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# Why do people perceive themselves as being downwardly or upwardly mobile?

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## Abstract

This study explores individual and contextual explanations of why some people perceive themselves as being mobile and others do not. While subjective social position in recent decades has become an important topic of sociological enquiry, only a handful of studies explicitly investigate the nature of subjective perception of intergenerational mobility. When assessing their performance in comparison to their parents, individuals are likely to consider many other aspects of their lives than the attainment of socio-economic position. For empirical analysis, I operationalise an objective indicator of intergenerational mobility, often assumed to be the central explanation of perceptions of mobility, by means of intergenerational educational trajectories. In addition to exploring individual-level explanations, I use multilevel mixed-effects Poisson regression models to test how contextual environment is associated with perceived intergenerational mobility across 35 societies in Europe, the Middle East and Central Asia. Results indicate that an objective measure of intergenerational mobility and other individual-level factors are important explanations of subjective intergenerational mobility. Further, the difference in economic development between individuals' birth years and the year of interview is the most salient contextual factor explaining perceived intergenerational mobility, while contemporary economic development and short-term economic growth also reduce the likelihood of perceived downward mobility. The findings of this study contribute to sociological literature by highlighting the importance of contextual environment and factors beyond socio-economic characteristics for individuals' perception of intergenerational mobility.

## Keywords

Intergenerational mobility, subjective social status, economic development, multilevel analysis, Poisson regressions.

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## Introduction

Intergenerational mobility refers to the degree to which individuals' social origins, i.e. parental characteristics during childhood, are associated with their status in adulthood. There is expanding scholarship which investigates the links between individuals' objective experience of intergenerational mobility and various outcomes such as redistribution preferences (Jaime-Castillo and Marqués-Perales, 2019), life satisfaction (Chan, 2018), and health (Präg and Richards, 2019). Nonetheless, since the theorised pathways of the consequences of intergenerational mobility almost exclusively refer to various psychosocial mechanisms (Gugushvili, Zhao, et al., 2019), it is of utmost importance to consider not only the implications of objective intergenerational mobility, but also its reflection in the minds of individuals. The subjective aspect of intergenerational mobility, however, with a few exceptions (Bar-haim, 2018; Kelley and Kelley, 2009), has been largely overlooked in sociological research.

This is a stark contrast to a growing amount of studies on individual- and contextual-level explanations of subjective social position at large which indicate that age, gender, education, income, occupation and material deprivation, among other factors, have important consequences for individuals' perceptions of their positions in the social hierarchy (Goldman et al., 2006; Singh-Manoux et al., 2003). Existing evidence also shows that, after accounting for individual-level socio-demographic and socio-economic characteristics, national levels of social welfare affect where individuals place themselves on the subjective socio-economic ladder. People in countries with higher levels of gross domestic product (GDP) per capita and lower unemployment rates tend to perceive themselves higher in the social hierarchy. It is also likely that political regime plays a role in self-assessment of socio-economic position. For instance, even when other explanations were accounted for, the overall subjective social position in post-socialist societies was lower than in capitalist countries (Evans and Kelley, 2004).

The current study contributes to sociological literature by shedding light on subjective perception of intergenerational mobility across a large number of societies. There are at least two reasons why investigating the prevalence and explanations of subjective perception of intergenerational mobility is an important research question from sociological and policymaking perspectives. First of all, intergenerational social mobility, measured via objective indicators such as education, occupation, and income, has recently begun to play an increasingly important role in public discourse about equality of life chances (Goldthorpe, 2016; Ludwinek et al., 2017). On the other hand, it is reasonable to assume that there are additional implications of the experience of social mobility, other than normative assessments of the process by third parties such as social scientists and government officials. Depending on their social origin, individuals start with an initial set of attitudes that evolve over the years, on the basis of personal experiences of intergenerational social mobility (Piketty, 1995). More importantly, it has been argued that the effects of social mobility on individuals' worldviews might be relevant only if they are aware of experiencing intergenerational mobility (Turner, 1992).

The relevance of understanding subjective perception of intergenerational mobility is important because it has been shown that this type of perception is associated with various attitudinal, behavioural, and health-related outcomes. Those who perceive being upwardly socially mobile support individual explanations of why some people are in need and larger income differences, and oppose certain welfare state programmes such as housing and old-age pensions (Gugushvili, 2016b, 2016a, 2019; Guillaud, 2013). Perceived downward social mobility has also been linked to reduced defence of the societal system in which individuals reside (Day and Fiske, 2017). Findings from social epidemiology suggest that subjective perception of mobility is associated with various health outcomes (Burazeri et al., 2008; Vaquera and Aranda, 2017). Syrian refugees who experience stronger perceived downward mobility after migration to Germany exhibited more severe depressive symptoms than refugees who did not view themselves as being downwardly mobile (Euteneuer and Schäfer, 2018).

To my knowledge, there are only a handful of studies which explicitly investigate why certain individuals perceive themselves as being intergenerationally mobile, while others do not (e.g. Duru-Bellat and Kieffer, 2008; Kelley and Kelley, 2009). However, even these studies have at least three

important limitations. First, they are primarily concerned with subjective perception of intergenerational mobility in occupational status, which limits the topic to only one, albeit important, aspect of individuals' lives. Second, the existing studies, as a rule, do not account for potentially important individual-level explanations why respondents might think that they are doing better or worse than their parents – e.g. adequately operationalised intergenerational objective mobility and changes in the social ladder over individuals' life courses. Third, they usually do not test how major contextual factors, such as long-term economic growth and macro-economic crisis, are associated with subjective perceptions of intergenerational mobility. This is the void the present study aims to fill.

## **Theoretical framework**

### *Objective vs. subjective intergenerational mobility*

To describe the theoretical underpinnings of the factors that can explain individuals' perceptions of experiencing or not experiencing intergenerational social mobility, perhaps the most important distinction to make is that between objective intergenerational mobility and the subjective perception of experiencing it. As an illustrative example for understanding differences between objective intergenerational mobility and its subjective perception, we can describe the case of French social structure. In a nationally representative sample of this country conducted in 2003, 57% of people were immobile in terms of occupational social class but only about a quarter of men perceived their situation as similar to their father's in subjective terms (INSEE, 2003). The difference is explained by the fact that respondents are more likely to overestimate their subjective trajectories (Duru-Bellat and Kieffer, 2008). In addition, people were more likely to experience upward social mobility if they started from a lower rung of the social hierarchy. Duru-Bellat and Kieffer (2008) conducted qualitative interviews with respondents which suggested that those people who overestimated their trajectories, as a rule, experienced objective stability that was wrongly perceived as upward mobility.

We can assume that the main aspect that differentiates the sociologists' concept of objective mobility from that imagined by individuals is the pre-objectified social structure used by the former, while the latter view their relative positions in comparison to their parents from their own particular views of the social world. While discussing differences between sociologists' and respondents' particular perspectives from their relative positions, Merllié (2008) provides an interesting metaphor which states that 'a move of ten kilometres is already a great distance for someone who has never left his or her village or neighbourhood, whereas it is less than negligible for a person with a map of the world in mind' (p. e62). We can infer that inconsistencies between subjective perception of mobility and objective mobility experience can be attributed to people's tendency to consider their own success in broader terms than occupational attainment. When explicitly asked if labour market status was the main feature of their life success, more than half of the respondents in France replied negatively. They believed that, among other things, positive relationships with family and friends and leisure activities were just as important as occupational mobility in determining success (Duru-Bellat and Kieffer, 2008). Similarly, in the present study the variable on subjective perception of intergenerational mobility captures the broader aspects of life than mobility in socio-economic position.

One of the few datasets which include a question on subjective perception of intergenerational mobility is the Social Inequality Module of the International Social Survey Programme (ISSP). In 2009, the ISSP asked its respondents in 41 countries to compare their own jobs with the jobs their fathers had when the respondents were 14 years old (ISSP, 2010). The survey data suggest that in almost all countries most people report being intergenerationally immobile, but this share of responses varies from 45% in Iceland to 26% in the United States. ISSP data also reveal that countries differ widely with the strength of their association between actual and perceived dimensions of social mobility. The most notable observation is that respondents in Northern European countries generally report a strong

association between the perceived and the actual dimension of intergenerational mobility, while in other countries the associations are much weaker (Meraviglia, 2017).

### *Socio-economic and socio-demographic explanations*

One of the reasons why, after accounting for objective social mobility, countries still differ in their levels of reported subjective intergenerational mobility could be their populations' different socio-demographic and socio-economic compositions. Existing studies suggest that individuals' socio-demographic characteristics, such as age, gender, educational and occupational attainment, and socio-economic position are important covariates of perceived intergenerational mobility (Duru-Bellat and Kieffer, 2008; Kelley and Kelley, 2009). Theoretical underpinnings of these associations are less well understood. It is known that in terms of objective intergenerational mobility individuals' age is an important characteristic and typically individuals achieve occupational maturity by the end of their 30s, while gender is an important aspect of subjective socio-economic position and therefore both age and gender could be associated with subjective intergenerational mobility. The main reason why individuals' education, occupation and social status could be independently related to perception of intergenerational mobility is that they make up a multidimensional concept of social origins and destinations (Bukodi et al., 2014): intergenerational mobility, in turn, in academic literature and everyday practice is predominantly understood in terms of attainment of these characteristics.

Furthermore, there are reasons to expect that other individual-level characteristics, not explored in the previous studies, could also be associated with subjective perception of intergenerational mobility. Comparison to parents in terms of intergenerational social mobility might refer to non-economic aspects of life such as personal relationships and general satisfaction with life. It is known that married people are happier than individuals with other marital statuses, which might also affect their perception of intergenerational mobility (Stack and Eshleman, 1998). Individuals who are divorced and have had various problems in personal relationships might consider this aspect while answering to a question of how well they have done in life in comparison to their parents. Recent literature also suggests that there are significant geographic inequalities in both objective social mobility levels and subjective perception of socio-economic position, both of which can be manifested in spatial differences in subjective intergenerational mobility (Simandan, 2018).

### *Economic change and 'tunnel effect'*

In addition to individual-level factors described in the previous section, the analysis of the ISSP data for 1999/2000 also reveals that change in GDP per capita, from a respondent's childhood to the date of the interview, has an important effect on subjective mobility perceptions (Kelley and Kelley, 2009). The theoretical explanation of this association is that individuals, based on their childhood experiences and socialisation (Ryder, 1965), are capable of forming perceptions of intergenerational mobility by contrasting socio-economic conditions when they were growing up to the current socio-economic environment. Furthermore, there are reasons to believe that more contemporaneous economic performance might be just as important for individuals' perceptions of intergenerational mobility as the long-term economic trends. For instance, a comparison of the first and the second rounds of the European Bank for Reconstruction and Development (EBRD) survey data, used in the current study, suggests that the perception of intergenerational mobility significantly declined from 2006 to 2010 by up to ten percentage points in some European countries. It seems unlikely that such a sizeable share of the population experienced major life-changing events on an individual level which could exclusively explain this decline in perceptions of intergenerational mobility. If individuals' perceptions of mobility are shaped by the present environment in which they live and particularly by improving or deteriorating socio-economic conditions, then it is likely that the effect of an immediate economic crisis, of the type which

took place in the second half of the 2000s, could be an important factor in explaining variation in subjective intergenerational mobility.

Another reason why the effect of contextual characteristics on subjective perception of intergenerational mobility is a sociologically relevant phenomenon is that it can be aligned with the so-called ‘tunnel effect’ – an important construct in reference group theory. In their seminal work, Hirschman and Rothschild (1973) described the ‘wellbeing prospect’ effect using a metaphorical example of a person in a car being stuck in a traffic jam in the middle of a two-lane tunnel. If cars in neither of the two lanes are moving, this person feels dejected. But once the cars in the lane next to him begin to move, this person’s spirits lift considerably because of the expectation that his car will soon be on the move. Empirical evidence, particularly from post-socialist contexts, is consistent with the idea of a tunnel effect, whereby individuals are affected by expectations of their falling or rising welfare (Ravallion and Lokshin, 2000). The same logic can be extended to the effect of contemporary economic development on perception of intergenerational mobility. For instance, if individuals live in environments with high economic growth, then they expect to improve their socio-economic position (Evans and Kelley, 2004) which can also be factored into individuals’ intergenerational comparisons with their parents.

### ***Subjective intergenerational mobility and post-socialist societies***

A dataset employed in the present study, unlike ISSP, is focused heavily on the Central and Eastern European and Eurasian countries which can bring additional analytical insights as it is not the usual sample of countries in this line of research. Post-socialist societies are significantly different from each other in terms of the levels of economic development and types of democracy they have achieved and this provides an opportunity to explore my research question in comparative perspective. The legacy of post-socialism can matter in several regards. Changes in economic output in the 1990s might have a much stronger effect on perception of subjective social mobility than on objective occupational mobility (Gugushvili, 2017). In post-socialist countries, subjective mobility appears to have a stronger effect on individuals’ attitudes than does objective mobility (Gugushvili, 2016a). A previous analysis of covariates of subjective mobility in nine post-socialist societies found that, unlike Western Europe, gender does not have an effect on subjective social mobility, which might mean that socialist policies had been more successful in achieving emancipation of women. On the other hand, it has been revealed that economic growth, measured by comparison of childhood to current GDP levels, did not matter in post-socialism (Kelley and Kelley, 2009).

In addition to the effects of economic development in post-socialist countries, political context might also be important for perceived intergenerational mobility. Transitional societies in post-socialist Europe can be divided into several territorial, cultural and geopolitical sub-groups, which also reflect the economic and political trends in these countries. The most advanced post-socialist societies, which were also the least affected by the crisis in the 2000s, are Central and Eastern European new EU member countries such as Poland, Slovenia, and the Czech Republic (Spendzharova and Vachudova, 2012). On the other hand, the group of former Soviet Union republics in Central Asia and South Caucasus as well as Belarus, Moldova, Russia and Ukraine are the least developed among other post-socialist societies. One of the mechanisms through which the authoritarian rulers in these countries maintain power is their legitimating claim that they represent the guardians of citizens’ socio-economic well-being (Von Soest and Grauvogel, 2016), which is linked to one of the central research questions of this study – how are macro-level developments associated with individuals’ subjective perception of intergenerational mobility?

### ***Focus and expectations of this study***

Before moving to the research design section and the description of empirical results, I will recap the precise focus of this study and the expectations regarding certain individual and contextual explanations.

Since the present article is effectively the first large scale investigation of the nature of subjective intergenerational mobility, it is primarily an explorative study which sets out to identify salient aspects of this phenomenon to be further scrutinised in future research.

My selection of individual-level variables starts with an assumption that intergenerational mobility in objective measures of socio-economic position, such as educational attainment, is an important explanation of subjective perceptions of intergenerational mobility. Further, based on the earlier theoretical and empirical work on subjective socio-economic position and objective social mobility, I also assume that the key socio-demographic and socio-economic variables are associated with subjective perception of intergenerational mobility. While I do not have specific expectations for each variable used in the empirical analysis, those characteristics which reflect individuals' worse-off conditions or deteriorating wellbeing would be positively associated with the perception of downward mobility and, vice versa, better-off or improving conditions would be positively associated with the perception of upward mobility. A similar logic also applies to contextual factors. Favourable macro-economic conditions, on average, would be associated with perceptions of upward intergenerational mobility, while sluggish economic progress can have the opposite effect. Inferring from the insights of socialisation theory, individuals are capable of remembering the socio-economic environment during their childhoods and adolescence and comparing it with present socio-economic conditions. The tunnel effect perspective, in turn, is helpful in understanding why short-term changes in socio-economic conditions on the macro level might affect individuals' perceptions of intergenerational mobility.

The specific nature of post-socialist countries, described in the previous section, might also moderate the effect of individual-level variables which is why, over and above exploring individual and contextual explanations of subjective intergenerational mobility, it is important to consider whether micro-level mechanisms are moderated by the macro-level environment. Cross-level interaction models in a multilevel research framework will allow explicit testing of whether the effect of objective intergenerational mobility on subjective perceptions of mobility is, for instance, moderated by structural economic upgrade which refers to overall improvement of socio-economic conditions in a society as a whole (Marshall, 1996).

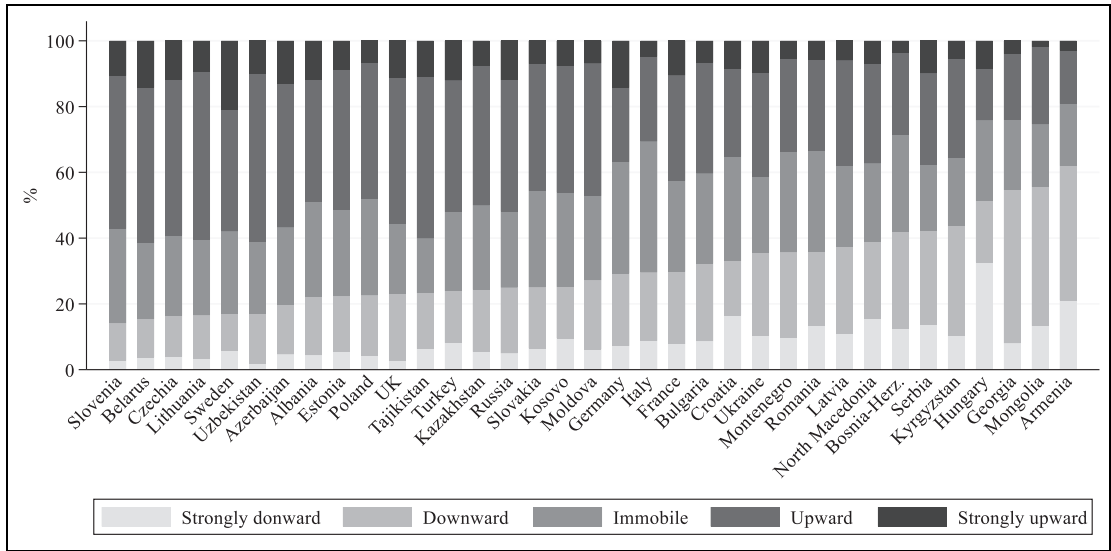
## Research design

### Dataset

The Life in Transition Survey (LITS) is one of the few known datasets which provide an opportunity to analyse the explanations of subjective intergenerational mobility in a large number of countries in Western, Central and Eastern Europe, the Middle East and Central Asia. LITS was commissioned by the EBRD and the World Bank and was conducted in late 2010, surveying individuals in 35 countries listed in Figure 1. LITS contains representative samples of the adult population in each country included. These samples were primarily derived from a two-stage sampling method that used census enumeration areas as primary sampling units and households as secondary sampling units. The net sample size in most countries was approximately 1000 respondents who took part in face-to-face interviews. I restrict the analytical sample to respondents aged 25 to 65 as the majority of individuals in this age range have already completed their education and have not reached the age of retirement. Nonetheless, in online supplementary materials, Table S1, the main results of the analysis are also reported for individuals who reached occupational maturity at the age of 35 and above. More information regarding LITS is provided in the EBRD (2010) report.

### Subjective intergenerational mobility

LITS asked respondents whether they agree or disagree with the following statement: 'I have done better in life than my parents'. From a five-point Likert scale, respondents chose 'strongly disagree,' 'disagree,' 'neither disagree nor agree,' 'agree' or 'strongly agree.' I transformed the answers to this question into five categorical variables: strongly disagree = strongly downwardly mobile (8% of the



**Figure 1.** Perception of intergenerational mobility across 35 countries, %.

Note: Countries are ranked from the lowest to the highest by the share of downwardly mobile individuals.

Source: Author's calculations based on data from LITS (EBRD, 2010).

sample), disagree = downwardly mobile (22%), neither disagree nor agree = immobile (24%), agree = upwardly mobile (36%), and strongly agree = strongly upwardly mobile (9%). Unlike the above-mentioned question from ISSP with the following wording: 'please think about your present job, if you compare this job to the job your father had when you were 14, would you say that the level of status of your job . . .', my measure of subjective intergenerational mobility does not necessarily imply social mobility in terms of occupational status or in terms of any other specific indicator of socio-economic position. Individuals tend to consider their own success in life in comparison with that of their parents in broader terms than a mechanical movement on an intergenerational socio-economic ladder (Duru-Bellat and Kieffer, 2008).

Figure 1 presents subjective mobility patterns across 35 countries which are ranked from the lowest to the highest share of downwardly mobile individuals. There are marked differences in the share of individuals reporting both downward and upward mobility. In some countries, such as Belarus, Lithuania and Uzbekistan, more than 60% of respondents report that they are doing better in life than their parents, while in countries on the other end of the distribution, such as Hungary, Mongolia and Armenia, more than a half of respondents believe that they have experienced downward intergenerational mobility. Countries belonging to the group of Western welfare democracies, particularly Germany and Italy, are somewhere in the middle and have the highest immobile population shares.

### *Individual-level independent variables*

Based on the presented theoretical framework, the most important individual-level explanation of subjective intergenerational mobility is the objective indicator of intergenerational mobility. To generate this variable, I use years of parental education which is the only variable available in LITS about individuals' social origins. Recent sociological literature has demonstrated that parental education is a valid indicator of social background which often plays a more important role in individuals' life chances than parental social class or social status (Bernardi and Ballarino, 2016). Educational attainment and values associated with it are likely to be important aspects in awareness of experiencing downward



**Table 1.** Operationalisation of intergenerational mobility in educational attainment, %.

Parents	Respondents		
	Bottom tertile	Middle tertile	Top tertile
Bottom tertile	1→1 Immobile: 17.2%	1→2: Upward: 9.0%	1→3: Strongly upward: 4.8%
Middle tertile	2→1 Downward: 15.6%	2→2: Immobile: 11.8%	2→3: Upward: 9.1%
Top tertile	3→1 Strongly downward: 8.0%	3→2: Downward: 9.8%	3→3: Immobile: 14.6%

Source: Author's calculations based on data from LITS (EBRD, 2010)

and upward intergenerational mobility. I employ the dominance approach, which means that if parents have different levels of educational attainment, the higher of the two is assigned to the respondents' parents. The educational level of respondents, in turn, is given by the 1997 version of the international standard classification of education (ISCED) which varies from ISCED 0 (pre-primary education) to ISCED 6 (second stage of tertiary education). Years of parental education obtained in different countries and educational settings might have various meanings. To mitigate this problem, I generate educational variables for parents and their offspring by creating the approximate tertiles of relative educational attainment separately in each country. These country specific tertiles are then used to generate a single measure of educational attainment (e.g. Gugushvili et al., 2019; Gugushvili et al., 2017). Finally, I construct variables for intergenerational educational mobility by cross-classifying parents' and respondents' highest level of education into nine possible intergenerational educational trajectories as shown in Table 1.

In addition to accounting for intergenerational mobility in educational attainment, I include in the analysis important explanations which have been theorised or identified in the previous section to be associated with subjective intergenerational mobility: gender (men 60.4%, women 39.2%); age (mean 43.4, SD 11.3) and age-squared/100; marital status (never married 15.4%, married 67.8%, divorced/separated 10.7%, widowed 6.0%); settlement type (urban 47.2%, rural 39.8%, metropolitan 12.9%). The perception of the current socio-economic situation, as opposed to the real conditions, may affect attitudes more strongly, as the feeling that available income is insufficient to cope with everyday life might affect individuals' intergenerational comparisons (Pfeifer, 2009). In LITS, respondents were asked to place their households on a ten-step ladder, with 1 representing a country's poorest 10% of people, and 10 representing the richest 10% (mean 4.49, SD 1.7). As for individuals' occupational attainment, I created four occupational categories for those individuals who worked for income during the 12 months prior to their interview. These occupations were originally classified in LITS according to the 1958 version of the international standard classification of occupations (ISCO), while I grouped them as white collar (ISCO: 0–2, 30.1%), blue collar (ISCO: 7–8, 15.9%), unskilled service (ISCO: 3 and 9, 6.1%), and farming occupations (ISCO: 4–5, 4.2%). Those individuals who were not employed but were looking for a job were classified as unemployed (13.1%). Other labour market statuses include students, retired, homemakers, disabled people and any other outstanding category (30.6%).

Survey respondents were also asked to place their households on the above-described ten-step ladder at a time four years prior to interview, which I used to derive the variable, change in socio-economic position, by subtracting the position in 2006 from the position in 2010 (mean 0.27, SD 1.47).

### Contextual-level explanatory variables

To derive the main contextual variables, the level of economic development and the short- and long-term changes in it, I used the measure of GDP per capita by purchasing power parities (PPP) in international

dollars with fixed 2011 prices. This measure considers inflation and differences in the cost of living between countries. The source of this variable is Gapminder (2018) which has compiled the data from numerous sources, such as official international statistics, various historical sources, and their own estimates. First, I use this source of data to obtain information on the level of economic development in 2010 (mean 17,804, SD 10,933; in regressions I actually use mean-centred values). Gapminder is arguably the only comparative dataset which provides information on the level of economic development for most years of the 20th century for each country included in LITS. This allows me to derive information on the level of economic development for individuals who were born even before the Second World War (Jarosz and Gugushvili, 2019). To understand how change in economic performance between individuals' birth years and 2010 is associated with their perceptions of intergenerational mobility, I calculate the difference between these two measures (mean 9068, SD 8142). As the absolute value of GDP per capita change between birth and survey year varies from -8783 to 37703, to facilitate the interpretation of results I standardise this change so that it has a mean value of 0 and standard deviation of 1.

To account for more recent developments related to the economic crisis in Europe and its possible effect on individuals' perceived intergenerational mobility, I calculate the difference in GDP PPP per capita levels between 2007 and 2010 in percentage terms (mean 3.0, SD 8.8). Based on the existing literature on the significance of the post-communist transition for individuals' lives, the importance of institutional legacies is assessed by generating a dummy variable for those countries which were part of the socialist bloc. To account for the potential effect of income inequality, I use net Gini coefficients for 2010 derived from the Standardized World Income Inequality Database (SWIID) as the contextual control variable. The SWIID standardises the United Nations University's World Income Inequality Dataset using a custom missing data algorithm (Solt, 2016). In addition, in online supplementary materials, Table S6, I also control for the demographic structure of countries included in the analysis.

## **Methods**

For the majority of the above-described explanatory variables, the share of missing information accounts for less than 1%, but the proportion of missing observations for years of parental education amounts 20.4% of the sample. To understand if missing data are absent completely at random, at random, or not at random, I generate a dummy variable which takes the value of 1 if respondents fail to provide an answer on their parental education. Then, I run analysis in which the independent variables serve as covariates of missingness. The results conclusively suggest that in parental education variable data are not missing completely at random. This is why the actual dataset I use in bivariate and multivariable analysis was obtained from a multiple imputation exercise via the Multiple Imputation using Chained Equations (MICE) package in Stata, version 15, allowing for twenty sets of multiple imputations and combining them using Rubin's (1987) rules. This leads to the analytical sample of 27,571 respondents. In online supplementary material, Table S4, the main results of the analysis are also reported from the sample without multiply imputed data.

To test individual-level effects on the outcome variable and simultaneously observe if contextual variables explain cross-country variation in subjective social mobility, I employ a multilevel statistical framework. This approach combines individuals from separate countries and assumes that observations within these countries show stronger similarity than those between countries. One of the main motivations of employing multilevel regressions is that grouped data violate the assumption of the independence of all observations (Maas and Hox, 2005). Mixed-effects models allow testing for, on the one hand, how observations grouped in countries explain variance in the dependent variable and, on the other hand, how specific characteristics of those countries are related to the dependent variable. Although there is no consensus on a minimum number of groups required for multilevel analysis, having 35 clusters is believed to be sufficient to utilise the multilevel research framework and this number of countries is commonly used in multilevel analysis in comparative sociology (Bryan and Jenkins, 2016).

From the various modes of multilevel regression models, empirical analysis in this study employs multilevel mixed-effects Poisson regressions. In these models the conditional distribution of the response given the random effects is assumed to be Poisson, while the logarithm of its expected value can be modelled by a linear combination of parameters (Harris et al., 2012). There are three main reasons why I use this modelling strategy. First, for the simplicity of interpretation of results, I combine the strongly downwardly and downwardly categories, on the one hand, and the strongly upwardly and upwardly categories, on the other hand, into two dummy variables taking a value of 1 if individuals perceive themselves as being downwardly or upwardly mobile. Second, it was not possible to fit multilevel multinomial regressions due to computational constraints associated with them when multiply imputed data are used.

Third, given the high prevalence of downward and upward mobility in the sample, the conventional multilevel logistic regressions with corresponding odds ratios are likely to overestimate the actual associations of the independent variables employed. In turn, the multilevel mixed-effects Poisson regressions used in this study allow the deriving of prevalence ratios, which are more appropriate measures of association with the high prevalence of positive outcomes in the binary dependent variables (Barros and Hirakata, 2003). For an illustrative example, let us assume there is a medical study of a new drug with the sample of 2000 individuals. Suppose that 800 out of 1000 non-treated individuals have a specific disease and 700 out of 1000 treated individuals have the same disease. Then the calculated odds ratio will be 1.74 (800/200 divided by 700/300), but the derived prevalence ratio will be only 1.14 (800/1000 divided by 700/1000) (Zou, 2004). This means that our estimated prevalence ratios, derived from the ‘mepoisson’ command in the Stata 15 statistical package with robust standard errors clustered around countries, will produce more conservative and robust estimates of the associations we are interested in.

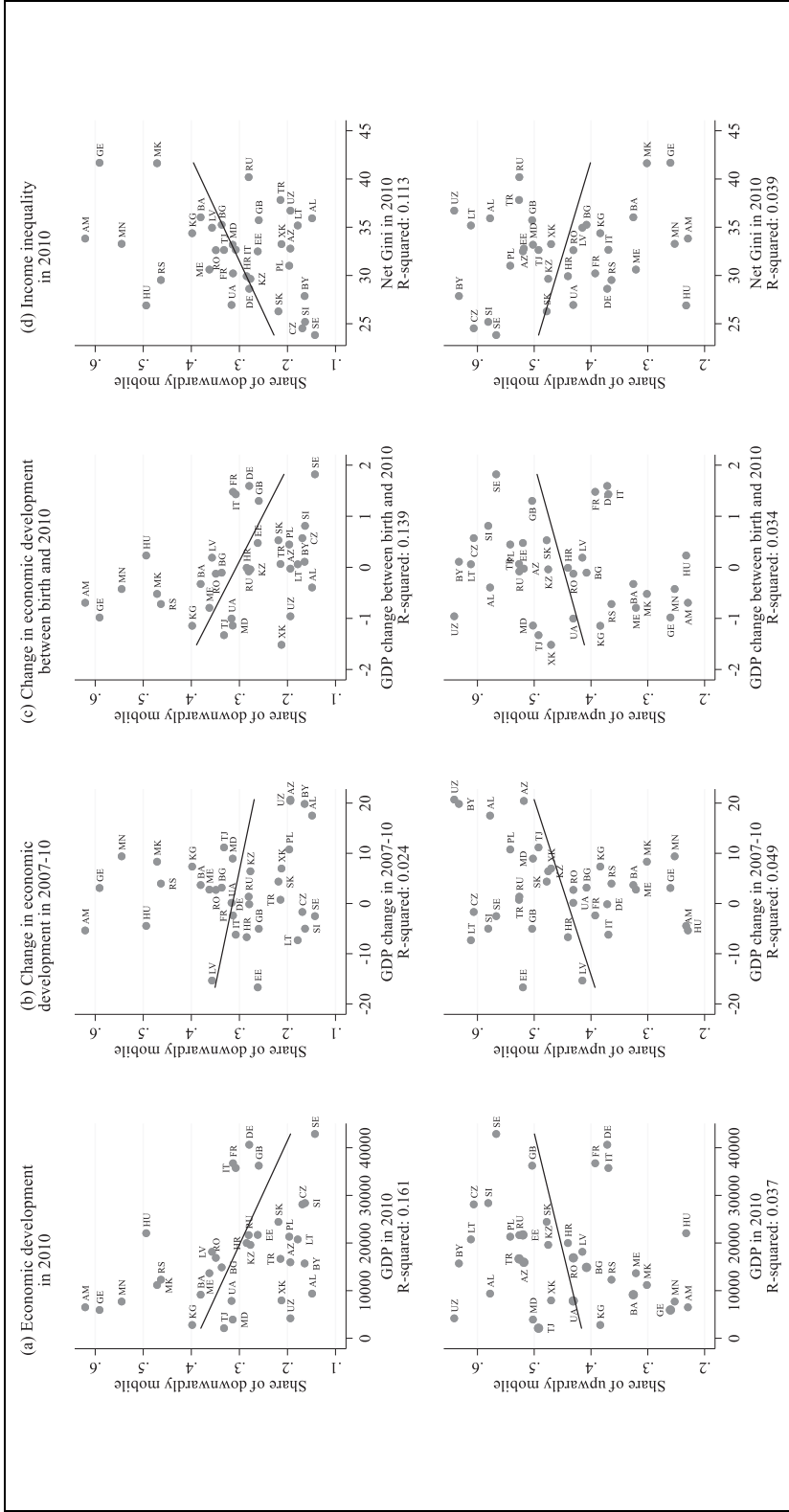
## Results

### *Bivariate associations and multivariable analysis*

Before proceeding to multivariable analysis, I investigate the bivariate associations of individual-level covariates and perceived intergenerational mobility with corresponding tests of differences in proportions or means in Table S2. In Figure 2, I also explore how the macro-level environment in which individuals reside is linked with their subjective perception of intergenerational mobility. The detailed description of these individual and contextual bivariate associations is given in online supplementary materials.

In Table 2, estimated coefficients from multilevel mixed-effects Poisson regressions show the prevalence of the considered mobility outcome in comparison to a specific reference group of a categorical variable or for a one unit increase in a continuous variable such as individuals’ age. The results suggest that intergenerational trajectories of educational attainment are associated with individuals’ perceptions of social mobility. The reference category for this variable comprises individuals who are immobile in the middle tertile of educational attainment. Compared to the reference group, those who experience objective downward mobility from the top to the bottom educational tertiles are more and less likely to perceive themselves as being, respectively, downwardly and upwardly mobile in Models 1 and 4, with prevalence ratios of 1.22 ( $p < 0.001$ ) and 0.87 ( $p < 0.01$ ). Similarly, upwardly mobile individuals in terms of educational attainment from the lower tertile to the middle or top tertiles are less likely to declare being downwardly mobile and more likely to report being upwardly mobile. The described associations are not significantly affected by other independent variables introduced in Models 2–3 and 5–6.

The presented Poisson regressions do not suggest that individuals’ gender makes any difference in perception of intergenerational mobility, but there is U-shaped association between age and, respectively, downward and upward mobility. This might be due to the well-known curvilinear association between age and subjective wellbeing attributed to increased satisfaction with certain life domains (e.g. social life) after middle age. I also find that individuals’ marital status is an important predictor of



**Figure 2.** Bivariate associations between the share of subjectively downwardly and upwardly mobile individuals and macro-level variables. Note: Two-letter country codes (ISO 3166) are used. Source: Author's calculations based on data from LITS (EBRD, 2010)

**Table 2.** Individual-level explanations of respondents' perception of intergenerational mobility, prevalence ratios (PR) from multilevel mixed-effects Poisson regressions.

	Perceived downward mobility=1, otherwise=0			Perceived upward mobility=1, otherwise=0		
	Model 1: PR (SE)	Model 2: PR (SE)	Model 3: PR (SE)	Model 4: PR (SE)	Model 5: PR (SE)	Model 6: PR (SE)
Intercept	0.29 (0.02)	0.18 (0.03)	0.38 (0.07)	0.43 (0.02)	0.98 (0.01)	0.97 (0.01)
Educational trajectories						
Bottom → bottom	0.98 (0.04)	1.04 (0.04)	0.95 (0.04)	1.02 (0.03)	0.97 (0.03)	1.03 (0.03)
Middle → bottom	1.08 (0.05)	1.09 (0.05)	1.02 (0.04)	0.92* (0.03)	0.92* (0.03)	0.96 (0.03)
Top → bottom	1.22*** (0.07)	1.20*** (0.06)	1.15** (0.06)	0.87** (0.04)	0.89** (0.04)	0.91* (0.04)
Bottom → middle	0.85** (0.04)	0.90* (0.04)	0.86** (0.04)	1.14*** (0.04)	1.09** (0.03)	1.12*** (0.04)
Middle → middle	1.00	1.00	1.00	1.00	1.00	1.00
Top → middle	1.11** (0.04)	1.06 (0.04)	1.10** (0.04)	0.88** (0.04)	0.92* (0.04)	0.89** (0.04)
Bottom → top	0.63*** (0.06)	0.66*** (0.06)	0.70*** (0.06)	1.30*** (0.06)	1.25*** (0.06)	1.19*** (0.05)
Middle → top	0.83*** (0.05)	0.82*** (0.04)	0.90* (0.04)	1.15*** (0.04)	1.15*** (0.04)	1.08* (0.04)
Top → top	0.95 (0.04)	0.91* (0.04)	1.05 (0.04)	1.03 (0.03)	1.06 (0.03)	0.97 (0.03)
Gender						
Women	—	1.00	1.00	—	1.00	1.00
Men	—	1.02 (0.02)	1.01 (0.02)	—	0.98 (0.01)	0.97* (0.01)
Age	—	1.03*** (0.01)	1.04*** (0.01)	—	0.99* (0.01)	0.98** (0.01)
Age-squared/100	—	0.96*** (0.01)	0.95*** (0.01)	—	1.02** (0.01)	1.03*** (0.01)
Marital status						
Never married	—	1.00	1.00	—	1.00	1.00
Married	—	0.79*** (0.03)	0.84*** (0.02)	—	1.24*** (0.04)	1.19*** (0.03)
Divorced/separated	—	1.12*** (0.03)	1.08** (0.03)	—	0.96 (0.04)	0.98 (0.04)
Widowed	—	1.01 (0.04)	0.97 (0.04)	—	1.06 (0.03)	1.08* (0.04)
Settlement type						
Rural	—	1.00	1.00	—	1.00	1.00
Urban	—	1.06* (0.03)	1.06* (0.03)	—	0.97 (0.02)	0.97 (0.02)
Metropolitan	—	1.05 (0.06)	1.06 (0.06)	—	1.01 (0.04)	1.00 (0.04)
Socio-economic rung	—	—	0.84*** (0.01)	—	—	1.12*** (0.01)

(continued)

Table 2. (continued)

	Perceived downward mobility=1, otherwise=0			Perceived upward mobility=1, otherwise=0		
	Model 1: PR (SE)	Model 2: PR (SE)	Model 3: PR (SE)	Model 4: PR (SE)	Model 5: PR (SE)	Model 6: PR (SE)
Labour market status						
White collar	—	—	0.89*** (0.03)	—	—	1.09*** (0.03)
Blue collar	—	—	0.99 (0.04)	—	—	1.04 (0.03)
Farmers	—	—	0.94 (0.05)	—	—	1.07 (0.06)
Unskilled service	—	—	1.01 (0.04)	—	—	1.04 (0.04)
Unemployed	—	—	1.17*** (0.04)	—	—	0.87*** (0.03)
Out of labour market	—	—	1.00	—	—	1.00
Mobility in status in 2006-10	—	—	0.98* (0.01)	—	—	1.02** (0.01)
Country-level variance	0.14 (0.03)	0.15 (0.03)	0.10 (0.02)	0.07 (0.02)	0.44 (0.06)	0.28 (0.05)
Countries	35	35	35	35	35	35
Observations	27,571	27,571	27,571	27,571	27,571	27,571

Notes: \*\*\*, \*\*, and \* denote statistical significance at the 0.001, 0.01, and 0.05 levels. Robust standard errors clustered around countries are shown in parentheses.

Source: Author's calculations based on data from LITS (EBRD, 2010)

intergenerational subjective mobility. Those who are married have consistently higher prevalence ratios (1.24,  $p < 0.001$  in Model 5) of perceiving themselves as upwardly mobile than those who have never been married. Urban residents, when compared to rural settlers, are also somewhat more likely to view themselves as downwardly mobile.

In Table 2 we can also observe that individuals' socio-economic position has a strong association with their perceived intergenerational mobility. Moving one step up in the 10-step ladder hierarchy is linked with prevalence ratios of 0.84 ( $p < 0.001$ ) and 1.12 ( $p < 0.001$ ) for respondents perceiving themselves to be, respectively, downwardly and upwardly mobile in Models 3 and 6. The unemployed and white collar professionals have the opposite perceptions of intergenerational mobility. In comparison to individuals who are outside of the labour market, unemployed people are more likely to declare downward mobility and less likely to declare upward mobility, whereas the professionals' group are less likely to declare downward mobility and more likely to declare upward mobility. Finally, change in the social hierarchy in 2006 to 2010 leads to, respectively, lower and higher perceptions of intergenerational downward and upward mobility.

### Contextual effects and cross-level interactions

The models in Table 3 are identical to those in Table 2 except that I consecutively introduce separate contextual variables while, in the final Model 6, I simultaneously include all contextual explanations (full regression output is reported in Table S5, online supplementary material). In Models 1–5, for both perceived downward and upward mobility, the only consistently significant contextual factor is the long-term change in GDP PPP per capita between individuals' birth years and 2010. The derived prevalence

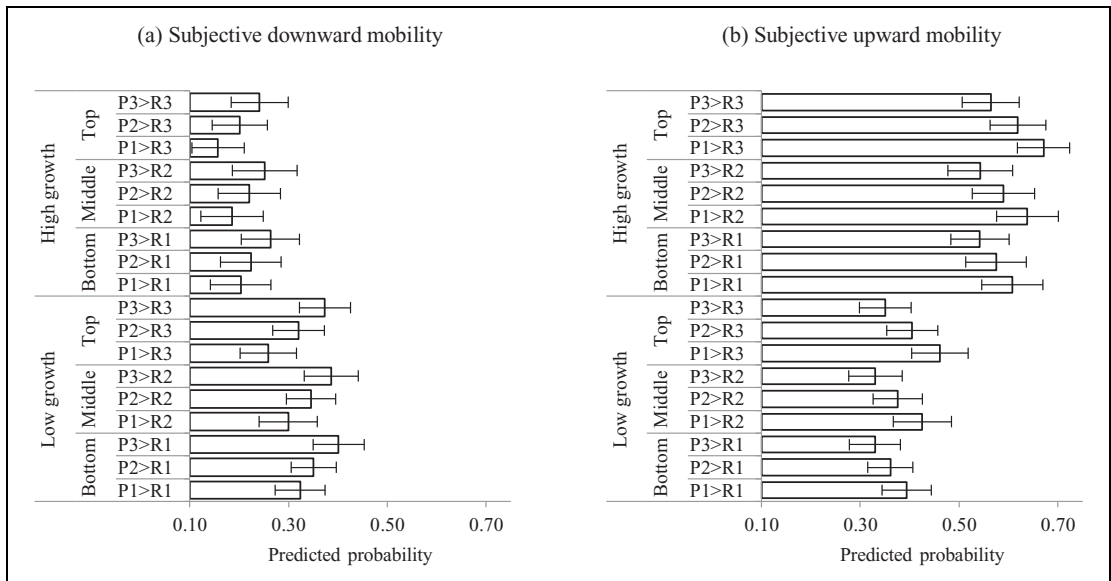
**Table 3.** Contextual-level explanations of respondents' perception of intergenerational mobility, prevalence ratios (PR) from multilevel mixed-effects Poisson regressions.

	Perceived downward mobility=1, otherwise=0					
	Model 1: PR (SE)	Model 2: PR (SE)	Model 3: PR (SE)	Model 4: PR (SE)	Model 5: PR (SE)	Model 6: PR (SE)
GDP PPP per capita	0.90* (0.05)	—	—	—	—	0.82* (0.07)
GDP change in 2007-2010	—	0.99 (0.01)	—	—	—	0.98** (0.01)
GDP change between birth-2010	—	—	0.89** (0.03)	—	—	0.91* (0.04)
Gini coefficient	—	—	—	1.00 (0.01)	—	0.99 (0.01)
Socialist legacy	—	—	—	—	1.09 (0.14)	0.73 (0.17)
Country-level variance	0.10 (0.02)	0.11 (0.02)	0.09 (0.02)	0.11 (0.02)	0.10 (0.02)	0.07 (0.01)
Countries	35	35	35	35	35	35
Observations	27,571	27,571	27,571	27,571	27,571	27,571
	Perceived upward mobility=1, otherwise=0					
	Model 1: PR (SE)	Model 2: PR (SE)	Model 3: PR (SE)	Model 4: PR (SE)	Model 5: PR (SE)	Model 6: PR (SE)
GDP PPP per capita	1.02 (0.04)	—	—	—	—	1.01 (0.09)
GDP change in 2007-2010	—	1.01 (0.00)	—	—	—	1.01 (0.00)
GDP change between birth-2010	—	—	1.12*** (0.04)	—	—	1.18*** (0.06)
Gini coefficient	—	—	—	1.00 (0.01)	—	1.01 (0.01)
Socialist legacy	—	—	—	—	1.04 (0.10)	1.25 (0.21)
Country-level variance	0.06 (0.01)	0.06 (0.01)	0.07 (0.01)	0.06 (0.01)	0.06 (0.01)	0.05 (0.01)
Countries	35	35	35	35	35	35
Observations	27,571	27,571	27,571	27,571	27,571	27,571

Notes: \*\*\*, \*\*, and \* denote statistical significance at the 0.001, 0.01, and 0.05 levels. Robust standard errors clustered around countries are shown in parentheses.

Source: Author's calculations based on data from LITS (2010)

ratios suggest that one standard deviation change in the latter measure is associated with 11% ( $p < 0.01$ ) lower prevalence of individuals perceiving themselves as being downwardly mobile and 12% ( $p < 0.001$ ) higher prevalence of individuals perceiving themselves as upwardly mobile. The described results are not qualitatively affected when all contextual factors are simultaneously accounted for. However, in Model 6, all of the coefficients related to the influence of economic development on perceived intergenerational mobility also become statistically significant with greater economic progress being associated with lower prevalence of intergenerational downward mobility perceptions. Table S7, in online



**Figure 3.** Predicted probabilities of subjective downward and upward intergenerational mobility according to educational mobility and high and low economic growth levels between individuals' birth and 2010

Notes: Error bars represent 95% CIs. PX > RX represent intergenerational trajectories from parental educational tertile to respondents' educational tertile.

Source: Author's calculations based on data from LITS (EBRD, 2010).

supplementary materials, also demonstrates that after removal of outlier countries at level 2, the statistical and substantive significance of the main findings are maintained.

Finally, in order to illustrate the absolute effects rather than relative prevalence ratios of one of the main independent variables, as well as to understand if the interactions between individual and contextual factors produce additional effects on perceived intergenerational mobility, in Figure 3 I estimate predicted probabilities of objective intergenerational mobility separately for those individuals who have experienced the highest 20% and the lowest 20% of economic growth rates between their birth years and the survey year. This exercise suggests that, mirroring the findings in Table 4, individuals experiencing high growth are more likely to declare themselves as being upwardly mobile and less likely to declare downward mobility. The opposite is the case for those who have experienced low economic growth between their birth and 2010. Irrespective of this long-term economic growth, I still find that moving up or down in terms of intergenerational educational attainment is an important factor in why some individuals perceive themselves as upwardly mobile and others do not. For instance, those who experienced high growth and upward mobility into the top educational tertile have a 0.67 (CI 95%, 0.62-0.72) probability of perceiving themselves as upwardly mobile, while for those who are immobile in the top tertile this probability is 0.56 (CI 95%, 0.51-0.62).

## Discussion and conclusions

In this study I have investigated, across a large number of societies, individual- and contextual-level explanations of why some people view themselves as being downwardly or upwardly mobile, while others think they are immobile. Understanding subjective social position has become an important topic of sociological enquiry in recent decades, but only a handful of studies explicitly investigate the nature of subjective perception of intergenerational mobility. The political relevance of intergenerational social



mobility, conventionally defined in terms of educational, occupational, and income mobility across generations, is obvious as it has become one of the priority areas of the EU's developmental strategy, which views it in terms of equal opportunities to ensure access and fairness for all throughout their lives (Ludwinek et al., 2017).

The transnational actors, public officials, and social stratification scholars are typically interested in intergenerational social mobility for normative considerations and efficiency concerns of 'wastage of talent'. But it is reasonable to assume that there are additional implications of the experience of social mobility, other than simply individuals' own levels of satisfaction with their intergenerational mobility experience. Arguably, the effect of social mobility on individuals' worldviews and behaviours might only be relevant when they are aware of the experience of upward or downward intergenerational mobility. If so, an argument can be made that understanding subjective perception of intergenerational mobility is as relevant as investigation of objective social mobility. In the introduction of a volume discussing the implications of intergenerational social mobility for political attitudes, Seymour Martin Lipset (1992), one of the leading political sociologists of the 20th century, asserted that subjective feelings about mobility are more important for political and economic attitudes than objective intergenerational upgrade of educational attainment and occupational status.

To inquire into micro- and macro-level explanations of subjective intergenerational mobility, I used one of the few large-scale comparative surveys, conducted in 35 countries across the Eurasian continent, which included a question on subjective perception of intergenerational mobility. The main characteristic of this indicator of intergenerational mobility is that it does not necessarily imply social mobility in terms of educational, occupational, or income mobility, but can also evoke various personal, familial, and contextual associations among individuals. My findings suggest that probably the most common explanation of subjective intergenerational mobility, mobility in educational attainment, is an important factor in why some people think that they have done better or worse than their parents. Further, I find that the age of individuals has an inverse U-shaped association with mobility perceptions and that married individuals are significantly different in their subjective mobility views than those in other marital categories. More importantly, current socio-economic position, short-term change in position in this hierarchy, and unemployment all maintain an independent association with subjective perception of mobility. In other words, more advantaged groups according to these characteristics are more and less likely, respectively, to report upward and downward intergenerational mobility. The idea that objective social mobility is only one factor among others affecting perceptions is in line with the 'death of class' hypothesis, which assumes that life chances have become closely associated with particular choices, events and stages in an individual's life, rather than with static social class membership (Grusky and Weeden, 2001).

The derived results also suggest that the difference in economic development between individuals' birth years and the timing of the interview is the most important contextual-level explanation of perceived intergenerational mobility, but contemporary and short-term economic growth also appears to reduce the likelihood of subjective downward mobility. The sociological implication of this finding is that individuals are likely to adjust the nature of their intergenerational comparison based on relatively minor changes in an environment in which they live. These findings are robust to alternative methodological specifications. For instance, in Table S3 in online supplementary materials, I run more conventional multilevel mixed-effects logistic regressions with the identical model and variable specifications as in the main analysis, and find that, as expected, Poisson regression estimates are more conservative than logistic regression estimates. I also fit diagonal reference models, which some consider a more appropriate method to test the consequences of intergenerational social mobility than conventional regression models (Van der Waal et al., 2017), and I find that intergenerational mobility in educational attainment, accounting for the parental and respondents' own education, has an independent effect on subjective perception of intergenerational mobility, as was shown in the main analysis.

It is hard to contextualise the described findings against the backdrop of previous literature from other countries. Yet, we can compare the subjective perception of intergenerational mobility in occupational

status for those Western European countries which participated in both ISSP and LITS surveys with the broader measure of subjective mobility used in the present study. This comparison shows that in four out of five countries individuals are more likely to declare downward mobility when asked about the general intergenerational comparison of their lives than when asked about subjective perception of intergenerational mobility in occupational status. In terms of individual-level predictors, we cannot compare the findings of this study with previous research because of the limited number of variables analysed in the earlier empirical research. As for the contextual-level explanations, economic growth between individuals' birth years and the year of interview was a significant factor in our study mirroring the results of Kelley and Kelley (2009) with the sample of only Western European countries.

Our understanding of the perceptions of subjective intergenerational mobility can be interesting from the perspective of social comparison theory (Wood, 1996). According to this approach individuals differ by the type of groups or individuals they choose as a reference for comparison and the nature of actual comparisons they make with the selected groups of individuals (Buunk and Gibbons, 2007). It is known that when asked to select a benchmark for socio-economic comparison of their current socio-economic conditions, about one-fifth of individuals compare themselves with their own parents (Gugushvili, Jarosz, et al., 2019). One reason for this is that children unconsciously internalise not only parental values and behaviours but also the socio-economic environment in which they were growing up (Bandura, 1977). My findings suggest that individuals' considerations on how well they have done in life in comparison to their parents are not static but rather vary by age, marital status, labour market status, socio-economic position, and long- and short-term economic growth. One of the main limitations of these findings, though, is that it uses cross-sectional survey data which refer to only one point in time and therefore a potential problem could be the correct identification of the nature of associations, for instance, in terms of differentiating the effect of age from the effects of cohort and period.

The findings presented have implied that the various variables affect subjective perception of intergenerational mobility, but the data and methodology do not allow the exclusion of the possibility of reverse causation as predicted by social selection theory (Blane et al., 1993). Intergenerational downward and upward mobility and its perception might influence individuals' characteristics such as their marital status or socio-economic rung. Further, the survey does not include information on respondents' international migration histories, which means that the macro-level variable on the difference in economic development between individuals' birth years and 2010 might not adequately reflect their personal circumstances. Nonetheless, when I restrict the sample to only those individuals who have lived for their entire lives in the towns where the interviews were conducted, and therefore have not migrated from third countries, the statistical and substantive significance of macro-level variables in these separate models remains the same (Table S8 in online supplementary materials). Another limitation of this study is that intergenerational educational mobility is only one, albeit important, type of objective intergenerational mobility that could also be marred with recall bias and measurement error.

The dataset analysed in this study includes a large set of countries in Europe, the Middle East and Central Asia, but the majority of countries are post-socialist societies which have experienced major economic and political changes in the last three decades. On the one hand, this might raise some questions concerning external validity of findings for other countries and contexts. However, the analysed survey data is a representative sample of a combined population of about 800 million individuals which at the time the survey was conducted constituted about 12% of the world's population. In turn multilevel models used in the analysis allow us to control away, as far as possible, the country-specific characteristics that can affect perceptions of subjective intergenerational mobility and also the link between subjective mobility and contextual factors. Nonetheless, if future social surveys for different sets of countries also include information on individuals' subjective intergenerational mobility, it would be interesting to see how these results compare to findings reported in the present analysis.


Bearing in mind the limitations of this study, my findings contribute to sociological literature on social mobility and stratification by highlighting the importance of contextual environment and factors beyond socio-economic characteristics for individuals' perception of intergenerational mobility. It is

also worthwhile to conclude with the potential policy implications of the derived findings. Intergenerational social mobility is a priority policy area for governments across European societies, including the United Kingdom, which can be seen in the ongoing work of the Social Mobility Commission that monitors progress towards improving social mobility in this country. The results of this analysis suggest that improving mobility rates in objective measures such as educational attainment might not be the only, or even the most important, factor for public perceptions of intergenerational mobility. Policies directed towards improving general socio-economic conditions, reducing unemployment and preventing, or at least mitigating, the consequences of economic crisis are also important for our understanding of why some individuals perceive themselves as being downwardly or upwardly mobile, while others do not.

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## Supplemental material

Supplemental material for this article is available online.

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