonia	IS	– Iceland	RO	– Romania
EL	– Greece	IT	– Italy	SE	– Sweden
ES	– Spain	LT	– Lithuania	SI	– Slovenia
FI	– Finland	LU	– Luxembourg	SK	– Slovakia
		LV	– Latvia	UK	– United Kingdom