What are the Trends and Explanations of Perceived Social Mobility in Poland?

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Abstract

There is an increasing interest in the subjective aspect of socioeconomic position and its implications for wellbeing across social science disciplines. One of the emerging dimensions of this scholarship is research on perceived social mobility, its determinants, and consequences. To date, most existing evidence in this area is based on cross-sectional data and corresponding methods, which are biased by the unobserved heterogeneity of individuals. The latter calls into question existing findings on the nature of perceived social mobility. To provide more robust estimates of trends over time and explanations of perceived social mobility, we explore two complementary datasets covering the period between the late 1990s and the late 2010s in Poland. Due to the major economic, political and social changes, exploring subjective perceptions of intergenerational mobility might be particularly important in post-communist settings. The analysis allows us to conclude that, over the last two decades, significant changes in perceived social mobility have taken place in Poland. In terms of the individual-level predictors of this trend, cross-sectional and random-effects analyses over-estimate the importance of certain characteristics, such as age, education, or size of locality, yet, based on the results from more robust fixed-effects estimates, we conclude that factors such as subjective social position, household income, and objective social mobility are important explanations as to why some people believe they are doing better or worse than their parents.

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Introduction

In a perfectly meritocratic society, individuals may expect to occupy any social position based on their abilities rather than on social background (Goldthorpe, 1996; Mijs, 2016; Swift, 2004). This idea of equal opportunities has become ingrained in some countries' national identities, perhaps most prominently in the United States (Hout, 2018), but it has also entered into the policy discourse of Western welfare democracies (Ludwinek et al., 2017). This interest in social mobility has been fuelled by the recent debates in public media and academia on the declining prospects for upward social mobility and the intensifying levels of downward social mobility in many developed countries (Bukodi et al., 2015; Li & Devine 2011; Song et al., 2020). Social mobility had a different manifestation in Eastern European communist societies, in which equality of opportunity was largely determined by authoritarian political considerations (Gugushvili, 2017a; Parkin, 1973), yet merit-based social mobility had become part of the promise, as these countries underwent major reforms and transitioned from communist to capitalist organization of political and economic life (Bukodi & Goldthorpe, 2010; Jackson & Evans, 2017).

Recent comparative studies suggest that there is a more nuanced picture of social mobility patterns than the simple Western vs. Eastern European divide, and that social mobility trends, among other factors, depend on individuals' gender, operationalization of social mobility, and changes in occupational structure in different groups of countries across the European continent (Bukodi et al., 2020; Erikson & Goldthorpe, 1992). Nevertheless, while in the UK, France, and the Nordic countries, there are nearly equal shares of upwardly and downwardly mobile individuals by absolute rates of mobility, in a number of post-socialist countries, the proportion of downwardly mobile individuals is greater than those who are upwardly mobile. In addition, some countries of Central Europe rank among Europe's most unequal societies in terms of relative mobility chances (Ludwinek et al., 2017; Narayan et al., 2018).

In parallel, there has been an increasing realization in social sciences of the importance of perceived, rather than objective measures of social stratification and mobility (Botha & Vera-Toscano, 2022; Demakakos et al., 2008; Gugushvili et al., 2022; Jackson & Grusky, 2018; Lipset, 1992; Palomar-Lever, 2007). The way people judge their living standards, and how they perceive their mobility trajectories can shape their attitudes and behaviours (Day & Fiske, 2019). For instance, subjective social position, the place in a social hierarchy that individuals see themselves as belonging to, influences the economic choices that individuals make (Ricci, 2016). Subjective social position is also linked to a feeling of happiness (Kim et al., 2020), and is found to be a predictor of individual health status (Sanchón-Macias et al., 2013) and health behaviours (D'Hooge et al., 2018). Individuals' feelings about their own social mobility, and the way they experience and explain their mobility trajectories can also shape their vision of a meritocratic society. As a result, such individual feelings are believed to be as important, or even more so, as objective indicators of social mobility (Duru-Bellat & Kieffer, 2008).

Furthermore, subjective social mobility is an important predictor of individuals' perceptions of own places in a social hierarchy, potentially affecting their sense of accomplishment and happiness, life satisfaction, and health and wellbeing (Berger & Engzell, 2020; Gugushvili 2021a; Kelley & Kelley 2009; Präg and Gugushvili

2020). Some recent evidence indicates that subjective social mobility may be a better predictor of various life outcomes in adult life than objective mobility trajectories operationalized through individuals' educational, occupational, or income attainment in comparison with those of their parents (Gugushvili & Präg, 2021; Präg and Gugushvili 2021; Gugushvili 2016). This is not surprising as the theoretical pathways for the impact of intergenerational social mobility almost exclusively refer to various psycho-social mechanisms (Day & Fiske, 2017; Newman, 1999).

It has been also argued that the perception of one's own mobility in relation to the position of one's parents becomes particularly important during radical systemic changes when political and economic turbulence leads to major shifts in socioeconomic structure (Janicka, 2020). At the same time, we know relatively little about the factors that determine self-perception of social mobility at the individual (Berger & Engzell, 2020; Gugushvili, 2019) and national levels (Kelley & Kelley, 2009), let alone how a sudden change in external conditions, e.g. major socioeconomic transformation, affects perception of social mobility. Most of the research on perceived social mobility has focused on relatively stable Western European and North American societies. Post-communist countries in Eastern Europe underwent transformative social, economic and political changes, which resulted in major upheavals in the socioeconomic structure. Among other developments, emerging economic sectors, the reshuffling of occupational groups and their levels of prestige, and private entrepreneurship would have potentially affected patterns of social mobility perception among individuals when compared to their parents.

Existing studies in this developing field rely on available cross-sectional data, which may be prone to bias, due to, among other factors, omitted time-invariant characteristics of individuals in the estimated models. Longitudinal analysis of data can potentially mitigate some of the statistical problems. In this study we use data from the Polish Panel Survey (POLPAN), which is one of the longest continuously run panel studies in Europe (Tomescu-Dubrow et al., 2021). This dataset is well suited to the study of perceived social mobility, as it is one of the few panel surveys explicitly asking individuals about their social mobility perceptions. For additional validity of our results, we also use cross-sectional data on alternative measures and explanations of perceived social mobility.

Background

Country Differences and Trends in Perceived Social Mobility

To understand the nature of perceived social mobility, it is helpful to describe the trends and differences between countries in terms of this measure. Existing data allow us to conclude that a significant share of individuals in contemporary generations, at least in Western democracies, report being worse off than their parents when making the intergenerational comparison by occupational and income attainment. To date, the evidence is scattered across different countries and time periods.

Duru-Bellat & Kieffer (2008), using data from the French National Institute of Statistics and Economic Studies, report that in 2003 about a third of respondents

thought their occupational position was not as high as their father's, while another 30% reported being occupationally immobile. Using the General Social Survey data from the United States for 1994-2018, Berger & Engzell (2020) show that, contrary to the marked decline in objective indicators of mobility (Chetty et al., 2017), the majority of Americans still feel that they are doing better when compared to their parents. In terms of birth cohorts that participated in the survey, starting with respondents born in the 1940s and ending with those born in the 1980s, the share of those who feel they are doing worse, compared to their parents, did not exceed 20% for each given cohort.

Kelley & Kelley (2009), using the pooled data from the 1999 International Social Survey Programme's (ISSP) Social Inequality module from 30 countries in different parts of the world, show that about a quarter of respondents evaluated themselves as occupying lower or much lower positions compared to their fathers and about a third of respondents thought they had the same occupational status as their fathers. Using the Life in Transition Survey, Gugushvili (2021) provides a ranking of 35 countries from Western, Central, and Eastern Europe, the Middle East and Central Asia in terms of shares of respondents who considered themselves intergenerationally immobile, or upwardly or downwardly mobile. The shares of those reporting downward mobility range from just above 10% (Slovenia) to more than 60% (Armenia). In Poland, more than one fifth of respondents reported downward mobility in 2010, while about half reported doing better in life compared to their parents.

What are the Explanations for Mobility Perceptions?

There is no specific theory that would explain the mechanisms behind the formation of social mobility perceptions. Only a handful of studies deal with the determinants of subjective intergenerational mobility. Factors that impact the way individuals perceive their own trajectory compared to their parents can be divided into individual- and contextual-level explanations. All individuals are born, grow, live, work and age within a specific set of conditions that shape their perceptions. Thus, major socio-demographic characteristics such as gender, age, educational attainment, social class, income and marital status are thought to be important determinants of perceived social mobility. It is also known that mobility perceptions can only partially be explained by mobility in objective measures of socioeconomic position. As for contextual characteristics, the socioeconomic environment in childhood, or the dynamics of economic development during an individual's lifetime can also shape the way individuals perceive their own position and compare it to that of their parents.

Berger & Engzell (2020) find that education level, minority status and place of residence play an important role in predicting perceived mobility trends in the United States. In an exploratory study, Duru-Bellat & Kieffer (2008) pinpoint specific demographic and social origin characteristics that affect the way individuals perceive own social mobility: women, compared to men, tend to assess own mobility negatively, while young people are more positive about their mobility experiences. Perhaps unsurprisingly, the higher the position respondents occupy and the higher their level of education at the time of the survey, the more likely they are to feel upwardly mobile. Those stemming from a more advantageous background, in terms of their

fathers' occupations and education, are less likely to think they have moved upwards within the social hierarchy. The same study also suggests that self-assessed mobility trajectory is a function of comparison to a individual's closest surroundings, which includes their parents and partners, but also their close friends and other people they feel being close to.

It is also known that perceived social mobility is sensitive to national contexts and particular historical circumstances. For instance, Kelley & Kelley (2009), analysing the pooled data for 30 countries, conclude that the actual gains in terms of occupation and education were the important factors influencing self-perceived mobility. Individual-level family income and supervisory position at the workplace were also important predictors. At the same time, the authors suggest that aggregate-level factors, such as country-wide gains in terms of GDP within the respondent's lifetime, were playing a significant role. The importance of the contextual environment is also clear from the results of the disaggregated analysis according to country type. In the analysis of nine post-communist societies, unlike in Western Europe countries, gender was not associated with the perceived social mobility. Moreover, the economic growth of a country in terms of GDP per capita also mattered only in countries without a communist experience (ibid.).

The Life in Transition Survey (LITS) has been used to explore both individual- and contextual-level characteristics associated with perceived intergenerational mobility (Gugushvili 2021a). LITS is primarily focused on post-socialist societies in Central and Eastern Europe and Eurasia. Unlike the ISSP dataset, which only considered the perceived occupational mobility of respondents, the LITS question on perceived social mobility deals with the general intergenerational comparison between parents and children, rather than with the attainment of specific indicators of socioeconomic position. Given that individuals tend to consider a wide array of factors when judging their mobility trajectories (Duru-Bellat & Kieffer, 2008), this survey item arguably better captures what respondents actually think of social mobility. The results suggest that objective mobility in educational attainment is one of the most important determinants of subjective intergenerational mobility assessment. Age and marital status also influence mobility perceptions. Individuals in more advantageous socioeconomic positions are more likely to report upward social mobility compared to their parents. Changes in GDP since a respondent's birth year, and the timing of the interview were important contextual explanations of self-assessed mobility, which implies that individuals are likely to adjust their own mobility assessment based on changes in the environment in which they live.

The above-described scholarship on explanations for social mobility perceptions is prone to several important limitations. First, it might not accurately reflect changes in individuals' judgments during their lifetimes. Assessment of an individual's own trajectory is significantly affected by their social origin (time-invariant factors), but is also shaped by, among other factors, educational, occupational and income attainment (changing characteristics). A more accurate assessment of trajectories would thus require a longitudinal analysis of data. To our knowledge, there are no studies that assess the major determinants of subjective social mobility using panel data. Secondly, previous research shows that, unlike objective mobility trajectories which only consider certain aspects of socioeconomic position (e.g. occupation), in judging their

own social mobility, individuals take into account not only multiple characteristics of their current positions, as well as those of their parents and the nearest surrounding, but also characteristics of their specific country in a given historical moment. As Polish sociologist, Janicka (2020) states, mobility perceptions are "a function of the entirety of their life experiences and common knowledge of social reality". Most perceived social mobility surveys are not suitable for this type of analysis as they do not provide the required longitudinal data.

Perceived Social Mobility in Poland and Hypotheses

Most of the described research focuses on determinants of perceived social mobility in Western welfare societies. In the post-communist context, however, subjective feeling about, and assessment of the change in one's social position in relation to parental status can reveal "the visions of the socio-professional or class structure present in the social consciousness" (Janicka, 2020). The legacy of socialism, coupled with intervention in the structures of stratification, has affected the patterns of intergenerational social mobility regimes in Eastern Europe and also plays an important role in today's societies (Bukodi et al., 2020; Gugushvili, 2017b). These differences can be explained by the structural inequalities in the two groups of countries, including low levels of economic development in the early post-communist period, diminished welfare states, higher risks and uncertainty in the population. Following the transition, which was experienced differently by the representatives of different social classes in these countries, societies are more stratified, making differences between those who are more advantaged and those who are less advantaged more salient (Domański, 1998, 2011). Consequently, Eastern Europeans reveal substantially lower levels of satisfaction with life compared to the residents of Western Europe (Kaiser & Trinh, 2021).

Perceived social position and social mobility had long been an interest for Polish sociologists (Janicka, 1985; Mach, 1991). Researchers have investigated the relationship between perceived and objective mobility. Janicka (2020), using the POLPAN data, studied the evolution of social mobility perceptions from 1988 to 2018 and their relations with objective mobility. According to her study, a sense of intergenerational upward mobility is most common in the upper class, relatively high in the middle class and least common in the lower class. The intensification of the sense of intergenerational downward mobility, Janicka suggests, results from a feeling of relative deprivation, arising from the differentiation of the socio-professional situation among individuals. Downward mobility may be associated with a growing sense of insecurity not only in the occupational sphere, but also in relation to unmet expectations in other areas of life.

Based on the described theoretical framework and previous applied research from various countries and settings, we can formulate the following hypotheses to be tested in the empirical section of the paper:

Hypothesis 1 Levels of perceived social mobility are not static and change over time and across cohorts.

Hypothesis 2 Economic development has a positive association with perceived social mobility.

Hypothesis 3 Individuals' main sociodemographic variables such as age, gender, and marital status are important predictors of perceived social mobility.

Hypothesis 4 Various measures of socioeconomic position such as education, income, subjective social status, and objective social mobility are positively related to perceived social mobility.

The main goal of our study is to narrow down the described research gap by using both cross-sectional and longitudinal data from Poland – the Polish Panel Survey (POLPAN), one of the longest continuously run panel surveys in Europe. Designed to study social structure, POLPAN is well suited for tracking the changes in individual position and perceived social mobility over the recent decades, with the most recent wave being fielded in 2018. POLPAN data provide opportunities for using a modelling strategy that would account for both variations between individuals and across time. We fit various specifications of random and fixed-effect models, which allow unobserved heterogeneity among individuals to be controlled for. For additional validity, we contrast the results from the POLPAN data analysis with a complementary cross-sectional survey, which also gives us an opportunity to compare results with an alternative measure of perceived social mobility.

Research Design

Data

We used two sources of data on perceived social mobility in Poland to complement and validate our results. A series of cross-sectional surveys, "Current Problems and Events", has been regularly carried out by the Public Opinion Research Center (CBOS) on a sample representative of the adult Polish population with around 1,000 respondents per survey. Questions related to perceived social mobility have been asked several times since 1999. For understanding trends over time, we used the aggregate data on perceived social mobility in 1999, 2004, 2013 and 2019 derived from the CBOS reports (Omyła-Rudzka, 2020). For the cohort-specific trends and an individual-level statistical analysis, we used the survey samples for 2004 and 2013 made publicly available in the Polish Social Data Archive (PADS). One of the main reasons why we use CBOS data is that it provides an alternative measure of perceived social mobility in Poland (described below).

The main data source that we use is the Polish Panel Survey (POLPAN) run by the Institute of Philosophy and Sociology of the Polish Academy of Sciences (IFiS PAN). This dataset was designed to study socioeconomic structure and inequalities, as detailed in the recent data description reports (Tomescu-Dubrow et al., 2021; Zelinska et al., 2021). In POLPAN, the same respondents have been interviewed about various aspects of their lives every five years, since 1988, with the most recent

wave, Wave 7, being fielded in 2018. Information about the perceived social mobility is available in all POLPAN rounds except for Wave 2 in 1993. Additionally, Wave 1 in 1988 asked the respondents about their fathers' *occupational* rather than *social* positions. For the sake of comparability over time with CBOS data, we excluded Wave 1 from the analysis. As a result, both for trends over time and statistical analyses at the individual level, we used data from five (1998, 2003, 2008, 2013 and 2018) POLPAN waves. Data on the number of respondents in the working sample, per wave, can be found in Table S1 in the supplementary materials.

Variables from CBOS

The CBOS surveys contain the following question: "*Compared to your parents, is your social position, generally speaking, higher, lower, or more or less the same as their position?*" with five answer options ranging from "definitely higher" to "definitely lower" with "more or less the same" in the middle. To construct the perceived social mobility variable, we reversed the scale and recoded the answers into strongly downwardly mobile=1, downwardly mobile=2, immobile=3, upwardly mobile=4 and strongly upwardly mobile=5.

We accounted for respondent age (recoded into age groups of 18–34, 35–44, 45–54, 55–64 and 65 or older) and gender (2=female). We recoded respondent education by collapsing the response options into eight hierarchical categories, ranging from primary or less (=1) to completed tertiary education (=8). We used information on respondent locality size according to five categories, from rural area (=1) to cities with 500,000 or more residents (=5). To account for respondent place of residence, we used the information on Polish regions, voivodeships (NUTS-2), and combined it with voivodeship-level gross domestic product (GDP) per capita data derived from the Local Data Bank of the Polish Central Statistical Office for the given year (Polish Central Statistical Office 2021). In this way, our variable reflects information on economic development in the voivodeships where respondents reside. In all models, we used the standardized (mean-centred) GDP per capita measure.

To account for subjective social position as a determinant of perceived social mobility, we used the following CBOS question: "*Some people occupy higher positions in our society, while others have lower positions. Where would you place yourself on the card shown? In which class and where?*" Respondents could choose one answer out of nine options, divided into higher, middle and lower classes. We reversed the scale and created a continuous subjective social position variable, taking values from the lowest (=1) to the highest (=9) position. Lastly, we controlled for standardized average household income.

We merged CBOS data for 2004 and 2013 into one data file consisting of 1,917 individuals. Information about perceived social mobility was available for 1,863 respondents, and this number was significantly reduced by missing information for several explanatory variables, primarily average household income. Given that nearly 40% of data on income was missing, which would have led to a substantial reduction in size of the analytical sample, we proceeded with multiple imputation of missing data (as described below). Further, information on marital status was collected in 2004 but not in 2013 and this is why we omitted it in our cross-sectional analysis.

Table S2 in the supplementary materials shows the summary statistics for the CBOS variables employed, including the proportions of missing values for each of them.

Variables from POLPAN

From the POLPAN data, we used variables that were constructed similarly to the CBOS variables. For a perceived social mobility measure, we relied on the following POLPAN question: "*When you compare your social position to that of your father when he was at your present age, do you think that your position is…*", with answers ranging from much higher than the father's position (=1) to much lower than the father's position (=5). We created five perceived social mobility categories, from strong downward social mobility (much lower=1) through strong upward social mobility (much higher=5) to be used in random and fixed-effects analyses. It is important to point out that while CBOS asked about the social position of the respondents' *parents*, POLPAN asked about the position of their *fathers.* Information about mothers' positions was collected in POLPAN only for later waves.

For each wave, we account for respondent age (categorized as in CBOS into five age groups), educational attainment (ranging from 1=primary education or less to 8=completed tertiary education), and standardized average household income. Average household income information is available for POLPAN waves from 2003 to 2018. Additionally, for 1998 we used the information on the total household income divided by the number of persons in the household. We also used the GDP for respondents' regions of residence (standardized) and locality size. Random-effects models additionally account for gender (2=female) and father's education (ranging from primary (=1) to tertiary (=8) levels).

To construct the subjective socioeconomic position variable, we used the following item in POLPAN: "*When comparing various social groups in our country, people believe that some of them are located higher than others. Here is an example of a scale. The bottom point on this scale, denoted by zero (0), refers to groups in the lowest social location, and the top point, denoted by ten (10), refers to groups in the highest. Please indicate where on this scale you would locate yourself*". By reversing the scales (from lowest to highest), and following minor adjustments, we obtained the social position variable for each POLPAN wave, ranging from the lowest (=1) to the highest socioeconomic position (=10).

Using POLPAN data, we also accounted for marital status (married=1, otherwise=0) and constructed the variable on objective intergenerational mobility, using the questions on respondents' own and their father's occupation. In particular, we used the main occupations of respondents in the survey year (available for all POLPAN waves) and their fathers' occupations when they were of the same age as respondents, both of which contained 14 socioeconomic classes. Following earlier work on Poland, we collapsed the answers into eight hierarchical social classes and recoded the categories from the lowest to the highest (Domański et al., 2009; Zelinska et al., 2021), ranging from 1=farmers to 8=high-level officials. We then created six occupational mobility variables for each wave by subtracting the father's occupation from the respondent's occupation. These mobility variables range from −6 to 7.

After considering five waves of POLPAN for our analysis, information on intergenerational social mobility is available for 3,380 individuals and 7,132 individual-time observations. However, as we take only those cases with no missing values for our variables of interest, we have 5,216 individual-time observations nested in 2,669 individuals. Table S3 in the supplementary materials contains the summary statistics for the variables used in the POLPAN's analytical sample.

Statistical Analysis

We conducted multiple imputation of CBOS data using Stata 16 statistical software and employing the Multiple Imputation by Chained Equations (MICE) algorithm (Rubin, 1987). In the original data, 37% of observations for household income were missing, as well as 3% for both perceived social mobility and subjective social position. Consequently, these three variables were registered as having missing data, while respondent age, gender, education, region of residence and locality, and survey year, were used as predictors of missing values. We created 50 imputed datasets. Imputation diagnostics suggest that the largest Fraction of Missing Information (FMI) equals 0.33, therefore having 50 imputed datasets was a robust imputation procedure. To understand what explains perceived intergenerational social mobility, we employed linear regression models on the pooled (2004 and 2013) sample for the CBOS data while also accounting for survey year fixed-effects. In the presented models, we gradually added confounders, including age, educational attainment, characteristics of the region and locality of residence, perceived social position, and average household income.

Exploiting the panel nature of the POLPAN data, we employed random- and fixed-effects models, controlling for a similar set of covariates as for the CBOS analysis, and then introducing additional variables, such as marital status, objective occupational mobility, and parental education as POLPAN-specific measures. The random-effects models accounted for the time-invariant gender of respondents and their fathers' educational attainment. All models also controlled for year-of-survey-related fixed-effects. For the analysis, we transformed POLPAN data into the long format using the *reshape* command in Stata 16, so that each individual-time pair was structured as a separate observation. We performed calculations using the *xtreg* command with clustered standard errors. For the models to which we fitted the data, the Hausman test rejected the null hypotheses suggesting that the fixed-effects estimators are preferred ($Chi^2(14)=55, 82$; $p=0.000$). Nonetheless, we present estimates from both random- and fixed-effects models to compare POLPAN results with both the CBOS analysis and the previous cross-sectional studies.

Results

Trends in Perceived Social Mobility Since the End of the 1990s

Figure 1 shows perceived social mobility in Poland from the end of the 1990s till the end of the 2010s. We see that most respondents assessed themselves as being
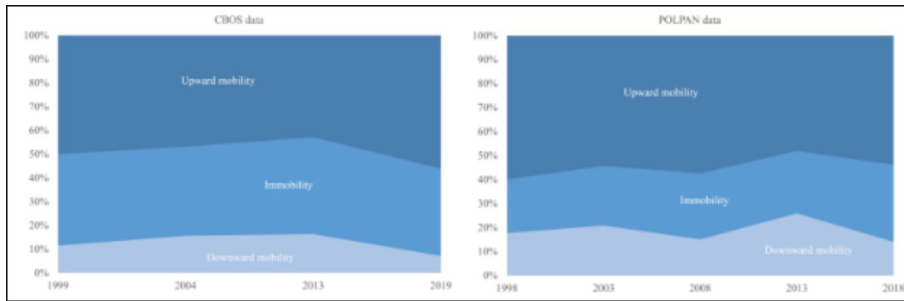
Fig. 1 Trends in perceived social mobility over time, % valid cases. *Source*: Omyła-Rudzka (2020); POLPAN (own calculations).

upwardly mobile. Based on the CBOS survey results, the shares of those who perceived their socioeconomic position as higher than that of their parents increased from 43% to 2013 to 56% in 2019, while it decreased from 60% to 1998 to 48% in 2018 based on the POLPAN results. The trends from both sources of data indicate that the share of those perceiving themselves as upwardly mobile gradually decreased from the late 1990s, reaching its minimum in 2013, and then increased again by the end of the decade. CBOS data also suggest that in 2019 the largest ever percentage of Poles felt that they were doing better than their parents. In turn, the POLPAN results indicate that the share of those perceiving themselves as upwardly mobile increased in period 2013–2018 but did not exceed the figure for those who considered themselves upwardly mobile in 1998.

At the other end of the social mobility perception scale, the share of those who considered themselves as worse off than their parents was the lowest in the late 2010s. These estimates range from 7% (2019) to 16% (2013) in the CBOS data, while in POLPAN this share significantly decreased from around a quarter of respondents in 2013 to only 14% in 2019. The share for immobile individuals remained relatively stable. In the CBOS data, this category of mobility perceptions decreased by 4 percentage points to 37% in 2013–2019. The share of immobile individuals was much smaller in the POLPAN data throughout the period under consideration, yet in 2018 it increased to around a third of respondents thinking that they occupied the same position as their fathers. The presented results are in line with Hypothesis 1 on the changing patterns of perceived social mobility in Poland.

Perceived Social Mobility by Birth Cohorts

After describing trends in perceived social mobility over time, we now split the CBOS and POLPAN samples into birth cohorts, based on respondent year of birth, ranging from those born in the 1920s to those born in the 1990s. Figure 2 illustrates the shares of individuals with different perceptions of social mobility among these birth cohorts. A feeling of intergenerational upward mobility dominates among respondents born before the late 1970s, according to the CBOS survey, and representatives of all cohorts in data from the POLPAN survey. In CBOS, more than half of the representatives of the two youngest cohorts, those born in the 1980s and the
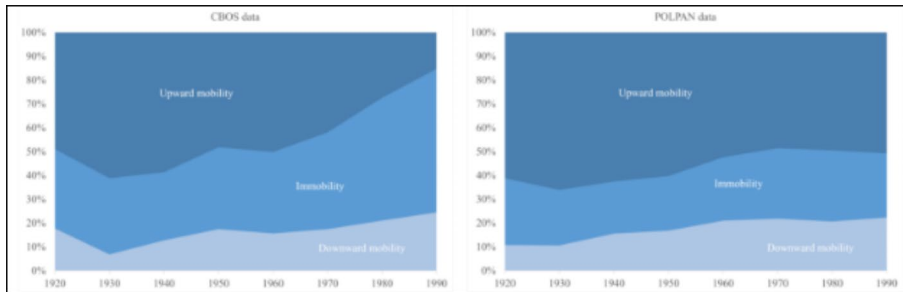
Fig. 2 Perceived social mobility by birth cohorts, % valid cases. Source: CBOS (2004;2013), POLPAN (own calculations).

1990s, considered themselves immobile compared to their parents. While interpreting the differences between the CBOS and POLPAN estimates, it is important to highlight that the source data for CBOS is based only on 2004 and 2013 surveys (when the lowest number of individuals reported being upwardly mobile), while POLPAN relies on the entire period since 1998 and can therefore be considered as a more reliable source of data for cohort analysis.

Despite the differences described, in both surveys the absolute majority of those born in the 1930s considered themselves to be upwardly mobile (61% in CBOS and 66% in POLPAN). Also, in both surveys, those who perceived themselves as being downwardly mobile were the minority, yet their share increased for more recent cohorts. In CBOS, the downwardly mobile ranged from 7% among those born in the 1930s to about a quarter of individuals born in the 1990s. In POLPAN, those who felt worse off than their fathers were 10% among the cohorts born before the 1940s, and about one fifth among those born after the 1950s. These results are again in line with Hypothesis 1 on changing perceived social mobility across birth cohorts.

Pooled cross-sectional Analysis of Perceived Social Mobility

Table 1 contains various specifications of linear regression (OLS) models using imputed and pooled CBOS data from 2004 to 2013 surveys. In line with the cohort trends described above, individuals' age is an important explanation of perceived social mobility. Younger respondents (those who are under 35), compared to middle-aged ones (those who are 35–45), tend to believe they are worse off compared to their parents, while those aged 55 or above are significantly more likely to assess their own social mobility trajectories positively. Another important explanation of perceived social mobility is individuals' own subjective perceptions of their current socioeconomic position; the higher individuals see themselves on a societal ladder, the better they assess their own intergenerational mobility experience. Perceived social mobility is also linked to respondents' education ($\beta=0.05$, SE$=0.01$) and their household income ($\beta=0.11$, SE$=0.03$) in Model 6, so that those who are better educated and belong to better-off households assess own social mobility more positively. These results largely correspond to the formulated Hypotheses 3 and 4. Additionally, the size of the locality where individuals live is a significant predictor of perceived social

Table 1 Pooled cross-sectional OLS analysis of perceived social mobility

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	20.00	26.86	27.91	22.59	22.21	22.22
	(9.76)	(9.52)	(9.56)	(9.36)	(9.36)	(9.36)
Age group (ref. 45–54)						
<=34	-0.30***	-0.37***	-0.37***	-0.46***	-0.44***	-0.44***
	(0.07)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
35–44	-0.06	-0.12	-0.12	-0.16*	-0.14*	-0.14*
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
55–64	0.18*	0.18**	0.18*	0.17*	0.14*	0.14*
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
=>65	0.20**	0.26***	0.27***	0.28***	0.25***	0.25***
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Respondent's education	——	0.09***	0.07***	0.07***	0.05***	0.05***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Regional GDP (std)	——	——	-0.01	-0.01	-0.02	-0.02
			(0.02)	(0.02)	(0.02)	(0.02)
Size of locality	——	——	-0.02	-0.04*	-0.05**	-0.04**
			(0.01)	(0.02)	(0.02)	(0.02)
Subjective social position	——	——	——	0.14***	0.13***	0.12***
				(0.01)	(0.02)	(0.03)
Average household income (std)	——	——	——	——	0.12***	0.11***
					(0.03)	(0.03)
Gender (female=2)	——	——	——	——	——	0.01
						(0.04)
Observations	1917	1917	1917	1917	1917	1917
Adjusted R^2	0.04	0.09	0.10	0.14	0.15	0.15

Notes: * $p<0.05$, ** $p<0.01$, *** $p<0.001$; Standard errors in parentheses; Survey year fixed-effects are included in all models. *Sources*: Own estimates using CBOS dataset.

mobility after the subjective position is accounted for in Model 5. Neither the economic development of the region where individuals reside (contrary to Hypothesis 2) nor their gender (contrary to Hypothesis 3) are significantly linked to individuals' mobility perceptions in our cross-sectional analysis.

Random- and Fixed-effects Analysis of Perceived Social Mobility

Using the POLPAN data, in Table 2 we present random- and fixed-effects analyses of perceived social mobility in Poland. First, we consecutively add variables similar to those in Table 1, and then proceed by adding to the regressions the variables which are not available in CBOS – marital status, objective occupational mobility, and father's education. As with cross-sectional data, the respondent's age is an important explanation of perceived social mobility in random-effects models, just like subjective social position, which is positively associated with social mobility perceptions ($\beta=0.09$, SE=0.01 in Model 6). An individual's education status ($\beta=0.09$, SE=0.01 in Model 1) and, more importantly, their average household income ($\beta=0.14$, SE=0.02 in Model 2) are also positively associated with a feeling of doing better than their father. These results confirm Hypothesis 4 on the importance of socioeconomic position for perceived social mobility. Married individuals are significantly more likely to

Table 2 Random and fixed-effects analysis of perceived social mobility

	Random effects estimates						Fixed-effects estimates			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 1	Model 2	Model 3	Model 4
Intercept	3.11***	3.21***	3.07***	3.12***	3.12***	3.21***	3.13***	3.10***	3.11***	3.13***
	(0.07)	(0.07)	(0.08)	(0.08)	(0.09)	(0.09)	(0.20)	(0.20)	(0.20)	(0.20)
Age group (ref. 45–54)										
<=34	-0.29***	-0.27***	-0.22***	-0.19***	-0.19***	-0.12**	0.18	0.21	0.22	0.21
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.12)	(0.12)	(0.12)	(0.12)
35–44	-0.15**	-0.13**	-0.12**	-0.11**	-0.11**	-0.07	0.08	0.10	0.11	0.10
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.07)	(0.07)	(0.07)
55–64	0.16***	0.17***	0.17***	0.15***	0.15***	0.14**	-0.13	-0.12	-0.12	-0.11
	(0.05)	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)	(0.07)	(0.07)	(0.07)	(0.07)
=>65	0.34***	0.39***	0.41***	0.38***	0.38***	0.36***	-0.24	-0.19	-0.21	-0.19
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.13)	(0.13)	(0.13)	(0.13)
Respondents' education	0.09***	0.08***	0.08***	0.03***	0.03***	0.09***	0.04	0.04	0.04	0.03
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)	(0.03)
Regional GDP (std)	0.04*	0.03	0.03	0.03	0.03	0.04**	-0.17	-0.17	-0.17	-0.16
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.14)	(0.14)	(0.14)	(0.14)
Size of locality	-0.07***	-0.07***	-0.07***	-0.06***	-0.06***	-0.03*	-0.06	-0.05	-0.05	-0.05
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.05)	(0.05)	(0.05)	(0.05)
Subjective social position	0.09***	0.08***	0.08***	0.08***	0.08***	0.09***	0.07***	0.06***	0.06***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Average household income (std)	——	0.14***	0.13***	0.13***	0.13***	0.16***	——	0.10***	0.10***	0.10***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)		(0.02)	(0.02)	(0.02)
Marital status (married=1)	——	——	0.16***	0.14***	0.14***	0.12**	——	——	-0.04	-0.04
			(0.04)	(0.04)	(0.04)	(0.04)			(0.07)	(0.07)
Objective occupational mobility	——	——	——	0.13***	0.13***	0.09***	——	——	——	0.04*
				(0.01)	(0.01)	(0.01)				(0.02)
Gender (female=2)	——	——	——	——	-0.00	-0.03	——	——	——	——
					(0.04)	(0.03)				
Fathers' education	——	——	——	——	——	-0.16***	——	——	——	——
						(0.01)				
Individual-times	5216	5216	5216	5216	5216	5216	5216	5216	5216	5216
Individuals	2669	2669	2669	2669	2669	2669	2669	2669	2669	2669
Adjusted R^2(within)	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04

Notes: * $p<0.05$, ** $p<0.01$, *** $p<0.001$; Standard errors in parentheses; survey year fixed-effects are included in all models.

Sources: Own estimates using POLPAN dataset.

positively assess their social mobility experiences ($\beta=0.16$, SE$=0.04$ in Model 3).

The size of locality is inversely related to social mobility assessments; those in larger cities are more sceptical of their own advancement (β = -0.06, SE=0.01 in Model 4). Residents of richer regions feel better off than their fathers, but this variable is significant only in Models 1 and 6. Children of better-educated fathers are less likely to report upward social mobility (β = -0.16, SE=0.01 in Model 6). Just as with cross-sectional CBOS data, individuals' gender is not a significant explanation of perceived social mobility in Poland.

To account for unobserved heterogeneity of individuals in our analysis and conduct a more rigorous test of the formulated hypotheses, in Table 2 we fit fixed-effects models, which can mitigate this statistical concern and provide more robust estimates of subjective social mobility explanations. Some of the important individual-level characteristics such as age, education, marital status, the size of locality and local economic development, which are significantly associated with perceived social mobility in the random-effects regressions, are insignificant in fixed-effects models. Only subjective social position (β=0.07, SE=0.01 in Model 1), average household income (β=0.10, SE=0.02 in Model 2), and objective occupational mobility (β=0.04, SE=0.02 in Model 4) remain significant in our longitudinal analysis with the fixed-effects specification. In line with Hypothesis 4, those who make progress in terms of their household income and objective occupational status, and who assess themselves as being higher in the societal hierarchy, also perceive their intergenerational social mobility experiences more favourably. In supplementary materials, Tables S4-S5, we have used the same pooled OLS, random- and fixed-effects specifications as in the main analyses, but this time we split the sample by gender. These results again suggest that the predictors of perceived social mobility do not significantly vary by respondents' gender.

Discussion and Conclusion

There is an increasing interest in trends in, explanations for, and wellbeing consequences of intergenerational social mobility across social science disciplines (Bukodi et al., 2020; Chetty et al., 2017; Gugushvili & Kaiser, 2020; Song et al., 2020). This interest is largely motivated by normative concerns for equality of opportunity and policy measures that can be employed to make societies fairer and more just (Ludwinek et al., 2017; Narayan et al., 2018). As is the case for other subjective aspects of individuals' socioeconomic position (Jackson & Grusky, 2018; Lindberg et al., 2021; Ritterman et al., 2009), scholars have recently begun to inquire about how individuals perceive their intergenerational social mobility.

Unlike the datasets used for studies on objective social mobility, which allow long-term historical trends across different countries to be looked into, there are virtually no data for understanding how perceived social mobility has been changing across time. Probably the most utilized cross-sectional data on perceived social mobility is available for the United States, but only since 1994 (Berger & Engzell, 2020). Two comparative cross-sectional surveys, namely ISSP and LITS, also include an item on perceived social mobility in their questionnaires. The previous analysis of these datasets suggests that changes over time in perceived social mobility do not always

coincide with changes in perceived mobility and that various individual-level and contextual explanations are significantly associated with the perception of upward or downward social mobility (Gugushvili 2021a; Kelley & Kelley 2009).

The main shortcoming of this emerging scholarship is that it is not able to statistically account for individuals' unobserved heterogeneity. It is likely that those who perceive themselves as being mobile are inherently different from those who have perceptions of being intergenerationally immobile. Building on the previous literature, in this study we have investigated trends and explanations of perceived social mobility using two complementary data sources from Poland. Our analysis of trends in social mobility using data from the CBOS and POLPAN surveys suggests that the share of upwardly mobile individuals gradually decreased from the late 1990s, reaching its minimum in 2013, and then increased again closer to the end of the decade. One of the explanations for the lower upward mobility perceptions in the earlier 2010s could be a slow economic development with an annual growth rate close to 1% in the country. The importance of the macroeconomic performance for perceived social mobility has been shown in earlier studies (Gugushvili 2021a; Kelley & Kelley 2009), which suggests that the contextual environment can be a valid predictor of social mobility perceptions in Poland. In turn, the rate of economic growth at the end of the 2010s (during the last waves of the analysed surveys) was five times higher than in 2013, which probably significantly affected why more individuals had positive perceptions of their mobility. Despite these changes over time in perceived social mobility, more than the half of respondents in all waves assessed themselves as being upwardly mobile. The trends from these two complementary datasets are close to each other which further adds validity to our results.

Even more interesting are our findings on individuals' social mobility perceptions viewed from the perspective of birth cohorts. In the analysis of the CBOS data, since we only had access to the 2004 and 2013 surveys, our estimates are likely to be negatively biased due to the lower prevalence of upward mobility perceptions in the 2013 survey. Nonetheless, the long-term trends in perceived social mobility across consecutive cohorts born since the 1920s are broadly similar in the two alternative surveys. The perception of the intergenerational advancement dominates among respondents born before the 1980s in both the CBOS and the POLPAN datasets. At the same time, those who perceived their social positions as being lower than those of their parents accounted for around one fifth of respondents who were born in the later decades. This trend mirrors the findings from the United States, where individuals born before the 1960s were also more likely to report being upwardly mobile (Berger & Engzell, 2020). It is likely that the reference group for the earlier generations in the Polish context were the parents who experienced the hardship and atrocities of two world wars and the struggle for independence, while for more contemporary generations parental levels of affluence did not seem to be much different from their own. Furthermore, we know that for many individuals in the post-communist countries, parents are not the main reference group in their social comparisons (Gugushvili 2021b).

After describing cross-sectional and cohort-specific trends, the goal of this paper has been to understand which factors are important for individuals' perceived social mobility. In line with the main formulated hypotheses and some previous research from transition and developing countries (Chen et al., 2018; Gugushvili 2021a; Lu

2021), cross-sectional analysis using CBOS data and random-effects analysis using the POLPAN data suggest that respondent age, level of education, marital status, size of locality, regional economic development are characteristics associated with perceived social mobility, yet these variables are not significant explanations in our fixed-effects models. In the latter approach, by controlling for individuals' time-invariant characteristics, we identified that a change in self-assessed social position, household income, and objective occupational mobility are significantly and positively associated with a change in perceptions of social mobility. These results largely confirm Hypothesis 4 and are in line with some earlier findings from other counties. Additionally, with a random-effects approach, we identified that children of tertiary-educated fathers were less likely to report upward social mobility. The comparison of the results between the cross-sectional, random-, and fixed-effects analyses suggests that unobserved heterogeneity is an important statistical concern affecting our understanding of the explanations of perceived social mobility, and that the previous studies using cross-sectional data and corresponding methods have been unable to account for statistical bias in their estimates.

Our findings are in line with the previous research, including from China, suggesting that previous social mobility is one of the key explanations for individuals' perceptions (Du et al., 2021; Gugushvili 2021a; Lipset 1992). Poland is characterized by relatively high levels of income inequality, which is known to affect the patterns of social comparison (Gugushvili et al., 2020; Wilkinson & Pickett, 2018). It is also not surprising that a change in the household income is an important predictor of a change in the perceived social mobility. Our finding that perceived social status is an important predictor of social mobility perceptions contributes to the growing literature on the strong explanatory power of subjective social position for various life outcomes (Demakakos et al., 2008; Lindberg et al., 2021; Präg 2020). In the Polish context, Domanski (2004) has previously argued that a subjective feeling of social mobility or retaining one's position is due to multiple factors, but is primarily due to the comparison of one's position to that of the other members of society. He argued that perceived intragenerational mobility is constructed by self-assessed position (Domanski 2004, 141). If, in 1988, the late communist period in Poland, Poles on average rated themselves as 5.4 on the subjective social ladder scale from 1 to 10, a decade later, in 1998 an average respondent assessed their own position as 4.7 on the same scale. This comparison captures a feeling of overall degradation which dominated Polish society in the first decade of post-communism.

Our study obviously has its limitations. We could only use complementary datasets from the end of the 1990s, which did not allow us to investigate trends in communist and early post-communist Poland, when the major political, social and economic reforms took place. For the cohort and individual-level analysis of the CBOS data, we only had access to the 2004 and 2013 surveys, which limited our ability to comprehensively analyse perceived social mobility trends using a cross-sectional dataset and to effectively compare these with the results from the POLPAN analysis. The comparison between the two datasets was also limited by our outcome measure, perceived social mobility, which in CBOS was measured in reference to both parents, but only in reference to respondents' fathers in POLPAN. Besides, some of the variables of interest to us, such as marital status, were not available in both datasets,

which further limited the comparability of our results. POLPAN is the oldest panel dataset in central and eastern Europe and its quality is ensured by rigorous data collection procedures (Tomescu-Dubrow et al., 2021). Yet, it is conducted in five-year intervals, which leaves space for many unaccounted-for changes to happen to survey participants from one wave to the next. Our interest in social mobility perceptions and their explanations is largely motivated by the potential impact of perceived social mobility on individuals' various life outcomes. In this study, we have only addressed the trends in, and explanations for social mobility, while future studies should investigate if perceived social mobility, beyond its health and wellbeing consequences (Gugushvili et al., 2022), also has implications for other areas of life, such as political and economic attitudes and behaviours (Gugushvili, 2016, 2020).

The main conclusion of our study is that, over the last two decades, significant changes in perceived social mobility have taken place in Poland, measured both across time and for birth cohorts. In terms of the individual-level drivers of this trend, cross-sectional analysis over-estimates the importance of certain characteristics, such as age, education, or locality size, yet factors such as subjective social position, household income, and objective social mobility are important explanations of social mobility perceptions based on the results from more robust fixed-effects regression models. There is growing evidence that social mobility perceptions are an important explanation for various life outcomes, which highlights the need to include this survey item in ongoing panel surveys in countries other than Poland. In addition, conducting survey experiments in this field to identify the causal determinants of perceived social mobility can be another promising avenue for future research (Gugushvili, 2022).

Declarations

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