Chapter 1.
Unequal opportunities

The share of inequality that is explained by circumstances beyond individuals' control, such as their place of birth or parental background, has increased on average since 2016 in the EBRD regions. This is a source of concern, as greater inequality of opportunity is associated with a stronger belief that political connections – rather than hard work and effort – determine success in life. It is also associated with weaker support for democracy, market economics and economic reforms.

Introduction

Inequality of opportunity occurs when opportunities in life are limited on the basis of a person's gender, their place of birth, their parental background or other circumstances outside their control (typically circumstances at birth). Higher levels of inequality of opportunity mean that people's circumstances at birth do more to determine their outcomes later in life, including the educational qualifications they obtain, the types of job they get and, ultimately, their income and consumption levels.

Inequality of opportunity is thus widely regarded as the unfair part of inequality (as opposed to the part that can be explained by differences in skills or effort). Greater inequality of opportunity is closely associated with lower intergenerational mobility. In this sense, the concept of equality of opportunity is rooted in a Rawlsian philosophical tradition whereby people can be expected to construct society in such a way that they would be happy for their place in society to be determined at random.[1]

Inequality of opportunity is also inefficient, because it prevents people from making the best use of their skills or realising their entrepreneurial ideas. This may negatively affect economic growth in the long term and trap a country on a path with increasingly unequal distribution of income and wealth.[2] Inequality of opportunity may be especially damaging in times of fast technological change, as it means that significant parts of the population are limited in their ability to acquire the new skills needed to support technological innovation.[3] For instance, people with inferior digital skills are less likely to believe that they will have a higher position on the income ladder (that is to say, a higher relative income ranking) in four

years' time when controlling for individual characteristics and country fixed effects (see also Chapter 3 on digitalisation).

Furthermore, unequal access to opportunities may also lead to a loss of faith in economic and political institutions. As a result, it may affect underlying beliefs which are critical for the functioning of society, such as the belief that hard work – as opposed to, say, political connections – is key to determining success in life. Unequal access to economic opportunities can also influence voting patterns and reduce popular support for democracy, market economics and structural reforms.

This chapter estimates inequality of opportunity in the EBRD regions – which is measured as the percentage share of income inequality that stems from circumstances beyond people's control – using the fourth round of the Life in Transition Survey (LiTS IV), which was conducted by the World Bank and the EBRD in the second half of 2022 and the first half of 2023. As part of that survey, 1,000 randomly selected individuals in each economy answered questions about their income, employment, education, attitudes, beliefs and recent experiences. Conducted face to face, the survey covered 33 economies in the EBRD regions, plus Algeria, Belarus, Germany and Russia.

The estimates obtained from that survey are contrasted with those obtained from the previous survey round (LiTS III), which was conducted in 2016.[4]

This analysis shows that parental background has a significant effect on outcomes later in life, with parental characteristics currently explaining around 75 per cent of total inequality of opportunity in the EBRD regions.

Generally speaking, inequality of opportunity appears to first rise and then fall as gross domestic product (GDP) per capita increases. However, in most economies in the EBRD regions (including higher-income economies) inequality of opportunity has increased since 2016 despite significant growth in income per capita. Perhaps reflecting those increases in inequality of opportunity, most survey respondents feel that they have done worse than the median person (that is to say, a typical individual) in their country since 2016.

This rise in inequality of opportunity raises broader questions about its potential impact on perceptions, expectations and beliefs. For instance, in economies with greater inequality of opportunity, fewer people expect to climb the income ladder and fewer people think that they have done better in life than their parents. Worryingly, in countries with greater inequality of opportunity, people across the income distribution are less likely to believe that effort and hard work – rather than political connections – are key to success in life. Support for democracy and market economics is also lower in economies with greater inequality of opportunity when controlling for individual characteristics.

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[1] See Rawls (1971) and Dworkin (1981).
[2] See Marrero and Rodríguez (2013) and Ferreira et al. (2014).
[3] See Murphy and Topel (2016).
[4] See EBRD (2016) for a discussion.

This chapter begins by looking at overall inequality of opportunity across the EBRD regions, as well as the roles played by key components such as parental background, gender and place of birth. It then places those estimates in the broader context of inequality of opportunity around the world, looks at changes over time and considers the impact that inequality of opportunity may have on people's beliefs and perceptions.

Inequality of opportunity

There is a large body of literature documenting the effects that parental characteristics and circumstances during childhood have on outcomes later in life.[5] For instance, the chances of becoming an inventor are strongly determined by an individual's characteristics at birth, even comparing people who had similar levels of cognitive ability (as measured by maths tests) during their school years.[6]

Intergenerational mobility varies greatly across countries, but also within them. For instance, despite the "American dream" being synonymous with intergenerational mobility, the United States of America has, overall, less intergenerational mobility than advanced economies such as Canada or Denmark. What is more, the lack of intergenerational mobility is even more pronounced in areas where segregation and inequality are high, primary schools are of worse quality and social capital is weaker.[7] Furthermore, "absolute mobility" in the United States (which roughly corresponds to the percentage of people who earn more than their parents did) has fallen from 90 per cent for people born in 1940 to 50 per cent for people born in the 1980s.[8] The neighbourhoods where people grow up also help to shape their earnings, university attendance rates, and fertility and marriage patterns (with boys' outcomes varying more across geographical areas than girls' outcomes). US counties with less concentrated poverty, less income inequality, better schools and lower crime rates tend to produce better outcomes for children in poor families.[9]

In line with those findings, LiTS IV data also suggest that parental background has a significant effect on outcomes later in life. For example, the number of books in a person's childhood home (which could, of course, be associated with many other factors, such as parents' education and household income) is closely correlated with economic success in adulthood. As part of the LiTS IV survey, respondents were asked how many books there were in their childhood home when they were 16 (not counting magazines, newspapers or schoolbooks), with five possible answers (0-10 books; 11-25 books; 26-100 books; 101-200 books; or 200+ books). Whether a person had (i) 0-10 books or (ii) 11 or more books in their childhood home at the age of 16 explains 94 per cent of total variation in household income percentiles later in life (see Chart 1.1).[10]

Furthermore, while the average employment rate among those who had more than 10 books at home is close to 60 per cent, it drops to 31 per cent for those who had 10 books or fewer. Levels of mental distress are also 8 per cent higher in the group that had 10 books or fewer relative to respondents who had at least 11 books (when controlling for the country of residence).

Chart 1.1. Having a larger number of books at home in childhood is strongly associated with higher incomes later in life
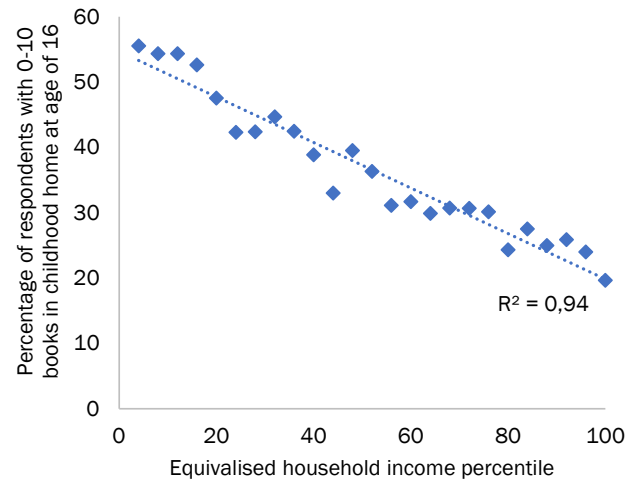
Source: LiTS IV and authors' calculations.
Note: Income percentiles are estimated for each economy and divided into 25 equally sized bins. For instance, the dot on the far right is an average across the 40 respondents with the highest incomes in each country. Household income is equivalised using the OECD-modified equivalence scale (whereby the size of the household is calculated by assigning a value of 1 for the first person over the age of 14, a value of 0.5 for each additional person over the age of 14, and 0.3 for each child under 14). This chart is based on data for the EBRD regions only.

Measuring inequality of opportunity

The analysis in this section looks more specifically at the relative importance of individual circumstances at birth for incomes later in life. It is based on equivalised household income, with income adjusted using the OECD-modified equivalence scale on the basis of the number of household members.[11]

A focus on equivalised household income (rather than individual earnings) is preferable, as this is the measure of income that best reflects consumption possibilities and general economic wellbeing, since it also accounts for income from other sources (such as capital income or transfers) and the pooling of resources within the household.[12] While personal earnings are an important source of individual status, self-esteem and bargaining power within the household, they are incomplete as a measure of individual

[5] See Solon (1999) and Black and Devereux (2011) for reviews of the extensive body of literature on intergenerational mobility.
[6] See Bell et al. (2019).
[7] See Chetty et al. (2014).
[8] See Chetty et al. (2017).

[9] See Chetty and Hendren (2018a, 2018b).
[10] See also Sikora et al. (2019).
[11] See Hagenaars et al. (1994).
[12] See Brunori et al. (2023b) and Ferreira and Gignoux (2011).

wellbeing (see also Box 1.1 on the links between individual circumstances and access to financial services). This measure also makes it easier to compare estimates derived from LiTS IV with those taken from other studies.

Income inequality is typically measured using a Gini coefficient. This measure ranges from 0 (where income levels are the same for everyone) to 100 (where all the income goes to one person). Gini coefficients can also be used to measure inequality of opportunity. In the analysis that follows, a machine learning approach is used to explain individual incomes in each country on the basis of a number of individual circumstances at birth: gender, place of birth (rural or urban) and parental characteristics (parents' levels of education and sectors of employment, plus the number of books at home during childhood). Predicted incomes based solely on these circumstances are then used to calculate a Gini coefficient. This coefficient captures the inequality of income that can be attributed to differences in circumstances at birth.

A Gini coefficient that is derived in this way will always be lower than a coefficient that is based on the observed distribution of income, since only part of income (and thus only part of income inequality) is explained by individual circumstances. The ratio of the Gini coefficient based on circumstances at birth to the Gini coefficient of observed income inequality indicates the share of overall income inequality that is explained by predetermined circumstances. The rest is explained by individual skills and efforts, as well as circumstances that are not captured in this analysis (see Box 1.2 for further details on the estimation of inequality of opportunity).

In some economies, such as Czechia, Germany and the Nordic countries, income inequality and inequality of opportunity are both fairly low – that is to say, income differences within the population are fairly small, and only a small percentage of those differences are due to circumstances at birth (see Chart 1.2, bottom left quadrant). Meanwhile, in Latin America and, to a lesser extent, a number of economies in the EBRD regions (including Azerbaijan and Romania), income inequality and inequality of opportunity are both fairly high (see top right quadrant of chart).

While income inequality remains fairly low in many economies in the EBRD regions by international standards, reflecting the legacies of centrally planned economies, in many of those economies (particularly in emerging Europe) inequality of opportunity is nonetheless fairly high (see bottom right quadrant of chart) – that is to say, circumstances such as gender, place of birth and parental characteristics play a significant role in explaining outcomes later in life, while the dispersion of those outcomes is not as high as in some other emerging markets (such as economies in Latin America, for example).

Lastly, in almost 40 per cent of all economies in the EBRD regions – including most economies in the Caucasus, Central Asia and the southern and eastern Mediterranean (SEMED) – income inequality is fairly high, but predetermined characteristics explain a fairly modest share of total variation in individual outcomes (see top left quadrant of chart).

Chart 1.2. Inequality can be high but not explained by circumstances at birth
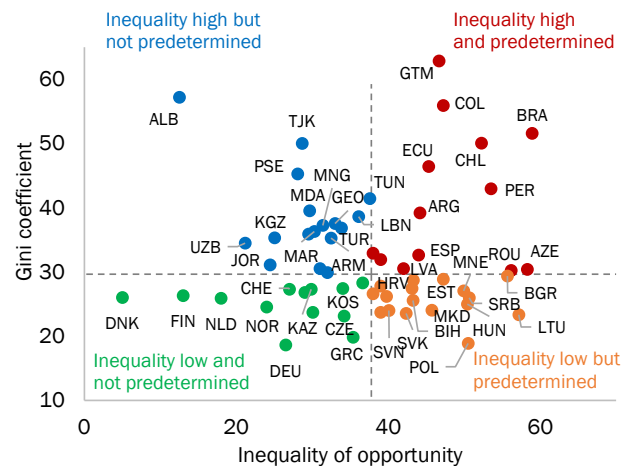
Source: Escanciano and Terschuur (2023), Brunori et al. (2023a), LiTS IV and authors' calculations.
Note: For LiTS IV economies, Gini coefficients and inequality of opportunity are both estimated using LiTS IV data. Estimates of inequality of opportunity are derived using a conditional inference forest (CIF) model of equivalised household income for each country (or comparable machine learning methods). The estimates are computed by dividing a measure of inequality in predicted outcomes (either the Gini coefficient or a debiased variant thereof) by the Gini coefficient of the actual outcome. The dotted lines denote medians based on all economies. Selected economies are labelled.

Parental characteristics are an important driver of inequality of opportunity

This analysis suggests that a significant share of the income inequality observed can be attributed to circumstances at birth (including gender, place of birth and parental characteristics), with that share ranging from 10-20 per cent in Albania and Tajikistan to over half in Azerbaijan, Bulgaria, Lithuania and Romania. These shares are smaller than those seen in Latin American economies (which typically exceed 50 per cent), but larger than those observed in some advanced economies (such as Denmark and the Netherlands, where inequality of opportunity is estimated at 5 and 18 per cent respectively).[13]

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13 See Brunori et al. (2023a) and Escanciano and Terschuur (2023).

The relative contributions that specific circumstances such as gender or place of birth make to overall inequality of opportunity also vary greatly across regions and countries (see Chart 1.3, which provides a breakdown of the values presented in Chart 1.2 for inequality of opportunity using a Shapley decomposition). In Poland, for example, parental background (parents' levels of education, their sectors of employment and the number of books at home during childhood) accounts for 77 per cent of total inequality of opportunity, while place of birth (urban or rural) accounts for 18 per cent and gender accounts for the remaining 5 per cent.

The results are broadly similar when focusing on individual wages instead (albeit the sample is much smaller, being based on people who are currently in employment). As expected, gender plays a larger role in explaining inequality of opportunity in respect of wages.

A large percentage of inequality of opportunity can be traced back to a person's parental background and is thus carried over across generations. Indeed, parental characteristics explain around 75 per cent of total inequality of opportunity in the EBRD regions (see Chart 1.3). This share has been broadly stable over time, based on comparable estimates from LiTS III, and it closely mirrors the developments that are typically observed in other emerging market economies.[14]

Place of birth tends to be the second most important factor, typically explaining between 7 and 30 per cent of total inequality of opportunity.

Gender explains between 1 and 8 per cent of total inequality of opportunity – although, as noted above, this partly reflects the fact that inequality of opportunity is measured here using equivalised household income.[15] In this analysis, therefore, the impact of gender can only be seen in single-person households (which account for around 12 per cent of all households in LiTS IV). Using estimates based on wages instead (but including the extensive margin – that is to say, zero-wage income for those not in employment) points to a significantly larger effect for gender, particularly in the SEMED region and Algeria. See also Box 1.3 for a discussion of the relationship between gender, sexual orientation and inequality.

Chart 1.3. Parental characteristics explain around 75 per cent of total inequality of opportunity
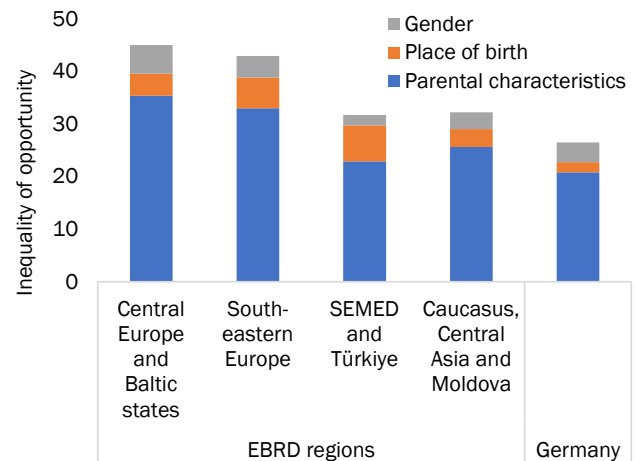
Source: LiTS IV and authors' calculations.
Note: Contributions are estimated using Shapley value decompositions.

In most economies in the EBRD regions, inequality of opportunity has increased

The way that inequality of opportunity varies with development points to the existence of a "Kuznets curve" across economies, with inequality of opportunity being low at low levels of GDP per capita, before rising and then eventually falling again as average income per capita increases (see Chart 1.4).[16] Returns to education tend to rise with the level of development as the matching of employees' skills and employers' job requirements improves, which can increase inequality of opportunity. In contrast, improvements to economic and political institutions help individuals to realise their potential regardless of their circumstances at birth (for example, by facilitating the establishment of businesses), and these improvements help to reduce inequality of opportunity.

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[14] See Brunori et al. (2023a).
[15] See also Brunori et al. (2023a) and Hufe et al. (2022).

[16] See Brunori et al. (2013).

Chart 1.4. Inequality of opportunity tends to rise and then fall as economies develop
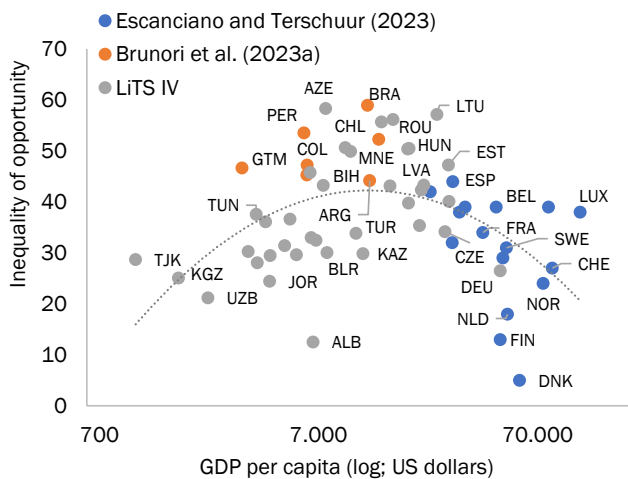
Source: Escanciano and Terschuur (2023), Brunori et al. (2023a), LiTS IV, World Bank World Development Indicators (WDIs) and authors' calculations.
**Note:** The horizontal axis shows the log of GDP per capita in US dollars at market exchange rates in the year for which inequality of opportunity is estimated. For Escanciano and Terschuur (2023), this is 2019; for Brunori et al. (2023a), this ranges from 2010 to 2015; and for LiTS IV estimates, it is 2022. The fitted quadratic line is based on all economies shown. Selected economies are labelled.

Despite this inverted U-shaped relationship between inequality of opportunity and GDP per capita, in most economies in the EBRD regions inequality of opportunity has increased since 2016 as per capita income has risen (see Chart 1.5, where the first panel plots inequality of opportunity against income per capita using LiTS III data gathered in 2016, while the second panel does the same thing using LiTS IV data collected in the period 2022-23). Most economies have moved up and to the right of the fitted curve, which is based on observations from both rounds of the survey. Notable exceptions include Germany and a number of economies in Central Asia (the Kyrgyz Republic, Tajikistan and Uzbekistan), where inequality of opportunity has fallen to even lower levels.

The relative contributions of parental characteristics, place of birth and gender have been broadly stable across the two survey rounds, with parental characteristics playing a slightly larger role in LiTS IV and place of birth playing a smaller role.

Chart 1.5. Inequality of opportunity has tended to increase in the EBRD regions since 2016
Panel 1. Inequality of opportunity based on LiTS III: An inverted U-shape
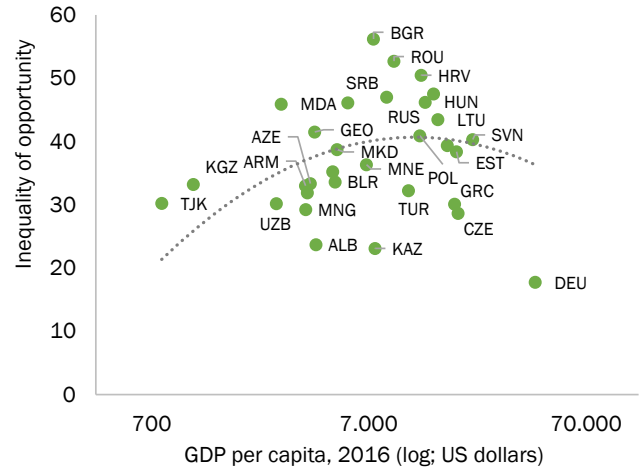
Panel 2. Inequality of opportunity based on LiTS IV: EBRD economies in the European Union (EU) further above the levels expected on the basis of their incomes
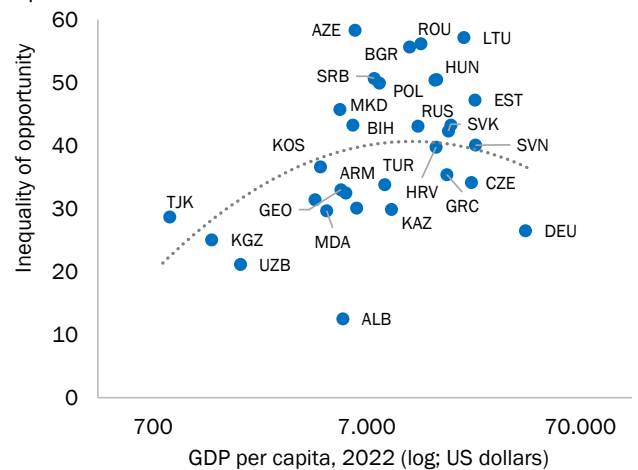

Source: LiTS III and LiTS IV, World Bank WDIs and authors' calculations.
Note: The horizontal axes show the log of GDP per capita in US dollars at market exchange rates, with the figures in Panel 2 being deflated using US inflation. The fitted quadratic lines are based on observations for all economies included in both LiTS III and LiTS IV.

In most EBRD economies, intergenerational mobility is low

As expected, estimates of inequality of opportunity are closely correlated with measures of intergenerational mobility. The latter can be captured, for instance, using the coefficient of the correlation between children's and parents' total years of schooling (see Chart 1.6). This relationship also holds when taking into account the logarithm of GDP per capita.

Chart 1.6. Greater inequality of opportunity is associated with lower intergenerational mobility
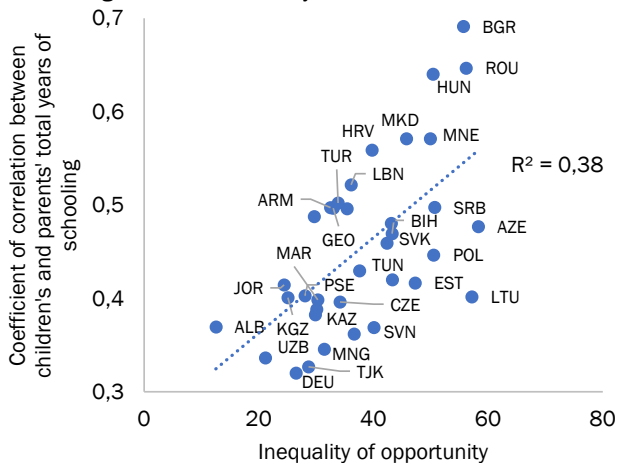
Source: World Bank Global Database on Intergenerational Mobility (GDIM), LiTS IV and authors' calculations.
Note: The fitted line is based on all economies included in LiTS IV except Algeria (which is not covered by the GDIM). The correlation coefficients are based on children born in the 1980s.

Other measures also point to low intergenerational mobility in large parts of the EBRD regions. For example, absolute mobility – measured as the percentage of respondents who have a higher level of education than their parents (conditional on the parents not having completed tertiary education) – is significantly lower in most EBRD economies than it is in Latin America and emerging Asia (as well as being lower than in advanced economies). This is especially pronounced in central Europe and the Baltic states, while absolute mobility is higher in Türkiye and the SEMED region.

Generally speaking, absolute mobility has an inverted U-shaped relationship with GDP per capita. The lowest rates of absolute mobility are observed in the very poorest countries (where the threshold for surpassing parents' level of education is low, but so is the capacity to educate children) and in the very richest countries (where the capacity to educate children is high, but so is the threshold for surpassing parents' level of education).[17]

While absolute mobility in the EBRD regions is currently low relative to other economies (both advanced economies and emerging markets alike), this was not the case in the past. In EBRD economies that used to be subject to central planning (all economies bar Greece, Türkiye and the SEMED region), absolute mobility has declined sharply. In those economies, cohorts born between the 1940s and the 1960s enjoyed far higher levels of absolute mobility than peers in other emerging markets, whereas cohorts born in the 1980s and 1990s have experienced lower levels of mobility (see Chart 1.7, panel 1). While absolute mobility has also declined in advanced economies, that decline has been much smaller than the one seen in the former centrally planned economies of the EBRD regions. In the SEMED region and Türkiye, by contrast, absolute mobility has risen for younger cohorts relative to older cohorts, despite levels of tertiary education remaining lower than in emerging Europe.

Similar patterns can be observed for relative mobility (see Chart 1.7, panel 2). This measure is calculated as 1 minus the coefficient of the correlation between children's and parents' education.

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[17] See van der Weide et al. (2024).

Chart 1.7. In former centrally planned economies in the EBRD regions, younger cohorts have lower intergenerational mobility than older cohorts

Panel 1. In those economies, the absolute mobility of cohorts born in the 1980s has fallen below the levels seen in other emerging markets
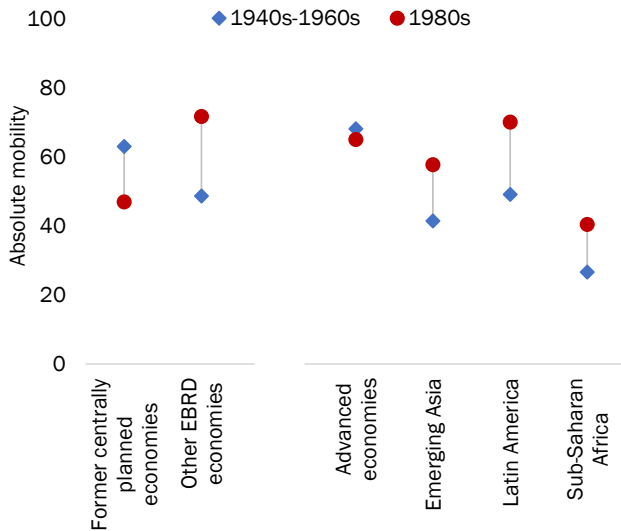
Panel 2. Relative mobility has also declined in those economies

Source: GDIM, LiTS IV and authors' calculations.

Note: In the EBRD regions, very similar patterns can be observed for the cohort born in the 1990s, but such data are not available for other economies. "Other EBRD economies" comprises Greece, Türkiye and the SEMED region. The figures for comparators are simple averages across 27 advanced economies (based on the World Bank's definition of "high-income" economies), 8 economies in Latin America and the Caribbean, 25 economies in emerging Asia (based on the World Bank's "East Asia" and "Pacific and South Asia" groupings) and 41 economies in sub-Saharan Africa.

[18] See Brock and Bussolo (2023).
[19] See Hvidberg et al. (2023) for data on Denmark, for instance.

Inequality of opportunity matters for expectations and beliefs

The continued rise in inequality of opportunity may lead to concerns about its potential impact on people's attitudes, beliefs and expectations.

For instance, in economies with greater inequality of opportunity, fewer people expect to climb the income ladder in the future. This remains the case when controlling for the quality of countries' economic institutions using the World Bank's "Rule of Law" and "Government Effectiveness" indices (which are part of its World Governance Indicators).

Inequality of opportunity may also affect people's perceptions of their own position in the income distribution, resulting in an impact on outcomes. For instance, a recent study using a laboratory experiment showed that income rankings matter for investment choices when inequality is due to circumstances rather than effort.[18]

The LiTS IV survey asked respondents to estimate their own position in the income distribution for their economy, asking them whether they were, in their view, among the lowest earners, among the top earners or somewhere in the middle. Respondents were also asked to report their actual income, which was then used to determine their actual position in the income distribution for survey respondents in the relevant economy. Respondents' self-assessments were strongly biased towards the middle of the distribution: low earners and top earners both tended to place themselves closer to the middle of the income scale (a pattern which can also be seen – albeit in a less pronounced form – in other household surveys looking at advanced economies).[19]

Across the income scale, LiTS IV respondents tend to place themselves lower on the income distribution than LiTS III respondents did. The average decline in respondents' perceived income rankings – 3 percentage points – is statistically significant at the 1 per cent level when controlling for actual income decile fixed effects and clustering standard errors at the economy level. This implies that survey respondents feel they have done worse than the median person (that is to say, a typical individual) in their economy since 2016.

This could reflect the sharp spikes in inflation rates that were seen just before the survey was conducted: average inflation in the EBRD regions stood at 17.5 per cent in October 2022 (up from around 4 per cent pre-Covid), before dropping to around 6 per cent in the early months of 2024.[20] Individuals in economies with high inequality of opportunity were also less likely to report that they were faring better in life than their parents. (Respondents were asked whether they agreed with the statement "I have done better in life than my parents",

[20] See EBRD (2023a).

with five possible answers ranging from "strongly disagree" to "strongly agree".)

Such perceptions matter. The correlation between perceived income rankings and individuals' satisfaction with life (measured by asking respondents whether they agree with the statement "All things considered, I am satisfied with my life now", with five possible answers ranging from "strongly disagree" to "strongly agree") is three times stronger than the correlation between actual income rankings and satisfaction with life. Similarly, the correlation between perceived income rankings and mental health (measured using a composite index based on the frequency with which respondents feel anxious, nervous or worried, very sad or depressed or have little interest or pleasure in doing things)[21] is almost twice as strong as the correlation between actual income rankings and mental health.

Inequality of opportunity also appears to be correlated with underlying beliefs. As part of the survey, respondents were asked which one of the following factors was the most important to succeed in life: "effort and hard work", "intelligence and skills", "political connections", "breaking the law" or "other". In general, people living in richer households tend to believe less in the value of effort and hard work and more in the role of political connections when it comes to success in life. However, these patterns vary across economies.

In countries with high inequality of opportunity, people across the income distribution are less likely to report that effort and hard work are key to success in life (see Chart 1.8). Instead, they are more likely to emphasise the importance of political connections. This is in line with the patterns seen in earlier survey rounds.[22]

Individuals in countries with greater inequality of opportunity also show less support for democratic political systems (see Chart 1.9). As part of the survey, respondents were asked which one of the following statements they agreed with most: "Democracy is preferable to any other form of political system"; "Under some circumstances, an authoritarian government may be preferable to a democratic one"; or "For people like me, it does not matter whether a government is democratic or authoritarian". In countries where inequality of opportunity was above the 90th percentile, an average of 46 per cent of respondents supported democracy. Conversely, in countries in the lowest decile for inequality of opportunity, 63 per cent of respondents favoured a democratic system of government. The correlation between inequality of opportunity and support for democracy is statistically significant at the 5 per cent level when controlling for the logarithm of GDP per capita and the quality of economic institutions. A similar correlation between overall inequality and support for democracy is also statistically significant (again, controlling for the logarithm of GDP per capita and the quality of economic institutions). The relative magnitude of the effects suggests

that if inequality increases and all of that increase is "unfair" (that is to say, it is driven entirely by rising inequality of opportunity), the associated decline in support for democracy will be 71 per cent larger than if inequality increases but the rise is not driven by inequality of opportunity (being caused, for example, by increasing returns to effort).

Chart 1.8. In countries with high inequality of opportunity, people across the income distribution …
Panel 1. … are less likely to believe in the value of effort and hard work …
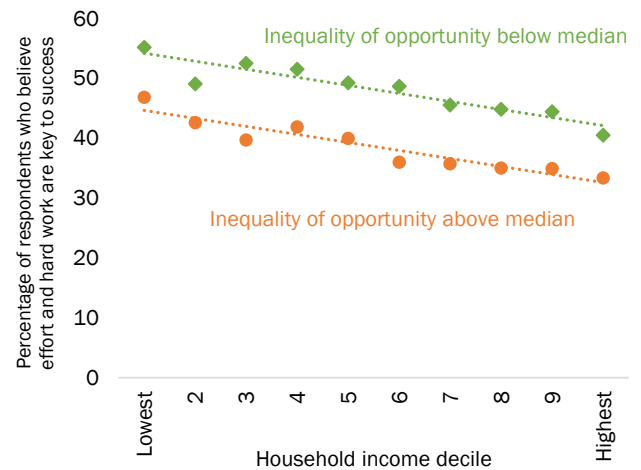
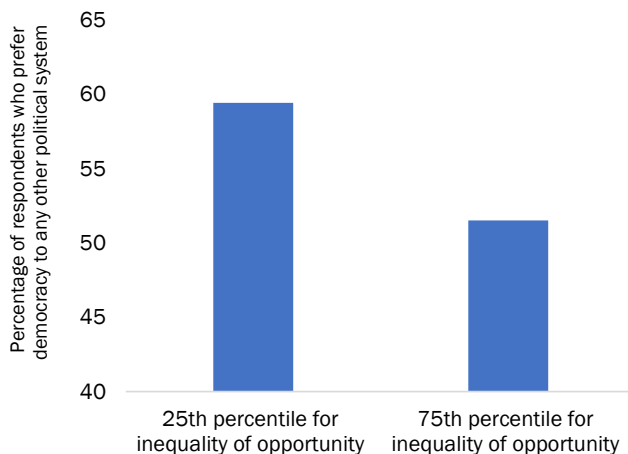**Panel 2.** … and more likely to emphasise the importance of political connections
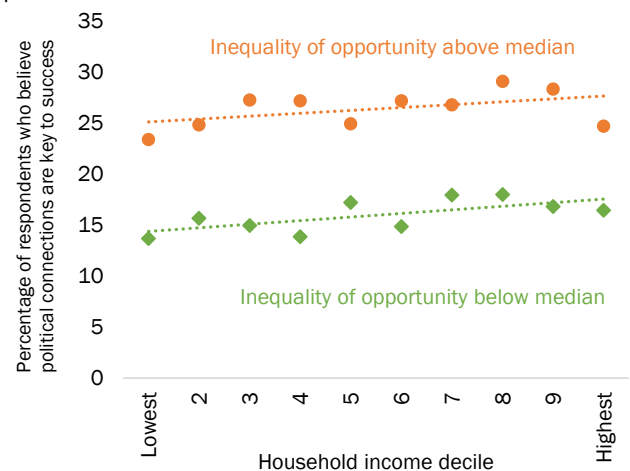
Source: LiTS IV and authors' calculations.
Note: This chart is based on data for the EBRD regions only.

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21 See EBRD (2023b).

22 See Brock (2020).

Chart 1.9. Individuals in countries with greater inequality of opportunity show less support for democratic political systems

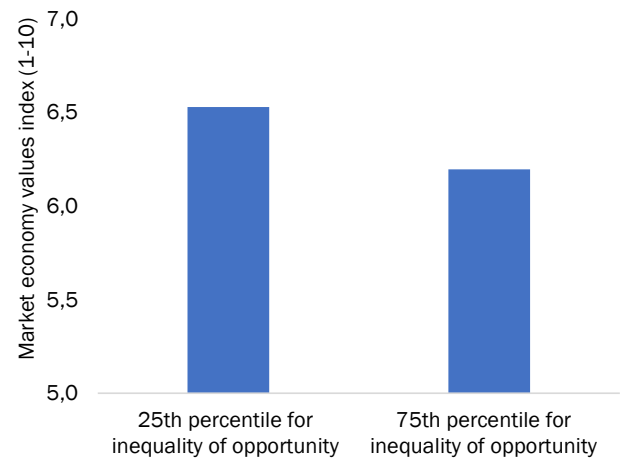**Source:** LiTS IV and authors' calculations.
Note: This chart is based on regression at the individual level for all economies included in LiTS IV (except Belarus, where the question was not asked), controlling for the logarithm of GDP per capita, overall income inequality, institutional quality (using the World Bank's "Rule of Law" and "Government Effectiveness" indices, which are part of its World Governance Indicators) and individual characteristics.

Support for market economics and market-oriented reforms also tends to be significantly lower in economies with greater inequality of opportunity (see Chart 1.10). As part of the survey, respondents were asked whether (i) private ownership of business and industry should be increased, or (ii) government ownership of business and industry should be increased. They were also asked whether (i) competition was good, encouraging people to work hard and develop new ideas, or (ii) competition was harmful, bringing out the worst in people. In both cases, they were asked to indicate their opinion on a scale of 1 to 10, where 1 meant agreeing completely with the first statement and 10 meant agreeing completely with the second statement, and they could pick any number in between if their opinion fell somewhere between the two statements. Responses to these two questions were averaged and rescaled such that higher values indicated greater support for principles of market economics. The resulting index is strongly correlated with answers to a separate question on whether respondents prefer market or planned economies; however, this question was not asked in all economies in LiTS IV.

On average, 46 per cent of respondents in the EBRD regions agree that private ownership should be increased and competition is good (defined as an average score in excess of 5 across the two questions). At the same time, the difference between average support for market economics in the quartile of economies with the lowest inequality of opportunity and average support in the quartile of economies with the highest inequality of opportunity stands at 9 percentage points. This is

a sizeable difference given how evenly balanced respondents' views on the benefits of expanding private and public ownership are on average.

Chart 1.10. Support for market economics also tends to be significantly lower in economies with greater inequality of opportunity

Source: LiTS IV and authors' calculations.
Note: This chart is based on regression at the individual level for all economies included in LiTS IV, controlling for the logarithm of GDP per capita, overall income inequality, institutional quality (using the World Bank's "Rule of Law" and "Government Effectiveness" indices) and individual characteristics.

These findings are in line with recent studies highlighting the links between (i) economic factors (such as increases in unemployment, the plight of less-skilled manufacturing workers in advanced economies and rising inequality) and (ii) growth in anti-establishment sentiment and support for populist politicians among impacted individuals.[23]

Conclusions

Inequality of opportunity is unfair and inefficient. And, as the results of LiTS IV show, it can also be fairly entrenched. As parents' level of education plays a particularly important role in determining children's level of education (and inequality of opportunity more broadly), educational reforms can be effective in improving economic opportunities for all.

Access to tertiary education can be broadened through targeted and competitive scholarship programmes.[24] At the same time, improving the quality of public primary and secondary education benefits everyone, but it disproportionately benefits weaker and poorer students who are not able to compensate for the weaknesses of the state system. In Estonia, for instance, educational reforms implemented in the 1990s were of particular benefit to weaker performers, and the results of those measures could be traced well into adulthood.[25]

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23 See Guriev (2018).
24 See also Palmisano et al. (2022).

25 See Byrne and Plekhanov (2021); see also Kóczán (2024) on the links between early educational experiences and labour market outcomes.

Meanwhile, better physical and digital infrastructure linking urban and rural areas and different regions of the country can help to ensure that there is no "wrong place" to be born.[26] Public policies may need to specifically target access to education and employment for the most disadvantaged groups and left-behind regions (see also Chapter 3 on digitalisation, which looks at access to the internet and digital technologies such as remote learning).[27]

Lastly, reforms that make it easier to start a business, improve the business environment for small firms and improve access to finance across the board can also play an important role, helping to reduce inequality of opportunity and the importance of family connections for achieving economic success.

[26] See also EBRD (2016).

[27] See McCann (2023) and EBRD (2023b) for a discussion of place-based policies.

Box 1.1. Financial inclusion and trust in financial institutions

Access to finance is critical for economic development, facilitating entrepreneurship and fostering inclusive growth, while ensuring equal access to economic opportunities for all segments of society. However, access to financial services remains low in the EBRD regions relative to advanced economies, and there are significant differences across groups of people within those economies.

Economies in the EBRD regions still lag behind advanced economies when it comes to ownership of bank accounts and engagement with financial institutions in general. According to data from LiTS IV, 97 per cent of people in Germany have an account with a bank or another formal financial institution, compared with just 57 per cent across the EBRD regions as a whole (with figures ranging from 8 per cent in Uzbekistan to 95 per cent in Slovenia). The gap is even more pronounced when it comes to borrowing, with people living in the EBRD regions being almost four times less likely to have borrowed from a financial institution than those living in advanced economies (which may reflect a combination of weaker demand for debt and restricted supply).

Women are clearly underserved when it comes to access to finance. The global gender gap between men and women in terms of account ownership stood at 7 per cent in 2022, while the financing gap for female-owned micro, small and medium-sized enterprises in emerging markets is estimated to stand at US$ 1.7 trillion.[28]

Analysis based on LiTS IV data confirms that women tend, on average, to face greater constraints than men when it comes to accessing formal financial services, reflecting both economic factors (such as lower incomes) and social norms. In the EBRD regions, women are, on average, 2.7 per cent less likely than men to have an account with a bank or another formal financial institution when controlling for age, level of education, household income, country of residence and other individual characteristics.

In LiTS IV, women in the EBRD regions were also 2.2 per cent less likely than men to have taken out a loan in the 12 months before the survey. This difference is unlikely to be purely demand-driven: female entrepreneurs in the EBRD regions face higher collateral requirements than their male counterparts when applying for loans, despite there being no statistically significant differences between the performance and profitability of male and female-led businesses when controlling for firm size, sector and capital intensity.[29] Recent research shows that gender biases in lending can be both subtle and firmly entrenched, demonstrating that women can face higher collateral requirements than men and that such

biases are considerably stronger in younger and less experienced loan officers.[30]

Access to financial services is also unequal from a geographical perspective. Individuals living in rural areas in the EBRD regions are 6.2 per cent less likely to have an account with a financial institution than counterparts living in urban areas when controlling for individual characteristics and country of residence. Individuals living in rural areas are also less likely to borrow than their counterparts in urban areas, although such differences are not statistically significant. Women living in urban areas are more than 4 per cent more likely to have an account with a financial institution than women in rural areas.

A lack of trust in financial institutions may be one of the factors impeding financial inclusion. Analysis based on LiTS IV data suggests that individuals who trust banks are more likely to have an account than those who distrust them when controlling for other individual characteristics.

In turn, results based on LiTS IV suggest that individuals living in economies that were more severely affected by the global financial crisis and the eurozone sovereign debt crisis (defined as economies with above-median cumulative declines in GDP relative to before the global financial crisis) tend to trust banks less than those living in less affected economies when controlling for individual characteristics (age, level of education and household income) and local area fixed effects.

Increasing financial inclusion for women and rural populations may require a combination of government initiatives, the rolling-out of digital technologies, financial literacy schemes and capacity-building programmes for financial institutions.[31] Such interventions may potentially involve trade-offs. For instance, while an increase in the number of state-owned banks can help to improve access to financial services for underserved segments of the population, those banks tend to be run less efficiently and their lending may be more influenced by political considerations.[32]

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[28] See IFC (2022).
[29] See We-Fi (2023).
[30] See Brock and De Haas (2023).

[31] See EBRD (2016).
[32] See EBRD (2020).

Box 1.2. Estimating inequality of opportunity

Inequality of opportunity is estimated here using the conceptual framework proposed by Roemer (1998). Specifically, the outcome of interest y is assumed to be a function of circumstances beyond the individual's control (C) and individual efforts (e):

$$y_i = g(C_i, e_i)$$

Those circumstances are defined as predetermined characteristics for which individuals cannot be held responsible (such as their gender or place of birth). Within this framework, interaction between circumstances partitions the population into a number of different types, and individuals can only belong to one type. The model also assumes that individual efforts are orthogonal to circumstances, and that individuals with identical circumstances who exert the same level of effort obtain the same outcomes. In this setting, the opportunities to exert effort that stem from one's circumstances at birth are seen as an inherent part of those circumstances. For example, an athlete who was born in a city with access to top training facilities might easily spend hours training. But athletes born in rural areas might have to travel a long way just to find a suitable place to train, making it harder to practise as much.

There are several trade-offs when estimating inequality of opportunity. Historically, researchers have often opted for fully parametric approaches.[33] However, such an approach imposes a rigid structure on the model, and a failure to include relevant sets of circumstances or a mis-specified functional relationship between circumstances and outcomes can lead to inaccurate estimates of inequality of opportunity.[34]

Recent literature suggests that machine learning can overcome some of these problems by balancing variance and bias in the predictions.[35] In this chapter, estimates of inequality of opportunity (the share of observed inequality that is explained by circumstances beyond the individual's control) are derived using conditional inference forests – a forest-based machine learning algorithm. The algorithm works by selecting a partition into types that maximises the variation in the outcome explained by inter-type inequality, commonly referred to as a "tree". This partition is preceded by a sequence of splits based on statistical tests, which ensures that the circumstance variables that have the strongest association with the outcome variable are chosen when splitting at each stage. To increase the accuracy of out-of-sample predictions, a "forest" is then obtained by estimating many trees across random subsamples and averaging them out.

Specifically, the estimates are obtained as follows. First, CIFs are used to estimate counterfactual country-specific distributions of the outcome that are conditional on the vector of circumstances, obtaining out-of-sample predictions using k-fold cross-fitting. Next, a novel debiased estimator, which is a variant of the Gini coefficient, is used to calculate absolute inequality of opportunity based on those predictions.[36] Finally, estimates of relative inequality of opportunity are obtained by dividing the result of that debiased estimator by the Gini coefficient of the actual outcome. The relative contributions made by the various circumstances are estimated using Shapley value decompositions.

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[33] See Bourguignon et al. (2007) and Ferreira and Gignoux (2011).
[34] See Brunori et al. (2019).

[35] See Brunori and Neidhöfer (2021) and Brunori et al. (2023a, 2023b).
[36] See Escanciano and Terschuur (2023).

# Box 1.3. Attitudes towards LGBTI individuals: evidence from LiTS IV

While traditional contributors to inequality of opportunity (such as gender, parental background and location) have been researched extensively, the impact of sexual orientation remains largely underexamined.[37] This factor can intersect with other aspects of inequality, potentially influencing access to opportunities in profound ways.

The advancement of rights for LGBTI (lesbian, gay, bisexual, transgender and intersex) individuals has been uneven at a global level. In the United States, significant progress has been made in recent years, with same-sex marriage being legalised in 2015 and nationwide protection against employment discrimination on grounds of sexual orientation being granted in 2020. However, in areas such as the SEMED region and eastern Europe, where the EBRD invests, progress has been minimal or non-existent, with strong anti-LGBTI attitudes continuing to persist.

Research shows that LGBTI individuals experience considerable discrimination across multiple domains. For example, same-sex couples often experience higher rejection rates and are given less favourable financing terms relative to different-sex couples when it comes to mortgage applications.[38] Meanwhile, other studies show that a significant proportion of LGBTI employees experience discrimination, leading to job insecurity and less favourable employment outcomes relative to their heterosexual counterparts.[39]

In many EBRD economies, LGBTI individuals tend to face grim socioeconomic conditions – as evidenced, for example, by the broadly negative attitudes towards sexual minorities in those economies. Chart 1.3.1 provides an overview of attitudes towards homosexuality in the EBRD regions, using a composite measure based on a series of LiTS IV questions about acceptance of same-sex couples.[40] Those questions cover issues such as whether same-sex couples should have the right to marry and adopt children, whether homosexual activity should be criminalised, and whether openly gay, lesbian and bisexual individuals should be allowed to serve in the military. The findings reveal a general lack of support for sexual minorities: even in Czechia – the most tolerant country in the EBRD regions in this regard – only 49 per cent of respondents express positive views about acceptance of homosexuality, compared with 70 per cent in Germany. Attitudes are much more negative in many other countries, with fewer than 5 per cent of respondents expressing support in Jordan, Armenia, the Kyrgyz Republic, Azerbaijan, North Macedonia, Kosovo and Kazakhstan.

Chart 1.3.1. Acceptance of homosexuality is generally low across the EBRD regions
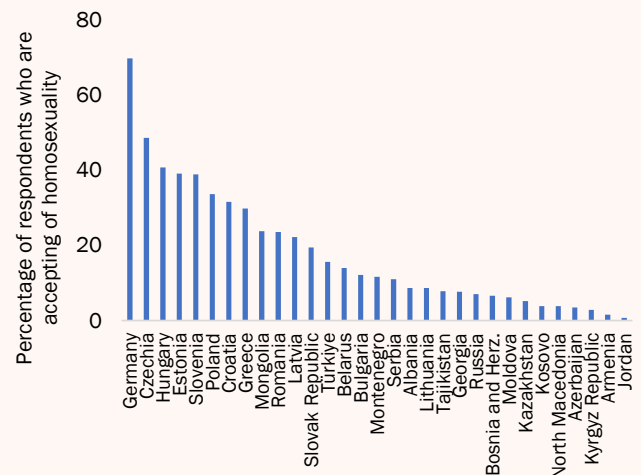
Source: LiTS IV and authors' calculations.
Note: This measure of LiTS IV respondents' acceptance of homosexuality is derived from their responses to several statements about LGBTI rights. Those statements cover issues such as same-sex couples' right to marry and adopt children, the criminalisation of same-sex sexual activity, and the acceptability of having openly gay, lesbian and bisexual individuals serving in the military. Each statement is scored on a scale ranging from 1 (strong opposition) to 4 (strong support). The measure is calculated as the percentage of respondents whose average score across all statements is 3 or higher, indicating general support for LGBTI rights.

How can societies become more inclusive of LGBTI individuals?

Research shows that legal recognition of same-sex relationships can help to improve people's attitudes towards sexual minorities. Such changes tend to be observed in groups of people who are more likely to be conservative, such as religiously conservative individuals, older people and rural populations.[41] Providing people with objective information can also help to shape public attitudes towards sexual orientation. A study involving randomised experiments in Serbia, Türkiye and Ukraine – countries where anti-LGBTI sentiment is widespread – underscores this effect.[42] In that study, participants who had learned about the economic cost of discrimination based on sexual orientation were significantly more likely to support equal employment opportunities for LGBTI individuals than those who did not receive such information. Lastly, increasing the visibility of issues related to sexual orientation and fostering national discussions about the societal roles of LGBTI individuals can help to catalyse cultural shifts. Evidence suggests that areas with more exposure to and contact with the LGBTI community exhibit greater acceptance of same-sex relationships.[43]

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[37] See, for example, Brunori et al. (2013).
[38] See Sun and Gao (2019).
[39] See Drydakis (2022) and Schraepen (2022).
[40] Questions on attitudes towards LGBTI individuals and same-sex couples could not be safely asked in Algeria, Lebanon, Morocco, Tunisia, Uzbekistan or the West Bank and Gaza.

[41] See Aksoy et al. (2020).
[42] See Aksoy et al. (2023).
[43] See Fernández et al. (2024).

Chart 1.3.2 presents details of a number of variables associated with acceptance of homosexuality in the EBRD regions. In line with previous research emphasising the value of personal contact, there is a strong correlation between knowing an LGBTI person and exhibiting more positive attitudes regarding LGBTI individuals. Younger individuals, women and those who have completed tertiary education also tend, on average, to show more support for LGBTI inclusion.

Chart 1.3.2. Younger individuals, women and those who have completed tertiary education tend, on average, to show more support for LGBTI inclusion
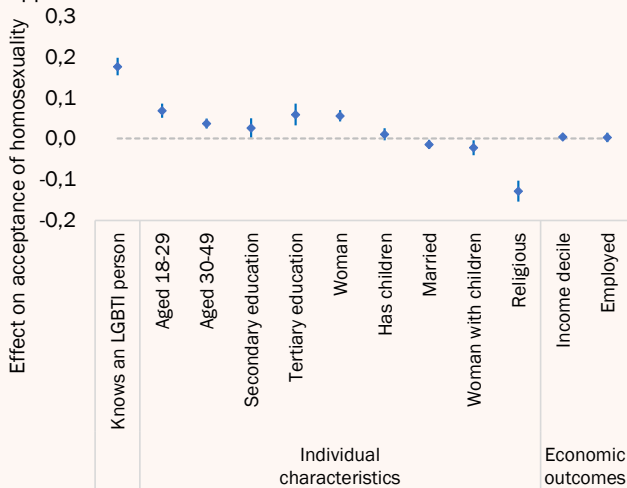
Source: LiTS IV and authors' calculations.
Note: This chart shows standardised coefficients derived from a linear probability model regressing acceptance of homosexuality on various individual characteristics and primary sampling unit (PSU) fixed effects. The bars denote 95 per cent confidence intervals, which are calculated on the basis of standard errors clustered at the level of the PSU.

In conclusion, LiTS IV data show that there is still a long way to go in terms of improving social acceptance of LGBTI individuals in the EBRD regions. That broader acceptance will be an important precondition for making meaningful improvements to the equality of opportunity of gay and lesbian people. Improving legal frameworks and raising awareness of LGBTI individuals can play a vital role in this regard, helping economies to take significant steps in the direction of inclusivity.

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