

Political Democracy, Economic Liberalization, and Macro-Sociological Models of Intergenerational Mobility

Abstract

Along with the previously investigated macro-sociological models which analyze the consequences of economic development, income inequality and international migration on social mobility, this article studies the specific contextual covariates of intergenerational reproduction of occupational status in post-communist societies. It is theorized that social mobility is higher in societies with democratic political regimes and less liberalized economies. The outlined hypotheses are tested by using micro- and macro-level datasets for 21 post-communist societies which are fitted into multilevel mixed-effects linear regressions. The derived findings suggest that factors specific to transition societies, conventional macro-level variables, and the legacy of the Soviet Union explain variation in intergenerational social mobility, but the results vary depending which birth cohorts survey participants belong to and whether or not they stem from advantaged or disadvantaged social origins. These findings are robust to various alternative data, sample and method specifications.

Keywords: Social Mobility, democracy, liberalization, industrialization, post-communism, EVS, multilevel analysis

1. Introduction

The year 2016 marked the 25th anniversary of the dissolution of Soviet Union, and the beginning of revolutions which overthrew communist governments. The collapse of these authoritarian systems meant the end of one of the largest experiments in de-stratification, in the history of humankind: that of the forceful distribution of equalized societal rewards (Ganzeboom and Nieuwbeerta, 1999). There is a consensus in current scholarly literature that transition has increased inequality in income distribution (Alam et al., 2005), but much less is known whether or not these trends are also reflected in the intergenerational equality of opportunities. Intergenerational social mobility, a classical topic in sociology (see Sorokin, 1927), refers to rates of movement upward or downward in the prevailing stratification hierarchy. Social stratification, in turn, can be understood as a tendency for the prevailing structures of inequality to persist over generations. If life chances primarily depend on ascribed factors rather than achieved ones, they cannot be considered as earned or chosen, and therefore are inherently unjust. Intergenerational status reproduction, therefore, represents one of the most fundamental forms of ascriptive inequality.

There is no unified theory that would suggest how macro-level developments shape social mobility regime in post-socialism. The industrialization thesis (Treiman, 1970) perceives economic development as a facilitator of social mobility. The transition from socialist to capitalist systems caused a decline in economic output for many countries, which, if the latter theory is correct, had therefore to intensify intergenerational status reproduction. Considering the region's growing economic inequality, the so called 'resource approach' in stratification literature also posits more intensive stratification in intergenerational occupational attainment. It is reasonable to believe that with wider income gaps, it is easier for the rich to provide their children with advantages that the poor struggle to afford (Andrews and Leigh, 2009). The relationship between intergenerational mobility and income inequality, known as the Great Gatsby Curve, could be mediated by access to higher education and the financial returns on education (Jerrim and Macmillan, 2015). Another line of thought suggests that migration is positively related to social mobility. Many post-communist countries are characterized with the high levels of emigration and immigration (Mansoor and Quillin, 2006). Migration may disrupt the existing system of social hierarchy because migrants are typically separated from their countries of origin, which can weaken intergenerational status reproduction among these individuals (Hodge, 1973; Lewin-Epstein and Semyonov, 1986; Yaish, 2002).

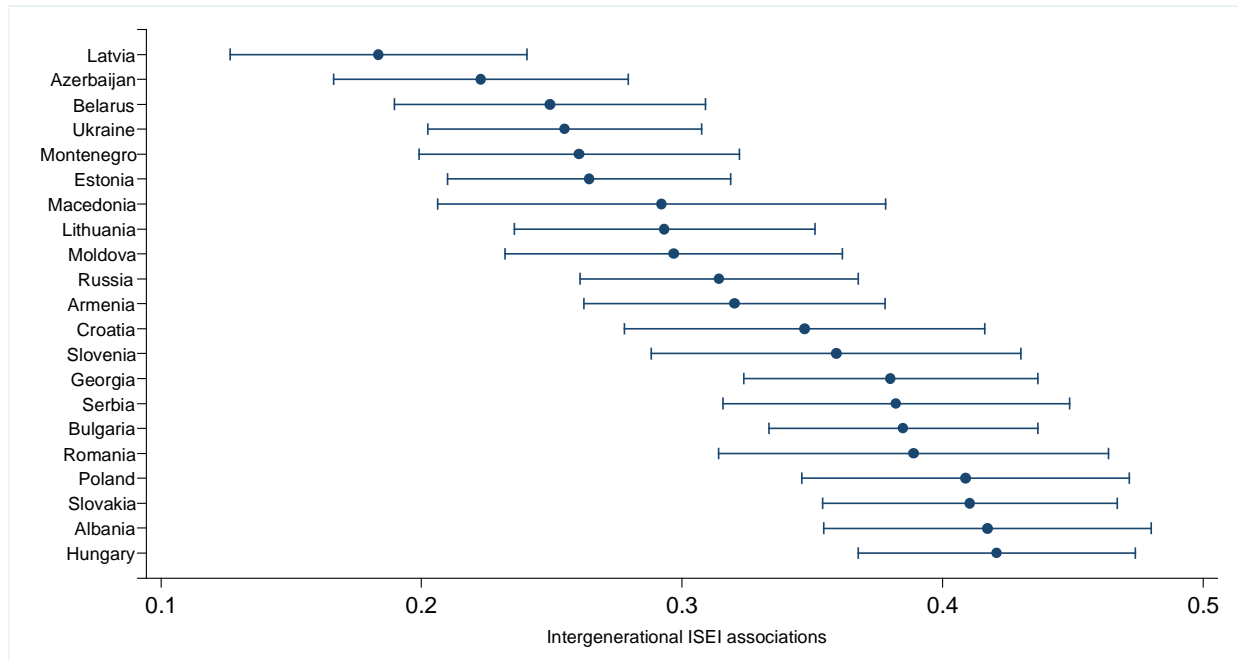
Limited, if any, comparative and systematic research exists regarding the covariates of social mobility in post-socialist countries, despite being highly relevant for academic and public policy realms. This research can have implications beyond those for post-communist societies, because when a government's active promotion of intergenerational equality of opportunities has not been seen to lead to adequate

results, relations between policies and outcomes must also be questioned in the context of advanced welfare democracies (Wong, 1995). The research gap can be explained by the tendency of researchers to concentrate on individual country-level studies rather than broader, fundamental questions related to intergenerational communist and post-communist mobility. Empirical research is also restricted by the limited availability of comparative datasets that cover most, if not all, transitional societies, making it difficult to compare results among post-socialist countries with findings from other industrialized nations. Major studies on covariates of social mobility do not provide adequate understanding of the post-communist region. The most influential works investigating macro-sociological explanations of differences in social mobility across countries only include a handful of post-communist states – mostly new EU members and Russia (Breen and Luijkx, 2004; Erikson and Goldthorpe, 1992; Yaish and Andersen, 2012). This is particularly regrettable because the communist experience can be considered as an ‘experiment’ from which we could learn more about the fundamental nature of social mobility and its covariates (Simkus, 1995).

Before we start speculating about potentially relevant explanatory factors, it is important to ask how much variation in social mobility do we observe in post-communist Central and Eastern Europe? Figure 1 illustrates that the rates of social mobility, measured by β coefficients from country-level ordinary least squares (OLS) models on the association between respondents and their parents’ International Socio-Economic Index of Occupational Status (ISEI) scores¹, vary considerably among the depicted 21 countries. The low values of coefficients suggest that offspring’s status is not strongly determined by their social origins, while the high coefficients indicate that significant intergenerational status reproduction takes place. The highest intergenerational ISEI associations are observed in Bulgaria, Hungary, Poland, and Czech Republic. The most fluid societies, on the other hand, are the former Soviet Union republics of Belarus, Azerbaijan, Ukraine, and the Baltic states of Estonia, Latvia, and Lithuania. These results are in line with other studies on social mobility in post-communist societies. Belarus had low stratification levels in the Soviet Union, which have been maintained in the post-communist period (Titma and Roots, 2006), while the reported intergenerational mobility in Estonia and Lithuania was the highest in a recent comparative study of twelve transitional societies (Verashagina, 2012). The described trends leave space for exploring the role of contextual variables in intergenerational social mobility with the following two main research questions: (1) how do we explain cross-national differences in social mobility in post-communist societies, and (2) are these macro-level variables similar to contextual factors proven to be important in the advanced welfare democracies?

¹ ISEI scores vary from minimum of 16 (individuals with the lowest status such as farm laborers) to 90 (individuals with the highest status such as judges).

Figure 1: Intergenerational ISEI associations from country-level OLS regression models



Notes: Bars show 95% confidence intervals based on robust standard errors. *Source:* Author's calculation based on data from European Values Study (EVS, 2010).

There are clear links between macro theories of social mobility and macro-level developments in post-communist societies. In macro-sociological models, intergenerational status reproduction is assumed to be a societal characteristic and other macro-level variables are employed to account for its variation (Breen and Luijckx, 2004). Along with considering already mentioned effects of industrialization (Treiman and Yip, 1989), income inequality, (Erikson and Goldthorpe, 1992), and international migration (Yaish, 2002), this article expands the previously analyzed set of countries to the majority of post-communist societies. I assess if the variation in social mobility within this sample is systematic and is driven by factors that are similar to the Western welfare democracies, or if it deviates in its own unique way, considering the specific historical legacies and two fundamental areas of post-communist transition – political democratization and formation of free market economies. This research agenda is in line with the call of raising questions about the possible contribution of states in shaping intergenerational equality of opportunities. In their seminal volume, Erikson and Goldthorpe (1992) called for a more intensive investigation of stratification in communism because “every opportunity should... be taken of exploiting situations that have some of the characteristics of ‘naturally occurring’ experiments... where, under socialist regimes, attempts have been made to modify the pattern of mobility chances to some end or other through various kinds of government intervention” (p. 395).

In addition to testing how conventional factors – economic development, income inequality and international migration – explain intergenerational social mobility in post-communist societies, I also investigate the role of two contextual variables that are, to my knowledge, unexplored in the literature on the cross-national variation of social mobility – the quality of political system and economic liberalization. The role of political democracy in social mobility could be important as it entails many aspects of the original industrialization thesis (Lipset and Zetterberg, 1959) – i.e., acculturation, ethnic tolerance, free and universal mass media. Although the effect of economic liberalization comes close to the role of income inequality in intergenerational social mobility, a free market economy is potentially capable of generating much broader structural inequalities where some individuals or families, have more of valued resources or opportunities than do others. Exactly this inequality might persist over generations and is related to the lower chances for intergenerational social mobility (Gugushvili, 2015). Furthermore, in empirical models I also account for the legacy of the Soviet Union. Membership in the Soviet Union might have a lasting effect on social mobility because this regime was a longer and more radical de-stratification experiment than were other Central and Eastern European communist societies.

To address the outlined research questions in the next section I proceed with the presentation of the theoretical framework and hypotheses, followed by description of the data and my empirical strategy. The results section first presents a bivariate analysis which is accompanied by multilevel mixed-effect linear regressions and the robustness tests of the main results; in the last section I summarize the derived findings and briefly discuss their implications for the stated theoretical framework and future research.

2. Research Framework and Hypotheses

Before describing how conventional macro-sociological factors of mobility – economic development, income inequality and migration – might affect intergenerational transmission of opportunities in post-communist societies, I outline two possible contextual factors and corresponding hypotheses specific to these countries – political democracy and economic liberalization.

2.1. Specific factors of post-communism

2.1.1. Political democracy

My first hypothesis implies that the differences in social mobility across post-communist societies can be explained by their attained level of democracy. According to Grusky and Hauser (1984), differences in social mobility rates are at least as much a consequence of political order as of economic development. Existing research highlights the importance of political ideology such as social democracy for individuals' life chances (Sieben and de Graaf, 2001), yet much less is known about whether or not the quality of democracy is associated with social mobility. De Tocqueville (1835) in his 'Democracy in America' argued that in traditional societies all citizens occupy social positions that are fixed across generations, while in democratic nations individuals and their families are constantly springing up and others are constantly falling away. Sorokin (1927), compiling data on upward mobility of the monarchs and presidents of different countries, stated that democratic societies are often characterized with more intensive upward mobility compared with non-democratic ones. Writing in the 1960s Blau and Duncan (1967) argued that, among other things, the stability of American democracy was 'undoubtedly related to the superior chances of upward mobility in this country' (p. 439). It has to be mentioned that the effect of democracy on social mobility might partially stem from the link between democracy and economic development (Burkhart and Lewis-Beck, 1994), but in this study I am interested in a direct association between the two.

There is a possibility that politically restrictive societies could in fact provide more opportunities for upward social mobility. This might be the case because authoritarian rulers, just as democratically elected leaders, need legitimacy from their own constituency (Schatz, 2006). Undoubtedly one of the most important aspects of post-socialist transition has been the public legitimacy of emerged political institutions (Centeno, 1994). Intergenerational social mobility can facilitate social moderation and integration into political system, whereas downward mobility – or even stability of marginal groups in a society with high mobility rates – is expected to foster radicalism and political alienation among individuals (Martinussen, 1992). High levels of social mobility may facilitate the stability of the regime through middle- or lower-class behavior because of their weaker incentives to support democratic transition (Leventoglu 2013). Communist ideology and institutions, it is argued, initially created a political climate in which an established middle class was considered a potential threat to the new social order. Only after the newly formed regimes succeeded in establishing political legitimacy and stability, industrial efficiency became a major preoccupation and challenged social stratification policies (Parkin, 1969).

On the other hand, we can describe various channels of positive impact of political democracy on intergenerational equality of opportunities. Perhaps the most straightforward effect through which democracy can stimulate social mobility is the respect of civil liberties and human rights. Firstly, in social mobility literature it is well known that minority groups are often socially less mobile (Heath, 2007),

while in democratic societies minority viewpoints are more likely to be respected, individuals enjoy more personal freedoms and people are less likely to be discriminated based on their ascribed characteristics. Gender equality, right to travel, choice of work and study are guaranteed – all of which could have an effect on social mobility. Democratic societies are characterized by a higher degree of religious tolerance and freedom of religious expression, which means that social mobility is less restricted based on religious affiliation (Khoury and Panizza, 2006).

Pluralistic and free electronic and printed media can facilitate social mobility in a society because individuals are less likely to require acculturation to radically different styles of life (Zijdeman, 2010). In addition, citizens in a democracy are treated equally under the law, their private property rights protected, private businesses are free from undue government influence, and an independent judiciary is impartial in its decisions – all of which can stimulate higher rewards of social mobility. Free and fair elections are often equated with the most popular definition of democracy (Schmitter and Karl, 1991). Elections provide mobility opportunities for individuals (and the groups they represent) who run for office on local, regional, and national levels.² Lastly, individuals are more likely to form professional organizations and trade unions. Political capital is less likely to affect social mobility and citizens have more opportunities to successfully petition government to redress their grievances, including those that hinder social mobility – quality education, health and childcare facilities (Esping-Andersen, 2004).

The reason why democracy might be particularly important for explaining social mobility in post-communist societies is that transition generated substantial discrepancies in political development; some countries became full-fledged democracies, others joined the club of authoritarian states, while the rest developed hybrid political regimes (Freedom House, 2010). Established differences allow the observation of the potential role of democratic versus authoritarian practices in the process of social mobility. For instance, it is well documented that in the Soviet Union, the state tried to control the inflow into politically important strata (Titma and Roots, 2006). Political loyalty was a more dominant factor than professional qualification as the basis for the promotion of people into communist elites (Gerber, 2000). Its effect must be more silent in the former Soviet Union where the communist party played a stronger role in socio-political life (Ishiyama, 1995). The effect of political capital is expected to be more pronounced in societies that only marginally reshuffled their political institutions. Authoritarian post-communist societies might provide fewer opportunities for upward social mobility simply because life chances are related to nepotistic links, political loyalty and connections, especially in public sector recruitment (Collins, 2004). This means that a lack of democratic government may lead to suboptimal

² Of course it can be argued that political candidates are more likely to be self-selected from privileged social backgrounds, but democratic elections undoubtedly provide better possibilities for winning political office than do strictly controlled and rigged ballots.

patterns of social mobility when factors other than individual merits matter more for occupational promotion. In short, controlling for other contextual effects, I hypothesize the following:

Hypothesis 1: Intergenerational social mobility is higher in more democratic post-communist societies.

2.1.2. Economic liberalization

In addition to political democracy another fundamental development at the heart of post-communist transition is economic liberalization, which consists of reforms in various aspects of economic policy such as regulation of prices and monopolies, foreign trade, currency convertibility, export controls, import tariffs and the openness of the economy to private sector entry and development (Heybey and Murrell, 1999). On the macro-level, economic liberalization has been identified as one of the most important factors that explain differences in economic growth between post-communist countries. In turn, the speed and comprehensiveness of economic liberalization has been shown to be associated with political changes in these societies (de Melo et al., 2001). But the implications of economic liberalization are not well understood as some studies demonstrate a negative association with GDP growth and government spending (Hamm et al., 2012). On the individual-level it was shown that rapid and large-scale privatization was associated with lower life expectancy in the considered countries the considered countries (Irdam et al., 2016; King et al., 2009; Stuckler et al., 2009). However, it is unknown whether or not economic liberalization has any links to social mobility patterns across post-communist societies.

On the meta-level, we can distinguish two alternative lines of thought that predict how economic liberalization and social mobility are associated. The first approach, referred to as ‘meritocracy as functional imperative’ implies that life chances in general, and employment opportunities in particular, depend on the efficiency considerations of a free market economy. This thinking implies a positive impact of a liberalized economy on social mobility because an individual’s merits, rather than social origin, become the dominant recruitment criteria. According to ‘incentive approach’ individuals’ motivation to pursue mobility is closely related to liberalized economy, and if there is no economic freedoms and resultant inequalities, neither does the payoff for mobility exist (Torche, 2005). If the motivation to access the greatest social rewards is the primary drive of social mobility, the latter should be the greatest in more liberalized economies.

Contrary to this perspective, there might exist an incompatibility between the idea of meritocracy and the main principles of a free-market economy (Goldthorpe, 1996). First of all, in a free market economy intergenerational differences are impossible to eliminate because families cannot be prevented from passing most economic, social or cultural capital to the next generation (Paglin, 1975). At the same time,

there are no objective criteria to define the nature of merit, which means that the idea of meritocracy is also illusory. The outcomes individuals achieve through their market activities are not necessarily connected with any type of merit or need (Rodrigues, 2013). According to Hayek (1960), equality would imply a single and universal measure of merit that is only attainable in authoritarian states, whereas in a free market economy different agencies make independent judgments, which is not ‘merely compatible with freedom but extends the range of choice open to the individual’ (p.163). Although Hayek’s critique of ‘merit’ and his discrepancy between the value of one’s services and one’s ‘moral merit’ cannot be understood as an empirical argument, he does claim, unlike many market-oriented theorists, that there is no way of preventing intergenerational transmission of ‘advantages which only some can have . . . from going to people who neither individually merit them nor will make as good a use of them as some other person might have done. Such a problem cannot be satisfactorily solved by the exclusive and coercive powers of the state’ (ibid., p. 92), but a planned economy could impose a ‘pattern’, which might involve high mobility.

Empirical evidence on the links between social mobility and economic liberalization is simultaneously scarce and mixed. Economic liberalization in Chile during the market-oriented transformations for instance did not associate with temporal changes in social mobility because of the effect of two parallel processes (Torche, 2005). On the one hand, hierarchical inequalities between the elites and the rest of society increased, but on the other hand, intergenerational status reproduction across the lower classes declined. More intensive economic liberalization took place in post-communist countries but surprisingly there has so far been little evidence suggesting causal or even correlative links between the two. Using data on individuals’ class origin, educational attainment and destination class, Bukodi and Goldthorpe (2010) find that in a liberalized economy the association between social origin and attained education strengthened, tight links between employment and education loosened, and origin-destination correlation intensified. The problem with the latter and the related studies is that they do not specifically test the role of economic liberalization in social mobility and neither control for other contextual characteristics. One exception is the study by Gugushvili (2015) but it does not account for other important contextual factors such as democracy, migration and institutional legacies. Based on the theoretical framework and the existing empirical findings, economic liberalization should be associated with lower levels of social mobility.

Hypothesis 2: Intergenerational social mobility is higher in societies with more intense economic liberalization.

2.3. Macro-sociological models of social mobility

In this section I briefly elaborate on three contextual variables that based on the earlier research might also have implications for social mobility variance across post-communist societies. These factors are economic development, income inequality, and international migration.

Industrialization is likely the leading macro-level explanation of changes in social fluidity within and across societies. The increasing ratio of non-manual to manual workers, urbanization, a shift to mass production, and the formalization and bureaucratization of work makes it more difficult for children to acquire positions that are similar to their parents' social status (Lipset and Zetterberg, 1959; Treiman, 1970). Although Goldthorpe (1985) states that attempts to capture the relationship between economic development and social mobility with simple unilinear formulae are futile, many scholars provide support for the industrialization thesis by finding a strong and positive relationship between economic development and social mobility (Dahan and Gaviria, 2001; Grusky and Hauser, 1984; Knigge et al., 2014; Treiman and Yip, 1989; Tyree et al., 1979). Controlling for other factors, the described relationship should be upheld in post-communist countries where more economically advanced nations must provide greater social mobility opportunities to their residents. If economic development leads to equalization of opportunities, then the opposite can be expected as a result of post-communist retrenchment of the overall output. Indeed, by the year 2000, the estimated level of real GDP in all transitional countries was 72% of the level achieved in 1989 (EBRD, 2001). These structural adjustments are not only limited in their effect on absolute mobility but are also likely to affect the relative equality of opportunities (Gerber, 2002). In a new social mobility regime with fewer jobs, access to the best positions becomes more competitive and restricted. This, in turn, makes the role of parental economic, cultural and social capital more salient in regard to life chances.

Regarding the role of income inequality, the so called 'resource approach' perceives income inequality as a factor restricting social mobility. Systematic inequalities in the resources available to families within a generation influence the goals and conditions of the pursuit of mobility strategies in the next generation (Goldthorpe, 2000). Actually, the idea of equality of opportunities is nothing more than freeing individuals from their experiences of growing up in disadvantaged circumstances with few resources for the realization of personal potential (Hout, 2004). It has been also demonstrated that access to education is likely to be one of key factors mediating the links between income inequality and intergenerational mobility (Jerrim and Macmillan, 2015). Although some scholars find a positive or no relation between intergenerational status reproduction and inequality (Grusky and Hauser 1984; Breen 2004; Yaish and Andersen 2012), more studies suggest that inequality in a country is associated with lower intergenerational social mobility (Erikson and Goldthorpe 1992; Treiman and Yip 1989; Andrews

and Leigh 2009; Björklund and Jäntti 1997; Jonsson and Mills 1993; Solon 2002). I do not have a specific reason to assume that the hypothesized effect should be manifested differently in post-communist societies. If anything, income inequality might have become an even more salient factor for intergenerational social mobility in the region. Gerber and Hout (2004), in their analysis of the mobility trends in Russia, speculate that transition in the 1990s increased inequality and altered many fundamental economic institutions so rapidly that changes in social mobility can be ascribed to these sources rather than to cultural change or industrialization.

The last contextual factor which could explain why social mobility rates vary across post-communist societies is migration. In most simple terms, migrants are typically separated from their communities of origin, which weakens links between individuals' social background and their destination (Hodge, 1973; Lewin-Epstein and Semyonov, 1986; Yaish, 2002). Although immigration is unlikely to operate as a key factor of social mobility, at all times and in any direct way (Goldthorpe et al., 1997), empirical evidence on the relationship between immigration and social mobility is predominantly positive. In addition to motivational and achievement-oriented values and rapid industrialization, the most socially mobile societies in the first half of the 20th century were characterized with unusually high proportions of immigrants (Kerckhoff et al., 1985; Tyree et al., 1979). In many post-communist countries the net migration rate has a negative value which means that more people leave from than arrive to these societies. Nonetheless, the major effect is expected to stem not from the net migration rate but from the long-term stock of migrants in these post-communist societies. For instance, despite the totalitarian nature of the Soviet Union, its population was marked by a high degree of domestic migration. Following the forceful reallocation of certain ethnicities and social groups as well as state-organized 'ethnic expansion' to the empire's peripheries in early years of the Soviet Union, migration became mostly family and labor related in the transitional period (Tishkov et al., 2005).

Hypothesis 3: Intergenerational social mobility is higher in countries with higher levels of (a) economic development, (b) income equality, and (c) international migration.

2.4. The legacy of the Soviet Union

After describing specific macro-level factors of post-communist countries and more conventional explanations of social mobility, it is also important to take into account probably the main factor that differentiates post-communist countries in two groups – the institutional legacy of the Soviet Union. One of the main conclusions of decades of social mobility research is that the fundamental determinants of life chances are resistant to change (Hout and DiPrete, 2006). Thus it is helpful to take into account the long historical patterns of social mobility in considered countries in order to understand more recent

developments. Despite many similarities, not all communist countries adopted and implemented identical strategies and policies and, to various degrees, preserved unique economic, political and cultural traditions that affected their social mobility regimes (Wong, 1995).

From the early stages of Soviet Union formation, efforts to reduce intergenerational status reproductions consisted of the elimination of economic elites and the confiscation of private property and other valued resources (Ganzeboom and Nieuwbeerta 1999). Political repressions created voids in the Soviet Union's prestigious occupations, which were filled by individuals coming from the lower social classes; but more fundamental and long term consequences were generated through radical affirmative-action policies (Fitzpatrick, 2002). Offspring of workers and peasants were compensated for the lack of economic and cultural resources, with educational opportunity (Marshall, Sydorenko, and Roberts 1995). This led to the rapid upward mobility of formally disadvantaged individuals, via the main political institution – the Communist Party – into administrative, political, managerial and other advantageous positions (Parkin, 1973). As early as the 1950s, some scholars claimed that the Soviet Union had succeeded in establishing a completely open social class system with a high degree of mobility (Inkeles, 1950). Others believed that most barriers to social mobility had disappeared as a result of fundamental changes in the social class structure, and that, for the first time in history, social mobility had become one of the primary routes to a gradual elimination of intergenerational status reproduction (Rutkevich and Filippov, 1973).

The implementation and consequences of de-stratification policies varied in other communist societies. The Soviet Union nearly concluded its unification in the beginning of 1920s, except for the Baltic States, while most Central and East European societies were turned into communist states after the end of the Second World War. Shortly after an early revolutionary period ended, the most extensive political repressions ceased and softer measures of egalitarianism were prioritized (Gugushvili, 2014). If initial egalitarian measures partially achieved their goal, later social mobility underwent a U-shaped evolution in many communist countries. Largely equalized life chances between working and middle class children in terms of educational and occupational attainment that was established during the early stages of communist rule gradually eroded (Iannelli, 2002). The most straightforward explanation of why this happened is that non-Soviet communist societies not only inherited capitalistic socio-economic inequality, but also reproduced it, as continued economic development required the retention of a social division of labor (Yanowitch, 1977). Researchers became more inclined to believe that communist policies made only minor idiosyncratic differences in intergenerational reproduction of inequalities in non-Soviet communist societies (Erikson and Goldthorpe, 1992). There are numerous ways in which Eastern and Central European countries were different from the Soviet Union, including their educational and labor market institutions which were less strictly regulated and universalized (Saar, 1997).

There are virtually no social mobility studies which simultaneously include the samples from a large number of the Soviet Union republics and other post-communist societies. Nonetheless, it is likely that the communist institutions and the individuals embedded in them have remained the source of post-communist reproduction and stratification through structural and economic inertia. This is why in macro-sociological analysis of factors associated with social mobility in post-communist countries, it is also important to control for the legacy of Soviet Union. It is interesting to see if after accounting for political democracy, economic liberalization and development, income inequality, and migration, the membership of Soviet Union still maintains an association with intergenerational social mobility.

3. Research Design

3.1. Dataset and macro-level data

The main problem in comparative social mobility studies in the broader post-communist region is that most of those societies, especially in the former Soviet Union, remain outside the scope of high quality cross-nationally comparable micro-level surveys including the Statistics on Income and Living Conditions (EU-SILC), International Social Survey Programme (ISSP) or European Social Survey (ESS). The 2008 wave of the European Values Study (EVS, 2010) is one of the few known surveys that provides an opportunity to analyze the links between intergenerational occupational mobility and the hypothesized contextual variables in a large number of former communist countries, including newly independent states of the former Soviet Union.

EVS is a large-scale cross-national survey repeated every nine years since 1981. Many countries of our interest, however, such as South Caucasian and Balkan states, appear only in the latest fourth wave of EVS, which was conducted in 2008-2009. The selected set of 21 post-communist societies includes respondents from Albania (the survey response rate of 87.6% according to American Association for Public Opinion Research (AAPOR) Response Rate 1 (RR1)), Azerbaijan (86.8%), Armenia (61.7%), Bulgaria (72.9%), Belarus (71.4%), Croatia (56.3%), Estonia (65.6%), Georgia (52.6%), Hungary (50.8%), Latvia (72.1%), Lithuania (64.9%), Macedonia (71.7%), Moldova (47.0%), Montenegro (87.7%), Poland (82.9%), Romania (53.2%), Russia (35.5%), Serbia (68.1%), Slovak Republic (56.4%), Slovenia (60.7%), and Ukraine (52.5%). Respondents from Bosnia and Herzegovina, Czech Republic, and Kosovo are excluded from our analysis because data for at least one macro-contextual variable were not available for these countries. EVS is produced by Tilburg University and its international partners and is widely used in comparative social research (e.g. De Regt et al., 2012; Gugushvili, 2015; Verbakel,

2012). Face-to-face interviews in each country were conducted using a representative, multi-stage (or stratified) random sample of the 18 and older adult population. The present study includes national samples of all individuals aged 25-59. The total number of completed interviews was approximately 1,500 respondents per country, after (listwise) deletion of missing data, 13,979 complete observations clustered in countries remain for the analysis.³

3.1.1. Individual-level data

Dependent and independent variables: Both the dependent and the main individual-level independent variables are respondents and their parents' International Socio-Economic Index of Occupational Status (ISEI) (Ganzeboom, De Graaf, and Treiman 1992; Ganzeboom and Treiman 1996), which is readily available in the EVS dataset. Respondents are asked about parental occupations when they were around 14 years old and if parents have different ISEI scores, the higher level occupational position is assigned to the respondents' parents (Erikson, 1984). In addition to a clear distinction between class and status as different but related forms of social stratification (Chan and Goldthorpe, 2007), one of the main rationales for selecting ISEI as the dependent variable is its simplicity for interpretation of the results. While it is true that EVS also allows consideration of social mobility in terms of the Erikson, Goldthorpe, and Portocarrero (EGP) class schema as categorical indicator of occupational stratification (the latter is probably the most applied occupation-based classification in intergenerational social mobility research), the estimations of their effects in a multilevel statistical framework would be technically inconvenient.⁴ ISEI also allows taking into account minor changes in intergenerational ISEI scores that cannot be captured in class-based social mobility approach. The number of observations and descriptive statistics for the employed variables are shown in Table a1 in the Appendix. EVS provides information about age and gender of all survey respondents. The proportion of missing data for respondents' and their parents ISEI scores are 12.0% and 26.1%, respectively. The missing rate varies across countries due to idiosyncratic characteristics of national surveys (see GESIS 2011), but this is unlikely to cause systemic bias in the estimation of results. In robustness analysis of the main results, however, we exclude countries with the highest rates of missing data to see how this affects the main findings. The mean values of both parental and respondents' ISEI scores are 37.5 and 43.2 points respectively.

³ For more information regarding the methodological approaches of EVS, consult the survey's official website (www.europeanvaluesstudy.eu).

⁴ As EGP class schema is not strictly hierarchically structured, intergenerational social mobility in this perspective has to be analyzed through movements from one to another class category across generations. The cross-level interaction of variables would in turn imply the calculation of regression coefficients for each mobility trajectory and its interaction with macro-level variable, which would make presentation and interpretation of the results rather cumbersome.

Control variables: Our models control for only the basic demographic variables in order to make comparisons across countries more reliable. The sample study includes a wide range of societies different in many respects such as culture, religion, and language, to name a few, which are not accounted for with the employed contextual variables. Including more controls in mixed regressions would create additional problems in the comparability of derived results. One of two background variables controlled in all models is gender which is operationalized by a dummy for male respondents. The gender dimension might be especially relevant for the former communist societies because the emancipation of women played a critical role in communist economic and social policies (Wong, 1995). The proportion of males equals to about 44%. The next controlled variable is respondents' age. Even though the sample is restricted to those aged 25-59 in the survey year, controlling for age is important for the results because the average estimated age for people reaching their highest occupational status is mid 30s (Goldthorpe, 2000). In order to take into account any curvilinear relationship that age might exhibit on occupational attainment, I also include in the models an age squared variable divided by 100. The descriptive statistics indicate that the average age in post-communist countries is 41. In the main analysis I do not control for respondents' education because this study is primarily interested in the total effect of social origin on occupational attainment. I opt for the latter strategy because it shows both direct effect of social origin on social destination and indirect transmission of advantage via educational attainment. In a robustness check, however, where respondents' education is included to test its mediating effect of social origin, it is restricted to International Standard Classification of Education (ISCED) 5-6, which measures the attainment of tertiary education across countries.

3.1.2. Country-level data

One of the most important concerns related to macro-level contextual data is to select a year from which variables derive. Using contextual data from a preceding time-span rather than the same time period as micro-level data has been a common practice in multi-level research on comparative social mobility. Contrary to some major studies on the topic (e.g. Breen and Luijkx, 2004; Treiman and Yip, 1989; Yaish and Andersen, 2012), which apply macro-data from two decades before the micro-survey, I derive contextual variables for the year of 2000, roughly a decade after the collapse of the Berlin Wall. This is justified by the fact that by the end of the 1990s the major changes in our contextual variables had already happened, and therefore should be reflected in social mobility rates.⁵

Using macro-level data for the end of the 1980s is less appropriate and often not feasible because many countries did not exist as independent nations before the beginning of the 1990s, consequently, data for this period are unavailable, and even if data could be accessed, variation in the main contextual

⁵ For the discussion of lagged effects of contextual factors see Balaev (2015; 2014).

variables of our interest – political democratization and economic liberalization – would be minimal. Many EVS 2008 participants entered the labor market in the turbulent 1990s and the data for 2000 must reflect the conditions they faced. Nonetheless, to check the robustness of findings, data from the early 1990s, late 2000s, and mean scores for the 1990s are also employed and compared to the results of the main analysis. Accounting for the mean scores for 1990s might be important because countries vary in their timing of the post-communist experiences. For instance, some aspects of liberalization such as large-scale privatization did not occur simultaneously across post-communist societies. With the mean values for the 1990s, those countries that started economic liberalization latter in the 1990s would have the lower scores of this index than those that started liberalizing their economies from the beginning of the 1990s. In addition, as explained in the methods and results sections, I also divide the analyzed sample into two sub-samples to see if contextual variables have varying associations on relatively younger (pre-) and older (post-) transitional cohorts.

The Soviet legacy: The importance of institutional legacies is accessed by deriving dummy variable for the following 10 countries which were part of the Soviet Union: Azerbaijan, Armenia, Belarus, Estonia, Georgia, Latvia, Lithuania, Moldova, Russia, and Ukraine.⁶

Political democracy: Since I am substantively interested in democratic development versus authoritarian practices to test H1 I employ Polity IV democracy and autocracy scores by the Integrated Network for Societal Conflict Research (INSOCR) (Marshall, Jaggers, and Gurr 2012). For each year and country, a ‘polity score’ is derived by subtracting autocracy score from democracy score. The derived variable ranges from –10 to +10, with –10 to –6 representing autocracies, –5 to 5 representing anocracies,⁷ and 6 to 10 representing democracies. The data suggests that there are only two autocracies among post-communist countries Belarus and Azerbaijan, while four countries (Lithuania, Czech Republic, Hungary, and Slovenia) demonstrate the highest possible score (10).

Economic liberalization: Perhaps the most appropriate measure of economic liberalization is the overall transition indicators of the European Bank for Reconstruction and Development (EBRD).⁸ The transition indicators stem from the assessment of the EBRD about country-specific transitional reforms. The index used in our models is based on summing the scores for 2000 in the following areas: (a) large scale privatization, (b) small scale privatization, (c) governance and enterprise restructuring, (d) price liberalization, (e) trade and foreign exchange system, (f) competition policy, (g) banking reform and interest rate liberalization, and (h) securities markets and non-bank financial institutions (EBRD, 2010).

⁶ The Soviet Union also included Central Asian Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, but these countries are not covered in EVS dataset.

⁷ Polity IV defines ‘anocracies’ as regimes with mixed or weak authority.

⁸ EBRD also provides scores for infrastructure reform, which describes liberalization according to the electrical power, railway, road, telecommunication, water and waste water sectors.

For each listed area scores vary from 1 to 5, which in turn reflect the judgment of the EBRD's Office of the Chief Economist about country-specific progress in economic liberalization. The higher scores correspond to stronger economic liberalization. The employed economic liberalization variable of EBRD is validated by its extensive application in comparative social and economic research (see BenYishay and Grosjean, 2014; Fidrmuc, 2003; Gugushvili, 2015; Havrylyshyn and van Rooden, 2003). Hungary (31.0), Estonia (29.3), and Poland (29.0) were countries with the most liberalized economies in 2000.

Economic development: To test the industrialization hypothesis I select the most commonly used measure – economic development, which itself is estimated by GDP per capita based on purchasing power parity (PPP). Data are in constant 2005 international dollars and are derived from the World Bank's (2012) World Development Indicators (WDI) database. The descriptive statistics for GDP ppp per capita indicates that post-communist countries are very different in their level of economic development. Some of the Central European countries such as Slovenia (15,033), Czech Republic (10,379), and Slovakia (8,957) are much richer than non-Baltic, former Soviet Union Republics.

Income inequality: Among various indicators of income inequality, the Standardized World Income Inequality Database (SWIID) seems to be the most appropriate for comparative research (Solt, 2009a). The SWIID standardizes the United Nations University's World Income Inequality Database using a custom missing-data algorithm (Solt, 2009b). I use net Gini coefficients that show how the real disposable incomes were distributed in these societies in 2000. The descriptive statistics indicate that the highest income inequality is observed in two post-Soviet societies of Georgia (43.7) and Moldova (42.0), while the lowest inequality is maintained in Slovenia (23.5).

Migration: To test the links between migration and social mobility, I opted for using international migrant stock. This is done simply because net migration rate describes short-term changes in migration trends, while international migrant stock shows the number of people born in a country other than that in which they live and is a more fundamental measure of migration (World Bank, 2015). After the breakup of the Soviet Union in 1991 people living in one of the newly independent countries who were born in another were classified as international migrants. The highest share of migrants is observed in the Baltic States of Latvia (18.2%) and Estonia (17.9%) which experienced inflow of ethnic Russians in the Soviet Union and in Armenia (18.7%) which is characterized by a large diaspora community in many countries of the world (Rutland, 1994).

3.2. Methods

Before proceeding with the contextual multivariate analysis, I consider it informative to illustrate graphically in bivariate settings how social mobility varies in relation to macro-level variables. A multilevel statistical framework, which received much attention since the 1990s (Hox, 2002), includes the most widely applied methods in empirical macro-sociological studies of social mobility. The latter approach combines individuals from separate countries, and implies that observations within these countries show stronger similarity than those between groups. If the latter is the case then it is helpful to analyze cross-national differences in the relationship between respondents' social origin and their destination. Mixed-effects models allow testing for both of the following: how groups of observations explain variance in dependent variables, and how specific characteristics of those groups are related to dependent and individual-level independent variables. The dataset allows us to analyze 21 post-communist societies, which is a number commonly issued in multilevel studies (e.g. Gesthuizen, Solga, and Künster 2011; Van Oorschot, Reeskens, and Meuleman 2012).

Out of various modes of multilevel regression models, I employ multilevel, mixed-effects linear regressions. The later specification is selected because both dependent and independent variables are continuous and because a linear association between the two is expected. In Model 1 below i indicates the individual respondents and j indicates the country; β_0 represents intercept; U_0 represents the intercept of the random component, while the ε_{ij} represents the individual level error term. Along with basic demographic controls I also include in regressions parental ISEI scores (allowed to vary across countries) by including in the mixed models the variance component, U_1 . This is important for assessing the extent to which links between social origin and destination vary cross-nationally.

$$\begin{aligned} \text{Resp. ISEI}_{ij} = & \beta_0 + \beta_1 \text{Male}_{ij} + \beta_2 \text{Age}_{ij} + \beta_3 \text{Age squared}_{ij} + \beta_4 \text{Parental ISEI}_{ij} \\ & + U_{0j} + U_{1j} \text{Parental ISEI}_{ij} \\ & + \varepsilon_{ij} \end{aligned} \quad (1)$$

For a formal analysis of the effects of macro-level variables on intergenerational ISEI association, in addition to level 1 individual data in Model 1, I consecutively, and in the full model, simultaneously, introduce contextual variables on level 2, γ , – the Soviet legacy, political democracy, economic liberalization, GDP per capita, net Gini coefficient, its squared term and international migrant stock. The direct effects of these contextual variables on respondents' ISEI attainment in a comparative perspective can be interesting but these relationships are not of primary concern for this study. For understanding the effects of macro variables on social mobility, I include in the mixed regressions cross-level interactions between parental ISEI scores and hypothesized contextual factors. These interaction terms, η_j , indicate how each contextual variable affects the relationship between social origin and respondents' destination class, and also serve as a formal test for the elaborated hypotheses.

$$\begin{aligned}
\text{Resp. ISEI}_{ij} = & \beta_0 \quad \overbrace{\text{Model 1}} + \gamma_1 \text{ Soviet legacy}_j + \gamma_2 \text{ Political democracy}_j + \gamma_3 \text{ Economic liberalization}_j \quad (2) \\
& + \gamma_4 \text{ Economic development}_j + \gamma_5 \text{ Income inequality}_j + \gamma_6 \text{ Income inequality}^2_j + \gamma_7 \text{ Migration}_j \\
& + \sum_{l=1}^7 \eta_l (\text{Parental ISEI}_{ij} \times [\text{Soviet legacy}_j + \text{Political democracy}_j \\
& + \text{Economic liberalization}_j + \text{Economic development}_j + \text{Income inequality}_j \\
& + \text{Income inequality}^2_j + \text{Migration}_j])
\end{aligned}$$

After identifying the effect of contextual factors on the full sample, I test how these macro variables explain intergenerational links in ISEI status among respondents who were born in 1949-1967 and are aged 41-59 versus those who were born in 1968-1983 and are aged 25-40. This exercise must reveal if the selected contextual factors have stronger power to explain the variation in social mobility among the younger cohorts that were more likely to be affected by contextual environment which is described by macro variables for 2000. The selection of these dates is not accidental. Individuals born in 1968 had to make the transition to work during the collapse of communist systems in 1989-1990, at the age of 21-22. Born in 1983, the youngest members of the sample turned 25-years-old in 2008, and had completed, or were about to complete, their entry to labor market. To make the post-communist results comparable with earlier trends, only those individuals born in the previous 19 years were selected. This means that individuals from pre- and post-transitional cohorts represent two time periods which have roughly equal length – 15 and 19 years. This strategy is also motivated by the research goal to compare only the immediate pre-transitional social mobility patterns with the developments after the beginning of the revolutions in Eastern Europe and the Former Soviet Union.

To further test the importance of contextual variables which are shown to have significant links with intergenerational ISEI association, I compute the slopes for respondents' ISEI on parental ISEI while holding the values of contextual variables at the highest and the lowest first difference levels.⁹ For each significant contextual variable, graphs show predicted ISEI scores for the specified values of these variables. If the components of democracy and economic liberalization positively or negatively (and significantly) associate with mobility rates then we would expect discrepancies in the slopes of curves among different values of these indicators. Lastly, the general fit of the models is estimated by the Bayesian and Akaike information criteria (BIC and AIC) and by the values of Bryk-Raudenbush R^2 . The contribution of various independent variables, including contextual factors, for explaining intergenerational ISEI association is estimated by the reduction of cross-national variation in ISEI (U_1 variance component). The mixed regression models with maximum likelihood estimators are run with the help of 'xtmixed' command in the Stata 13 statistical package.

⁹ These are effectively the values of the contextual variables at their highest and the lowest deciles.

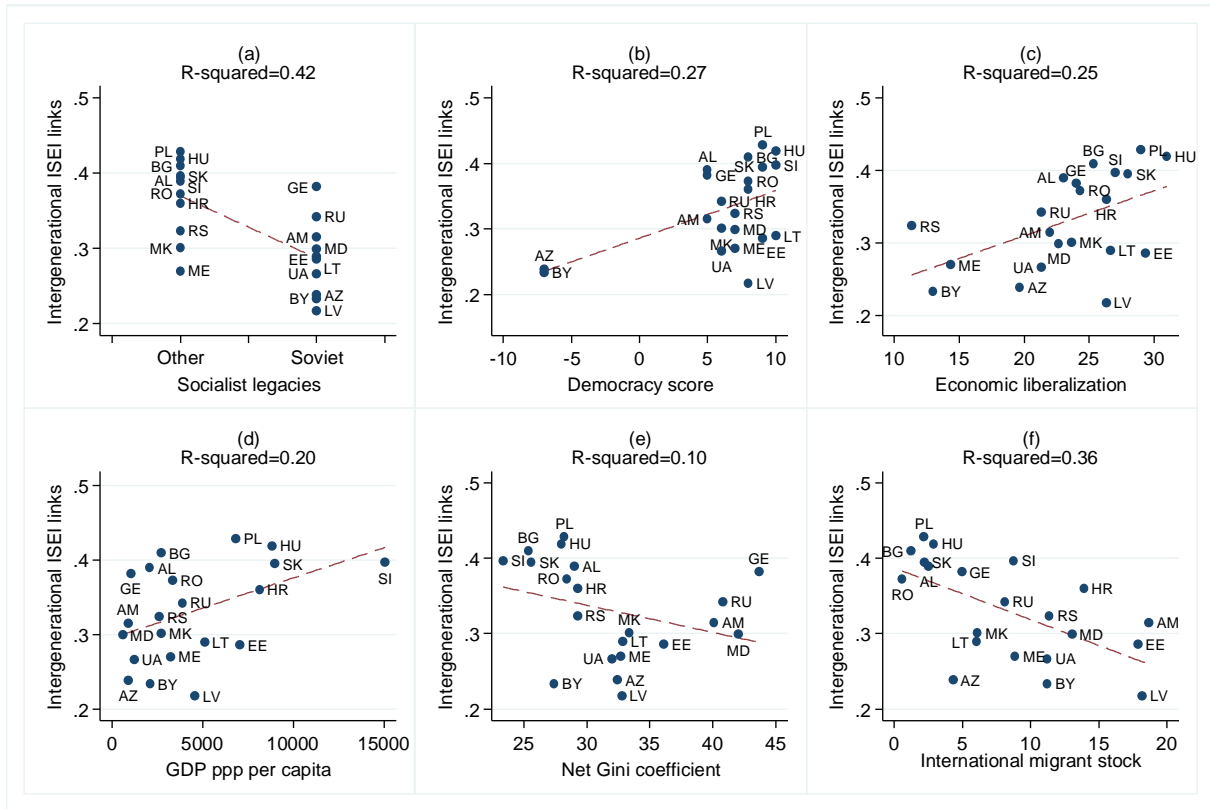
4. Results

4.1. Descriptive and bivariate analysis

In order to understand the observed differences in social mobility in post-communist societies, I start with the depiction of bivariate links between hypothesized contextual variables, on the one hand, and the derived coefficients of social mobility, on the other hand. Figure 2 shows a series of graphs to visually illustrate how the Soviet legacy, democracy, economic liberalization, economic development, income inequality, and international migrant stock are linked to the intergenerational ISEI β coefficients. These graphs also display lines indicating fit from OLS regressions and the R^2 values of these relationships. Figure 2a suggests that the Soviet legacy is a significant covariate of differences in observed social mobility rates. The dichotomy between the post-Soviet and other post-communist republics accounts for more than two-fifths of the variance in intergenerational ISEI association. Two countries in Figure 2b, Azerbaijan and Belarus, are clear outliers with their authoritarian political systems. Nonetheless, the relationship between democracy and mobility is negative and moderately significant ($R^2=0.27$). Contrary to H1, more authoritarian societies seem to secure higher intergenerational mobility to their citizens. Economic liberalization shows a moderate and positive association with social mobility ($R^2=0.25$) which is in line with H2.

Figure 2d shows associations between GDP per capita levels and intergenerational ISEI scores derived from OLS regressions. Contrary to the industrialization hypothesis, higher GDP levels per capita are associated with lower social mobility rates ($R^2=0.20$). These findings, if confirmed in multilevel analysis, would cast doubt on the prevailed understanding of the role of economic development and inequality for social mobility in post-communist settings. The discrepancy with H3b is also observed in terms of income inequality in 2000. If there is any relationship between net Gini coefficient and social mobility in post-communist countries, it is a curvilinear one – both high and low income inequality is linked with the lower social mobility rates. Based on this observed association, in the multivariate analysis I include both the main effect of income inequality and its squared term. Finally, Figure 2f shows a bivariate scatter plot of social mobility and international migrant stock as a percent of the population. In line with H3c, the relationship is clearly negative and linear between these two variables – the countries with the highest stock of migrants also have the lowest intergenerational ISEI associations ($R^2=0.36$).

Figure 2: Bivariate relationships between macro-level variables and intergenerational ISEI association



Notes: All derived OLS coefficients are statistically significant at the 0.01 level or higher. Two-letter country Codes (ISO 3166) are described in Appendix, Table a1. *Source:* Author's calculation based on data from EVS (2010) and various macro-data sources.

The described bivariate analysis provides tentative evidence on the links between social mobility and contextual factors and serves as the preliminary test of the stated hypotheses. Nonetheless, the observed relationships might be affected by the socio-demographic characteristics of country samples, while the described contextual variables are also highly correlated with each other (see Figure a1 in Appendix). Associations are especially high, on the one hand, between the Soviet legacy and inequality (0.71, $p < 0.01$) and the Soviet legacy and international migrant stock (0.54, $p < 0.01$), and on the other hand, between economic liberalization and democracy (0.66, $p < 0.01$), and economic liberalization and GDP per capita (0.58, $p < 0.01$). In addition, economically more developed countries are also less unequal (-0.54 , $p < 0.01$) and more democratic (0.51, $p < 0.01$). Overall, it is obvious that macro-contextual variables are related to each other and therefore we have to be careful in the interpretation of the results. Both the described compositional effects and the problem of multicollinearity of contextual factors can be mitigated with the employed strategy of multivariate multilevel analysis.

4.2. Multivariate analysis of contextual variables

Table 1 shows multilevel mixed-effects linear regression models that predict respondent's occupational status from contextual factors with random intercept and random slopes for the social origin variable. The measure of intraclass correlation in empty regression (not shown) indicates that the dependent variable, respondents' ISEI, does not vary much across post-communist societies ($ICC*100=1.94$), but the variation in respondents' ISEI score across countries is not the main interest of this article. In Model 1, I only include parental ISEI, its variance component, and respondents' gender and age as predictors of the dependent variable. Expectedly, social origin has a positive and statistically significant association with the respondents' attained ISEI scores, regression coefficient for parental ISEI taking value of 5.345 ($p<0.001$). The age variable and its quadratic form do not appear to have statistically significant associations with the respondents' attained status. Males, on average, are disadvantaged by 3.5 ISEI scores. The latter, on the one hand, might be related to the legacy of communist policies intended for the full emancipation of women (Wong, 1995). Professional occupations such as medicine, teaching, accounting, and law revealed extraordinarily high shares of females in communist societies than was the case in capitalist ones (Manning, 1976). On the other hand, at least in some post-communist countries females have been more successful in transitioning to a new service-dominated capitalist economy by taking up various technical and associate professional occupations (Burawoy et al., 2000; Pollert, 2003). Nonetheless, these basic demographic variables have virtually no effect on parental ISEI and its random component. In fact, the reduction of cross-country variation in parental ISEI variable on the occupational attainment of offspring is only 3.8%.

The variance component of parental ISEI still remains statistically significant in Model 1. The socio-demographic variables in the analyzed sample do not eliminate cross-country differences in intergenerational ISEI scores and, consequently, in social mobility. In Models 2-7, I introduce each hypothesized contextual factor separately in regressions, while all macro variables – the Soviet institutional legacy, Polity IV democracy scores, EBRD's economic liberalization index, GDP PPP per capita, net Gini coefficient, its squared term, and international migrant stock – are simultaneously controlled for in Models 8-9. If the interactive coefficients of parental ISEI and contextual variables are statistically significant, macro indicators have meaningful associations with social mobility rates. A minus sign of derived coefficients indicates that this specific contextual factor positively associates with social mobility, with a plus sign yielding an opposite effect. To evaluate how well each model performs, I estimate the percentage reduction of cross-country variation in intergenerational ISEI association. In other words, random variance in parental ISEI in Models 1-9 are compared to the baseline model of

intergenerational ISEI association that does not include any individual and macro-level controls. Both interactions' constitutive terms are mean-centered so that they show the size of the effect on the dependent variable when another interaction term equals to zero (its mean value because of standardization). The interpretation of the main effects from the contextual variables is not the primary concern of this study, but they do not appear to affect respondents' attained ISEI levels in Models 2-7.

Table 1: Mixed models predicting ISEI from individual-level and contextual variables with random intercept and slope

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Fixed effects									
Intercept	46.00***	45.97***	46.05***	46.07***	46.02***	45.46***	46.01***	45.73***	45.91***
Male	-3.576***	-3.571***	-3.574***	-3.579***	-3.580***	-3.578***	3.566***	-3.561***	-3.558***
Age	0.014	0.017	0.012	0.012	0.013	0.013	0.012	0.005	0.011
Age ² /100	-0.061	-0.064	-0.058	-0.058	-0.059	-0.060	-0.058	-0.050	-0.056
Parental ISEI	5.345***	6.052***	5.384***	5.313***	5.370***	4.775***	5.394***	4.957***	5.532***
Context factors									
Soviet legacy	.....	-0.037	.....	.....	.....	.....	.....	.....	-0.705
Democracy index	.....	.....	0.123	.....	.....	.....	.....	0.404	0.226
Economic liberalization	.....	.....	.....	-0.493	.....	.....	.....	-1.199**	-1.073*
GDP PPP per capita	.....	.....	.....	.....	0.186	.....	.....	0.845	0.793
Gini coefficient	.....	.....	.....	.....	.....	-0.099	.....	0.213	0.341
Gini coefficient ²	.....	.....	.....	.....	.....	0.547	.....	0.499	0.522
Migration rate	.....	.....	.....	.....	.....	.....	0.461	0.197	0.331
Interactions effects									
ISEI × Soviet legacy	.....	-1.367***	.....	.....	.....	.....	.....	.....	-1.204***
ISEI × Democracy	.....	.....	0.522***	.....	.....	.....	.....	0.388***	0.096
ISEI × liberalization	.....	.....	.....	0.535**	.....	.....	.....	0.150	0.346*
ISEI × GDP	.....	.....	.....	.....	0.484**	.....	.....	-0.046	-0.093
ISEI × Gini	.....	.....	.....	.....	.....	-0.792***	.....	-0.491**	-0.185
ISEI × Gini ²	.....	.....	.....	.....	.....	0.609***	.....	0.466***	0.439***
ISEI × Migration	.....	.....	.....	.....	.....	.....	-0.583***	-0.381*	-0.173
Random effects									
Intercept	2.064***	2.060***	2.038***	2.009***	2.056***	1.948***	2.038***	1.670***	1.648***
Parental ISEI	0.864***	0.533***	0.669***	0.694***	0.742***	0.513***	0.632***	0.001	0.001
Percent explained ^a	3.78%	40.65%	25.48%	22.72%	17.44%	38.5%	29.63%	99.89%	99.92%
Statistics									
AIC	116,861	116,856	116,854	116,858	116,858	116,860	116,855	116,848	116,844
BIC	116,921	116,931	116,929	116,934	116,933	116,936	116,946	116,999	117,002
Bryk/Raudenbush R ² lev. 1	0.117	0.118	0.119	0.118	0.118	0.118	0.119	0.120	0.121
Bryk/Raudenbush R ² lev. 2	0.208	0.233	0.252	0.278	0.263	0.232	0.341	0.526	0.539
Countries	21	21	21	21	21	21	21	21	21
Observations	13,979	13,979	13,979	13,979	13,979	13,979	13,979	13,979	13,979

Notes: ^a compared to baseline model of intergenerational ISEI associations. ***, **, and * denote statistical significance at the 0.001, 0.01, and 0.05 levels. Robust standard errors are calculated (not shown). ISEI scores and contextual variables are standardized. Source: Author's calculation based on data from EVS (2010) and various macro-data sources.

Our preliminary observations in Figure 2, regarding the Soviet institutional legacy, is formally confirmed by the derived results in Model 2, Table 1. The former Soviet Union status of a country strongly reduces the links between parental and respondents' ISEI scores ($-1.37, p<0.001$). In addition, the introduction of the Soviet legacy in the regression reduces the size of the random component of parental ISEI by more than 40%. The latter is the highest share of reduction conditioned by any other contextual variable when entered separately into the model. Nonetheless, we know that the former Soviet Union status is negatively correlated with economic development and democracy, and positively correlated with inequality and migration. Statistically strong coefficient of the interaction term for democracy and parental ISEI scores ($-0.52, p<0.001$) reveals a negative association between democracy and social mobility in post-communist context. Furthermore, in line with H2 the economic liberalization is negatively associated with social mobility in Model 4. Using democracy and liberalization as contextual variable reduces the variance component of parental ISEI, respectively, by 25.5% and 22.7%.

Contrary to H3a, in Model 5 we see that higher economic development is associated with lower intergenerational social mobility and this macro-contextual factor reduces the cross-national variation in the intergenerational ISEI effect by only 17.4%. The social mobility implications of economic development could be disguised by other contextual variables. In Model 6, I test H3b regarding the negative link between income inequality and intergenerational social mobility. Based on the observation from Figure 2 that net Gini coefficient and social mobility in post-communist countries might have the curvilinear association, I include in the analysis the main effect of this contextual variable and its squared term. The results suggest that there is indeed the curvilinear effect of income inequality and intergenerational ISEI links. Intergenerational social mobility is low in post-communist countries with both the lowest and the highest net Gini coefficients. The explained variance on level 2 with income inequality, estimated with Bryk-Raudenbush R^2 , is also the highest among all other contextual variables. In line with our expectations, in Model 7 the higher share of migrant stock leads to weaker intergenerational ISEI associations which is line with the formulated H3c. This contextual factors reduces the variance component of parental ISEI score by 29.6%, and it comes close to the legacy of the Soviet Union and income inequality.

After we have seen how separate contextual variables are associated with social mobility in post-communist societies, I simultaneously introduce these macro-level factors in Models 9, while in Model 8 I also observe the results without controlling for the Soviet legacy. Due to a small degrees of freedom in the latter models we should expect weaker associations than those observed in Models 2-7. The strongest predictors of social mobility in Model 8 are income inequality ($-0.49, p<0.01$ and $-0.47, p<0.001$ for its squared term) and political democracy ($-0.39, p<0.001$). In addition, the stock of international migrants ($-$

0.38, $p < 0.05$) also maintains statistical significance. All three of these statistically significant macro-level variables strongly correlate with the Soviet legacy, and therefore it remains to be seen how the described associations are manifested when the Soviet legacy is accounted for. Model 9 suggests that institutional characteristics of the Soviet Union which are not reflected in other contextual factors have direct links with intergenerational social mobility as the dummy variable for the Soviet Union membership maintains statistical significance (-1.20 , $p < 0.001$). In addition, the coefficient size for income inequality is reduced and only its squared term maintains statistical significance (0.44 , $p < 0.001$). Unlike the results in Model 8 economic liberalization becomes a statistically significant covariate of differences in social mobility between countries (0.35 , $p < 0.05$). In line with H2 and H3b intergenerational association in ISEI status is higher in economically more liberalized and unequal post-communist societies. In comparison to the baseline, the full model almost completely explains out cross-country variation in the parental ISEI effect, while the country level Bryk-Raudenbush R^2 takes value of 0.54.

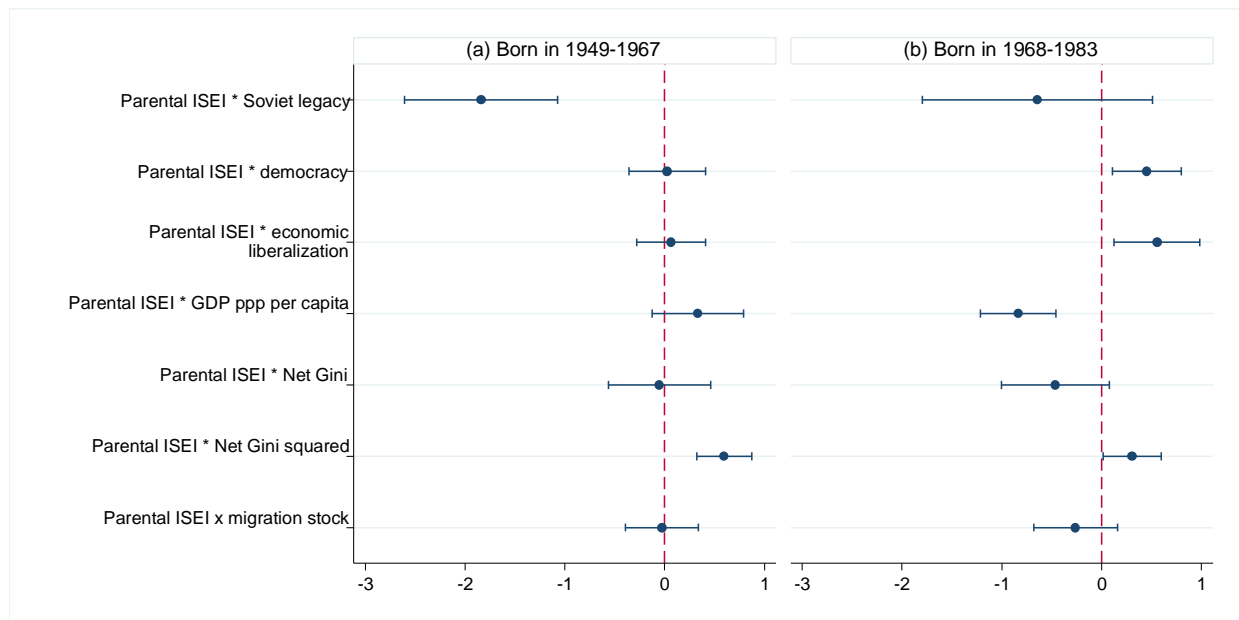
4.3. Younger and older cohorts and predicting ISEI scores

Figure 3 shows identical analysis as reported in Table 2, however now the sample is split by respondents' birth dates – those born in 1949-1967 and aged 41-59 (Figure 3a) and those born in 1968-1983 and aged 25-40 (Figure 3b). The results are interesting as they show that intergenerational social mobility in different cohorts is conditioned in various ways by contextual variables. First, the Soviet legacy is much more pronounced among respondents born before 1967 (-1.84 , $p < 0.001$). The latter group of individuals can be defined as a pre-transition generation. This is in line with theoretical expectations on more intense de-stratification established by the Soviet Union. Another significant covariate of intergenerational ISEI among the older cohorts is the squared term of income inequality that has positive effect on the strength of intergenerational ISEI links (0.60 , $p < 0.001$). The effect of income inequality is partially predicted by H3b as we observe that in only the most unequal countries net Gini coefficient negatively associates with social mobility rates. We can speculate that those countries who were more economically unequal before the collapse of communism were also freer from the oppressive state policies and possibly did not implement de-stratification measures as extensively as the Republics of the Soviet Union.

The associations of ISEI and contextual variables in Figure 3b are quite different for individuals born in 1968-1983 and aged 25-40. The latter group of respondents can be defined as belonging to a transition generation. The Soviet legacy becomes less important in accounting for cross-national differences in social mobility. The latter might be conditioned by drastic changes in egalitarian policies in post-Soviet newly independent states due to more intense fiscal crisis in these countries. On the other hand, the

variables on political democracy (0.45, $p < 0.01$) and economic liberalization (0.55, $p < 0.05$), unlike Figure 2a, become positive and statistically significant. The latter associations are also expected as the variation in political democracy and economic freedom starting from the beginning of the 1990s would affect more intensively the younger generation who were more likely to enter the labor market at that time. The effect of economic liberalization is in line with theoretical expectation in H2 which states that the higher liberalization leads to lower social mobility, but the effect of democratization is the opposite to what we expected in H1. The interaction term for parental ISEI and the squared term of income inequality, measured with net Gini coefficient, becomes less salient but still remains statistically significant (0.31, $p < 0.05$). This might suggest that not short-term income distribution but the broader structural inequalities expressed in economic liberalization are more important for intergenerational social mobility.

Figure 3: Contextual factors and the relationship between parental and respondents' ISEI scores

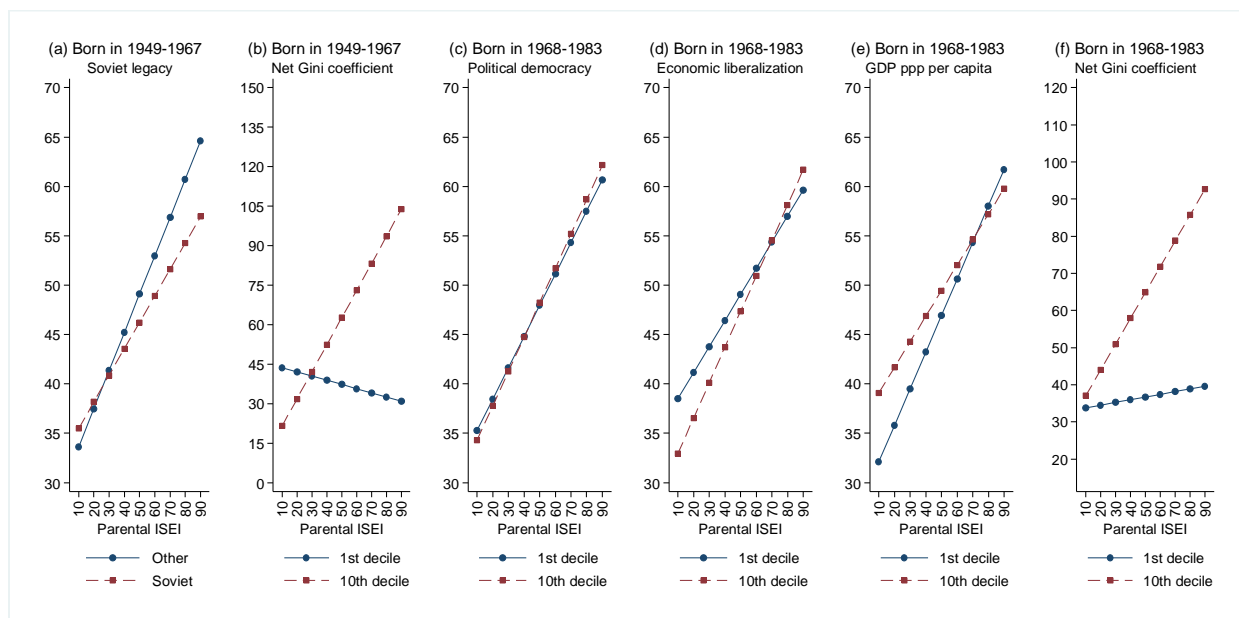


Notes: Regression coefficients are derived from models with identical specifications as in Table 1 controlling for all individual and contextual variables. Bars show 95% confidence intervals based on robust standard errors. *Source:* Author's calculation based on data from EVS (2010) and various macro-data sources.

The only factor which changes the direction of association with intergenerational mobility from Figure 3a to Figure 3b and becomes statistically significant is economic development, expressed in GDP ppp capita levels (-0.84 , $p < 0.001$). Economic development is associated with higher social mobility levels among individuals born in 1968-1983 and this association is in line with industrialization thesis outlined in H3a. Apparently, economic prosperity opened more opportunities for social mobility to younger cohorts in post-communist societies.

Now, to identify the specific results stemming from contextual variables and to see if they have varying association for individuals with advantaged and disadvantaged social background, I derive graphs with respondents' predicted ISEI scores based on their social origin. Figures 4a shows how intergenerational ISEI association varies in the former republics of the Soviet Union and other post-communist societies among individuals born in 1949-1967. The displayed association clearly suggests that the links between parental and respondents' ISEI scores are stronger in the non-Soviet post-communist societies and this association is vividly manifested for individuals with advantaged social background. For instance, when parental ISEI score is 80 (e.g. life science or health professional), individual's predicted status is 54 (e.g. mechanical engineering technician) in the former Soviet Union. In other post-communist countries the same social origin leads to ISEI score of 61 (e.g. finance dealers). Figure 4b shows the variance of intergenerational ISEI association conditioned by the high and the low first differences in the squared term of income inequality. Intergenerational ISEI links are especially strong in countries with high Gini levels at higher parental ISEI scores. Social origin of ISEI 70 (e.g. middle school teachers) for instance leads to respondent's predicted attainment of ISEI 83 (e.g. veterinarian), while the same association in the lower levels of income inequality is ISEI 53.

Figure 4: Contextual factors and respondents' predicted ISEI scores conditioned by parental ISEI scores



Notes: Predicted ISEI scores of respondents are fitted values derived from random intercept and random slope mixed models, which control for respondents' age, age² and gender. *Source:* Author's calculation based on data from EVS (2010) and various macro-data sources.

Lastly, I explore intergenerational ISEI association among younger cohorts born in 1968-1983. As Figure 3b suggests, four interaction terms of contextual variables with parental ISEI scores maintain statistical significance at the 95% level. Democracy, economic liberalization, and income inequality are associated with tighter intergenerational ISEI links, while economic development is related to higher social mobility rates. Figure 4c shows it is difficult to distinguish the effect of political democracy among individuals with advantaged and disadvantaged social backgrounds. The patterns are clearer in Figures 4d and 4e where economic liberalization and economic development have particularly strong associations with individuals' life chances with lower parental ISEI scores. The slope for the countries where economic liberalization is higher and economic development is lower is steeper than is the case for countries with less liberalized and more developed economies. The main difference which we observe in comparison to Figures 4a and 4b is that in Figures 4d and 4e the effect of economic liberalization and economic development is manifested at the lower end of parental social origin. This contradicts what Torche (2005) reports for the Chilean case. The effect of the squared term of net Gini coefficient for those born 1968-1983 in Figure 4f comes close to the described effect for those born in 1949-1967.

4.4. Further tests and robustness check

After observing statistically significant associations between various contextual factors and intergenerational social mobility in post-communist societies, I conduct further tests to show if the findings are robust to various alternative data, sample and method specifications. First of all, I investigate how results vary if different timeframe for macro variables is selected. For this purpose I again run multilevel mixed-effects linear regressions as given in Table 1, but this time macro-variables stem first from 1990 when countries began their transition from communist authoritarian regimes to democratic and capitalist societies, which is followed by the application of mean scores for the 1990s and the contemporary macro-level data from 2008, the same year as EVS micro-dataset was collected. Testing the mean scores for 1990s might be important because not all countries commenced their transitional reforms in the same year. My analysis shows that if entered separately as the only contextual factors explaining variance in intergenerational ISEI associations all factors exert similar and statistically significant associations with social mobility when these macro-level variables are measured in 1990, 2008, and for the 1990s. This is expected as the correlation between macro measures in the 1990s, 2000, and 2008 is strong.

Second, I add into the mixed-effects models respondent educational attainment and its variance component. Although the magnitude of interaction coefficients between micro and macro-level variables becomes smaller with the latter specification, the statistically significant associations of the identified

contextual factors are maintained. For instance, the Soviet legacy, and to a lesser degree income inequality and economic development, are the most significant covariates of social mobility among individuals above 40 years of age, while among individuals born after 1967 economic development, political democracy, economic liberalization and income inequality maintain statistically significant association with intergenerational social mobility. Higher education increases respondents' ISEI scores by about 18 points, while education's variance component maintains statistical significance in all models suggesting that the association of education with ISEI attainment varies across countries.

Next, cross-sectional dataset that I use does not provide information when individuals across their life-course attained their occupations. In stable western democracies, individuals attain their mature occupational positions by the late 30s, but in societies where massive transitions have taken place such as these from command to a variety of more or less free market type systems, considerable disruption to the more typical age of destination job attainment is likely. To mitigate this problem, in unreported analysis I have excluded from the sample those individuals who have experienced a continuous period of unemployment longer than 3 months during the last five years prior to the interview. Obviously, long-term unemployment does not tell us about age of occupational destination, but it could be a proxy of occupational disruption in individuals' lives. When individuals with long-term unemployment histories are excluded from the analysis (35.5% of the sample), however, the main results reported in Table 1 are virtually unaffected.

To test if the contextual variables are relevant for relative rather than absolute intergenerational social mobility, I create the decile variables of parental and respondents ISEI scores. In this specification intergenerational upward social mobility is defined as a situation in which respondents' attained ISEI score is in a higher decile than their parents ISEI decile. The results of this exercise further support the findings in the main analysis, particularly for those born in 1967-1983. In fact, all statistically significant relationships given in Figure 3 are enhanced by the relative measure of social mobility. The interaction terms between parental ISEI decile and contextual variables for economic liberalization, economic development, and international migrants stock become statistically significant at the 99% level in the same direction as given in the main analysis. Political democratization, in turn, maintains its negative effect on intergenerational ISEI association.

In order to check if outliers on country-level such as democracy in Azerbaijan or economic development in Slovenia affect the main results, as seen in Figure 1, in unreported analysis I have re-estimated regressions with the baseline specification after excluding one country at a time from the sample. This exercise did not produce any derivations from the default analysis. Lastly, excluding three countries with the highest rates of missing data for respondents' and their parents ISEI scores, as shown in Table a1 in Appendix, also does not substantively affect the results of the main analysis. Therefore, the

described tests and sensitivity analysis allow me to conclude that the presented results are robust with respect to alternative model and variables specifications.

5. Conclusions and Discussion

This article investigated the links between contextual variables and intergenerational social mobility in post-communist societies. Based on insights from the existing literature, I assumed that factors linked to intergenerational mobility in the earlier macro-sociological models in the context of the developed world – economic development, income equality, and international migration – would also be relevant in post-communist countries. In addition, accounting for the role of the Soviet Union’s legacy, I investigated two contextual factors which, to my knowledge, have not been previously studied in the comparative social mobility literature – the level of democracy and economic liberalization. The output from the bivariate and multivariate analysis of the sample of respondents aged 25-59 suggest that economic liberalization and income inequality (at the higher end of its distribution) are positively associated with intergenerational reproduction of occupational status.

The salience of economic liberalization in explaining cross-national level of social mobility corresponds well to the earlier country-level studies that reveal positive links between a liberalized economy and various adverse societal outcomes. For instance, King et al. (2009) find that rapid and large-scale privatization was associated with lower life expectancy in post-communist countries. It is a possibility that economic liberalization is not only associated with the higher inequality in incomes, but also with much broader structural inequality. The latter is a situation in which some individuals or families have more of valued resources or opportunities than do others and this inequality is likely to persist over generations decreasing individuals’ chances for intergenerational mobility in occupational status (Gugushvili, 2015). Economic liberalization in post-communist countries, unlike the scenario envisioned by the ‘meritocracy as functional imperative’ approach, apparently does not create the environment in which the idea of meritocracy serves as one the main principles of a free-market economy. It is conceivable that economic liberalization has increased wealthy families’ ability to transmit their accumulated economic, social, and cultural capital to the next generation (Goldthorpe, 1996; Paglin, 1975). The latter conclusion is also supported by the finding that the observed negative link between economic liberalization and social mobility is primarily manifested among individuals aged 25-40 who were more likely to enter labor market after the start of transition.

Unlike the previous findings on the issue (Torche, 2005), I also reveal that the consequences of liberalization is more vividly manifested at the lower end of parental social origin. Probably one of the

reasons why we see this trend is that economic liberalization generates inequalities among the least advantaged individuals, while the privileged are able to maintain their status regardless of economic inequalities or even benefit from a new equilibrium.

In addition, I find that the institutional legacy of the Soviet Union maintains a positive and statistically significant association with intergenerational social mobility when other contextual variables are accounted for. Indeed, the descriptive statistics presented in Figure 1 identify all eight countries with the lowest intergenerational ISEI associations as newly independent states of the former Soviet Union. The salient role of the Soviet legacy is in line with a handful of intergenerational social mobility studies which simultaneously include the samples from the Soviet Union republics and other communist societies. For instance a comparative study of intergenerational educational mobility in twelve communist societies in the second half of 20th century found that former members of the Soviet Union such as Lithuania, Russia and Ukraine tend to record higher mobility rates than do the Central and East European post-communist societies (Veraschagina, 2012). The review of findings from individual country studies also suggests that intergenerational status reproduction was allegedly higher in Central and East European countries than in the Soviet Union republics (Bukodi and Goldthorpe, 2010; Gerber and Hout, 2004; Gugushvili, 2014; Marshall et al., 1995; Titma et al., 2003). Of course the salience of the Soviet legacy does not assert that barriers to social mobility were completely absent in the Soviet Union, as some sociologist have claimed, but rather that the more intense de-stratification policies implemented by the Soviet Union have long-term implications for the maintained levels of intergenerational social mobility, particularly among the elderly population.

Furthermore, one of the major findings of this article is that the hypothesized contextual variables have varying implications depending if the analysis includes those born in 1949-1967 versus those born in 1968-1983. The consequences of the Soviet legacy and net Gini coefficient are much more significant for the older survey respondents, which could mean that the Soviet de-stratification policies are less relevant for individuals belonging to the transition generation, while economic liberalization rather than income inequality matter more for the younger cohorts. The positive association of migration with social mobility is only observed in models that do not account for the former membership of the Soviet Union. International migration is more important for intergenerational social mobility of the younger cohorts aged 25-40. The latter might not be surprising as the mean stock of migrants in non-Soviet post-communist societies is about two times lower than it is in the successor states of the Soviet Union. Migrants are typically separated from their communities of origin, which might weaken links between individuals' social background and their destination. Post-communist transition has caused substantive changes in the international stock of migrants in the considered countries and it seems that the observed

association with social mobility runs through younger individuals who were more likely to be active participants of international migration.

Unlike already described macro-level variables, the effects of democracy and economic development are only revealed when the analysis is disaggregated into younger and older cohorts. I hypothesized that democracy would have positive links with social mobility through various mechanisms such as equality of opportunities, the rule of law, civil liberties, fair elections, higher tolerance and gender equality, but the results reveal its negative association among younger survey respondents born in 1968-1983. It is a possibility that authoritarian societies provide higher mobility opportunities because of political legitimacy concerns. The mechanisms of occupational attainment in less democratic societies might be linked more to corruption and nepotism than social origin (Moreno, 2002). In fact, Pujals (2001) studied the links between social mobility and the Soviet Union's authoritarian regime in the 1920s and early 1930s by looking at the corrupt networks that connected revolutionary society, the Communist Party establishment, and the industrial sector. A random sample of files for communist party affiliates showed that a corrupt support system existed between management personnel in the industrial sector, influential Communist Party members, and officials inside the bureaucratic structure, which protected dishonest individuals and contributed to their social mobility. These trends could also be relevant to the demise of the communist system and the emergence of authoritarian states in the beginning of the 1990s.

My findings also confirm the relevance of the industrialization thesis among the younger survey respondents. More prosperous post-communist societies seem to provide to their younger citizens more opportunities for intergenerational social mobility. The conducted analysis suggests that economic development has particularly strong effects on individuals' life chances with lower parental ISEI scores. It is well known that the structural forces of economic expansion and contraction create distinctive national patterns of labor force adjustment (DiPrete et al., 1997). Actually, the main link through which the institutional changes of market transition affect stratification is the structural change that influences individual-level labor market prospects and life chances (Gerber, 2002). One of the reasons why economic performance could affect social mobility in post-communist countries is changes in returns to education and the quality of the educational institutions (Newell and Reilly, 1999; Saar and Unt, 2012) that are often associated with socioeconomic development.

It is important to mention some of the major caveats and limitations of this study. The organizers of the survey that I used in this article have done much to ensure the high quality of data collection and its cross-national comparability, but in a few post-communist countries the practice of survey data collection raises some questions (see Verbakel 2012). A more important concern for the study of macro-level covariates of socialist and post-socialist stratification regimes is the sample selection problem. This is important because the analysis of social mobility is based on respondents' retrospective answers about

their social origin and occupational attainment. We cannot be sure that the population samples in 2008 adequately represent the earlier trends in social mobility. For instance, due to emigration some of those countries lost as much as one-fourth of their populations since the 1990s. Therefore, retrospective questions could miss social mobility information from emigrated residents of a particular country. Another important problem for the study of contextual explanations of mobility is the direction of causality of the findings. The proposed hypotheses implied that various macro-level factors determine the levels of social mobility, however, the data and methodology do not allow the exclusion of the possibility of reverse causation. Besides, using only one wave of cross-sectional data such as EVS is a drawback in investigating the long-term consequences of macro-level variables such as the legacy of Soviet Union. If we assume that social mobility affects individuals' attitudes and behavior regarding politico-economic institutions (see Leventoglu, 2013, 2005), upwardly and downwardly mobile individuals could themselves contribute to the levels of economic development, liberalization, and democracy.

After discussing the results, implications and limitations of this study, I can conclude that contextual variables tested in the macro-sociological models of intergenerational social mobility can indeed explain cross-country variation in social mobility in post-communist societies. This article expands the earlier findings from the relevant literature, and suggests that conventional macro-level variables might have varying associations with social mobility depending on the selected countries and the birth cohorts of participants. The findings reported in this article also open new possibilities for future research on the role of the quality of political system and economic liberalization in explaining why individuals in some countries have higher chances of intergenerational occupational mobility than do individuals in other countries. Considering the varying trends of democratization and the promotion of neoliberal economic agendas in many Latin American, African, and Asian societies, as well as in the Western Europe and North America, these macro-contextual factors can be the important areas of future scholarly analysis of cross-national differences in the levels of intergenerational social mobility.

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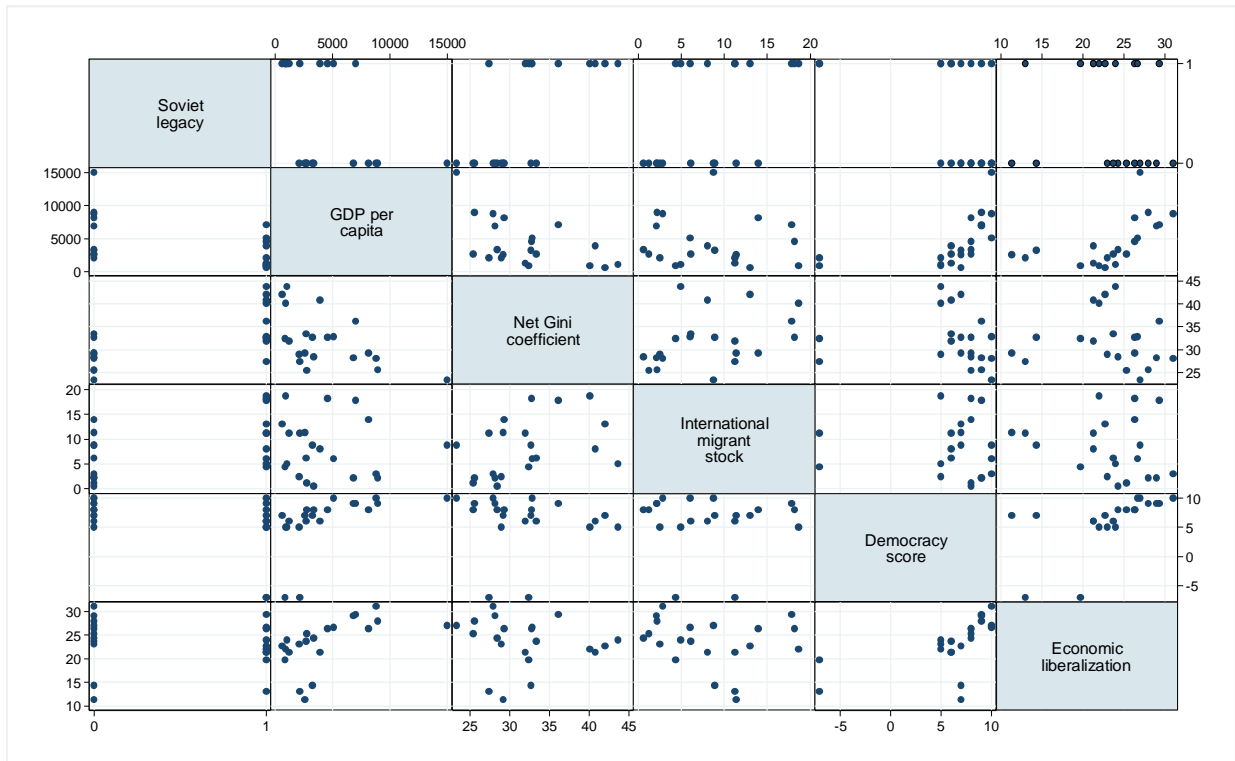
Appendix

Table a1: Descriptive statistics of individual-level variables used in the multilevel analysis

	ISO (3166)	Number of cases	Respondent ISEI		Parental ISEI		Age	Males	Higher education
			Mean	% missing	Mean	% missing	Mean	Mean	Mean
Albania	AL	1033	29.6	19.4	39.6	26.9	42.7	0.50	0.20
Azerbaijan	AZ	1063	47.3	9.0	40.2	40.2	36.3	0.52	0.51
Armenia	AM	922	40.7	19.3	47.4	14.0	40.9	0.42	0.31
Bulgaria	BG	849	37.3	4.6	41.3	8.2	43.3	0.44	0.25
Belarus	BY	935	39.5	6.3	47.9	36.7	40.9	0.40	0.37
Croatia	HR	861	38.2	15.1	42.8	42.3	41.5	0.41	0.23
Estonia	EE	841	38.9	1.9	43.7	9.2	42.5	0.37	0.28
Georgia	GE	970	40.9	25.2	47.2	16.9	41.8	0.35	0.43
Hungary	HU	946	35.8	5.5	42.7	13.8	41.4	0.50	0.20
Latvia	LV	862	37.3	6.5	41.3	19.9	41.7	0.39	0.30
Lithuania	LT	863	35.8	5.9	44.4	25.8	42.8	0.44	0.48
Moldova	MD	942	30.1	10.5	41.6	14.6	42.8	0.47	0.20
Montenegro	ME	1013	39.4	23.3	44.6	50.7	40.6	0.44	0.26
Poland	PL	949	35.9	9.6	43.8	22.5	42.0	0.43	0.23
Romania	RO	901	35.4	14.3	40.6	65.6	43.6	0.45	0.12
Russia	RU	935	40.5	3.3	45.0	18.4	42.2	0.36	0.35
Serbia	RS	984	37.0	20.9	43.4	43.9	41.7	0.47	0.24
Slovak Republic	SK	878	33.8	3.6	40.1	10.6	45.3	0.40	0.12
Slovenia	SL	834	38.5	7.4	44.4	35.0	42.4	0.48	0.24
Ukraine	UA	902	38.3	2.8	42.6	9.7	43.0	0.39	0.46
Macedonia	MK	1004	40.6	31.4	45.5	57.1	41.2	0.58	0.28

Notes: Samples are restricted to individuals aged 25-59. *Source:* Author's calculation based on data from EVS (2010).

Figure a1: Pairwise correlations between contextual variables



Notes: Country is unit of analysis. Correlations are statistically significant at the 0.01 level or higher.

Source: Author's calculation based on various macro-data sources.