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DISCUSSION PAPER SERIES

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ABSTRACT

The Inequality and Mobility of Exposure to European Soviet Communism

We compare inequality and social mobility trends in European countries exposed to Soviet Communist (SC) regimes with those not exposed, using similar welfare measures. We draw upon a rich retrospective dataset that collects relevant welfare measures across regimes, including information on living space and self-reported health, and relevant inequality and mobility indices for ordinal and categorical data. Our results suggest evidence of comparable welfare inequality trends in countries exposed to SC regimes and those unexposed. Although individuals exposed to SC enjoyed higher levels of social mobility, differences in inequality across countries exposed to different regimes were negligible. A plausible explanation lies in the countervailing role of the welfare state in countries not exposed to SC and the inefficiency of the bureaucratic allocation of private goods aimed at reducing inequality in countries exposed to SC.

JEL Classification: I14, H53, I13, I38, N34, P20, P29, P36, P46

Keywords: inequality, welfare, living space, self-reported health, health inequality, education, social mobility, Soviet Communism, bureaucracies, European Communist Regimes

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1 Introduction

Soviet-led Communism or Soviet Communism (SC) regimes in Europe were a set of socio-political regimes based on an ideology (or a narrative) that attempted to eliminate social class distinctions by abolishing private property, preventing significant wealth accumulation, and dismantling market economies and liberal democratic structures. These objectives were articulated in ideological principles and policy frameworks to establish a state-managed economy that provided various publicly funded social services under central bureaucratic planning.[1] However, the extent to which SC genuinely aimed to achieve such radical egalitarianism, or whether egalitarian rhetoric was employed primarily as a tool of state propaganda, remains contested. This is the main purpose of this paper, and more specifically it attempts to understand the varying interpretations of SC's success in addressing social inequality compared to European countries not exposed to SC.

In assessing the success of Soviet Communism, it's important to consider that, in response to the perceived threat of communist expansion, many European countries not exposed to SC developed publicly funded welfare programs and services (welfare states) around the same time. These programs aimed to improve access to social services benefiting disadvantaged individuals (Glennerster, 2020).[3] Such programs were in turn funded by progressive taxation to address prevailing market disparities, which resulted in an overall reduction in inequality across Europe (Piketty and Saez, 2014).

Soviet Comunism were a unique set of socio-political regimes based on the bureaucratic allocation of private goods such as living space and healthcare services, unlike in non-SC countries where markets played a more significant role. However, whether SC delivered a more equitable allocation of such outcomes remains unclear.[4] The system of bureaucratic

[1]The ideological foundation of Soviet Communism was, in its foundation, heavily influenced by Marxist-Leninist principles, which advocated for the collective ownership of means of production and the redistribution of resources to reduce inequality. See Marx and Engels (1848) and Lenin (1917) for foundational works that outline these principles. Although the regimes were significantly heterogeneous [2], debates persist about whether these goals were genuinely pursued in practice or served as rhetorical devices to legitimise state power. For further discussion, see Fitzpatrick (1999) and Kotkin (1995).

[3]We acknowledge that the development of welfare states was likely influenced by multiple factors, including industrialisation and economic modernisation (Wilensky, 1975), the influence of social movements and labour unions (Esping-Andersen, 1990), and the expansion of democratic institutions (Hicks, 1999). While the geopolitical context of the Cold War and the ideological competition it fostered may have played a role, these other factors likely shaped the timing and scope of welfare programs in each country. Furthermore, we recognise that welfare states took distinct forms, as highlighted by Titmuss (1974). Titmuss categorises welfare states into three ideal types: the "marginal" model (Anglo-Saxon countries), the "industrial achievement" model (Central Europe), and the "institutional" model (Scandinavia and the UK). These models varied in their reliance on state intervention and redistribution, reflecting differing national priorities and historical trajectories. While our study focuses on the broader impact of welfare states in reducing inequality, we acknowledge the importance of these variations in shaping specific outcomes.

[4]The selection criteria for these bureaucrats evolved; initially, members were more likely to have modest backgrounds compared to their counterparts in non-SC regimes (Echols, 1981), but gradually, they became more specialised (Lodge, 1968).

allocation benefited certain individuals over others, granting privileged access to scarce resources and services such as less crowded housing, higher-quality food and diets, and vacation opportunities. Although founded on principles of egalitarianism, SC still engendered a distinctive hierarchy, wage differentiations (Parkin, 1971), and social stratification (Filtzer, 2013).[5]

Third, the persistent impact of religion has been posited to have eclipsed the ideological effects of the SC regimes (Hadler, 2005). Religion's enduring influence, even in formally atheist states, shaped social norms and individual preferences, often rivaling the effects of communist indoctrination (Alesina and Giuliano, 2007). SC societies were also historically marked by substantial regional, ethnic, and gender disparities in political representation, mirroring the variances observed in numerous non-communist nations (Echols, 1981).[6]

Fourth, SC gave rise to a culture of informal payments, which not only consolidated social and familial networks (Costa and Kahn, 2023) but also perpetuated a system of informal remunerations, bartering, and favour exchanges (Bergson, 1984), ultimately limiting the potential for inequality reduction.

Previous studies have documented that whilst income inequality had been present before SC in Russia, it exhibited a decline to very low levels during the Soviet period and a subsequent escalation to pronounced disparities following the dissolution of the Soviet Union (Novokmet et al., 2018). Similarly, Bukowski and Novokmet (2021) in examining the highest percentile of the income distribution, document consistent evidence of a lower income inequality under SC due to capped and regulated salaries.[7] Nonetheless, the focus of previous research has been on inequality in "observable" income differences alone.[8] Yet, given the active role of the government in the provision of private goods, income measures might not be suitable for consistent regime comparisons. The use of income as a measure of welfare, when

[5]Communist Party members, ministers, public managers, elite athletes, distinguished members of the intelligentsia, scientists, and veterans enjoyed enhanced political and economic privileges.

[6]While religion is highlighted here due to its documented influence on social and ideological outcomes, other factors likely contributed to shaping societal outcomes in SC and non-SC contexts. For instance, variations in social trust levels have been linked to institutional resilience and governance outcomes (Algan and Cahuc, 2010). Additionally, pre-communist legal traditions influenced long-term institutional development (Hayo and Voigt, 2010), and historical determinants of redistribution preferences, such as inequality aversion and perceptions of social mobility, also played a role (Alesina and Giuliano, 2007; Angelucci and Di Maio, 2016). These factors provide valuable complementary perspectives, though religion is emphasized here due to its documented persistence and relevance in SC contexts.

[7]Studies examining income inequality patterns suggest that following the demise of SC, Central and Eastern European countries experienced a significant transformation in their income distribution patterns. Originally characterized by relative income equality (with Gini indexes below 25), these nations transitioned to a state of pronounced inequality (Gini indexes of 35 and above) (Brzezinski et al., 2022b). Notably, the average Gini index of income inequality in Eastern European countries now surpasses that of the rest of Europe by approximately three percentage points. Such a trend can largely be attributed to the transition from state-dominated to private-sector employment and the income effects of the appropriation of assets by the former communist elite (Brzezinski et al., 2022b).

[8]Inequality in income or consumption alone, even when available can be regarded as an imperfect proxy of standards of living (Deaton, 2005).

comparing individuals exposed to different regimes, requires adjustments to ensure that a comprehensive measure of welfare, as conceptualised by Becker (1965), is employed.[9]

As an alternative to using income as a measure of welfare, it is possible to rely on comparable welfare metrics that bear relevance across different regimes. In this paper, we focus on the inequality in health and living conditions. The significance of using other welfare measures is that income in SC regimes was a less reliable indicator of welfare.[10] Furthermore, by drawing on retrospective welfare data it is possible to measure inequalities that account for these informal income sources and other differences in privilege. A similar study by Kesternich et al. (2014) explores the enduring socio-economic and health impacts of World War II on older Europeans, highlighting the significance of historical context in shaping current welfare outcomes. In our study, we combine both current prospective data and retrospective data concerned with the respondent childhood. This dataset allows us to examine the effect of early-life conditions as affected by regimes exposure.

This paper studies inequality and social mobility trends across various comparable welfare metrics among individuals exposed to SC, compared to unexposed individuals in European countries. Such an approach allows testing the hypothesis of 'egalitarian inequality', namely the extent to which institutional egalitarianism delivers lower inequality and higher social mobility. We assess the pattern of inequality and mobility across these relevant welfare dimensions, regardless of whether such differences are reflected in monetary expressions of well-being in the form of income or wealth. Although we draw on current and retrospective data, concerns regarding potential recollection bias are carefully addressed and mitigated.

We use data from the Survey on Health, Ageing, and Retirement in Europe (SHARE), and we examine measures of inequality and mobility in health and access to living space both at the time of the survey as well as retrospectively, using the retrospective questionnaire of the survey (SHARELIFE), which collects information on respondents early lives. We utilize both uni-variate and bi-variate inequality measures for the surveyed countries, and we examine country-specific evidence alongside the correlation between early life and later life measures.

We contribute to the literature as follows. First, we are the first to examine the current and retrospective inequality in countries exposed and unexposed to SC using several measures of welfare, such as living space and health which are comparable across socio-political regimes. Second, unlike previous research, which revolves around mainly single-case studies, we measure inequality across several countries. Third, we focus on other dimensions of welfare that are harder to manipulate than individual income and are comparable across regimes. Specifically, our study examines disparities in health-related metrics and actual living space. Such metrics are less susceptible to immediate manipulation and more reflective

[9]The notion of full income encompasses earnings maximization within the constraints of household budgets and commodity production functions, extending beyond formal income sources to include informal economic activities (Chiappori and Lewbel, 2015).

[10]Welfare was instead contingent on other features such as status in the regime and access to informal networks of privilege.

of long-standing advantages or disadvantages. This aspect of our analysis is informed by previous findings, such as those by Cvrcek (2009), which documented persistent inequalities in biological standards of living during the initial decades of Communist governance in Czechoslovakia. However, whereas Cvrcek (2009) focused on a single country over a limited timeframe, our study encompasses a broader sample of countries and evaluates a wider array of comparable well-being indicators. Moreover, we examine the dimension of privilege through the lens of living space or dwelling crowdedness, which, as we argue allows for comparisons between communist and free market regimes.

The rest of this paper is organised as follows, Section 2 provides a background description of what we know about inequality under communism. Section 3 describes the dataset. Section 4 presents the methods of empirical analysis. Section 5 reports the main results. Section 6 provides robustness checks and a final section concludes.

2 Inequality Under Soviet Communism

2.1 Roots of Egalitarian Inequality

Soviet Communism (SC) was founded on principles of egalitarianism and state control over the means of production. Initially, these policies facilitated significant upward mobility for workers and peasant children, particularly during the early years of the regime (Filtzer, 2013). However, this momentum slowed over time, and a stable elite emerged. This elite maintained privilege through informal resource allocation and access to goods, creating a distinct type of inequality, different from that seen in market economies.

Despite compressed wage structures that reduced income inequality on paper (Bukowski and Novokmet, 2021), the reliance on informal mechanisms of resource distribution created significant welfare disparities. Access to subsidized housing, healthcare, and consumer goods often depended on informal networks and reciprocal relationships, inherently favoring those with better connections (Staniszkis, 2023; Nee, 1989). For example, Communist Party membership, while a potential pathway to social mobility, did not guarantee privilege uniformly [11]. Instead, the benefits were concentrated among those who actively leveraged their political capital (Duke and Grime, 1997; Böröcz and Róna-Tas, 1995).

The hierarchical structure of Communist societies further entrenched inequalities. While the SC regimes proclaimed equality, the central planning mechanism was inherently inflexible, failing to address the diverse needs of a heterogeneous population (Henderson et al.,

[11] Membership of the Communist Party (CP) was a necessary condition for professional and social advancement, providing significant benefits to those who were able to leverage it effectively. In this regard, it proved advantageous, but only for individuals who succeeded in capitalizing on the opportunities it offered. Nonetheless, there was little to no distinction between a worker who was a CP member and one who was not, as the mere affiliation did not guarantee any inherent advantages in terms of status or position without the successful navigation of the associated opportunities.

2005). Urban elites, for instance, enjoyed preferential access to goods and services, while rural populations remained disadvantaged. Moreover, rationing and bureaucratic allocation of resources often rewarded loyalty over need, exacerbating disparities (Morton, 1980; Matthews, 2013). These dynamics were not uniform across all SC countries, as the degree of rural-urban disparity and access to resources varied significantly, reflecting the diverse socio-economic landscapes ofsuch regimes like Soviet Union, Poland, Estonia, and East Germany.

Although SC regimes espoused egalitarian principles, some scholars argue this was largely rhetorical, with systemic practices often contradicting these stated ideals (Miller, 1984). Informal networks, political privilege, and resource allocation biases not only created disparities but also entrenched them over time, serving as critical mechanisms undermining SC's egalitarian goals.

A notable feature of SC inequality was the proliferation of informal markets. While official income was relatively equal, informal incomes varied significantly, as individuals accessed alternative sources of income and goods through social networks and barter systems (Bergson, 1984; Staniszkis, 2023). This dynamic created hidden disparities, undermining the regime's egalitarian claims. Evidence from studies of the post-Communist transition highlights the persistence of these inequalities, with former elites often converting their political capital into economic wealth during privatization processes (Böröcz and Róna-Tas, 1995; Eyal, 2003).

The post-1989 transition to market economies further revealed the hidden layers of inequality embedded within SC societies. The re-privatization of housing and public services, for instance, disproportionately benefited those who had held political power under the previous regime (Milanovic, 1998). As Heyns (2005) observe, patterns of inequality following the collapse of Communism were shaped not only by market reforms but also by the entrenched social hierarchies inherited from the SC period. In particular, inequalities by education, region, and health status increased dramatically, with the rural-urban divide becoming more pronounced. In contrast, non-SC countries relied on market-based mechanisms and welfare systems that, while imperfect, often provided more transparent and equitable distribution of resources.

Despite the regime's ideological commitment to equality, the inherent contradictions of its economic and social policies produced a new form of hierarchical inequality. While market mechanisms were criticized for fostering inequality in capitalist societies, the bureaucratic rigidity and reliance on informal transactions within SC economies created parallel challenges, often leaving the most vulnerable populations – such as rural workers and those without political connections – at a significant disadvantage (Staniszkis, 2023; Nee and Matthews, 1996).

Finally, the post-Communist era underscores the enduring legacies of SC inequalities. Countries like Poland, Hungary, and the Czech Republic experienced widening income and wealth disparities following the transition to market economies (Heyns, 2005; Duke and Grime, 1997). Reforms such as privatization and subsidy reductions, while fostering economic

growth, often entrenched the privileges of the former elite, perpetuating a cycle of inequality that remains evident today.

2.2 Health Inequality During Soviet Communism

Health inequalities under Soviet Communism (SC) were shaped by both societal hierarchies and the mechanisms of resource distribution. While the Semashko healthcare system – a hallmark of Communist governance – provided universal coverage ostensibly free at the point of use, the reality of healthcare access was far more complex. Informal payments and reciprocal exchanges were pervasive, with some studies estimating rates exceeding 60% in certain regions, and as high as 91% in Armenia (Henderson et al., 2005). These informal mechanisms disproportionately benefited those with social or political connections, allowing them to bypass official channels and gain superior care. This dynamic not only reinforced existing inequalities but also entrenched systemic advantages for privileged groups, undermining the egalitarian ideals of the regime (Cvrcek, 2009).

The provision of healthcare services under SC was further complicated by geographic and infrastructural disparities. Urban centres often had better-equipped facilities and more qualified healthcare professionals compared to rural areas, where access to even basic healthcare services was limited (Watson, 1995). These discrepancies were exacerbated by resource allocation priorities, which often favoured industrial regions over agricultural or peripheral areas. Such patterns reflected broader socio-economic hierarchies within SC societies and introduced regional inequities in health outcomes.

Beyond access to medical services, the biological standard of living, as measured by indicators such as nutrition, height, and overall health, exhibited significant disparities across regions and socio-economic groups. Mackenbach (2012) argue that chronic stress, shaped by entrenched social hierarchies, adversely affected health outcomes even in societies that proclaimed egalitarian ideals. These inequalities were compounded by limited public health initiatives and an underdeveloped focus on preventive care. For example, cardiovascular diseases and alcohol-related mortality remained significantly higher in SC countries compared to their Western counterparts, with middle-aged men particularly affected by disproportionately high mortality rates (Bobak and Marmot, 1996).

While SC regimes espoused universal healthcare access, investments in public health infrastructure often lagged behind industrial and military spending, leaving healthcare facilities underfunded and inadequately staffed. State-run hospitals, were frequently plagued by shortages of medical supplies and equipment. This forced patients to rely on informal networks to secure adequate care, perpetuating inequalities and creating barriers for those without connections or financial resources (Mäkinen, 2000).

The persistence of these health inequalities was not uniform across SC countries. Differences in resource allocation, geographic context, and political administration resulted in

varying health outcomes. For example, urbanized countries like East Germany often experienced better healthcare access compared to more rural-dominated economies like Bulgaria or Romania, where disparities between urban and rural healthcare infrastructure were more pronounced. These health inequalities persisted into the post-Communist transition period, with the collapse of centralised healthcare systems exacerbating existing disparities. As many countries moved towards market-based healthcare models, access to quality care became increasingly dependent on individual economic resources. This shift disproportionately affected vulnerable populations, particularly those in rural areas or from lower socio-economic backgrounds, who experienced declines in both the availability and quality of healthcare services (Carlson, 1998).

The transition revealed the long-term effects of chronic underinvestment in healthcare during the SC era. Sortality rates for preventable conditions, such as cardiovascular disease and alcohol-related illnesses, remained stubbornly high in former SC countries, reflecting the cumulative impact of systemic neglect and socio-economic stressors (Cornia, 1994). In some cases, these disparities expanded even further, as post-Communist governments struggled to implement effective healthcare reforms despite economic and political instability (Cornia and Paniccià, 2000).

Although the Semashko system was designed to provide universal healthcare, its implementation undermined the system's egalitarian goals and game rise to health inequalities that persisted long after the fall of Communism. However, the legacy of such inequalities continues to shape health outcomes in the region, underscoring the complex interplay between political systems, social hierarchies, and public health. Such dynamics varied significantly across SC countries, reflecting the diversity of healthcare systems and sociopolitical structures within the Soviet bloc.

2.3 Inequality in Living Space During Soviet Communism

Housing was a critical marker of social status in Soviet Communist (SC) societies. While the state nominally provided housing free of charge via the distribution of socially owned flats or tenancy rights at highly subsidised rates, the bureaucratic allocation systems were fraught with inefficiencies and inequalities. Chronic shortages of housing, resulting from inadequate investment and rapid urbanisation, disproportionately affected lower socio-economic groups and rural populations (Morton, 1979; Milanovic, 1998). The allocation process was often characterised by long waiting lists, favouritism, and the pervasive influence of informal payments, which enabled wealthier or better-connected individuals to bypass official procedures and secure housing more quickly (Staniszkis, 2023; Matthews, 2013). These mechanisms gave rise to disparities and created structural barriers to equitable housing access.

A typical dwelling was a small one or two bedroom flats sized leading to a problem of overcrowding

The bureaucratic management of housing allocations entrenched social inequalities. Access to better-quality or larger housing was frequently tied to political status or professional rank. Members of the Communist Party and the urban elite often had privileged access to state-allocated housing, including cooperative flats and newly constructed dwellings, which were generally superior in quality and location. In contrast, lower-income families and rural migrants were often relegated to older, poorly maintained properties or shared communal flats, where multiple households were forced to share kitchen and bathroom facilities (Morton, 1979; Milanovic, 1998). By the 1960s, approximately 60% of urban households lived in communal apartments, a situation that disproportionately affected the less affluent and perpetuated significant disparities in living standards. These patterns were not uniform across SC countries, with urbanised regions like East Germany faring better in housing access compared to more rural economies like Bulgaria and Romania, where shortages and overcrowding were more pronounced. Indeed, Yugoslavia exhibited 6.1 built dwellings per 1000 inhabitants in 1982, which compared to 7.2 in Romania, Bulgaria 7.7 and Czechoslovakia 7.2 per 1000 inhabitants (BeÅ¾ovan, 1987, 85).

The system of cooperative housing further deepened social divides. These cooperatives, which allowed individuals to contribute financially toward the construction and ownership of their apartments, were often accessible only to those with sufficient resources or political connections. For the majority of workers and rural migrants, cooperative housing remained out of reach, reinforcing a stratified housing market within what was ostensibly an egalitarian society (Staniszkis, 2023). However, additionally, rural populations faced distinct disadvantages in housing access and quality. The state prioritised urban areas for housing investment, leaving rural communities with inadequate infrastructure and substandard living conditions. This urban-rural divide in housing quality mirrored broader socio-economic disparities, as rural residents often lacked the political and social capital necessary to improve their circumstances (Matthews, 2013). Regional diversity also played a role, with countries like Slovenia and Croatia benefiting from unique self-managed enterprises that invested heavily in urban housing, contrasting sharply with less developed SC countries (Milanovic, 1998).

The pervasive housing shortages and systemic inequalities in allocation were not merely consequences of economic constraints but were also exacerbated by the ideological and political structures of SC societies. Housing allocation served as a mechanism of control and reward, reinforcing loyalty to the state and the Communist Party. Those deemed politically trustworthy or professionally valuable were often granted priority access to desirable housing, while dissenters or those on the fringes of society were relegated to substandard accommodations. This system institutionalised housing inequality, embedding it within the broader fabric of SC society (Henderson et al., 2005).

Despite these challenges, the state's housing policies did succeed in some areas, particularly in increasing overall housing stock and reducing homelessness. However, the quality of housing and the inequalities in its distribution often undermined these achievements. By the

late 1980s, as SC regimes began to collapse, the inadequacies of the housing system became increasingly apparent, with many urban areas suffering from severe overcrowding and a lack of modern amenities. The subsequent transition to market economies exposed and, in many cases, exacerbated these disparities, as the privatisation of housing disproportionately benefited former elites and those with the means to purchase their properties outright (Milanovic, 1998; Heyns, 2005).

Housing under SC was a microcosm of the broader social and economic inequalities that characterised these societies. While the state's efforts to provide universal access to housing were nominally egalitarian, the realities of resource allocation, informal networks, and systemic shortages created a deeply stratified system that privileged the politically connected and the urban elite at the expense of the broader population. The diversity of housing policies and outcomes across SC countries highlights the complex interplay between local contexts, ideological frameworks, and resource limitations.

3 Data

Our primary data source is the Survey on Health, Ageing and Retirement in Europe (SHARE), a comprehensive longitudinal and cross-national study designed to collect detailed information on individuals aged 50 and above in continental Europe. This dataset offers extensive insights into health, socioeconomic status, and the dynamics of community and family connections (Börsch-Supan et al., 2013). While SHARE includes multiple waves of data collection (e.g., waves 1, 2, and 4 through 6) that provide contemporary measures of health and living conditions, our study focuses exclusively on the seventh and third wave, which include detailed retrospective information. The retrospective component of the dataset captures a broad spectrum of the respondents' life experiences, including health and healthcare histories, housing, career trajectories, household dynamics, childhood academic achievements, fertility, early-life emotional experiences, parental relationships, and adverse events during childhood.

The SHARE dataset enables a comparative analysis of individuals' experiences under different socio-political regimes, with a unique focus on retrospective measures of health and living conditions. To ensure data robustness, we use only observations where variables of interest are present and impose a minimum threshold of 50 respondents per cohort to minimize potential biases in country-level comparisons. Furthermore, we address concerns regarding recall bias by drawing on prior studies validating the reliability of retrospective responses in SHARE data (Kesternich et al., 2014; Mazzonna, 2014). One limitation to acknowledge is that we cannot estimate the pre-trends predating the introduction of comuminst regimes given the small sample of respondents at the time of the interview exposed to such as period.

We classified the surveyed countries into two distinct categories based on their histori-

cal socio-political regimes: "Non-communist economies" and "Soviet communist economies." The former encompasses countries that were not under Soviet influence, including Austria, Switzerland, Spain, Italy, France, Denmark, Greece, Sweden, Belgium, Israel, Luxembourg, Portugal, Cyprus, Finland, Malta, and Germany (before 1945 and as West Germany from 1945 to 1989). The latter category includes countries that were part of the Soviet sphere, namely the Czech Republic, Poland, Hungary, Slovenia, Estonia, Croatia, Lithuania, Bulgaria, Latvia, Romania, Slovakia, and East Germany (from 1945 to 1989).

While this classification captures broad historical and political distinctions, we acknowledge the heterogeneity within these categories, particularly among Communist economies, which varied significantly in their levels of industrialisation, rural-urban distribution, and socio-economic policies. For example, countries like Poland and Romania were predominantly rural with significant private housing ownership, while urbanized regions like East Germany and Slovenia exhibited stricter state control and different housing dynamics. This variation is explicitly addressed in our analysis to account for the diverse historical contexts of Communist and Non-communist economies.

3.1 Outcome Measures

We adopt a comprehensive approach by integrating a wide array of health indicators that span both retrospective and current evaluations of health and socio-economic circumstances. This methodological choice supports our comparative analysis by enabling the juxtaposition of health outcomes of individuals from countries previously under Soviet Communist influence against those from other European nations. By examining both childhood and adulthood health outcomes, we provide a nuanced understanding of long-term patterns of inequality and mobility across regimes.

Central to our investigation is the health trajectory of native-born individuals, encompassing both their childhood and adult years. Participants are asked about their health during their youth, offering a response spectrum from "excellent" to "very poor." Respondents also have the option to withhold their response, declare a lack of recollection, or report significant fluctuations in their childhood health status. To ensure analytical rigor, we focus on individuals who provided complete responses across key variables. Health status is operationalized through a 5-point scale, where 1 represents "very poor," 2 "fair," 3 "good," 4 "very good," and 5 "excellent." Current health is assessed on a similar 5-point scale, adjusted for consistency to range from 1 ("very poor") to 5 ("excellent").[12]

Retrospective health indicators provide valuable insights into respondents' perceptions of their past well-being, particularly for major health events or broad assessments. While

[12]Respondents were asked to describe their childhood health with the question: *"Would you describe your health during childhood as generally excellent, very good, good, fair, or poor?"* For current health, they were asked: *"How would you rate your health overall?"* with the response options: 1) Excellent, 2) Very good, 3) Good, 4) Fair, and 5) Poor.

subjective in nature, these measures are widely used and allow for meaningful historical comparisons. To ensure data robustness, we utilize a well-documented and validated dataset that demonstrates the reliability of such retrospective measures.

Our analysis also incorporates socio-economic conditions during both childhood and adulthood. To approximate the living standards of respondents, we construct a variable reflecting the number of people per room, which serves as a proxy for household crowding and living space. This variable is assessed retrospectively for childhood conditions and contemporaneously for the respondent's current household circumstances. While this measure captures critical aspects of living standards, it is complemented by other indicators of health and well-being to provide a more comprehensive view of socio-economic inequalities.[13]

The seventh wave of SHARE, which includes detailed retrospective information, forms the primary basis for our analysis. This wave allows us to link respondents' childhood conditions to their current outcomes, offering a unique perspective on the enduring effects of socio-political regimes on health and socio-economic status. The choice of these specific measures reflects their relevance to our central research question: understanding how health and socio-economic outcomes differ between countries under Soviet Communist influence and those in other European contexts.

3.2 Research Samples and Summary Statistics

We leverage two distinct subsets of the SHARE database to achieve dual objectives: initially, to analyze the inequality and mobility within the self-reported health (SAH) metrics, and subsequently, to investigate the distribution of health-related variables across various socio-economic strata.

The first subset, henceforth identified as the "Health dataset," encapsulates both current and retrospective evaluations of self-assessed health (SAH), including memories from childhood. The second subset, designated as the "Health & Housing Crowdedness" dataset, similarly encompasses contemporary and historical data concerning health and residential density. Our analysis consistently encompasses a minimum of 50 participants per birth cohort.

Accordingly, the Health dataset focuses on individuals born between 1923 and 1970. In contrast, the Health & Housing Crowdedness dataset extends its analysis to those born between 1925 and 1978. Descriptive statistics for these datasets are detailed in Table 1, while Table B10 outlines the cohort size by year of birth.

[13] To construct the variable for the number of people per room during childhood, we relied on the following survey questions: (i) *"How many rooms did your household occupy in this accommodation, including bedrooms but excluding the kitchen, bathrooms, and hallways?"* (referring to when the respondent was 10 years old), and (ii) *"Including yourself, how many people lived in your household at this accommodation when you were 10 years old?"* For adulthood, we used: (iii) *"How many rooms do you have for your household members' personal use, including bedrooms but excluding the kitchen, bathrooms, and hallways?"*, and (iv) *"Including yourself, how many people live in your household currently?"*

Table 1: Summary statistics

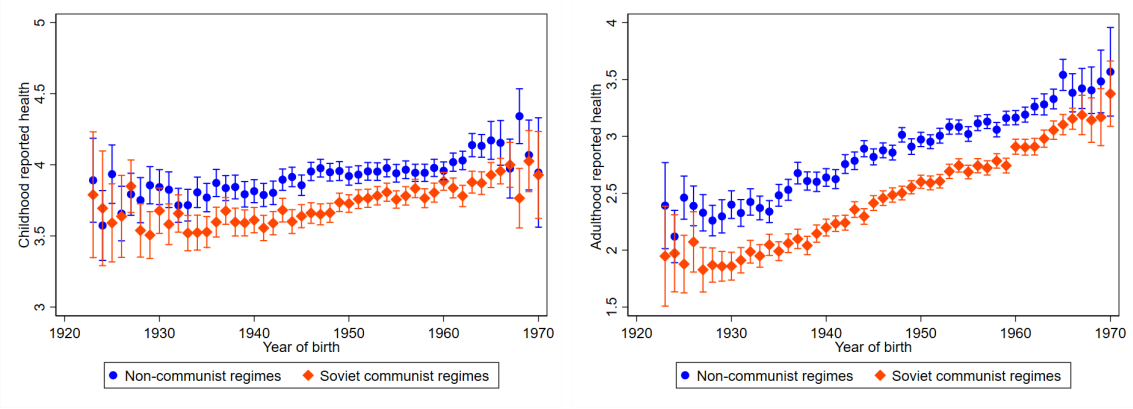
Variable	N	Mean	Std. Dev.	Min	Max
Health dataset					
Childhood SAH	55,187	3.8242	1.0410	1	5
Late adulthood SAH	55,187	2.7391	1.0520	1	5
Health & Crowdedness dataset					
Childhood SAH	28,581	3.7897	1.0596	1	5
Late adulthood SAH	28,581	2.8047	1.0426	1	5
N. people per room (child)	28,581	1.8775	1.2977	0.0909	43
N. people per room (adult)	28,581	0.6162	0.3788	0.0400	6

Notes: We restricted our analysis to solely encompass individuals who were native-born interviewed in the seventh wave and born within the timeframe spanning from 1923 to 1970 in Health dataset and from 1925 to 1967 in Health & Crowdedness dataset. We also only include observations where the variables of interest are present for all individuals and there are at least 50 individuals per cohort.

The "Health dataset," focusing on Self-Assessed Health (SAH) during both childhood and adulthood, comprises data for 55,187 individuals. The average SAH score in childhood is 3.82, with a standard deviation of 1.04. In adulthood, the mean SAH score decreases to 2.74, with a standard deviation of 1.05. SAH scores, which can range from 1 (very poor) to 5 (excellent), provide a quantifiable measure of health at both life stages.

Within the "Health & Housing Crowdedness dataset," which includes data on SAH during childhood and adulthood as well as residential density, we analyzed 28,581 individuals. Childhood SAH scores in this dataset have a mean of 3.79 and a standard deviation of 1.06, while adulthood scores average at 2.80 with a standard deviation of 1.04. This dataset also examines the average number of people per room, a proxy for living conditions, which averages 1.88 (SD = 1.30) in childhood and 0.62 (SD = 0.38) in adulthood. The number of occupants per room varies widely, from 0.09 to 43 in childhood and from 0.04 to 6 in adulthood, illustrating the range of housing conditions experienced by respondents.

Our analysis is specifically tailored to native-born individuals interviewed in the seventh wave, with birth years ranging from 1923 to 1970 for the Health dataset, and from 1925 to 1967 for the Health & Housing Crowdedness dataset. Inclusion criteria were strict, requiring complete data across all variables of interest and a minimum of 50 participants per cohort, ensuring the robustness and reliability of the findings. This approach was adopted to circumvent the potential loss of approximately 30,000 observations related to the Health variable, which would have resulted from a more narrow focus on the Health & Housing Crowdedness dataset alone.



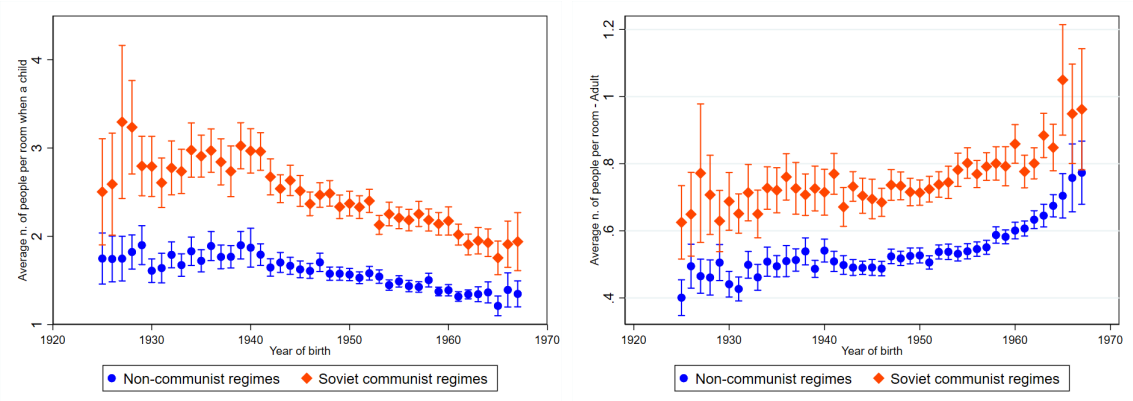
(a) Reported health by cohort in Childhood (b) Reported health by cohort in Adulthood

Figure 1: The figure reports the mean point estimates and confidence interval of the Self-assessed health rate by year of birth of the individual. Subfigure (a) refers to retrospective SAH and Subfigure (b) refers to the respondent's late adulthood SAH. We include the 95% confidence interval at the cohort level. Source: SHARE several waves

Figure 1 delineates the average and confidence intervals of self-reported health across different birth cohorts, comparing childhood and adult phases. This visual representation highlights that individuals from non-SC countries report generally better health levels compared to SC counterparts. A significant divergence in self-reported health during childhood becomes apparent, particularly for cohorts born around or before the Second World War period. In contrast, the disparity in contemporary self-reported health between non-SC and SC economies not only broadens but also exhibits minimal overlap, primarily at the distribution's extremities. This pattern underscores a consistent trend of lower self-reported health in SC economies, both retrospectively and in late adulthood, compared to their non-SC counterparts. Moreover, respondents from non-SC countries uniformly report a better health across all age groups. Notwithstanding these disparities, a convergence in the trend lines of both groups is observed, indicating a narrowing of the gap over time.

Figure 2 explores the average density (crowdedness) of living space, quantified as the number of individuals per room, contrasting childhood and current living conditions in SC and non-SC countries. The analysis reveals that SC economies historically experienced higher housing crowdedness, a gap that has notably diminished over time. Specifically, inhabitants of SC countries have consistently faced more crowded living conditions compared to those from non-communist backgrounds. Consistently, subfigure (a) illustrates a positive trend among younger generations in non-communist countries, showing a gradual decline in crowdedness during childhood relative to older cohorts, yet indicating that contemporary living spaces are significantly more spacious in comparison to both economies' historical standards. Conversely, Subfigure (b) indicates an increase in the average number of individuals per room across successive generations in both economic systems, pointing to a trend towards more

cramped living conditions for younger cohorts, with overlapping estimates between the two country groups.



(a) Childhood n. of people per room by cohort (b) Adulthood n. of people per room by cohort

Figure 2: The figure reports the mean point estimates and confidence interval of the average number of people per room by year of birth of the individual. Subfigure (a) refers to the retrospective interviewee's recollection of the number of rooms and people living in his/herdual-dimensionald in Subfigure (b) refers to the respondent's self-reported average number of people per on his/her current household. We include the 95% confidence interval at the cohort level. Source: SHARE several waves

4 Empirical Strategy

In this section, we report the inequality and mobility estimation methods and consider the extent to which a country's exposure to SC influenced measures of inequality and mobility. We analyze inequality indices of two measures of welfare, namely (i) self-reported health and (ii) living space. It is important to note that the analyses presented are descriptive in nature and do not establish causal relationships. Finally, we examine the association between the distribution of health and the distribution of living space across time to estimate a measure of social mobility, or dependence of early life health and social socio-economic status. Initially, we consider univariate inequality measures. Given that the outcomes examined take a categorical form, it is important to acknowledge that traditional inequality metrics, typically formulated for continuous data, may not optimally apply to categorical variables, such as health statuses.

Following our exploratory trends analysis, we extend the univariate analysis of inequality in health and living space to consider a bivariate analysis where status is defined by individuals' living space. This extension allows an examination of health mobility, providing a nuanced understanding of changes in health status relative to material conditions.

4.1 Univariate inequality

Given the ordinal nature of self-reported health, we employ a measure that emphasizes variability around the median rather than the mean, which is better suited for ordinal data. We use the Cowell-Flachaire index (Cowell and Flachaire, 2017), which calculates an individual's relative standing within the distribution from both ascending and descending perspectives. Let n_k denote the count of individuals in category k, and n the total number of individuals. The relative position s_l of an individual i is given by:

$$s_l = \frac{1}{n} \sum_{l=1}^{k(l)} n_l, \tag{4.1}$$

where s_l represents an individual's position within the distribution.

The Cowell-Flachaire index, defined as:

$$I_\alpha = \frac{1}{\alpha[\alpha - 1]} \left[\frac{1}{n} \sum_{l=1}^{n} s_l^\alpha - 1 \right], \tag{4.2}$$

adjusts the sensitivity of inequality depending on the value of α, highlighting inequality among either lower or higher categories.

For the continuous variable (living space, measured as individuals per room), we utilize the Gini Index, which quantifies inequality based on the Lorenz curve. The Gini Index G is given by:

$$G = 1 - 2 \int_0^1 L(p) \cdot dp, \tag{4.3}$$

where $L(p)$ denotes the Lorenz curve, illustrating the cumulative distribution of living space.

4.2 Bivariate inequality

To examine inequality across both health and socio-economic rank, we apply the Concentration Index (CI), which reflects how health status is distributed along the socio-economic ladder:

$$CI = \frac{2}{\mu} \operatorname{cov}(h, r), \tag{4.4}$$

where h represents health status, μ is its mean, and r is the individual's rank in the socio-economic distribution (Wagstaff, 2002). Given the association between covariance and ordinary least squares (OLS) regression, Kakwani et al. (1997) shows how to obtain an analogous estimate of the concentration index using a "convenient regression" technique, that transforms our health variable of interest into the rank of the distribution of our socio-economic variable. Thus, we estimate the following convenient regression:

$$2\sigma^2(\frac{h_i}{\mu}) = \alpha + \beta r_i + \varepsilon_i, \tag{4.5}$$

where β refers to CI, σ^2 is the variance of the rank r and ε is a normally distributed error term. As in Mackenbach and Kunst (1997), we control for individual-level covariates in regression 4.5, where the concentration of health inequality, $2\sigma^2\left(\frac{h_i}{\mu}\right)$, is estimated as a function of socio-economic rank r_i, individual characteristics X_i, and an error term.

Additionally, we explore how changes in socio-economic status over the life course relate to health inequality by comparing an individual's socio-economic rank in childhood to adulthood. Following Wagstaff and Watanabe (2003), we estimate the equation for $2\sigma^2_{\Delta r_i}\left(\frac{h_i}{\mu}\right)$, where Δr_i measures the rank change. The coefficient γ captures the difference in health inequality by comparing concentration indexes across socio-economic transitions. Standard errors are recalculated following Kakwani et al. (1997) for robustness.

4.3 Health and Social Mobility

To study intergenerational health mobility from childhood to adulthood, we use the mobility index as proposed by Cowell and Flachaire (2017):

$$M_\alpha = \frac{1}{\alpha[\alpha-1]n}\sum_{l=1}^{n}\left[\left(\frac{u_i}{\mu_u}\right)^\alpha\left(\frac{v_i}{\mu_v}\right)^{1-\alpha} - 1\right], \quad \alpha \in \mathbb{R}, \alpha \neq 0, 1, \tag{4.6}$$

where u_i and v_i denote the health status of individual i during childhood and adulthood, respectively, and μ_u and μ_v are the mean values of u and v. The parameter α influences sensitivity to upward or downward mobility. A positive value of α produces indices that are particularly sensitive to downward movements, while negative α values yield indices that are highly responsive to upward movements.

In addition, we examine the mobility over the distribution of the socio-economic variable. We divide each socio-economic measure into five quintiles to define a 5×5 matrix, in which we observe the proportion of individuals with poor or fair health status in each cell. We perform this exercise for each of the groups: Non-SC and SC regimes.

As is common practice in the literature, we report the intergenerational elasticity of the number of persons per room variable. Intergenerational socio-economic elasticity is a widely used measure of mobility. Our parameter of interest is obtained using a regression model that captures the link between the socio-economic status when the respondent was a child, represented by the natural logarithm of the number of persons per room, and that of the respondent's current socio-economic status, represented by the logarithm of the number of persons per room in current household. The higher the value of the intergenerational elasticity, the more significant the association between the socio-economic status of the two generations and, consequently, the lower the intergenerational mobility. A limitation of our

approach is that we derive the intergenerational elasticity (IGE) from an ordinary least squares (OLS) regression model, which captures the association at the mean of the distribution of socio-economic variables and does not take into account the potential variability of the IGE. Thus, to lessen this effect we also provide sub-sample analysis of the childhood health-related response.[14]

5 Results

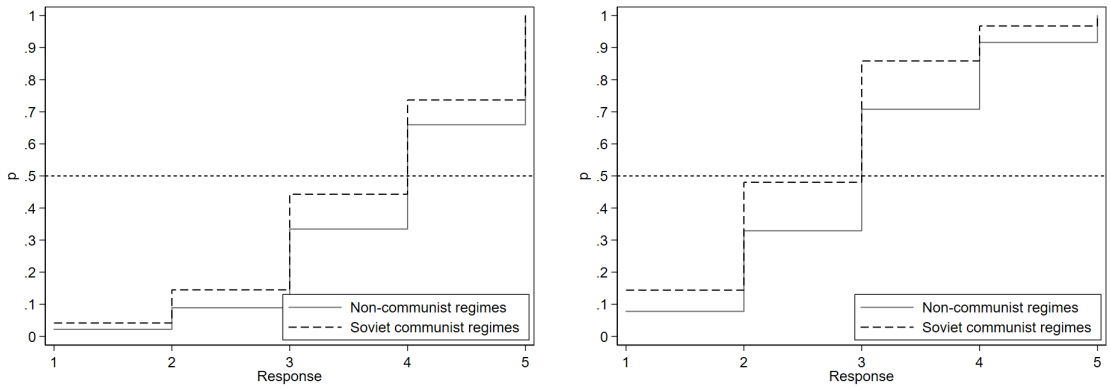
5.1 Health Inequality and Mobility

We begin presenting our results that draw from the "Health dataset" to examine the temporal dynamics of inequality and mobility in individuals' self-reported health statuses during both childhood and adulthood. This approach allows us to assess long-term trends and contrasts in health outcomes between individuals from Soviet Communist (SC) economies and those from Non-Communist economies.

5.1.1 Univariate Health Inequality

To investigate health inequality further, we examine the cumulative distribution functions (CDFs) of self-assessed health for individuals from SC and Non-SC economies. These distributions are analyzed separately for retrospective childhood health and current adult health. The results are visually represented in Figure 3, and more speciically, the CDFs reveals a clear and consistent pattern: distributions for individuals not exposed to SC lie below those for individuals from SC economies across both childhood and adulthood. This finding suggests first-order stochastic dominance of Non-SC over SC economies in terms of self-reported health. In other words, individuals unexposed to SC exhibit consistently higher levels of self-assessed health compared to their counterparts from SC economies, a trend evident during childhood and persisting into adulthood.Such persistent disparity underscores the long-term effects of differing socio-political regimes on health outcomes. The results highlight not only the lower baseline health levels in SC economies during childhood, but also the limited improvements in health outcomes across the life course for individuals from these regions compared to their Non-SC counterparts. These findings provide robust evidence of the impact of regime-specific policies and socio-economic conditions on individual well-being over time.

[14]Further technical details and derivations of these measures are discussed in the Appendix A.



(a) CDF of childhood

(b) CDF of late adulthood SAH

Figure 3: The figures report the cumulative distribution functions (CDFs) of both, childhood and late adulthood SAH of Non-Communist and Soviet Communist regimes.

Next, we turn to examine inequality of childhood self-reported health (SAH). Table 2 reports the Cowell-Flachaire indices for both Downward and Upward evaluations of retrospective health status during the respondents' childhood. We present the indices across four distinct values of the parameter α, indicative of the sensitivity to the distribution of SAH status, for both Downward and Upward health statuses. The selection of α values is pivotal; lower α values tend to produce inequality estimates more attuned to the lower-status groups, whereas higher values are inclined to favour the higher-status groups in their sensitivity.

Against the backdrop of lower inequality in SC regimes, our findings reveal that, in fact, Non-SC regimes exhibit consistently reduced levels of health inequality during childhood compared to their SC counterparts. This pattern holds across both methodological approaches and irrespective of the chosen α values. The results highlight that early-life inequalities in SC countries were shaped by systemic disparities in access to healthcare, nutrition, and housing, factors deeply influenced by socio-political structures and, for earlier cohorts, the enduring impact of the Second World War (WWII).

Further subsample analyses based on age and gender reveal that the differences in health inequality are particularly stark among individuals from SC regimes born before the end of WWII (1946), as opposed to the younger cohorts. The pre-1946 cohort experienced childhood during a period marked by wartime devastation, resource scarcity, and the delayed post-war recovery in SC countries. The war's destruction of infrastructure, combined with the transition to state-controlled healthcare systems, disproportionately affected rural and lower socio-economic groups, exacerbating health disparities. By contrast, Non-SC economies benefited from earlier post-war rebuilding and the establishment of welfare states, which mitigated inequalities in childhood health.

Gender also emerges as a significant determinant in the discrepancy of health inequality

between Non-Communist and SC economies. Notably, the disparity in health inequality between these two economic frameworks is more pronounced among males than females. This trend may reflect gendered differences in household resource allocation during childhood, with boys in SC countries potentially facing greater nutritional and healthcare disadvantages due to entrenched socio-cultural norms. By adulthood, however, the gender gap in health inequality narrows, particularly in SC economies, where centralized healthcare systems likely played a role in equalizing outcomes across genders, albeit within a low overall standard of health.

Analogously to the analysis of inequalities during childhood, we report the Cowell-Flachaire indices for the Downward and Upward status of current adult self-reported health in Table 3. In contrast to estimates presented in Table 2, our analysis reveals that when examining later-life self-reported health, Non-SC countries exhibit higher levels of health inequality compared to SC economies. This finding reflects the uniformity imposed by centralized healthcare policies in SC countries, which compressed health outcomes and limited variability, even at the expense of overall health standards. Despite this apparent reduction in inequality in adulthood, the consistently lower levels of self-reported health in SC economies indicate that these systems failed to effectively address the root causes of poor health among disadvantaged groups.

The results are particularly revealing for individuals from SC economies born before 1946. For this cohort, higher levels of health inequality in childhood are mirrored by relatively compressed inequality in adulthood. This generational contrast underscores the long-term impact of WWII, highlighting how early-life deprivation shaped inequality trajectories over time. Post-1945 cohorts show evidence of reduced health inequality in SC countries during childhood, likely reflecting the implementation of state-driven health policies. However, these reductions were insufficient to fully mitigate the effects of systemic inefficiencies and wartime legacies.

Taken together, the results displayed in Tables 2 and 3 suggest that SC countries exhibit evidence of greater health inequality when responding to questions concerning their retrospective health status compared to their current health status. This finding aligns with the idea that health outcomes are closely tied to socio-economic factors. However, such average estimates are significantly heterogeneous across cohort-specific exposure to SC. For individuals born before 1946, wartime devastation played a critical role in shaping inequality patterns, particularly in SC economies where post-war recovery was slow and uneven. Gender disparities further highlight the nuanced interplay of socio-cultural and policy-driven factors in influencing health trajectories.

Table 2: Cowell-Flachaire index. Childhood SAH

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Non-communist regimes	0.6480	0.7162	0.9168	1.5991	0.5159	0.6212	0.8461	1.5449	27,586
	(0.0011)	(0.0012)	(0.0014)	(0.0024)	(0.0015)	(0.0015)	(0.0017)	(0.0027)	
Soviet communist regimes	0.6549	0.7285	0.9372	1.6419	0.5573	0.6612	0.8895	1.6070	26,943
	(0.0012)	(0.0012)	(0.0014)	(0.0022)	(0.0012)	(0.0012)	(0.0013)	(0.0020)	
Born before 1946									
Non-communist regimes	0.6511	0.7222	0.9274	1.6222	0.5402	0.6444	0.8710	1.5798	9,000
	(0.0021)	(0.0022)	(0.0026)	(0.0042)	(0.0023)	(0.0022)	(0.0026)	(0.0041)	
Soviet communist regimes	0.6634	0.7405	0.9540	1.6721	0.5789	0.6824	0.9130	1.6425	8,278
	(0.0018)	(0.0021)	(0.0025)	(0.0040)	(0.0022)	(0.0020)	(0.0022)	(0.0037)	
Born after 1945									
Non-communist regimes	0.6450	0.7114	0.9092	1.5834	0.5030	0.6082	0.8316	1.5234	18,586
	(0.0014)	(0.0014)	(0.0017)	(0.0030)	(0.0019)	(0.0019)	(0.0022)	(0.0034)	
Soviet communist regimes	0.6487	0.7209	0.9275	1.6252	0.5471	0.6509	0.8776	1.5886	18,665
	(0.0015)	(0.0016)	(0.0018)	(0.0028)	(0.0016)	(0.0015)	(0.0017)	(0.0027)	
Male									
Non-communist regimes	0.6446	0.7119	0.9109	1.5881	0.5083	0.6135	0.8373	1.5314	12,395
	(0.0017)	(0.0018)	(0.0021)	(0.0035)	(0.0022)	(0.0022)	(0.0025)	(0.0039)	
Soviet communist regimes	0.6516	0.7235	0.9296	1.6268	0.5414	0.6463	0.8738	1.5852	11,143
	(0.0018)	(0.0019)	(0.0022)	(0.0034)	(0.0021)	(0.0020)	(0.0022)	(0.0034)	
Female									
Non-communist regimes	0.6505	0.7194	0.9213	1.6075	0.5219	0.6272	0.8530	1.5553	15,191
	(0.0015)	(0.0016)	(0.0019)	(0.0031)	(0.0020)	(0.0019)	(0.0022)	(0.0033)	
Soviet communist regimes	0.6559	0.7306	0.9409	1.6495	0.5676	0.6705	0.8987	1.6192	15,800
	(0.0015)	(0.0016)	(0.0019)	(0.0030)	(0.0015)	(0.0014)	(0.0016)	(0.0027)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

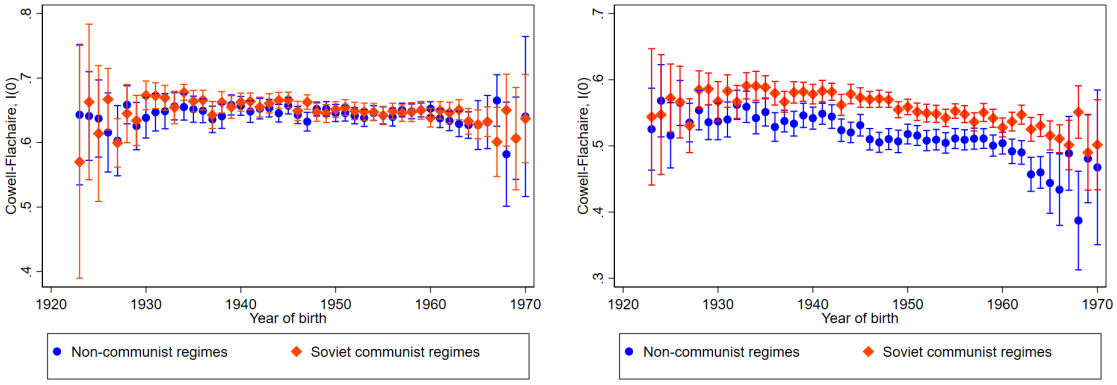
Table 3: Cowell-Flachaire index. SAH late adulthood

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Non-communist regimes	0.6261	0.7126	0.9311	1.6489	0.6401	0.7237	0.9399	1.6560	27,586
	(0.0010)	(0.0012)	(0.0016)	(0.0028)	(0.0009)	(0.0011)	(0.0016)	(0.0028)	
Soviet communist regimes	0.5930	0.6843	0.9015	1.6038	0.6354	0.7101	0.9174	1.6138	26,943
	(0.0008)	(0.0010)	(0.0014)	(0.0027)	(0.0014)	(0.0015)	(0.0019)	(0.0031)	
Born before 1946									
Non-communist regimes	0.5958	0.6863	0.9038	1.6093	0.6426	0.7182	0.9264	1.6258	9,000
	(0.0018)	(0.0022)	(0.0030)	(0.0053)	(0.0020)	(0.0025)	(0.0032)	(0.0055)	
Soviet communist regimes	0.5336	0.6303	0.8452	1.5237	0.6116	0.6807	0.8792	1.5477	8,278
	(0.0018)	(0.0019)	(0.0024)	(0.0044)	(0.0028)	(0.0028)	(0.0031)	(0.0049)	
Born after 1945									
Non-communist regimes	0.6300	0.7130	0.9285	1.6412	0.6285	0.7142	0.9308	1.6439	18,586
	(0.0014)	(0.0016)	(0.0020)	(0.0035)	(0.0010)	(0.0013)	(0.0018)	(0.0033)	
Soviet communist regimes	0.6031	0.6883	0.9002	1.5943	0.6269	0.7025	0.9087	1.5993	18,665
	(0.0011)	(0.0014)	(0.0020)	(0.0037)	(0.0015)	(0.0018)	(0.0023)	(0.0040)	
Male									
Non-communist regimes	0.6281	0.7145	0.9330	1.6515	0.6397	0.7238	0.9406	1.6577	12,395
	(0.0015)	(0.0018)	(0.0024)	(0.0043)	(0.0014)	(0.0017)	(0.0024)	(0.0043)	
Soviet communist regimes	0.5992	0.6898	0.9069	1.6112	0.6364	0.7121	0.9205	1.6195	11,143
	(0.0013)	(0.0016)	(0.0023)	(0.0043)	(0.0020)	(0.0023)	(0.0029)	(0.0049)	
Female									
Non-communist regimes	0.6243	0.7110	0.9294	1.6466	0.6403	0.7234	0.9392	1.6543	15,191
	(0.0014)	(0.0017)	(0.0022)	(0.0038)	(0.0012)	(0.0015)	(0.0020)	(0.0038)	
Soviet communist regimes	0.5882	0.6799	0.8968	1.5970	0.6339	0.7079	0.9142	1.6081	15,800
	(0.0012)	(0.0014)	(0.0019)	(0.0036)	(0.0018)	(0.0020)	(0.0025)	(0.0041)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

5.1.2 Univariate Health Inequality by Cohort

Figures 4 and 5 report the estimates of the the Cowell-Flachaire index for α values equal to 0, analyzing health inequality across cohorts for its two different reference points for status (upward and doward looking). Figure 4 focuses on retrospectively reported childhood health status, while Figure 5 examines current health status in adulthood. These estimates are derived from the "Health dataset," and confidence intervals are constructed using bootstrap standard errors to ensure robustness.



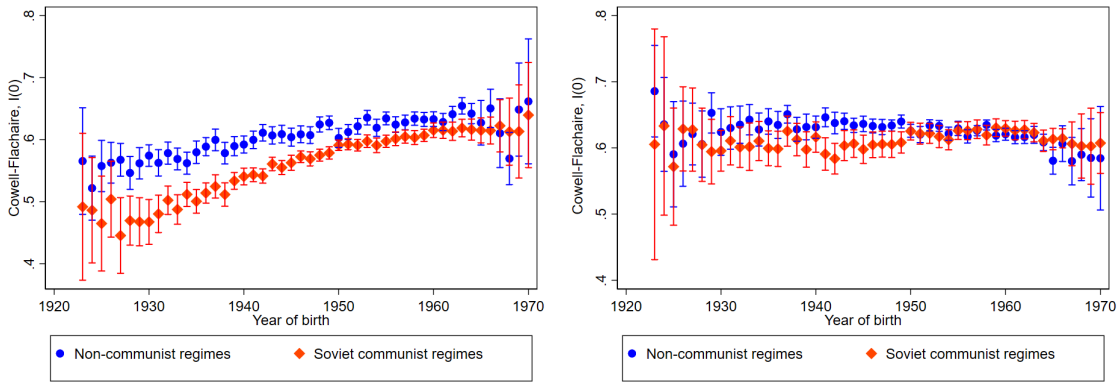
(a) Downward looking status

(b) Upward looking status

Figure 4: Point estimate and confidence interval of the Cowell-Flachaire index by cohort, I(α=0). Childhood SAH. 95% confidence intervals derived using bootstrap standard errors.

The results for childhood self-reported health (SAH) in Figure 4 reveal a marked contrast between SC and Non-SC regimes. When examining the "downward-looking status" version of the Cowell-Flachaire index, no discernible differences are observed between the two regime types across cohorts. This finding suggests that, for lower-status groups, inequality in childhood health was similarly distributed in SC and Non-SC economies. However, if we take the "upward-looking status" version of the Cowell-Flachaire index as our preferred estmatte of health inequality, it reveals that inequality in upward health trajectories is consistently lower in Non-SC regimes compared to SC regimes, particularly for respondents born after the 1940s. Namely, from the 1950s onward, individuals in Non-SC countries experienced greater mobility toward better health statuses, while those in SC countries faced higher barriers to health improvement during childhood.

The observed patterns align with the historical context: SC countries, particularly those recovering from the Second World War, struggled with systemic deficiencies in healthcare infrastructure and nutrition, which disproportionately affected upward mobility in health outcomes. Conversely, Non-SC regimes benefited from earlier investments in public health systems and welfare policies aimed at reducing childhood health disparities.



(a) Downward looking status

(b) Upward looking status

Figure 5: Point estimate and confidence interval of the Cowell-Flachaire index by cohort, I(α=0). Late adulthood SAH. 95% confidence intervals derived using bootstrap standard errors.

Figure 5 shifts the focus to current health status in adulthood. Now, the results reveal a reversal of patterns observed in childhood. For the "downward-looking status", health inequality is higher in Non-SC regimes compared to SC regimes, particularly for cohorts born before the 1960s. This suggests that, while SC regimes exhibited greater inequality in childhood health, during adulthood they managed to effectively redcue the differences in health outcomes across the population, particularly for lower-status groups. In contrast, when we turn to "upward-looking status" measures, our estimates reveal smaller and statistically non-significant differences between SC and Non-SC regimes across most cohorts. The exception being for individuals born in the 1940s, where SC regimes exhibit slightly higher inequality in upward health trajectories. This pattern highlights the role of historical and systemic factors, such as the lagged effects of WWII and the rigidities of centralized healthcare systems, in shaping health outcomes.

The generational dynamics revealed by Figures 4 and 5 underscore the lasting impact of WWII on health inequality. For cohorts born in the 1930s and 1940s, particularly in SC regimes, the war's devastation resulted in significant health disparities. Limited access to nutrition, healthcare, and stable living conditions during critical developmental years created enduring gaps in health outcomes. The post-war recovery in SC countries was further hindered by the prioritization of industrialization over public health investments, exacerbating these disparities. In contrast, Non-SC regimes benefited from earlier recovery efforts and the establishment of welfare states that prioritized equitable access to healthcare and improved living conditions. These historical advantages are reflected in the lower inequality observed in childhood health upward mobility in Non-SC regimes.

For post-1950 cohorts, the differences in health inequality between SC and Non-SC regimes diminish, particularly for the downward-looking status in adulthood. This reflects

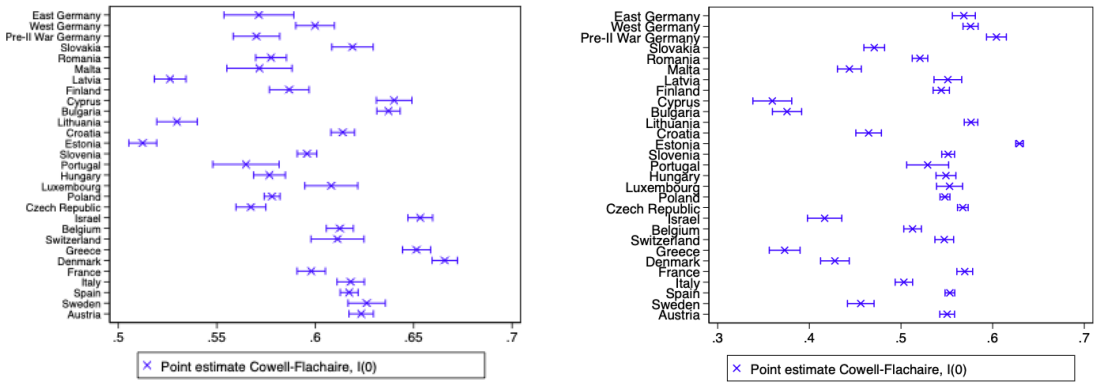
the efforts of SC regimes to standardize healthcare access and reduce disparities through centralized policies. However, these policies often came at the expense of overall health quality, as reflected in consistently lower average health levels in SC economies.

Finally, while Figures 4 and 5 provide a broad comparison of SC and Non-SC regimes, it is important to acknowledge the heterogeneity within these categories. Countries within SC regimes varied widely in their socio-economic policies and recovery trajectories. For example, urbanized regions such as East Germany implemented stricter state controls on healthcare and housing, while more rural economies like Romania and Bulgaria faced greater infrastructural deficits. Examining cross-country differences within SC and Non-SC regimes would provide additional insights into the interplay of policy, historical context, and health inequality.

The results from Figures 4 and 5 highlight the complex and dynamic nature of health inequality across cohorts and socio-political regimes. While Non-SC regimes generally exhibit lower inequality in childhood health, SC regimes demonstrate greater compression of health outcomes in adulthood, albeit within a lower overall standard of health. The interplay of cohort-specific exposure to historical shocks, such as WWII, and systemic policy differences underscores the importance of historical and contextual factors in shaping health inequality trajectories over the life course.

5.1.3 Univariate Health Inequality by Country

Figures 6 and 7 present the Cowell-Flachaire index estimates for downward and upward health inequality ($\alpha = 0$) by country. Figure 6 focuses on childhood SAH, while Figure 7 examines health inequality in late adulthood. These results provide a granular view of health inequality within individual countries, offering insights into the heterogeneity that exists within SC and Non-SC regimes.



(a) Downward looking status

(b) Upward looking status

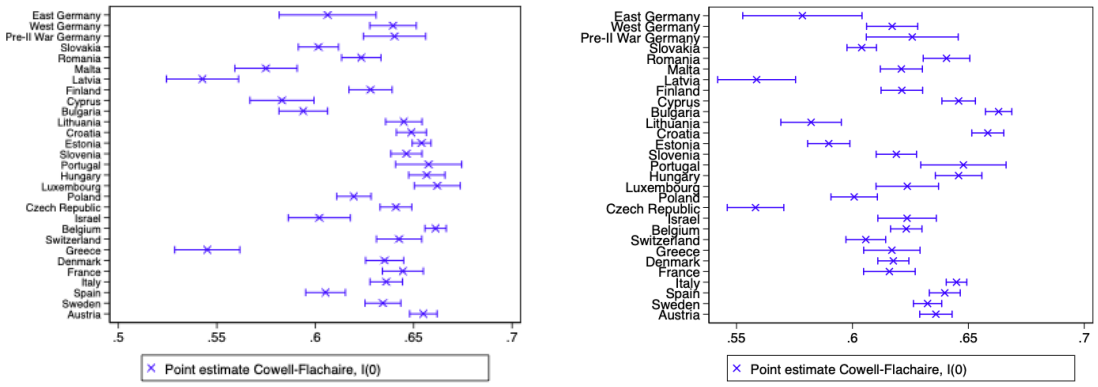
Figure 6: Point estimate Cowell-Flachaire index, I(α=0). Childhood SAH. 95% confidence intervals derived using bootstrap standard errors.

Figure 6 displays the downward and upward inequality indices for childhood SAH across the countries in our dataset. The distinction between downward-looking and upward-looking inequality measures is critical for understanding the nuances of health inequality.

i) "Downward-looking inequality": Several SC countries, such as East Germany, Poland, and Hungary, exhibit relatively low levels of health inequality when focusing on the downward perspective. This suggests that, for childhood health outcomes, SC regimes may have succeeded in limiting the extent of inequality among the least healthy individuals. The centralized policies of SC regimes, which prioritized access to basic healthcare and education, may have contributed to reducing inequality among lower-status groups during childhood, despite the overall deficiencies in healthcare infrastructure.

ii) "Upward-looking inequality": When examining upward inequality, which reflects disparities among individuals with better health statuses, no clear country-specific patterns emerge. This lack of distinct trends may indicate that upward mobility in childhood health was more uniformly constrained across countries, regardless of the socio-political regime. It also underscores the persistent challenges in promoting higher health standards in SC countries, where systemic inefficiencies often limited opportunities for upward mobility in health outcomes.

The results from Figure 6 highlight the diversity within SC and Non-SC regimes. For instance, while some SC countries (e.g., East Germany) appear to have succeeded in compressing downward health inequality, others (e.g., Romania and Bulgaria) show comparatively higher levels of inequality. This variation underscores the importance of considering country-specific factors, such as resource allocation, healthcare quality, and urban-rural divides, in interpreting health inequality trends.



(a) Downward looking status

(b) Upward looking status

Figure 7: Point estimate Cowell-Flachaire index, I(α=0). Late adulthood SAH. 95% confidence intervals derived using bootstrap standard errors.

Figure 7 extends the analysis to late adulthood health, providing a perspective on how inequality evolves over the life course.

i) "Downward-looking inequality": In contrast to childhood SAH, Non-SC countries exhibit noticeably higher levels of downward health inequality in adulthood. This trend suggests that Non-SC regimes, characterized by market-based healthcare systems, may have struggled to provide equitable access to healthcare for disadvantaged groups. Conversely, SC countries show lower levels of downward inequality, reflecting the compressive effect of centralized healthcare policies. However, it is important to note that this compression often occurred at the expense of overall health quality, as SC systems frequently faced shortages of medical supplies and limited investments in healthcare infrastructure.

ii) "Upward-looking inequality": For upward inequality in adulthood, the differences between SC and Non-SC regimes are less pronounced. While Non-SC countries generally exhibit slightly higher levels of inequality, the variations are not statistically significant across most countries. This finding aligns with broader observations that upward mobility in health outcomes tends to be more constrained across both regime types in adulthood, reflecting the cumulative effects of earlier life inequalities.

The results from Figures 6 and 7 highlight the substantial heterogeneity within SC and Non-SC regimes. For example:

- SC countries such as East Germany and Slovenia exhibit relatively low levels of both downward and upward health inequality in adulthood, likely reflecting their more urbanized and industrialized economies, which facilitated better healthcare access.
- Conversely, SC countries like Romania and Bulgaria show higher levels of inequality, particularly in childhood health, reflecting the challenges faced by rural-dominated economies with weaker healthcare systems and greater infrastructural deficits.

- Among Non-SC countries, Scandinavian nations such as Sweden and Denmark consistently demonstrate lower levels of health inequality, underscoring the role of robust welfare states in promoting equitable health outcomes. In contrast, countries like Portugal and Greece display higher levels of inequality, reflecting the historical underinvestment in public healthcare in these regions.

These findings emphasize the importance of examining health inequality at the country level to uncover the nuances that aggregate SC versus Non-SC comparisons may obscure. While SC regimes appear to have been relatively effective in compressing downward health inequality in adulthood, this compression often came at the expense of upward mobility and overall health quality. Non-SC regimes, by contrast, demonstrate greater variability in inequality, reflecting the diverse policy approaches and socio-economic contexts across countries.

The interplay between historical shocks, such as the WWII, and subsequent policy responses is also evident in these results. For instance, SC countries recovering from WWII often prioritized rapid industrialization over investments in healthcare infrastructure, leading to persistent inequalities in childhood health. Non-SC countries, particularly those in Western Europe, benefited from earlier post-war reconstruction and the establishment of welfare states, which helped mitigate health disparities.

Overall, Figures 6 and 7 illustrate the complex and multi-faceted nature of health inequality across countries and regimes. These results underscore the need for a nuanced, country-specific approach to understanding the drivers of health inequality and mobility over the life course.

5.1.4 Health Mobility

Table 4: Mobility index

	Non-communist regimes	**Soviet communist regimes**
$\alpha = 0$	0.2375	0.2274
	(0.0021)	(0.0020)
$\alpha = 0.5$	0.2203	0.2117
	(0.0017)	(0.0016)
$\alpha = 1.0$	0.2330	0.2198
	(0.0021)	(0.0017)

Notes: Standard errors are in parentheses and as in Cowell and Flachaire (2018), we compute the standard errors with the percentile bootstrap method.

An extension of previous estimates is the analysis of health and social mobility differences between individuals exposed to SC and Non-SC economies. Table 4 presents the Cowell-Flachaire Mobility index for both regime types, computed for various values of α (0, 0.5, and 1). These indices provide a measure of the relative mobility of individuals between childhood and adulthood health statuses, with higher values indicating greater mobility.

The results indicate that SC regimes exhibit consistently lower mobility indices compared to Non-SC economies. For instance, at $\alpha = 0$, the mobility index for Non-SC regimes is 0.237, while for SC regimes, it is 0.227. This pattern persists across all α values, reflecting a structural rigidity in health mobility within SC regimes. The finding aligns with the notion of egalitarian immobility," where SC policies, while aimed at reducing inequality, also suppressed upward mobility, limiting opportunities for individuals to improve their health trajectories over time.

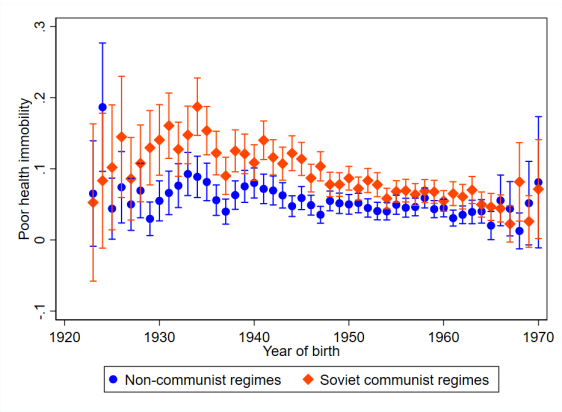


Figure 8: Immobility of poor health states by cohort. This figure shows the proportion of individuals that assessed their health statuses in both periods, childhood and late adulthood, poor or fair.

To contextualize the mobility indices further, we introduce a measure of "health immobility." This variable equals 1 if an individual reported both their childhood health status and their current health status (at the time of the interview) as "poor" or "fair," representing the two lowest levels of the five-point health scale. Figure 8 plots this measure against the year of birth for individuals from SC and Non-SC economies.

The estimates from Figure 8 reveal significant differences in health immobility between the two regimes. Immobility is notably higher in SC regimes, with a pronounced gap during the cohorts born between 1930 and 1950. This period corresponds to the years directly impacted by the WWII and its aftermath, highlighting the long-term effects of historical shocks on health trajectories. In SC regimes, wartime devastation, resource scarcity, and systemic inefficiencies in healthcare provision likely contributed to entrenched immobility among disadvantaged groups. By contrast, Non-SC economies, particularly those in Western Europe, benefited from earlier post-war recovery and the establishment of welfare systems that fostered greater health mobility.

The observed pattern of lower mobility in SC regimes underscores the structural constraints imposed by centralized policies. While SC economies succeeded in compressing health inequality by limiting disparities among lower-status groups, this compression often came at the expense of upward mobility. Individuals in SC regimes faced systemic barriers,

including limited access to quality healthcare and poor infrastructure, which restricted their ability to improve their health outcomes over time. The persistence of immobility in SC regimes highlights the dual challenge of achieving equality while fostering opportunities for improvement.

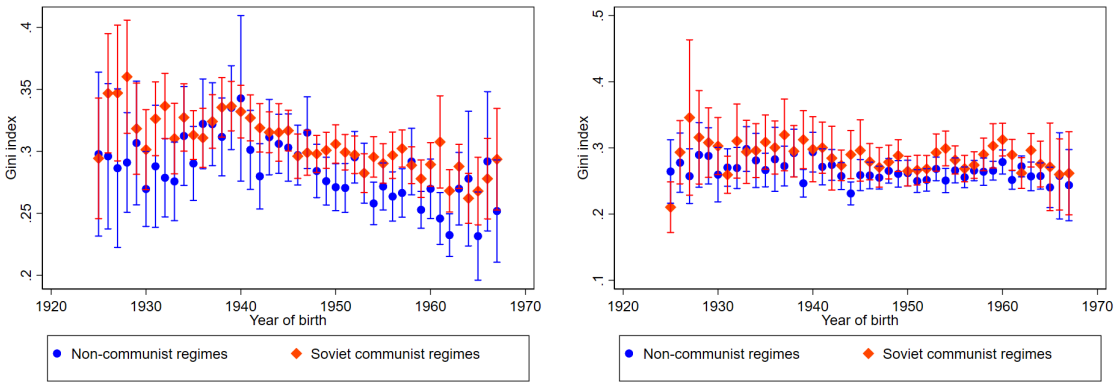
By contrast, Non-SC economies, characterized by market-based healthcare systems and diverse policy approaches, exhibit higher mobility indices. These regimes allowed for greater differentiation in health outcomes, enabling upward trajectories for a broader segment of the population. However, the variability in mobility indices across Non-CS economies suggests that these gains were not uniform and depended on country-specific factors such as healthcare investment, social safety nets, and historical recovery efforts.

The cohort analysis in Figure 8 provides additional insights into the temporal dynamics of health mobility. For cohorts born before 1950, immobility is significantly higher in SC regimes compared to Non-SC economies. This reflects the compounded effects of WWII and the subsequent focus on industrialization over healthcare investment in SC countries. For later cohorts, born after 1950, the gap in immobility narrows, suggesting that post-war SC policies, such as the expansion of basic healthcare and housing, may have had some success in reducing health immobility. Nevertheless, these improvements remained insufficient to eliminate the structural rigidity embedded in SC systems.

The results from Table 4 and Figure 8 illustrate the complex interplay between regime type, historical context, and health mobility. While SC regimes aimed to reduce inequality, their centralized approaches often entrenched structural rigidity, limiting opportunities for upward health mobility. Non-SC regimes, though exhibiting higher variability, generally provided greater opportunities for individuals to escape poor health statuses over the life course.

5.2 Inequality in Living Space

In this section, we examine inequality in living space as a proxy for socio-economic status during both childhood and adulthood. To achieve this, we utilize the "Health & Crowdedness" dataset, which combines self-reported health measures with data on the average number of individuals per room, a widely used indicator of household living standards. This dataset allows us to explore the relationship between socio-economic conditions and health trajectories, providing valuable insights into how early-life socio-economic status influences health outcomes over the life course.



(a) Childhood

(b) Late adulthood

Figure 9: Point estimate of the Gini index of average number of persons per room by cohort. 95% confidence intervals derived using bootstrap standard errors.

Figure 9 presents the Gini indices for the number of persons per room by cohort, stratified by year of birth. Panel (a) illustrates inequality during childhood, while Panel (b) shows inequality in living space during late adulthood, based on respondents' current socio-economic conditions.

The results from Panel (a) of Figure 9 indicate a rise in the Gini index for cohorts born around the 1940s, suggesting increased inequality in living space during childhood for these individuals. This trend likely reflects the widespread socio-economic disruptions caused by the WWII, which affected populations on both sides of the Iron Curtain. Wartime destruction and resource scarcity led to significant disparities in housing quality and availability, particularly in regions with large urban populations or high concentrations of displaced individuals.

No statistically significant differences in childhood living space inequality are found between SC and Non-SC regimes, as reflected by the overlapping confidence intervals. That is, during childhood, the socio-political regime did not play a decisive role in determining inequality in living space. In contrast, broader historical and economic factors, such as wartime devastation and post-war reconstruction efforts, were likely more influential in shaping household conditions.

Panel (b) of Figure 9 shows that living space inequality in adulthood has remained relatively stable across cohorts, with no significant differences between SC and Non-SC regimes. The persistence of stable Gini indices for current socio-economic status suggests that both regime types maintained consistent levels of inequality in living space among older adults, despite their contrasting socio-economic systems. In SC regimes, centralized housing policies aimed to provide equitable access to housing but often failed to address regional disparities and quality deficits. Conversely, in Non-SC regimes, market-based housing systems allowed

for greater variability in living standards but also promoted upward mobility for certain groups.

Table 5: Concentration index

Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.001	0.011
(0.008)	(0.012)
Indirect standardisation	
-0.352	-0.227
(0.013)	(0.016)
late adulthood SAH	
0.021	0.026
(0.009)	(0.012)
Indirect standardisation	
-0.075	-0.068
(0.010)	(0.014)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997). Our regression model includes indirect standardization during both childhood and adulthood. For the former, we incorporate the number of childhood conditions and the gender of the survey respondent. For the latter, we consider whether the interviewee suffers from chronic conditions, their Body Mass Index, whether they experienced dispossession and/or hunger before 1989, the Brody Instrumental Activities of Daily Living Scale, and the gender of the survey respondent.

Table 5 presents the concentration index for childhood and adulthood SAH, stratified by SC and Non-SC regimes. The concentration index measures the degree of inequality in health outcomes relative to socio-economic status, with higher absolute values indicating greater inequality.

For childhood SAH, the concentration indices are close to zero for both SC (0.011) and Non-SC (0.001) regimes, suggesting that health inequality during childhood was not strongly associated with socio-economic status. However, after applying indirect standardization, we observe a negative concentration index for both regime types, with SC regimes (-0.227) exhibiting slightly less inequality than Non-SC regimes (-0.352). This pattern indicates that SC policies, despite their limitations, may have somewhat mitigated the association between childhood living space and health outcomes.

In adulthood, the concentration indices increase slightly for both SC (0.026) and Non-SC (0.021) regimes, reflecting a modest but significant association between current health and socio-economic status. After performing an indirect standardization, the concentration index remains negative for both regime types, though the magnitude is smaller compared to childhood (-0.068 for SC and -0.075 for Non-SC regimes). This result suggests that while socio-economic disparities persist into adulthood, the degree of inequality associated with living space is less pronounced in SC regimes, likely due to the compressive effects of centralized policies.

The results from Figure 9 and Table 5 highlight the complex relationship between living space inequality and health across different life stages and socio-political regimes. During childhood, the overlap in Gini indices between SC and Non-SC regimes suggests that regime type was not a dominant determinant of living space inequality. Instead, historical shocks such as WWII played a pivotal role in shaping household conditions for cohorts born in the 1940s. The post-war period saw significant efforts in both regimes to rebuild housing and stabilize living conditions, though the approaches differed markedly.

In adulthood, the stability of Gini indices and the modest concentration indices reflect the enduring influence of early-life socio-economic conditions on health outcomes. SC regimes, with their focus on standardized housing policies, appear to have compressed inequality to some extent, particularly for disadvantaged groups. However, this compression often came at the expense of quality and upward mobility. Non-SC regimes, while exhibiting greater variability, allowed for higher average living standards and more opportunities for upward mobility among certain socio-economic groups.

The findings underscore the importance of considering both historical context and regime-specific policies in analyzing living space inequality. While SC regimes aimed to reduce disparities, their centralized approaches often failed to address regional and infrastructural challenges. Non-SC regimes, on the other hand, leveraged market mechanisms to improve overall living standards but struggled to eliminate inequalities among the most disadvantaged groups.

5.3 Socio-Economic Health Inequality and Mobility

Table 6: Concentration index rank change $\delta(r) = rank_{child} - rank_{adult}$

Non-communist regimes	*Soviet communist regimes*
-0.004	-0.003
(0.000)	(0.000)

Notes:The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997)

Table 6 extends the analysis of Table 5 by examining rank changes in the CI for socio-economic status (number of people per room) between childhood and adulthood. The health variable corresponds to the current status, and the change in rank reflects shifts in household crowding over the life course. The estimates (-0.004 for Non-communist and -0.003 for SC economies) indicate no statistically significant change in the rank-based socio-economic gradient over time.

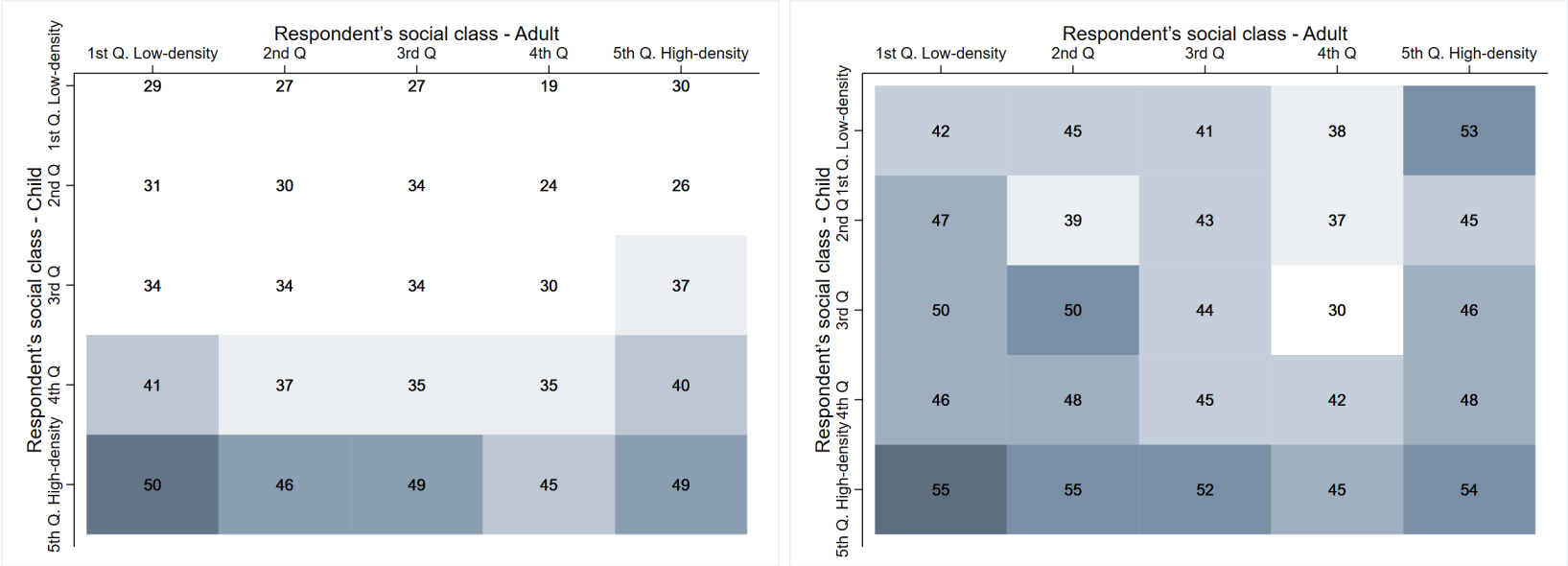
This finding suggests that the overall socio-economic gradient in health has remained stable across generations in both regime types. Importantly, the trend toward a stronger

concentration of favorable health outcomes in less crowded rooms in adulthood compared to childhood highlights the enduring influence of socio-economic conditions on health trajectories. The relative stability of the gradient underscores the systemic nature of socio-economic health inequalities, which persist despite differing policy approaches between SC and Non-communist regimes.

These results provide important insights into the socio-economic dimensions of health inequality and mobility across life stages and regimes. The near-zero CIs for childhood health indicate a relatively even distribution of health outcomes during early life, likely shaped by shared historical events such as WWII. However, the negative CIs after standardization reveal the enduring influence of socio-economic gradients, with better health outcomes concentrated in higher-status households. This pattern is more pronounced in Non-communist economies, where market-driven policies allowed for greater variability in living standards but also reinforced socio-economic gradients.

In SC economies, the smaller magnitude of the CIs reflects the compressive effects of centralized policies aimed at equalizing socio-economic outcomes. However, these policies were often insufficient to address the root causes of health inequalities, particularly those stemming from childhood conditions. The persistence of stable rank changes over time further underscores the systemic nature of these inequalities, which are deeply embedded in the socio-economic structures of both regimes.

While SC regimes succeeded in narrowing disparities to some extent, their centralized policies often came at the expense of quality and upward mobility. Non-communist regimes, on the other hand, allowed for greater variability in health outcomes, with higher average living standards but persistent socio-economic gradients. These results underscore the complex interplay between socio-economic status, health, and policy, revealing the challenges of achieving both equality and mobility in diverse socio-political contexts.



(a) Non-communist regimes

(b) Soviet communist regimes

Figure 10: Matrix of the percentage of individuals with poor or fair current self-rated health across quintiles

5.4 Social Mobility Analysis

Figure 10 provides a visual representation of social mobility through a matrix depicting the movement of individuals from their childhood socio-economic status to their status in late adulthood. The matrix illustrates the prevalence of poor and fair self-reported health across quintiles based on the socio-economic measure of the number of people per room during childhood (on the y-axis) and adulthood (on the x-axis). Quintile one represents households with fewer people per room, indicative of better living conditions, while quintile five signifies more crowded conditions.

The shading in the matrix represents the prevalence of poor and fair health outcomes, with darker shades indicating higher prevalence. Clear disparities are observed between SC and Non-communist regimes. Across nearly all quintiles, SC economies display a higher prevalence of poor and fair self-rated health compared to their Non-communist counterparts. This pattern underscores the lasting effects of socio-economic and health inequalities entrenched during formative years in SC regimes.

A closer inspection of the y-axis highlights that childhood crowdedness is strongly associated with poor health outcomes in adulthood across both regimes. Individuals in the fifth quintile during childhood consistently report higher proportions of poor and fair health states as adults, irrespective of their socio-economic quintile in adulthood. This persistence suggests that early-life disadvantages exert a lasting influence on health trajectories.

The patterns along the x-axis reveal differences in how adult socio-economic status correlates with health outcomes between the two regimes. In SC economies, adult living conditions show a more pronounced association with poor health outcomes. For instance, individuals in the fifth quintile as adults report significantly higher prevalence rates of poor health, even when their childhood conditions were relatively favorable. In Non-communist regimes, the association between adult socio-economic status and poor health outcomes is less stark, reflecting the role of welfare policies in mitigating the impact of socio-economic disadvantages.

The matrix suggests contrasting mobility patterns between SC and Non-communist regimes. While Non-communist regimes exhibit lower overall prevalence of poor health states, reflecting upward socio-economic mobility and its associated health benefits, SC regimes show less pronounced improvements. These findings suggest that socio-economic mobility in SC regimes is insufficient to mitigate the adverse effects of childhood disadvantages on adult health, reflecting broader evidence of "egalitarian immobility" in SC societies.

Table 7: Inter-generational Elasticity by Regime Type

	Overall	Non-communist regimes	Soviet communist regimes
Overall	0.235***	0.191***	0.102***
	(0.005)	(0.007)	(0.010)
Male	0.248***	0.205***	0.113***
	(0.008)	(0.011)	(0.015)
Female	0.227***	0.180***	0.098***
	(0.007)	(0.010)	(0.013)

Notes: Standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The table quantifies intergenerational elasticity by regressing adulthood living conditions (measured by the logarithm of the number of occupants per room) on childhood living conditions.

Table 7 quantifies intergenerational elasticity by regressing adulthood living conditions, measured by the logarithm of the number of occupants per room, on childhood living conditions. At the aggregate level, childhood living arrangements explain approximately 24% of the variation in adult living conditions. However, significant differences emerge when disaggregating by regime type and gender. Elasticity in non-communist regimes is significantly higher than in Soviet communist regimes, with the former nearly double in magnitude. This result suggests that childhood socio-economic conditions exert a stronger influence on adult outcomes in non-communist regimes. The greater persistence of childhood living conditions in these contexts may reflect deeper socio-economic stratifications or differing degrees of economic mobility. By contrast, the lower elasticity observed in Soviet communist regimes indicates a more uniform distribution of living standards, consistent with the compressive effects of centralized policies.

Disaggregating by gender, males exhibit higher intergenerational elasticity across both regime types compared to females. Men's adult living conditions are more strongly linked to their childhood environments. For women, while the influence of childhood living conditions remains significant, the effect is slightly weaker. This gender difference may reflect variations in societal roles, labor market participation, and family dynamics that influence pathways to adult living standards.

Table 8 further explores these patterns by examining intergenerational elasticity under two specific health conditions: poor infant health and good infant health. For individuals with poor childhood health, elasticity patterns reveal nuanced differences over time and across regimes. Among cohorts born before 1945, elasticity in non-communist regimes is 0.175 with a standard error of 0.037, while Soviet communist regimes exhibit a lower elasticity of 0.094 with an identical standard error of 0.037. This contrast highlights the stronger persistence of childhood disadvantages in market-driven economies relative to centralized systems. Disaggregating by gender, males and females show comparable elasticity in non-communist regimes, with values of 0.156 and 0.192 respectively. In Soviet communist regimes, elasticity for females drops to 0.063 with a standard error of 0.044, indicating weaker intergenerational transmission among women with poor health in Soviet economies.

Table 8: Inter-generational Elasticity by Infant Health and Regime Type

	Poor infant health		**Good infant health**	
	Non-communist regimes	**Soviet communist regimes**	**Non-communist regimes**	**Soviet communist regimes**
Year of birth $\leq$ 1945	0.175***	0.094***	0.200***	0.080***
	(0.037)	(0.037)	(0.013)	(0.017)
Male	0.156***	0.156***	0.210***	0.075***
	(0.0514)	(0.063)	(0.018)	(0.024)
Female	0.192***	0.063	0.191***	0.089***
	(0.052)	(0.044)	(0.018)	(0.023)
Year of birth $>$ 1945	0.178***	0.181***	0.220***	0.139***
	(0.029)	(0.034)	(0.009)	(0.014)
Male	0.156***	0.134**	0.236***	0.150***
	(0.049)	(0.055)	(0.014)	(0.021)
Female	0.194***	0.213***	0.207***	0.133***
	(0.037)	(0.043)	(0.013)	(0.018)

Notes: Standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The table reports intergenerational elasticity by regressing adulthood living conditions (logarithm of the number of occupants per room) on childhood living conditions. Results are disaggregated by infant health, year of birth, regime type, and gender.

For cohorts born after 1945, the elasticity for poor infant health stabilizes in non-communist regimes at 0.178 with a standard error of 0.029 but rises in Soviet communist regimes to 0.181 with a standard error of 0.034. This trend suggests that early health disadvantages in Soviet regimes increasingly impacted adulthood living conditions, potentially reflecting post-war shifts in healthcare access, social policies, or economic conditions. The gender breakdown further underscores this dynamic, with elasticity for females in Soviet communist regimes reaching 0.213 compared to 0.194 for females in non-communist regimes. For males, elasticity in non-communist regimes remains at 0.156, while in Soviet regimes, it is lower at 0.134.

In contrast, individuals with good childhood health experience consistently higher elasticity in non-communist regimes compared to Soviet communist regimes across all birth cohorts. For those born before 1945, elasticity is 0.200 in non-communist regimes with a standard error of 0.013, compared to 0.080 in Soviet communist regimes with a standard error of 0.017. This suggests that favorable childhood conditions had a stronger long-term influence in market-driven economies. Disaggregating by gender, men exhibit slightly higher elasticity at 0.210 compared to women at 0.191 in non-communist regimes. In Soviet communist regimes, the results are more compressed, with elasticity for males at 0.075 and females at 0.089.

For cohorts born after 1945, elasticity rises further in both regimes, particularly in non-communist contexts where it reaches 0.220 with a standard error of 0.009. Gender-specific results show that malesâ elasticity in non-communist regimes rises to 0.236, while in Soviet regimes, it reaches 0.150. For females, elasticity remains at 0.207 in non-communist regimes compared to 0.133 in Soviet regimes. These results highlight that menâs outcomes are more closely tied to childhood environments, while womenâs outcomes are influenced by additional societal and familial factors.

The results presented in Tables 7 and 8 and Figure 10 highlight the complex interplay between childhood conditions, adult socio-economic outcomes, and regime type. Non-communist regimes demonstrate greater intergenerational persistence, driven by deeper socio-economic stratifications and less uniform living standards. By contrast, Soviet communist regimes exhibit lower overall elasticity, reflecting the compressive effects of centralized policies but also limitations in addressing long-term disadvantages. The findings also reveal that early health conditions play a significant role in determining intergenerational elasticity, with notable differences between birth cohorts and across regime types. The gender-specific findings emphasize differential pathways through which men and women navigate early-life conditions to adult living standards. Men's outcomes are more strongly linked to their childhood environments, while women's outcomes appear more influenced by societal and familial factors.

5.5 Educational Attainment as a Proxy for Socio-Economic Status

In this section, we investigate the relationship between educational attainment and health outcomes, using the time span between an individual's year of birth and the year of school completion as a proxy for socio-economic status (SES). This measure provides a consistent and comparable metric across regimes and national contexts, addressing challenges inherent in standardizing years of formal education due to structural differences in educational systems.

The use of educational attainment aligns with extensive literature that highlights education as a critical determinant of life-course outcomes. Education is strongly correlated with income, access to resources, and health behaviors, making it a robust indicator of SES. By focusing on the duration from birth to school completion, we mitigate biases introduced by variations in educational systems, enabling robust comparisons across countries and political regimes.

To quantify the distribution of health outcomes across SES ranks, we compute the Concentration Index (CI) as specified in Equation 4.4:

$$CI = \frac{2}{\mu}\text{Cov}(h, r), \tag{5.1}$$

where h denotes self-assessed health (SAH), μ is the mean of the health measure, and r represents an individual's rank in the socio-economic distribution, defined by their educational duration. This approach allows us to examine how health outcomes are distributed across SES, shedding light on the role of education in shaping health inequalities.

Table 9: Concentration index. Schooling

Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0204	0.0198
(0.0072)	(0.0074)
Late adulthood SAH	
0.0588	0.0679
(0.0070)	(0.0075)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).

Table 9 presents CI estimates for both childhood and late adulthood SAH, disaggregated by regime type. The results highlight notable patterns:

- Childhood SAH: The CI values for childhood SAH are small and similar between regimes (0.0204 for Non-communist and 0.0198 for SC regimes), with no significant differences. These findings suggest that during early life, health outcomes were relatively evenly distributed across educational ranks, regardless of regime type. This uniformity may reflect the broader

socio-economic disruptions of the early 20th century, which leveled health outcomes across SES ranks during childhood.

- Late Adulthood SAH: In late adulthood, the CI values increase for both regimes, indicating a stronger concentration of favorable health outcomes among individuals with longer educational durations. Notably, the CI is higher for SC regimes (0.0679) than for Non-communist regimes (0.0588), suggesting a more pronounced socio-economic gradient in health in SC countries. This pattern reflects the cumulative advantages associated with prolonged educational attainment in SC regimes, where access to education was often tightly linked to political and social privileges.

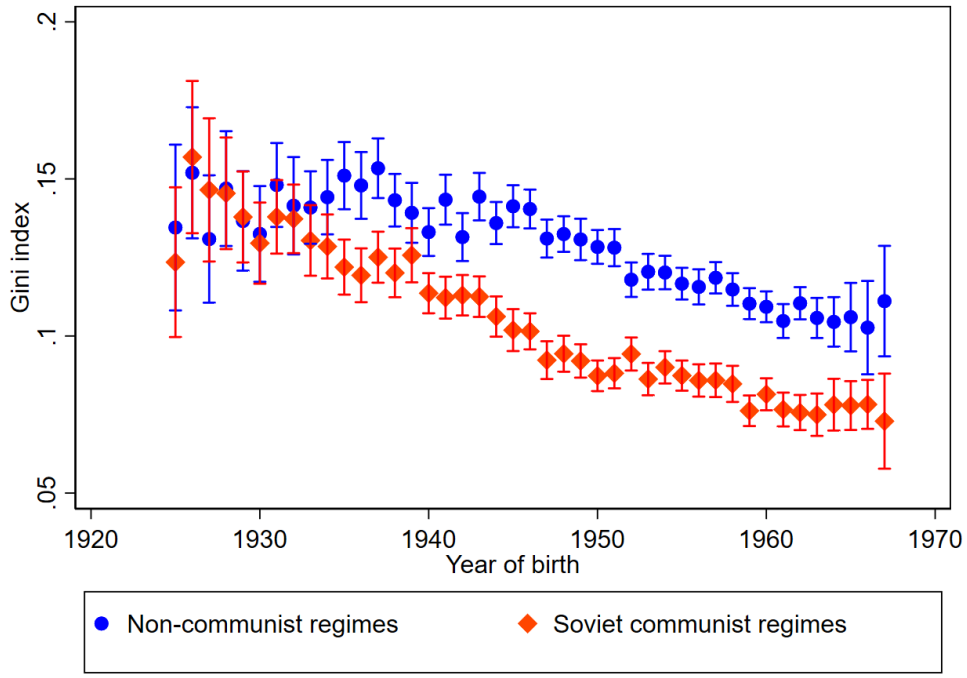


Figure 11: Gini Index of Educational Attainment by Cohort. This figure displays the Gini index of the time span between an individual's year of birth and school completion, comparing non-communist and SC regimes. Confidence intervals derived using bootstrap standard errors.

Figure 11 complements the CI analysis by illustrating the Gini index of educational attainment across cohorts. The results reveal significant regime differences:

- SC Regimes: Educational inequality is lower in SC regimes for cohorts born after 1940, reflecting state-driven efforts to expand access to education and promote equality. This reduction in inequality aligns with broader social and policy reforms implemented during the mid-20th century, aimed at reducing disparities in educational attainment.

- Non-communist Regimes: While educational inequality remains higher in Non-communist regimes, a gradual convergence is observed in later cohorts, suggesting improvements in ac-

cess to education over time. However, the persistence of higher inequality indicates that systemic barriers to education were not entirely eliminated in these regimes.

The convergence observed in later cohorts across both regimes highlights the long-term impact of policy reforms aimed at equalizing educational opportunities. However, the slower reduction in inequality in Non-communist regimes underscores the challenges of addressing entrenched socio-economic disparities through education alone.

Comparing these findings with the results in Table 5, which examines household crowding as a proxy for SES, reveals a consistent pattern: both measures indicate significant disparities in health outcomes across SES ranks. This alignment reinforces the robustness of our methodological approach and highlights the multifaceted nature of socio-economic influences on health.

6 Robustness

The robustness checks performed in this study affirm the reliability and generalisability of our findings on self-assessed health (SAH) across varied socio-political and historical contexts. These checks systematically account for potential biases related to methodological decisions, subgroup characteristics, and historical factors, ensuring that identified patterns reflect broader, enduring trends rather than context-specific anomalies.

To mitigate recall bias, common in retrospective health data, we incorporated a memory performance indicator, comparing respondents with varying cognitive recall abilities. This ensured our results were robust against memory-related inaccuracies, thereby enhancing confidence in the validity of self-reported early-life health measures.

Further validation involved analysing cohorts defined by birth before and after 1945, acknowledging the significant health and socio-political disruptions of the Second World War. This approach allowed us to examine how wartime deprivation and differing post-war trajectories under Soviet Communist (SC) and non-communist regimes influenced long-term health outcomes.

We also considered geopolitical diversity within communist contexts by analysing regional groups such as the Visegrad countries, the Baltic States, and the Western Balkans. This highlighted regional disparities in policy implementation, healthcare accessibility, and socio-economic stability, revealing distinct transitional impacts on health trajectories.

Complementing subjective SAH measures, we incorporated an objective health metric – number of medical diagnoses– to validate findings against potential subjectivity biases. This dual approach reinforced our conclusions across different health assessment methods.

Additionally, an urban-rural analysis illustrated divergent health inequalities between SC and non-communist regimes. Despite centralised planning intended to reduce disparities in communist countries, significant inequalities persisted, especially in rural areas. In

contrast, market-oriented regimes demonstrated sharper urban-rural divides, underscoring spatial inequities inherent to different economic systems.

Lastly, incorporating country-level wartime casualty rates highlighted how demographic shocks and resource disruptions influenced health outcomes. For example, severe wartime losses in countries such as Poland had lasting effects, exacerbated by subsequent inefficiencies in centrally planned economies.

Collectively, these robustness checks demonstrate the broad applicability and validity of our findings, addressing methodological and historical biases, and situating health trajectories within their socio-political contexts. This comprehensive approach emphasises the importance of historically and institutionally contextualised health inequality research, ensuring rigorous and insightful conclusions.

6.1 Socioeconomic Background

To investigate the impact of childhood socioeconomic status (SES) on health trajectories, we construct a factor index following Kesternich et al. (2014), comprising indicators such as log-transformed books at home, household amenities (electricity, water), and household density. SES is categorised into three groups: low (below the 25th percentile), medium (25th - 75th percentile), and high (above the 75th percentile). However, it is crucial to acknowledge the potential endogeneity of SES within historical and socio-political contexts.

Table B11 compares self-assessed health (SAH) scores during childhood and adulthood across SES groups, stratified by Soviet Communist (SC) and non-communist regimes. Complementary insights are drawn from Tables 2 and 3.

Childhood SAH is consistently higher across all SES categories in non-communist regimes (Tables B11 and 2). The greatest disparity is observed within the high SES group, with notably better outcomes in non-communist contexts. Conversely, SC regimes exhibit smaller health variations among lower SES groups, implying a somewhat more equal yet lower-level health distribution.

For adulthood SAH, health inequalities intensify significantly in non-communist economies, particularly within low SES categories (Tables B11 and 3). In contrast, SC regimes demonstrate a narrower SAH distribution, reflecting smaller SES-related health gaps. While adult SAH declines across all SES levels, non-communist regimes show a steeper decline, potentially due to greater disparities in healthcare and social mobility.

The comparative analysis underscores the enduring influence of childhood SES on later-life health. Lower SES consistently correlates with poorer adult health across both regime types, though less markedly in SC economies, suggesting redistributive policies mitigated SES-related disparities to some degree.

To further assess SES-related health inequalities, we examine concentration indices (CI) for SAH (Tables B12 and 5). In non-communist contexts, stable CI values from childhood

to adulthood indicate persistent SES stratification, reinforcing lasting SES advantages in health outcomes. Conversely, SC regimes exhibit compressed CI distributions, reflecting less pronounced health stratification, particularly among lower SES groups, aligning with earlier observations (Table 2). Although communist policies did not eliminate disparities entirely, they appeared to attenuate health inequalities significantly relative to non-communist counterparts.

6.2 Validity of Retrospective Data for Early-Life Health Research

Retrospective data, while inherently vulnerable to recall bias, remain a valuable resource for understanding early-life health when appropriate safeguards are employed. To evaluate potential bias in self-assessed health (SAH) measures, we developed a memory indicator based on immediate and delayed recall of a ten-word list. This produced a graded score (0 to 10) reflecting cognitive recall capacity.

To assess the impact of memory performance on SAH reporting, the sample was split at the median score, distinguishing high and low memory groups. As summarised in Table B13 and compared with Tables 2 and 3, SAH distributions remained consistent across cognitive strata, suggesting minimal recall bias in retrospective health reporting.

Previous research supports the reliability of structured retrospective data collection. Brunello et al. (2017) and Christelis et al. (2010) illustrate the effectiveness of memory aids and life-course anchoring. The SHARE survey, our data source, incorporates such methods-including life history calendars and memory prompts-to enhance accuracy. Validation studies by Garrouste et al. (2011) and Havari and Mazzonna (2015) affirm SHARE's internal coherence and historical alignment, reinforcing confidence in its retrospective measures.

Further analysis explores socio-economic gradients in health through the concentration index (CI), applied to SAH data stratified by memory performance in Table B16. These findings mirror trends in Table 5, confirming the socio-economic gradient is robust to cognitive variation.

To examine historical influences, respondents were divided into pre- and post-1945 birth cohorts. Table B14 shows lower childhood SAH for pre-1945 cohorts, likely due to wartime hardship and limited healthcare. Table B15 reveals these early disadvantages persist into adulthood, particularly in SC regimes. Post-1945 cohorts exhibit improved SAH, especially in non-communist regimes, reflecting post-war policy advancements.

The alignment of SAH distributions, CI values, and cohort differences across tables B13, 2, 3, B16, and 5 underscores the validity of retrospective data. Despite potential recall bias, the findings consistently reveal socio-economic and historical patterns in health, substantiating the reliability of SAH as a retrospective health indicator.

6.3 Comparative Analysis of Self-Assessed Health Across Communist Transition Groups

An analysis of self-assessed health (SAH) across communist transition groups offers insight into how geopolitical and historical contexts shaped health outcomes. Table B17 presents SAH data for individuals classified into three groups: the *Visegrad Group* (Poland, Hungary, Czech Republic, Slovakia), the *Baltic States* (Estonia, Latvia, Lithuania), and the *Western Balkans/Former Yugoslavia* (Croatia, Slovenia). This classification captures the varied socio-political and economic conditions under which these countries experienced communism. In conjunction with Tables 2 and 3, the analysis reveals significant variation in health trajectories.

During childhood, individuals in communist regimes report lower SAH than their non-communist counterparts (Table 2), with internal disparities apparent. The Visegrad countries show relatively better childhood SAH, likely due to more robust healthcare and welfare systems. In contrast, the Baltic States and Western Balkans report lower childhood SAH, reflecting socio-economic instability and limited access to healthcare during the Soviet era and within the former Yugoslavia.

Adulthood SAH (Table B17) continues to reflect early-life conditions and the nature of post-communist transitions. Visegrad countries report improved adulthood SAH relative to the Baltic States and Western Balkans, suggesting more successful transitions and healthcare reforms. Persistently low SAH in the Baltic States and Western Balkans corresponds with economic disruptions, healthcare inefficiencies, and, in the latter, post-communist conflict.

The concentration indices (CIs) in Table B18 trace the distribution of SAH across life stages. Childhood CIs show relatively equitable health distributions under communist regimes, consistent with Table 5. In adulthood, a modest widening of SAH disparities emerges, indicating that egalitarian childhood outcomes diminished over time.

These findings underscore the long-term effects of specific socio-political environments on health. While communist regimes initially constrained health inequalities, these effects proved only partially durable. The divergence in SAH outcomes across transition groups and life stages, supported by consistent CI trends in Tables B18 and 5, affirms the robustness of our measures and the enduring legacy of early-life contexts on adult health.

6.4 Objective Measure of Health

While self-assessed health (SAH) is widely used due to its accessibility, its subjective nature can limit comparability across contexts, as it is shaped by cultural norms, psychological factors, and individual expectations. To address this limitation, we introduce an objective proxy: the *number of diagnoses*, which captures the cumulative burden of chronic conditions, including heart disease, diabetes, cancer, and chronic lung disease.

This variable serves multiple purposes: (i) it mitigates the subjectivity inherent in SAH; (ii) it quantifies cumulative health burdens; (iii) it enables robustness checks by validating SAH-based findings; and (iv) it enhances cross-cohort comparability by relying on standardised medical indicators.

Table B19 reports Concentration Index (CI) values linking the *number of diagnoses* to socio-economic status (SES), proxied by crowdedness (persons per room) during childhood and adulthood. Childhood CI values are positive in both non-communist (0.0818) and Soviet communist regimes (0.0944), indicating better health outcomes among individuals from less crowded early-life environments. The steeper gradient in communist regimes suggests persistent structural inequalities.

Adulthood CI values remain positive (0.0246 in non-communist and 0.0639 in communist regimes), highlighting continued associations between SES and health, though weaker than in childhood. The higher adult CI in communist regimes points to entrenched privilege and bureaucratic inefficiencies that undermined egalitarian goals.

Overall, the inclusion of the *number of diagnoses* strengthens our analysis by providing an objective complement to SAH. It confirms the lasting influence of early-life SES and reveals how socio-political contexts moderated health inequalities in both communist and non-communist regimes.

6.5 Urban/Rural Divide

The urban-rural divide represents a significant dimension of health inequality, shaped by disparities in access to healthcare, socio-economic opportunities, and environmental conditions (Woods, 2010; Smith and Jones, 2021). Urban areas typically offer superior infrastructure and services, whereas rural areas face systemic disadvantages that contribute to poorer health outcomes.

In Soviet Communist (SC) regimes, centralised planning aimed to reduce regional inequalities, including the urban-rural divide. However, the effectiveness of these policies remains contested, given the persistent inefficiencies in welfare provision (Milanovic, 1998).

Table B20 presents descriptive health inequality metrics across urban and rural populations in SC and non-SC economies, complementing earlier regime-wide findings in Tables 2 and 3. Results indicate that urban-rural health disparities are less marked in SC regimes, likely due to standardised resource allocation. However, this uniformity may reflect systemic levelling rather than genuine equity (Brzezinski et al., 2022a).

In contrast, non-SC regimes exhibit sharper urban-rural divides, with urban populations reporting consistently better health outcomes, consistent with literature on rural disadvantage in market economies (Smith and Jones, 2021). These differences underscore the spatial inequalities perpetuated by market mechanisms.

Importantly, the findings in Table B20 are descriptive, not causal. The relative uniformity

observed in SC regimes reflects centralised control, whereas the pronounced disparities in non-SC contexts highlight challenges in addressing rural disadvantage within liberalised systems.

Table B21 expands this analysis by reporting concentration indices (CI) for SAH across urban and rural settings, split by regime type and life stage. For childhood SAH, urban CI values are positive in both SC and non-SC regimes, with a higher index in SC contexts (0.0119 vs 0.0033), suggesting greater concentration of favourable health among higher socio-economic ranks. In rural areas, SC regimes maintain a positive CI (0.0114), while non-SC regimes exhibit a slightly negative value (-0.0012), indicating marginally more equitable distributions.

In late adulthood, urban CI values are broadly similar across regimes (0.0193 in SC and 0.0222 in non-SC). However, rural areas in SC regimes reveal a higher CI (0.0322) than those in non-SC contexts (0.0177), pointing to increasing concentration of better health among higher socio-economic ranks in SC rural populations over time.

These patterns suggest that while SC regimes achieved greater parity during childhood, particularly in rural regions, these gains were not sustained into adulthood. The levelling effects of central planning weakened over time, revealing underlying disparities. In non-SC regimes, initial rural equity during childhood gave way to more stratified outcomes by adulthood, driven by market-based inequality.

Taken together, Tables B20 and B21 underscore the long-term limitations of centralised systems in maintaining rural health equity, and the persistent spatial stratification inherent in market economies.

6.6 World War II Casualties

This section examines the long-term impact of World War II casualties-measured as a proportion of the 1939 population-on subsequent health inequality. Table B22 reports wartime demographic losses across countries, drawing on historical sources (Van Mourik, 1978; Putzger et al., 1963; Overman, 1999; Kesternich et al., 2014). The selected countries all experienced population losses exceeding 0.01%. Poland, with a 17.22% loss, faced the most severe disruption, while Sweden and Denmark experienced minimal losses.

These disparities provide a basis for assessing the long-run effects of demographic shocks on health and inequality. Soviet Communist (SC) regimes were disproportionately affected, both by conflict and post-war privation, while non-SC countries benefitted from stronger recovery frameworks.

Table B23 presents Cowell-Flachaire indices for childhood and adulthood health inequality, based on a subset of countries from Table B22. Compared to Tables 2 and 3, this subset analysis highlights how wartime losses shaped long-term disparities. Health inequality in childhood remains higher in SC regimes, but the adulthood reduction is more pronounced, suggesting that redistributive SC policies had a stronger levelling effect in countries severely

affected by the war.

Notably, results for SC regimes are driven largely by Poland, whose extreme losses (17.22%) illustrate the intersection of demographic trauma and centralised policy. While SC economies aimed to mitigate inequality, they often introduced inefficiencies and informal hierarchies (Milanovic, 1998; Brzezinski et al., 2022b). The persistence of early disparities into adulthood was partially offset by redistributive policies, albeit with diminishing welfare quality.

Table B24 provides concentration indices (CI) for health outcomes, expanding the analysis of Table 5. A positive CI indicates a concentration of better health among higher socio-economic ranks. In childhood, SC regimes exhibit a modest CI of 0.011, reflecting some inequality in favour of higher SES groups. In adulthood, the CI rises to 0.026 for SC regimes, compared to 0.021 in non-SC regimes. This aligns with trends in Table 5, indicating stronger socio-economic gradients in SC contexts despite redistributive efforts.

These findings suggest that while SC regimes aimed to equalise outcomes, they struggled to overcome the legacy of wartime shocks. In contrast, non-SC regimes, supported by more effective welfare institutions, maintained lower inequality gradients. The comparative CI values underscore the lasting imprint of demographic trauma on health inequality across regime types.

7 Conclusion

This paper has analyzed inequality and mobility trends across two measures of welfare (self-reported health and living space) in countries exposed and unexposed to Soviet Communism (SC). Utilizing both current and retrospective measures, we offer a comprehensive examination of childhood and older-age welfare outcomes. Our analysis is supplemented with robustness checks to address potential biases, including survival and recall biases, and includes new insights into the role of schooling and the lasting impact of World War II.

Our findings indicate that individuals in Non-SC regimes consistently report higher levels of self-reported health compared to their counterparts in SC regimes, both during childhood and adulthood. However, the gap narrows for individuals born before the 1940s, reflecting the broader disruptions caused by World War II, which impacted both SC and Non-SC countries. For housing conditions, we document significantly higher levels of crowding (less living space per person) in SC countries, a direct consequence of rationed access to housing under central planning.

When examining patterns of inequality, our results reveal comparable levels of childhood health inequality across regimes, regardless of whether upward- or downward-looking measures of status are employed. However, current health inequality exhibits a nuanced pattern: Non-SC countries show higher inequality when downward-looking measures are used, while levels are comparable across regimes for upward-looking measures. Inequality trends diverge

more sharply among cohorts born after the 1940s, highlighting the post-war recovery period's impact on welfare outcomes. Our results suggest a convergence in inequality levels between SC and Non-SC regimes for younger cohorts, reflecting the broader structural changes in both sets of countries over time.

Our analysis of mobility further highlights significant differences between regimes. SC countries exhibit lower mobility in terms of self-reported health status, with a higher proportion of individuals remaining in poor health throughout their lives. By contrast, Non-SC regimes display greater intergenerational elasticity of socio-economic status, suggesting stronger linkages between childhood and adult living conditions. Interestingly, SC regimes demonstrate slightly higher mobility among younger cohorts, potentially reflecting the partial erosion of rigid socio-economic structures in the post-Soviet era.The introduction of schooling data adds a critical dimension to our analysis, showing that educational attainment plays a significant role in shaping both inequality and mobility. While SC regimes achieved notable gains in universal education, these gains did not translate into substantial reductions in welfare inequality, highlighting the inefficiencies of bureaucratic allocation systems. Moreover, World War II's disproportionate impact on SC countries, including severe population losses and prolonged post-war recovery, underscores the importance of historical context in interpreting these findings.

Overall, this study documents evidence of persistent inequalities in comparable dimensions of welfare despite the egalitarian aspirations of Soviet Communism regimes. Although SC regimes initially achieved lower levels of inequality, these effects diminished over time, resulting in inequality levels comparable to those in Non-SC regimes.

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A Detailed Empirical Strategy

This appendix provides a detailed mathematical overview of the inequality and mobility metrics used in the analysis.

A.1 Univariate Inequality with Ordinal Outcomes

Considering the ordinal nature of health-related variables in our study, conventional tools designed for assessing cardinal income inequality may not be ideally suited for analyzing disparities within our primary dataset. As reported by Allison and Foster (2004) inequality for original variables is more accurately depicted by the variation around the median, rather than the mean, offering a more fitting reference point. Hence, the first part of the analysis will focus on an analysis of ordinal variables, employing the Cowell-Flachaire index for analysis (Cowell and Flachaire, 2017).

More specifically, we define n_k as the count of observations within each ordinal category, where $k = 1, 2, ...,$ and 1 signifies the lowest category. The relative standing of an individual i, positioned in category $k(i)$, can be ascertained through either a descending perspective ($\sum^{k(i)} l = 1nl$) or an ascending perspective ($\sum^{K} l = k(i)nl$). By normalizing these sums against the total number of observations, $n = \sum^{K} k = 1nk$, each individual's relative position is scaled to a continuum between 0 and 1. This dual perspective allows for the derivation of two distinct relative positions, reflecting the individual's status within the distribution, assessed from either lower to higher values or the reverse.

$$s_l = \frac{1}{n} \sum_{l=1}^{k(l)} n_l \tag{A.1}$$

$$s'_l = \frac{1}{n} \sum_{l=1k(l)}^{k} n_l, \tag{A.2}$$

where s_l and s'_l are the downward and upward-looking definitions of an individual's relative position, respectively. In the event of perfect equality, all the individuals are kept in the same ladder position and thus $s_l = s'_l = 1$. The index takes this state as the reference point.

A.2 Univariate Inequality with Continuous Outcomes

Next, given that living space is measured using a continuous measure, we also estimate the Gini Index for the continuous variable of the number of individuals per room. We begin defining the Lorenz curve, which represents the distribution of the fractional rank r of an individual in $L(F(r))$, and is conventionally defined as follows:

$$L(F(r)) = \frac{E(C|c \leq r)F(r)}{\mu} = \frac{H(r)}{\mu}, \tag{A.3}$$

where C is the cardinal variable of interest and $\mu = E(C)$. The Gini index (G) is defined based on the ratio of the respective areas on the Lorenz curve diagram so that the Gini index is equal to zero in the case of no inequality:

$$G = 1 - 2\int_0^1 L(p) \cdot dp = 1 - 2\frac{H(r)}{\mu}. \tag{A.4}$$

A.3 Bivariate Inequality

To explore the distribution of health-related and socioeconomic inequality, we estimate the Concentration Index (CIs). The CI represents the area under the Lorenz curve, which plots the cumulative proportion of the variable of interest against the cumulative percentage of the population, ranked by their socio-economic status from lowest to highest. It is important to note that in our case, lower rankings may indicate a better socio-economic position, as lower rankings correspond to fewer individuals per room. The CI can be described as:

$$CI = 1 - 2\int_0^1 L_h(p) \cdot dp, \tag{A.5}$$

where the subscript h refers to the prevalence of well-being measures in that socio-economic rank ladder. The CI index assumes a negative value when the curve is above the line of equality (the 45° line), denoting a concentration of better health states among the lowest ranked, and a positive value when the curve falls below the line of equality. As in

$$CI = \frac{2}{\mu} cov(h, r), \tag{A.6}$$

where h refers to the health status measure, mu is the mean of the health measure, and r is an individual's rank in the socio-economic distribution. Given the association between covariance and ordinary least squares (OLS) regression, Kakwani et al. (1997) shows how to obtain an analogous estimate of the concentration index using a "convenient regression" technique, that transforms our health variable of interest into the rank of the distribution of our socio-economic variable. Thus, we estimate the following convenient regression:

$$2\sigma^2(\frac{h_i}{\mu}) = \alpha + \beta r_i + \varepsilon_i, \tag{A.7}$$

where β refers to CI, σ^2 is the variance of the rank r and ε is a normally distributed error term. As in Mackenbach and Kunst (1997), we have considered the effect of a number of controls as reflected in regression A.7 by including a set of individual-level covariates:

$$2\sigma^2(\frac{h_i}{\mu}) = \alpha + \beta r_i + \delta X_i + \varepsilon_i. \tag{A.8}$$

A.4 Inequality over the Life Course

Finally, we investigate the association of changes in socioeconomic status on health-related inequality by comparing an individual's position in the socio-economic distribution as a child versus as an adult. In doing so, we examine the correlation between the health variable and socio-economic change in rank from childhood to adulthood. Likewise,

$$2\sigma^2_{\Delta r_i}(\frac{h_i}{\mu}) = \alpha + \gamma \Delta r_i + \varepsilon_i, \tag{A.9}$$

where $\Delta r_i = r_{Adulthood,i} - r_{Childhood,i}$ is the difference in an individual's i ranks obtained with the two wealth-related measures and $\sigma^2_{\Delta r_i}$ is the variance of Δr_i. The parameter of interest γ estimates the difference between the two concentration indexes. We re-estimate the standard errors in all convenient regressions as in Kakwani et al. (1997).

A.5 Health and Social Mobility

To study the intergenerational health mobility profiles from childhood to adulthood self-reported health and analyse the distribution of the difference of health responses per cohort of birth and socio-economic quintiles. To assess health mobility, we employ the mobility index after Cowell and Flachaire (2017):

$$M_\alpha = \frac{1}{\alpha[\alpha-1]n} \sum_{l=1}^{n} [[\frac{u_i}{\mu_u}]^\alpha [\frac{v_i}{\mu_v}]^{1-\alpha} - 1], \alpha \in R, \alpha \neq 0, 1, \tag{A.10}$$

where u_i and v_i denote the health status of individual i during their childhood and adulthood, respectively. Parameters μ_u and μ_v refer to the mean values of u and v, while α characterises the traits of members within a class. A positive value of α produces indices that are particularly sensitive to downward movements, while negative α values yield indices that are highly responsive to upward movements. Cowell and Flachaire (2017) define respective mobility indices when α=0 (**??**) and α=1 (**??**) as follows:

$$M_{\alpha=0} = -\frac{1}{n} \sum_{l=1}^{n} \frac{v_i}{\mu_v} ln(\frac{v_i}{\mu_v} / \frac{v_i}{\mu_v}); \tag{A.11}$$

$$M_{\alpha=1} = \frac{1}{n} \sum_{l=1}^{n} \frac{v_i}{\mu_v} ln(\frac{v_i}{\mu_v} / \frac{v_i}{\mu_v}). \tag{A.12}$$

As our measure of health is ordinal, the mean is not maintained under changes in scale (Allison and Foster, 2004). In such cases, Cowell and Flachaire (2017) suggest comparisons

of cumulative distribution functions (CDFs) to preserve the distributional orderings. More specifically,

$$u_i = \hat{F}_o(x_{t=0,i}), \tag{A.13}$$

$$v_i = \hat{F}_1(x_{t=1,i}), \tag{A.14}$$

where $\hat{F}_o(.)$ and $\hat{F}_1(.)$ are the empirical distribution functions of survey respondent health in childhood and adulthood, respectively.[15]

[15] Cowell and Flachaire (2017) define the empirical distribution function as $\hat{F}_t(x) = \frac{1}{n}\sum_{j=1}^{n} I(x_{tj} \leq x)$ where $t = 1, 2$, and $I(.)$ is an indicator function, equal to 1 if its argument is true and to 0, otherwise.

B Tables

Table B10: Number of observations by year of birth

Year of birth	Health dataset	Health & Crowdedness dataset
1923	67	na
1924	111	na
1925	149	85
1926	185	105
1927	239	114
1928	319	195
1929	369	201
1930	459	245
1931	518	283
1932	596	327
1933	676	364
1934	762	418
1935	883	482
1936	931	505
1937	982	554
1938	1,113	610
1939	1,122	594
1940	1,297	757
1941	1,284	708
1942	1,304	701
1943	1,458	797
1944	1,575	873
1945	1,535	811
1946	1,726	959
1947	1,783	968
1948	1,975	1,064
1949	1,914	975
1950	2,054	1,025
1951	1,985	1,042
1952	2,030	1,060
1953	1,951	993
1954	2,035	1,019
1955	2,08	1,044
1956	1,929	995
1957	2,085	1,117
1958	2,016	1,060
1959	2,040	1,110
1960	2,018	1,071
1961	1,741	968
1962	1,59	880
1963	1,232	577
1964	1,131	565
1965	672	142
1966	614	112
1967	247	106
1968	177	na
1969	135	na
1970	93	na

Notes: The table presents the count of individuals per cohort and sample.

Table B11: Cowell-Flachaire index. Socieconomic background

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Low SES-SAH									
Childhood									
Non-communist regimes	0.6567	0.7289	0.9359	1.6361	0.5397	0.6459	0.8750	1.5902	5,465
	(0.0024)	(0.0026)	(0.0030)	(0.0048)	(0.0031)	(0.0030)	(0.0033)	(0.0050)	
Soviet communist regimes	0.6270	0.6991	0.9035	1.5911	0.5667	0.6624	0.8806	1.5766	1,703
	(0.0063)	(0.0065)	(0.0075)	(0.0115)	(0.0037)	(0.0038)	(0.0050)	(0.0093)	
Adulthood									
Non-communist regimes	0.6042	0.6932	0.9110	1.6204	0.6445	0.7224	0.9329	1.6372	5,465
	(0.0025)	(0.0029)	(0.0038)	(0.0067)	(0.0022)	(0.0028)	(0.0038)	(0.0067)	
Soviet communist regimes	0.5614	0.6467	0.8495	1.5061	0.5666	0.6383	0.8354	1.4901	1,703
	(0.0027)	(0.0036)	(0.0057)	(0.0115)	(0.0088)	(0.0088)	(0.0099)	(0.0150)	
Medium SES-SAH									
Childhood									
Non-communist regimes	0.6451	0.7133	0.9138	1.5951	0.5176	0.6222	0.8463	1.5436	10,036
	0.0020	0.0021	0.0024	0.0040	0.0024	0.0024	0.0027	0.0043	
Soviet communist regimes	0.6279	0.6987	0.9015	1.5852	0.5551	0.6521	0.8706	1.5640	3,207
	(0.0043)	(0.0044)	(0.0050)	(0.0078)	(0.0029)	(0.0030)	(0.0038)	(0.0068)	
Adulthood									
Non-communist regimes	0.6301	0.7152	0.9323	1.6481	0.6354	0.7198	0.9362	1.6514	10,036
	(0.0016)	(0.0020)	(0.0026)	(0.0046)	(0.0014)	(0.0018)	(0.0025)	(0.0046)	
Soviet communist regimes	0.5789	0.6582	0.8567	1.5095	0.5810	0.6500	0.8440	1.4952	3,207
	(0.0028)	(0.0040)	(0.0061)	(0.0119)	(0.0060)	(0.0067)	(0.0083)	(0.0138)	
High SES-SAH									
Childhood									
Non-communist regimes	0.6442	0.7104	0.9079	1.5818	0.5080	0.6123	0.8348	1.5257	6,451
	0.0024	0.0026	0.0031	0.0052	0.0029	0.0030	0.0034	0.0055	
Soviet communist regimes	0.6347	0.7065	0.9113	1.6016	0.5577	0.6566	0.8778	1.5785	2,053
	(0.0051)	(0.0052)	(0.0060)	(0.0091)	(0.0037)	(0.0036)	(0.0043)	(0.0076)	
Adulthood									
Non-communist regimes	0.6403	0.7236	0.9402	1.6580	0.6284	0.7160	0.9352	1.6546	6,451
	(0.0019)	(0.0024)	(0.0032)	(0.0057)	(0.0018)	(0.0022)	(0.0031)	(0.0056)	
Soviet communist regimes	0.5873	0.6634	0.8600	1.5116	0.5828	0.6531	0.8476	1.4990	2,053
	(0.0040)	(0.0055)	(0.0081)	(0.0154)	(0.0068)	(0.0077)	(0.0099)	(0.0169)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B12: Concentration index. SES

SES low	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0107	0.0186
(0.0177)	(0.0435)
late adulthood SAH	
0.0242	0.0098
(0.0178)	(0.0436)
SES medium	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0110	0.0239
(0.0129)	(0.0306)
late adulthood SAH	
0.0201	0.0160
(0.0130)	(0.0310)
SES high	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0116	0.0251
(0.0171)	(0.0402)
late adulthood SAH	
0.0257	0.0100
(0.0172)	(0.0414)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).

Table B13: Cowell-Flachaire index. Cognition

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Childhood									
Under the median									
Non-communist regimes	0.6538	0.7249	0.9302	1.6256	0.5362	0.6416	0.8692	1.5797	9494
	(0.0019)	(0.0020)	(0.0024)	(0.0039)	(0.0023)	(0.0023)	(0.0026)	(0.0040)	
Soviet communist regimes	0.6315	0.7045	0.9104	1.6031	0.5683	0.6656	0.8861	1.5876	2988
	(0.0047)	(0.0050)	(0.0057)	(0.0086)	(0.0027)	(0.0027)	(0.0035)	(0.0067)	
Over the median									
Non-communist regimes	0.6437	0.7104	0.9086	1.5838	0.5083	0.6128	0.8358	1.5279	12458
	(0.0017)	(0.0018)	(0.0022)	(0.0036)	(0.0022)	(0.0022)	(0.0025)	(0.0040)	
Soviet communist regimes	0.6266	0.6967	0.8983	1.5786	0.5507	0.6475	0.8652	1.5555	3975
	(0.0039)	(0.0040)	(0.0046)	(0.0072)	(0.0025)	(0.0027)	(0.0035)	(0.0063)	
Adultdhood									
Under the median									
Non-communist regimes	0.6121	0.7020	0.9217	1.6375	0.6468	0.7265	0.9396	1.6511	9494
	(0.0017)	(0.0020)	(0.0026)	(0.0045)	(0.0015)	(0.0019)	(0.0026)	(0.0046)	
Soviet communist regimes	0.5637	0.6510	0.8568	1.5212	0.5782	0.6497	0.8482	1.5096	2988
	(0.0022)	(0.0027)	(0.0041)	(0.0084)	(0.0062)	(0.0063)	(0.0072)	(0.0110)	
Over the median									
Non-communist regimes	0.6342	0.7163	0.9311	1.6431	0.6257	0.7121	0.9292	1.6424	12458
	(0.0016)	(0.0019)	(0.0025)	(0.0044)	(0.0013)	(0.0016)	(0.0023)	(0.0042)	
Soviet communist regimes	0.5793	0.6525	0.8443	1.4829	0.5736	0.6415	0.8316	1.4700	3975
	(0.0030)	(0.0041)	(0.0060)	(0.0114)	(0.0047)	(0.0055)	(0.0071)	(0.0123)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B14: Cowell-Flachaire index. Cognition Year of birth Childhood.

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Before year 1945									
Under the median									
Non-communist regimes	0.6517	0.7239	0.9306	1.6295	0.5508	0.6541	0.8807	1.5926	4,170
	(0.0028)	(0.0029)	(0.0034)	(0.0054)	(0.0029)	(0.0028)	(0.0032)	(0.0051)	
Soviet communist regimes	0.6328	0.7064	0.9126	1.6063	0.5665	0.6646	0.8859	1.5889	1,098
	(0.0073)	(0.0077)	(0.0089)	(0.0136)	(0.0045)	(0.0045)	(0.0057)	(0.0107)	
Over the median									
Non-communist regimes	0.6435	0.7137	0.9170	1.6053	0.5365	0.6394	0.8635	1.5655	2,369
	(0.0043)	(0.0044)	(0.0051)	(0.0081)	(0.0040)	(0.0039)	(0.0046)	(0.0075)	
Soviet communist regimes	0.6384	0.7105	0.9155	1.6071	0.5706	0.6664	0.8858	1.5865	570
	(0.0099)	(0.0108)	(0.0130)	(0.0208)	(0.0065)	(0.0073)	(0.0098)	(0.0183)	
After year 1945									
Under the median									
Non-communist regimes	0.6539	0.7237	0.9269	1.6169	0.5227	0.6291	0.8565	1.5631	5,324
	(0.0024)	(0.0026)	(0.0031)	(0.0051)	(0.0035)	(0.0035)	(0.0039)	(0.0059)	
Soviet communist regimes	0.6294	0.7025	0.9083	1.6004	0.5691	0.6660	0.8859	1.5864	1,890
	(0.0057)	(0.0060)	(0.0069)	(0.0106)	(0.0036)	(0.0036)	(0.0046)	(0.0085)	
Over the median									
Non-communist regimes	0.6429	0.7085	0.9050	1.5758	0.5009	0.6055	0.8277	1.5160	10,089
	(0.0020)	(0.0021)	(0.0026)	(0.0043)	(0.0026)	(0.0027)	(0.0031)	(0.0048)	
Soviet communist regimes	0.6238	0.6936	0.8946	1.5727	0.5471	0.6440	0.8611	1.5493	3,405
	(0.0040)	(0.0041)	(0.0047)	(0.0074)	(0.0029)	(0.0029)	(0.0037)	(0.0066)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B15: Cowell-Flachaire index. Cognition Year of birth Adulthood.

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
				Before year 1945					
				Under the median					
Non-communist regimes	0.5868	0.6768	0.8921	1.5895	0.6354	0.7089	0.9142	1.6052	4170
	(0.0025)	(0.0030)	(0.0041)	(0.0073)	(0.0031)	(0.0036)	(0.0046)	(0.0077)	
Soviet communist regimes	0.5475	0.6390	0.8479	1.5148	0.5721	0.6456	0.8458	1.5087	1098
	(0.0034)	(0.0034)	(0.0049)	(0.0100)	(0.0101)	(0.0095)	(0.0100)	(0.0143)	
				Over the median					
Non-communist regimes	0.6158	0.7072	0.9285	1.6481	0.6479	0.7283	0.9426	1.6577	2369
	(0.0028)	(0.0034)	(0.0048)	(0.0090)	(0.0034)	(0.0042)	(0.0055)	(0.0096)	
Soviet communist regimes	0.5641	0.6455	0.8434	1.4890	0.5614	0.6303	0.8232	1.4674	570
	(0.0053)	(0.0076)	(0.0119)	(0.0241)	(0.0159)	(0.0165)	(0.0193)	(0.0301)	
				After year 1945					
				Under the median					
Non-communist regimes	0.6270	0.7153	0.9358	1.6586	0.6453	0.7294	0.9469	1.6674	5324
	(0.0022)	(0.0026)	(0.0034)	(0.0060)	(0.0019)	(0.0024)	(0.0033)	(0.0059)	
Soviet communist regimes	0.5695	0.6535	0.8561	1.5150	0.5768	0.6473	0.8439	1.5005	1890
	(0.0026)	(0.0036)	(0.0056)	(0.0115)	(0.0075)	(0.0078)	(0.0092)	(0.0145)	
				Over the median					
Non-communist regimes	0.6297	0.7093	0.9211	1.6257	0.6157	0.7024	0.9179	1.6244	10089
	(0.0019)	(0.0022)	(0.0028)	(0.0047)	(0.0014)	(0.0018)	(0.0024)	(0.0044)	
Soviet communist regimes	0.5780	0.6493	0.8391	1.4731	0.5708	0.6386	0.8275	1.4618	3405
	(0.0037)	(0.0048)	(0.0068)	(0.0127)	(0.0051)	(0.0060)	(0.0078)	(0.0135)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B16: Concentration index. Cognition

Under the median	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0015	0.0098
(0.0136)	(0.0312)
Over the median	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0017	0.0090
(0.0118)	(0.0291)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).

Table B17: Cowell-Flachaire index. SC sub-groups

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Childhood									
Visegrad group	0.6355	0.7061	0.9092	1.5956	0.5428	0.6437	0.8657	1.5642	9972
	(0.0023)	(0.0024)	(0.0026)	(0.0040)	(0.0018)	(0.0018)	(0.0021)	(0.0035)	
Baltic States	0.6424	0.7226	0.9370	1.6515	0.6135	0.7068	0.9289	1.6479	7218
	(0.0024)	(0.0028)	(0.0036)	(0.0062)	(0.0016)	(0.0019)	(0.0027)	(0.0054)	
Western Balkans	0.6540	0.7241	0.9275	1.6179	0.5237	0.6301	0.8575	1.5643	5216
	(0.0025)	(0.0027)	(0.0031)	(0.0051)	(0.0034)	(0.0033)	(0.0037)	(0.0055)	
Adulthood									
Visegrad Group	0.6008	0.6853	0.8947	1.5809	0.6176	0.6919	0.8958	1.5790	9972
	(0.0015)	(0.0020)	(0.0029)	(0.0055)	(0.0024)	(0.0028)	(0.0037)	(0.0062)	
Baltic States	0.5224	0.6070	0.8049	1.4415	0.5863	0.6485	0.8335	1.4625	7218
	(0.0024)	(0.0031)	(0.0043)	(0.0079)	(0.0035)	(0.0037)	(0.0046)	(0.0080)	
Western Balkans	0.6050	0.6961	0.9145	1.6230	0.6376	0.7148	0.9249	1.6286	5216
	(0.0019)	(0.0023)	(0.0033)	(0.0065)	(0.0030)	(0.0035)	(0.0045)	(0.0075)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B18: Concentration index. Communist groups

	Under the median	
	Childhood SAH	*late adulthood SAH*
Visegrad	0.0070	0.0089
	(0.0227)	(0.0226)
Baltic states	0.0098	0.0276
	(0.0237)	(0.0245)
Western Balkans	-0.0033	0.0256
	(0.0175)	(0.0185)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).

Table B19: Concentration index. Objective measure of Health

Non-communist regimes	*Soviet communist regimes*
Childhood Number of persons per room	
0.0818	0.0944
(0.0099)	(0.0116)
Late adulthood Number of person per room	
0.0246	0.0639
(0.0101)	(0.0118)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).

Table B20: Cowell-Flachaire index. Urban/Rural divide

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
Childhood									
Urban									
Non-communist regimes	0.6499	0.7168	0.9160	1.5952	0.5126	0.6177	0.8419	1.5382	15274
	(0.0015)	(0.0016)	(0.0020)	(0.0033)	(0.0021)	(0.0021)	(0.0024)	(0.0037)	
Soviet communist regimes	0.6549	0.7290	0.9385	1.6447	0.5588	0.6630	0.8918	1.6108	10633
	(0.0019)	(0.0020)	(0.0024)	(0.0037)	(0.0020)	(0.0019)	(0.0021)	(0.0033)	
Rural									
Non-communist regimes	0.6441	0.7137	0.9158	1.6007	0.5192	0.6245	0.8499	1.5504	12285
	(0.0018)	(0.0018)	(0.0020)	(0.0033)	(0.0021)	(0.0021)	(0.0023)	(0.0036)	
Soviet communist regimes	0.6546	0.7278	0.9361	1.6394	0.5561	0.6598	0.8877	1.6040	16305
	(0.0014)	(0.0016)	(0.0018)	(0.0028)	(0.0016)	(0.0015)	(0.0016)	(0.0026)	
Adulthood									
Urban									
Non-communist regimes	0.6323	0.7186	0.9375	1.6584	0.6385	0.7239	0.9420	1.6622	15274
	(0.0013)	(0.0015)	(0.0020)	(0.0035)	(0.0011)	(0.0014)	(0.0019)	(0.0034)	
Soviet communist regimes	0.6028	0.6915	0.9074	1.6101	0.6354	0.7117	0.9199	1.6180	10633
	(0.0014)	(0.0017)	(0.0024)	(0.0046)	(0.0020)	(0.0024)	(0.0030)	(0.0051)	
Rural									
Non-communist regimes	0.6172	0.7038	0.9210	1.6331	0.6399	0.7211	0.9343	1.6436	12285
	(0.0015)	(0.0018)	(0.0024)	(0.0043)	(0.0014)	(0.0018)	(0.0024)	(0.0043)	
Soviet communist regimes	0.5850	0.6775	0.8949	1.5950	0.6328	0.7065	0.9128	1.6063	16305
	(0.0010)	(0.0012)	(0.0018)	(0.0034)	(0.0018)	(0.0020)	(0.0025)	(0.0040)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B21: Concentration index. Rural/Urban divide

Urban	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0033	0.0119
(0.0114)	(0.0187)
late adulthood SAH	
0.0222	0.0193
(0.0114)	(0.0192)
Rural	
Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
-0.0012	0.0114
(0.0132)	(0.0150)
late adulthood SAH	
0.0177	0.0322
(0.0129)	(0.0155)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).

Country	**Death Rate (%)**
Austria	5.56
Germany	8.23
Sweden	0.03
Italy	1.14
France	1.44
Denmark	0.16
Greece	9.10
Belgium	1.05
Czech Republic	2.38
Poland	17.22

Table B22: World War II percentage of causalities by 1939 population by country

Table B23: Cowell-Flachaire index. WW2

	Downward looking status				Upward looking status				N
	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	I(α=0)	I(α=0.25)	I(α=0.5)	I(α=0.75)	
				Childhood					
Non-communist regimes	0.6538	0.7216	0.9221	1.6052	0.5121	0.6184	0.8445	1.5452	16,470
	(0.0014)	(0.0015)	(0.0018)	(0.0031)	(0.0020)	(0.0020)	(0.0023)	(0.0035)	
Soviet communist regimes	0.6300	0.7015	0.9054	1.5924	0.5590	0.6563	0.8757	1.5723	6,963
	(0.0031)	(0.0032)	(0.0037)	(0.0057)	(0.0019)	(0.0020)	(0.0026)	(0.0048)	
				Born before 1945					
Non-communist regimes	0.6584	0.7300	0.9363	1.6354	0.5408	0.6463	0.8749	1.5890	5,044
	(0.0023)	(0.0025)	(0.0030)	(0.0049)	(0.0032)	(0.0031)	(0.0034)	(0.0053)	
Soviet communist regimes	0.6355	0.7088	0.9151	1.6094	0.5704	0.6677	0.8886	1.5920	1869
	(0.0054)	(0.0058)	(0.0067)	(0.0103)	(0.0034)	(0.0034)	(0.0044)	(0.0082)	
				Adulthood					
Non-communist regimes	0.6283	0.7143	0.9327	1.6511	0.6391	0.7237	0.9406	1.6577	16,470
	(0.0013)	(0.0016)	(0.0021)	(0.0036)	(0.0011)	(0.0014)	(0.0020)	(0.0036)	
Soviet communist regimes	0.5804	0.6610	0.8612	1.5184	0.5834	0.6533	0.8489	1.5045	6,963
	(0.0017)	(0.0024)	(0.0037)	(0.0073)	(0.0037)	(0.0041)	(0.0051)	(0.0085)	
				Born before 1945					
Non-communist regimes	0.5970	0.6863	0.9028	1.6065	0.6409	0.7168	0.9246	1.6226	5,044
	(0.0025)	(0.0030)	(0.0040)	(0.0071)	(0.0026)	(0.0032)	(0.0042)	(0.0073)	
Soviet communist regimes	0.5583	0.6458	0.8510	1.5122	0.5713	0.6430	0.8410	1.4993	1869
	(0.0026)	(0.0031)	(0.0048)	(0.0098)	(0.0080)	(0.0079)	(0.0087)	(0.0130)	

Notes: The table shows point estimates of Cowell-Flachaire inequality indices over various values of α and their associated bootstrapped standard errors.

Table B24: Concentration index. WW2

Non-communist regimes	*Soviet communist regimes*
Childhood SAH	
0.0003	0.00633385
(0.0092)	(0.0146)
late adulthood SAH	
0.0225	0.0116
(0.0100)	(0.0211)

Notes: The table presents point estimates of the concentration index, accompanied by standard errors within parentheses, calculated according to the method outlined in Kakwani et al. (1997).