



# POLICY ANALYSIS LABORATORY: STREAM 2

BEICICI, 21-25 OCTOBER 2019





## STREAM 2: INEQUALITY AND SOCIAL MOBILITY

- Session 1: Introduction: conceptual and methodological issues
- Session 2: Indicators for measuring inequality and social mobility
- Session 3: Main drivers of inequalities and barriers to social mobility in the Western Balkans
- Session 4: Small Group Work - Identification of different social, political, financial, policy related, and institutional mechanisms contributing to specific inequality and mobility issues.
- Session 5: Small Group Work - Systematic integration of key barriers and opportunities for improvement of equity and social mobility in Western Balkan countries.
- Session 6: Work on Plenary Presentation - Formulation of recommendations for improvement of equity and social mobility in Western Balkan countries; Evaluation of the Stream

# SESSION 1

- Objectives:
  - To understand the topics of inequality and social mobility
  - To distinguish between different types of inequalities
  - To understand why inequality and social mobility matter
  - To understand relationship between inequality and social mobility

## Speakers:

- **Nermin Oruc, CREDI**
  - Introductory remarks on the above topics
- **Stobodan Cvejić, Faculty of Philosophy, Belgrade / SECONS;**
  - Class and education mobility, and their impact on reproduction of inequality
- **Christiane Westphal, European Commission, DG EMPL**
  - The EU policy framework for defining, monitoring and addressing inequality; Convergence/divergence between EU countries and impacts on the Western Balkans in the EU periphery
- Outputs: Statements of principles about inequality of social mobility in the Western Balkans

# SESSION 2

- Objectives:
  - To present a review of inequality and social mobility indicators and their availability in the Western Balkans
  - To present advantages and disadvantages of various indicators
  - To present recent figures on inequality of social mobility in the Western Balkans

## Speakers:

- Nermin Oruc, CREDI
  - Introductory remarks on the above topics
- Stobodan Cvejić, Faculty of Philosophy, Belgrade / SECONS;
  - Inequality and social mobility indicators in the Western Balkans
- Amela Kurta, CREDI
  - A brief presentation of microsimulation models and a new FWS's initiative on developing an integrated social policy indicator system for the Western Balkans
- Outputs: Understanding of current situation on inequality of social mobility in the Western Balkans

# SESSION 3

- **Objectives:**
- To describe the main drivers of inequality of educational opportunities
- To understand the effect of education on inequality of social mobility
- To understand the effect of labour market and its institutions on inequality of social mobility

## Speakers:

- **Nermin Oruc, CREDI**
  - Introductory remarks on the above topics
- **Jeton Mehmeti, GAP Institute**
  - Gender inequalities at the labour market
- **Cristina Mereuta, European Training Foundation**
  - Education and labour market policies and skill gaps; The role of education in changing economies and societies and how this leads to changes in educational systems; The right to education and lifelong learning within the EU agenda
- **Outputs: Understanding of the main drivers of inequality of social mobility in the Western Balkans**

## SESSION 4: SMALL GROUP WORK

- Objective: To identify different social, political, financial, policy related, and institutional mechanisms contributing to specific inequality and mobility issues, based on discussions from previous sessions
- Outputs:
  - Main drivers?
  - Actions needed?
  - Key stakeholders?

## SESSION 5: SMALL GROUP WORK

- Objective: Systematic integration of key barriers and opportunities for improvement of equity and social mobility in Western Balkan countries
- **Guest speaker: Elira Jorgoni, ESA Consulting**
  - Topics: profiles of excluded + barriers; strategies in place to make functional the social elevator
- Outputs:
  - Main challenges and obstacles?
  - Actions needed?
  - Key stakeholders?

## SESSION 6

- Preparing for the Plenary presentation:
  1. Statement of principles – Based on discussions from Session 1
  2. Current situation - Based on discussions from Sessions 2 and 3
  3. Priorities for the short- and medium-term - Based on Small Group work from Sessions 4 and 5
  4. Challenges and Obstacles to overcome - Based on Small Group work from Sessions 4 and 5
  5. Actions needed and Changes to be Achieved - Based on Small Group work from Sessions 4 and 5
  6. Key Stakeholders and Partners - Based on Small Group work from Sessions 4 and 5





# SESSION 1

## Objectives

- To understand the topics of inequality and social mobility
- To distinguish between different types of inequalities
- To understand why inequality and social mobility matter
- To understand relationship between inequality and social mobility

# DEFINITIONS

- Inequality
  - **Income inequality**, in economics, significant disparity in the distribution of income between individuals, groups, populations, social classes, or countries. Income inequality is a major dimension of social stratification and social class. It affects and is affected by many other forms of inequality, such as inequalities of wealth, political power, and social status. Income is a major determinant of quality of life, affecting the health and well-being of individuals and families, and varies by social factors such as sex, age, and race or ethnicity.

Britannica.com

- Social Mobility
  - **Social mobility**, movement of individuals, families, or groups through a system of social hierarchy or stratification. If such mobility involves a change in position, especially in occupation, but no change in social class, it is called “horizontal mobility.” An example would be a person who moves from a managerial position in one company to a similar position in another. If, however, the move involves a change in social class, it is called “vertical mobility” and involves either “upward mobility” or “downward mobility.” An industrial worker who becomes a wealthy businessman moves upward in the class system; a landed aristocrat who loses everything in a revolution moves downward in the system.

Britannica.com



## TYPES OF INEQUALITY

- Inequality of outcomes vs. inequalities of opportunities
- Vertical vs. Horizontal Inequality
- Consumption, Wage, Income, Assets, Wealth Inequality
- Economic, Educational, Health, Political, Environmental, ...



## WHY INEQUALITY OCCURS?

- Physical attributes
- Personal Preferences
- Social Process
- Public Policy

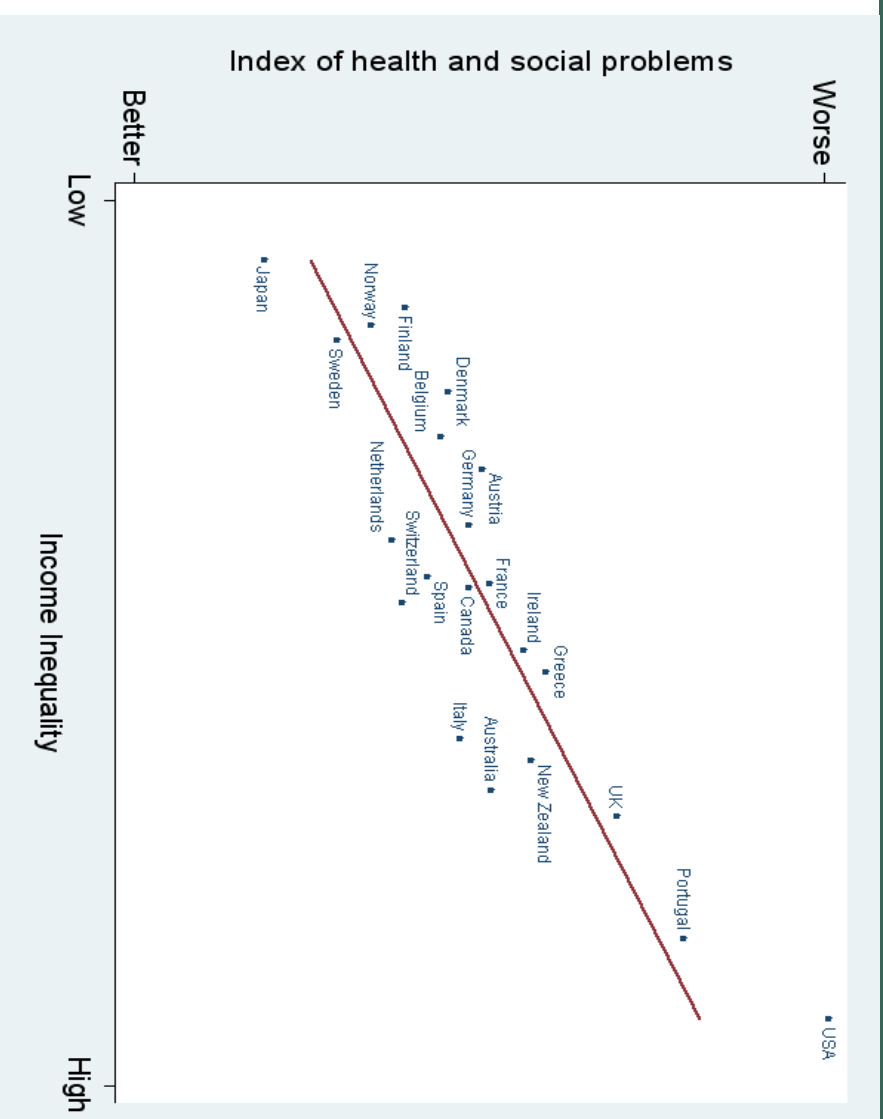
# WHY INEQUALITY MATTERS? (1)

## Index of:

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- **Social mobility**

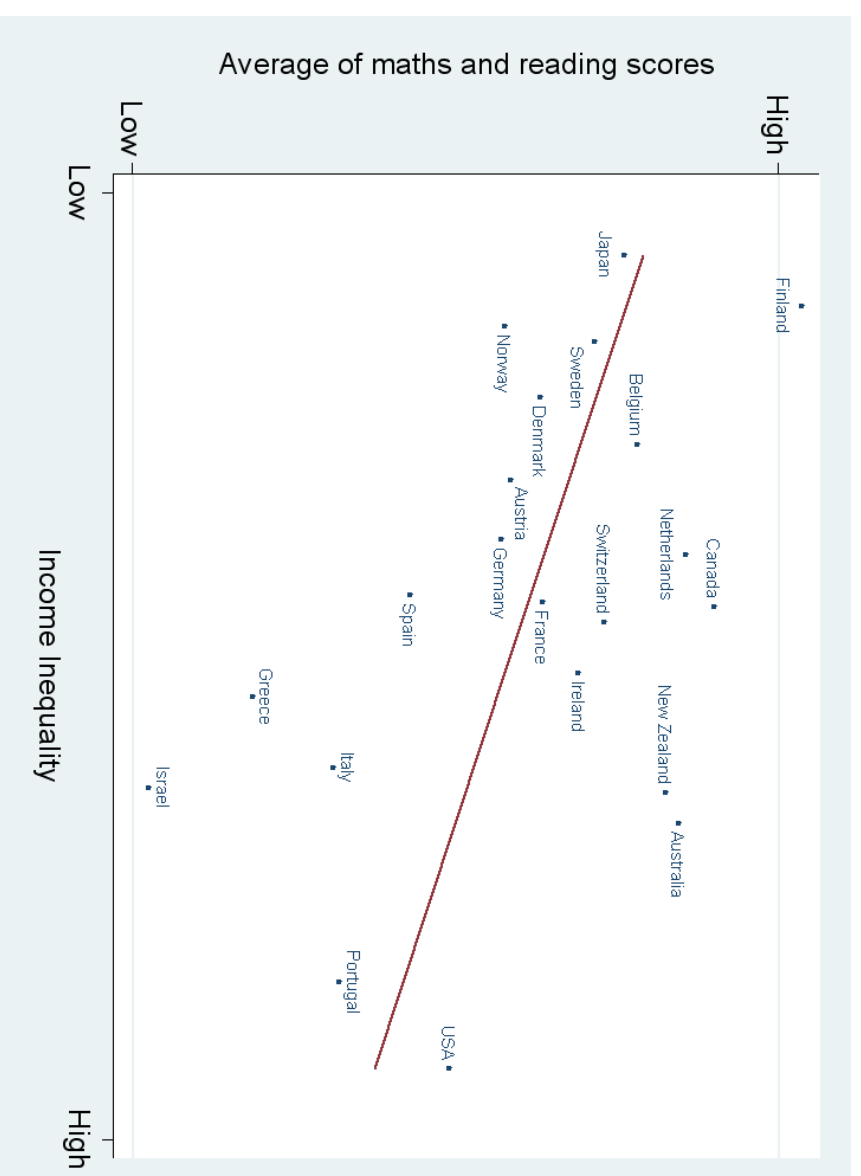
**No relationship between each of the above and GDP**

Source: Wilkinson & Pickett, *The Spirit Level* (2009)



# WHY INEQUALITY MATTERS? (2)

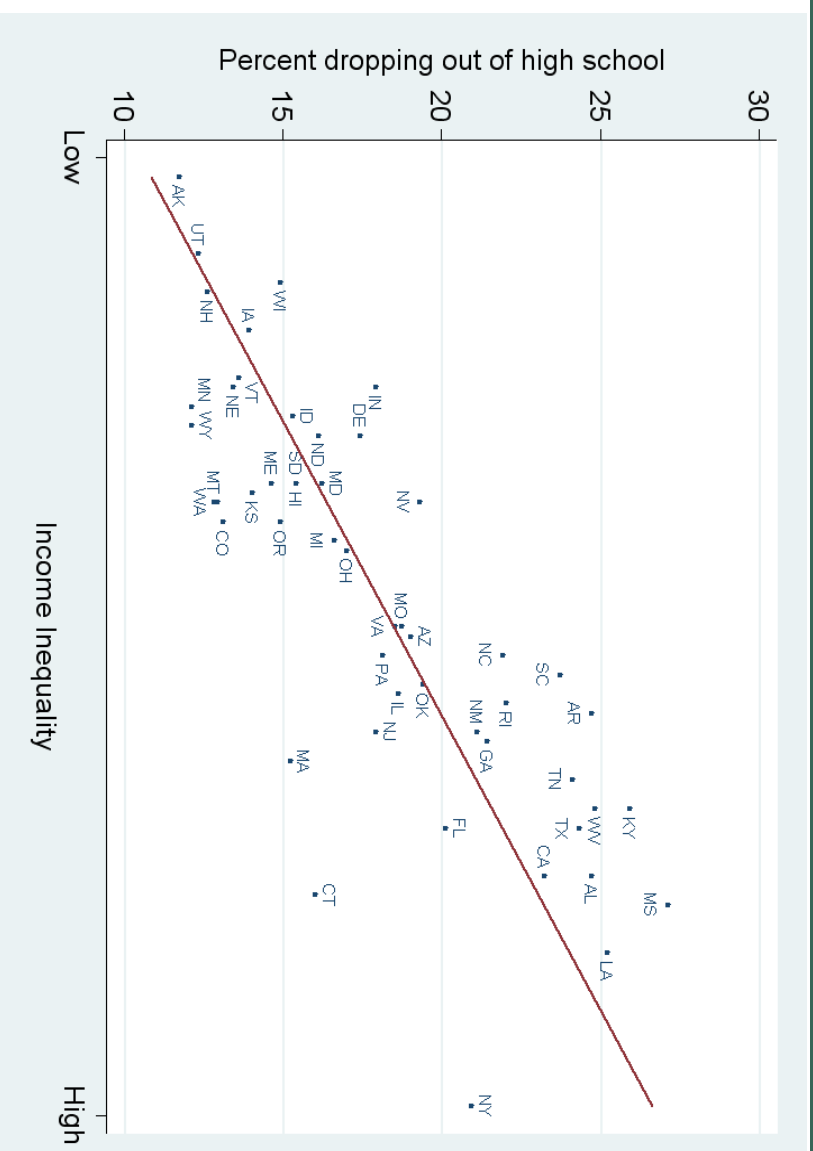
Educational Scores are Higher in More Equal Rich Countries



Source: Wilkinson & Pickett, *The Spirit Level* (2009)

# WHY INEQUALITY MATTERS? (3)

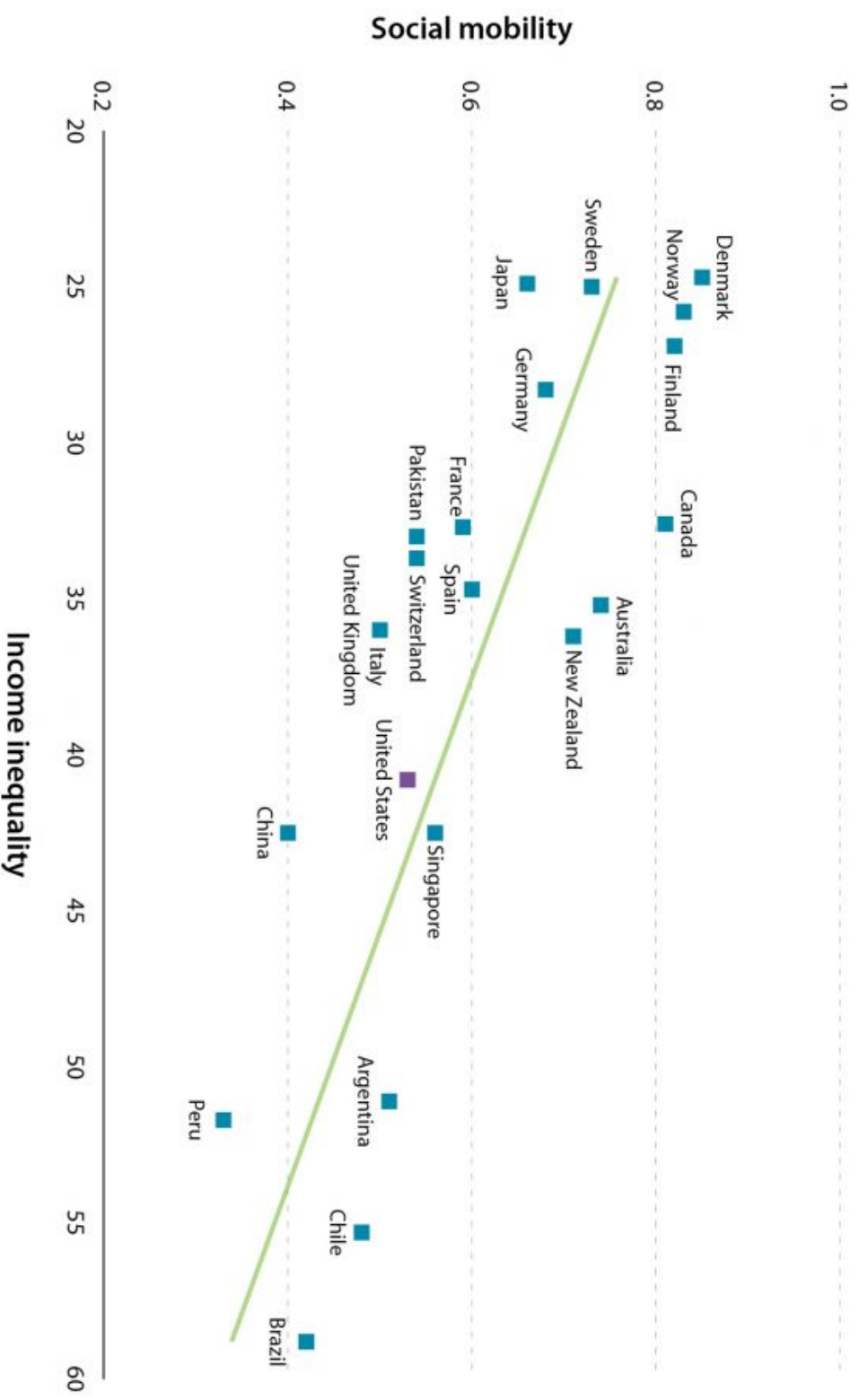
More Children Drop Out of High School in More Unequal US States



Source: Wilkinson & Pickett, *The Spirit Level* (2009)

# The Relationship between Income Inequality and Social Mobility

Around the world, high income inequality is associated with low social mobility.



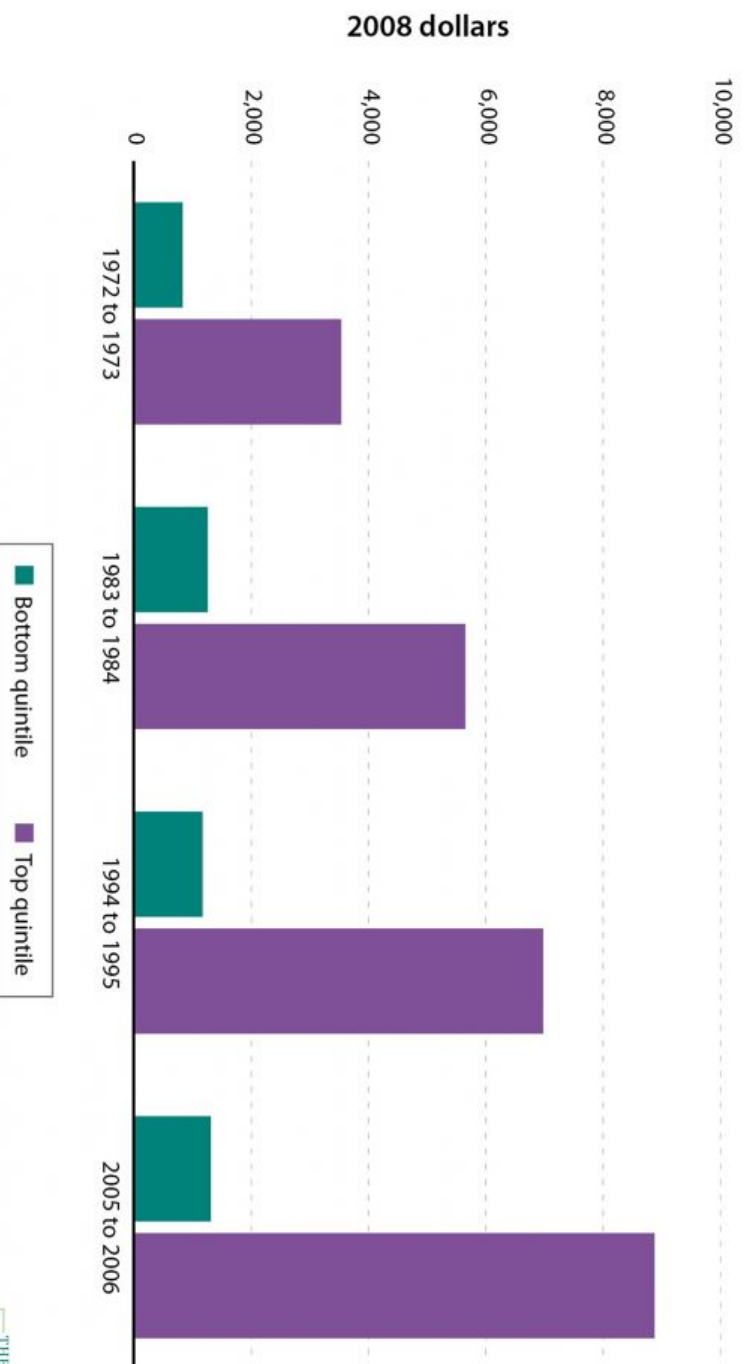
Source: Corak (2013); World Bank (2013).



# INEQUALITY AND SOCIAL MOBILITY

## Enrichment Expenditures on Children

High-income families spend about seven times more on their children than low-income families.





## SESSION 2: INDICATORS

### Objectives:

- To present a review of inequality and social mobility indicators and their availability in the Western Balkans
- To present advantages and disadvantages of various indicators
- To present recent figures on inequality of social mobility in the Western Balkans



# MOTIVATIONS

- (Ab)use of Gini coefficient. To many number around, for each country
- Cross-country comparisons of Gini calculated from different data sources
- Use of unusual indicators

## ALTERNATIVE MEASURES

- Consumption - HBS
  - household
  - per capita
  - per equivalent single adult
- Income - SILC
  - household
  - per capita
- Choice between income and consumption is largely driven by the greater likelihood of accuracy of information on consumption.

# CONSTRUCTING A CONSUMPTION MEASURE

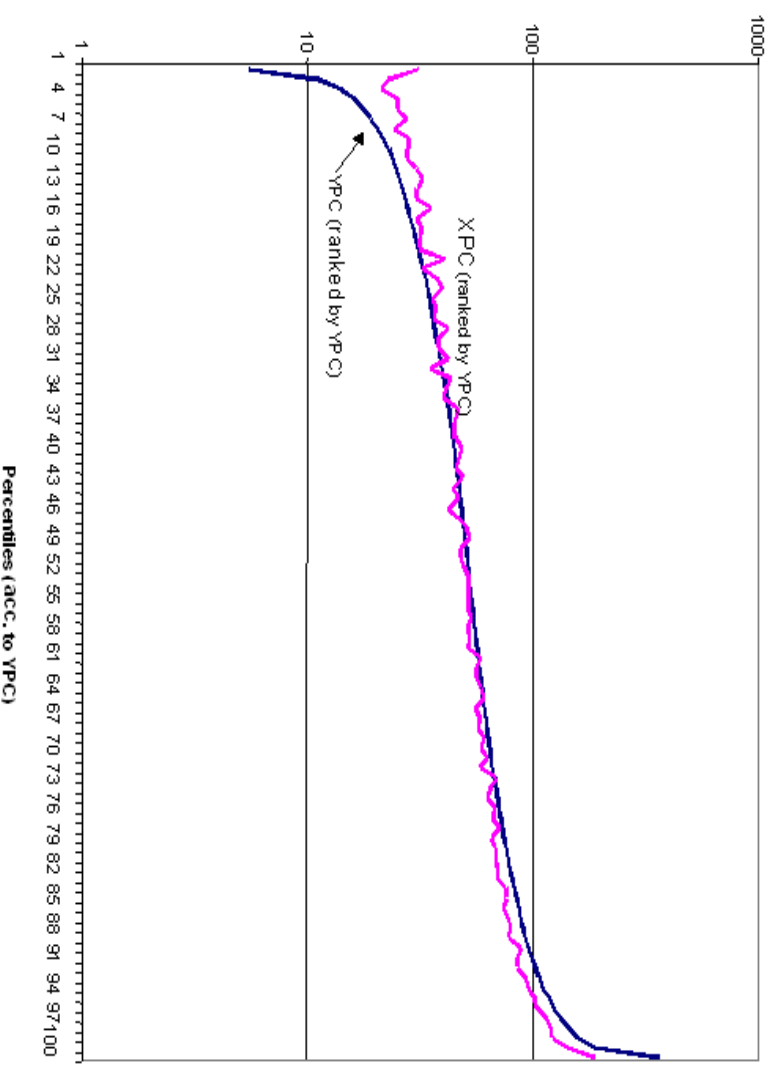
1. Construct a food consumption measure
  - Food expenditures should include not only purchased items but also consumption out of home production.
2. Add basic non-food items (from consumption module)
3. Add other non-food items (other modules)
4. Add housing expenditures
  - Including imputed rent. Based on a survey question, or predict rent paid based on regression models estimated on subset of renting households.
5. Add use-value of consumer durables
  - Health expenditures are usually excluded
- One needs to understand what is included in the measure

# ADJUSTMENTS TO CONSUMPTION AGGREGATE

- Spatial price variation
  - Cost of living adjustments
- Demographic Composition
  - Equivalence Scales
  - Economies of Scale
- Which unit of analysis?
  - Household or individual?

# CONSUMPTION (OR EXPENDITURES) VS INCOME

- Income: gives actual economic power
- Expenditures or consumption: give actual standard of living
- Savings (as % of income) generally larger for higher income households  
=> inequality of income greater than inequality of expenditures
- Income can be negative; C cannot be  
=> inequality of income greater than inequality of expenditures



Source: Milanovic

## INEQUALITY MEASUREMENT AXIOMS

- 1. If all incomes are multiplied by a constant ( $Y_i = Y_i * C$ ), inequality does not change.
- 2. Increase of all incomes by a constant ( $Y_i = Y_i + C$ ), reduces inequality (follows from 1).
- 3. If number of recipients is multiplied (at each income level) by a constant, inequality does not change
- 4. Progressive transfer (which does not change the rankings of individuals) reduces inequality (Dalton's axiom). (Dalton improvement = income of the poor  $\uparrow$  by at least as much as income of the rich goes down.
- 5. Symmetry or anonymity: if two people swap positions, inequality does not change.
- 6. Inequality measure lies in  $[0, 1]$  domain.



# MEASURES OF INEQUALITY: DESIRABLE PROPERTIES AND HOW DIFFERENT MEASURES SATISFY THEM (1)

	<b>Gini</b>	<b>Theil</b>	<b>Mean log deviation</b>	<b>Relative mean deviation</b>
Formula	$\frac{1}{2m} \frac{1}{n^2} \sum_{i=1}^n \sum_{j=1}^n  y^i - y^j $	$\frac{1}{n} \sum_{i=1}^n \log \frac{\frac{1}{n}}{Y_i / m}$	$\ln m - \frac{1}{n} \log(y^i)$	$\frac{1}{2n} \frac{1}{n} \sum_{i=1}^n  y^i - m $
Compares person's income to:	Other persons' income	his share in population	mean	mean
Features	Mean-normalized measure. Shows percentage difference between incomes of two randomly selected individuals	Compares relative incomes of all individuals (either population weighted or income weighted)		Mean-normalized measure
Intuitive explanation	Gini of 30 means that the expected difference in income btw. 2 randomly selected persons is 60 of overall mean income.		Shows percentage difference between income of a randomly selected individual and overall mean income.	Shows percentage of total income that should be transferred so that all incomes are the same.
Income-scale independence (if all incomes increase by the same %, measure does not change)	Yes	Yes	Yes	Yes

Source: Milanovic

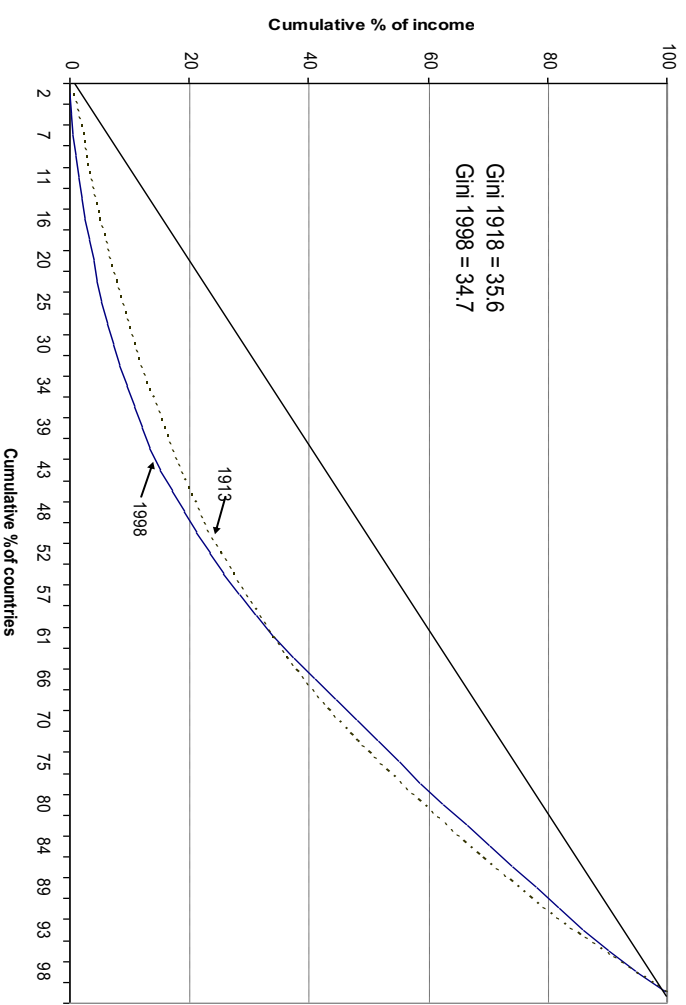
# MEASURES OF INEQUALITY: DESIRABLE PROPERTIES AND HOW DIFFER MEASURES SATISFY THEM (2)

	<b>Gini</b>	<b>Theil</b>	<b>Mean log deviation</b>	<b>Relative mean deviation</b>
Absolute increase of all incomes reduces inequality	Yes	Yes	Yes	Yes
Size independence (population size does not affect the measure)	Yes	Yes	Yes	Yes
Progressive transfer reduces inequality (The Pigou-Dalton transfer principle)	Yes	Yes		Not if both individuals have incomes greater (or lower) than the mean.
Symmetrical (if two people change their places, measure is not affected)	Yes	Yes	Yes	Yes
Measure varies between 0 and 1	Yes	Not bounded from above.	Not bounded from above.	Yes
Decomposability (between recipients and between Income sources)	Yes, between income sources No, between recipients	Yes (both)	Yes (both)	No
Sensitivity to transfers	Greatest at the mode (varies as density function of the distribution)			Insensitive if transfers take place between two individuals with income greater (or lower) than the mean.

Source: Milanovic

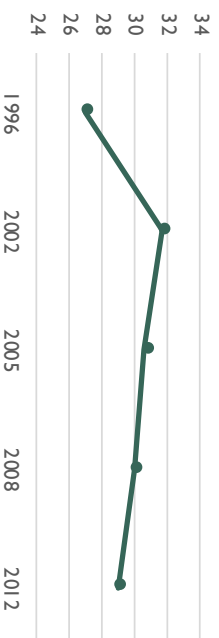
# EQUAL GINI?

- The area is the same, but the shape of the distribution is not

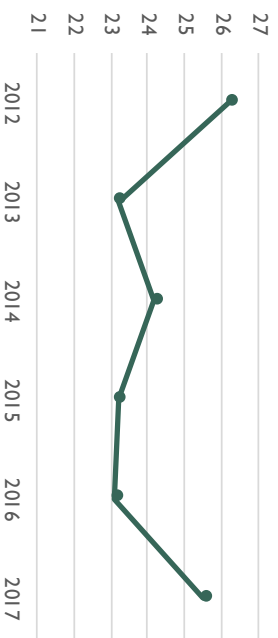


# INEQUALITY IN THE WESTERN BALKANS (I)

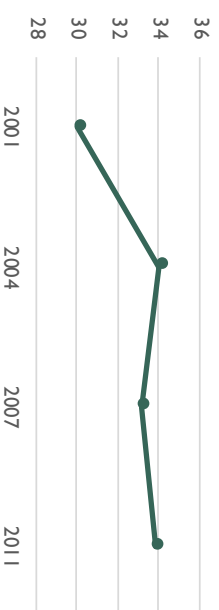
Gini Coefficient in Albania (World Bank)



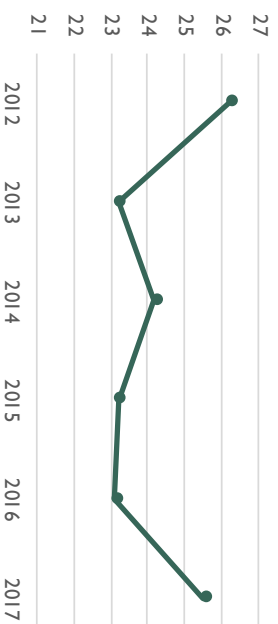
Gini Coefficient in Kosovo



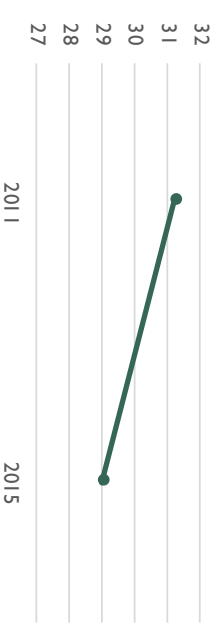
Gini Coefficient in Bosnia and Herzegovina (World Bank)



Gini Coefficient in Kosovo

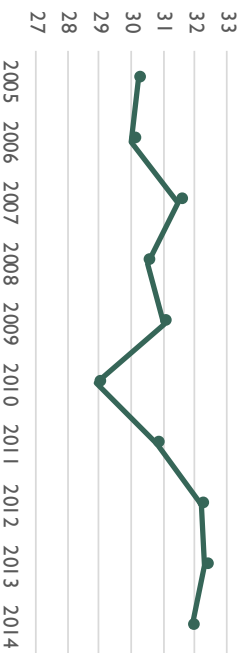


Gini Coefficient in Bosnia and Herzegovina

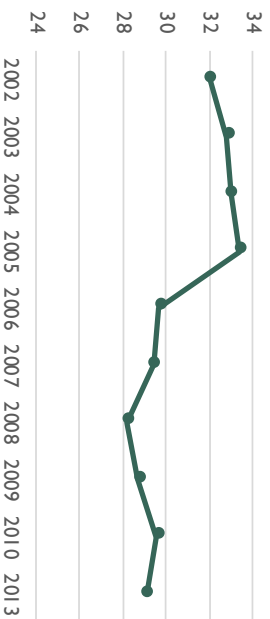


# INEQUALITY IN THE WESTERN BALKANS (2)

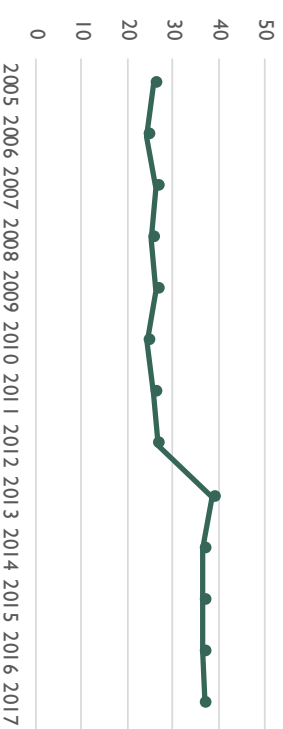
Gini Coefficient in Montenegro (World Bank)



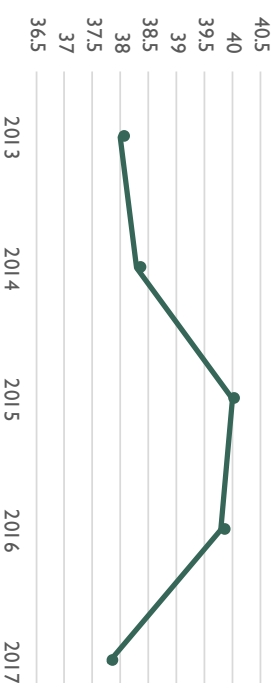
Gini Coefficient in Serbia (World Bank)



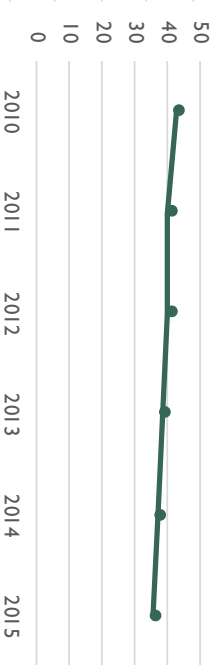
Gini Coefficient in Montenegro



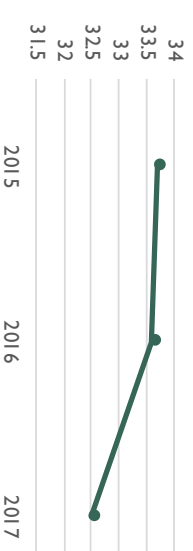
Gini Coefficient in Serbia



Gini Coefficient in North Macedonia (World Bank)

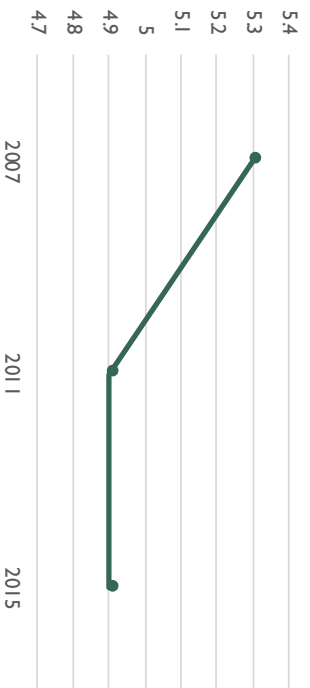


Gini Coefficient in North Macedonia

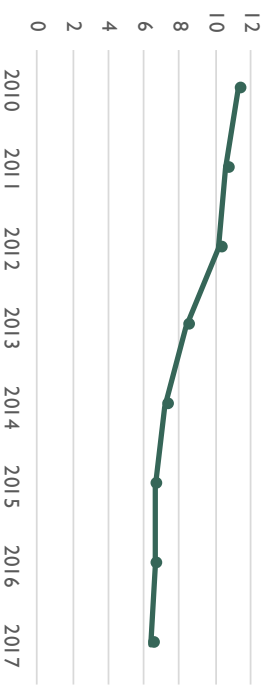


# INEQUALITY IN THE WESTERN BALKANS (3)

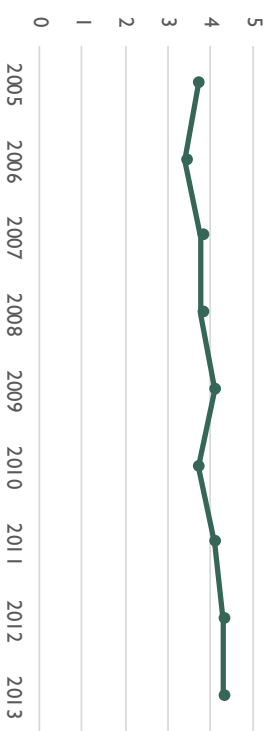
### S80/S20 in Bosnia and Herzegovina



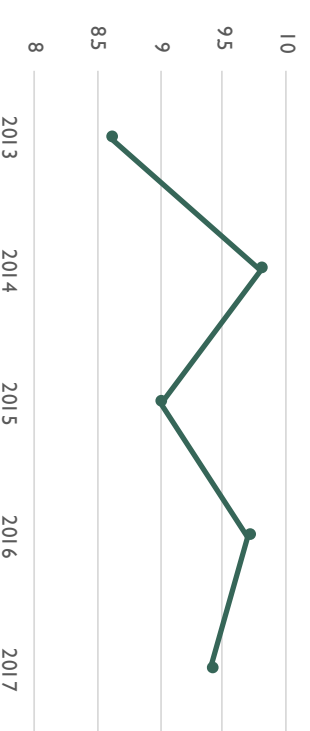
### S80/S20 in North Macedonia



### S80/S20 in Montenegro



### S80/S20 in Serbia



# INTERGENERATIONAL SOCIAL MOBILITY INDICATORS (1)

## OECD INDICATORS:

- Perceived and actual mobility of earnings over one generation,
- Share of individuals expecting improvement of the financial situation of their household for the next 12 months,
- Share of people who believe how important is having well-educated parents to get ahead,
- Expected number of generations it would take the offspring from a family at the bottom 10% to reach the mean income in society,
- A likelihood of educational attainment by parental education background,
- Percentage of managers and manual workers if parents are manual workers,
- Percentage of persons in bottom and top quartile with a father in the bottom quartile of earnings,
- Percentage of managers and manual workers if parents are managers,
- Percentage of persons in bottom and top quartile with a father in the top quartile of earnings,

# INTERGENERATIONAL SOCIAL MOBILITY INDICATORS (1)

## OECD INDICATORS (cont'd):

- Share of individuals moving up, moving down or staying in the same income quintile,
- Share of individuals in the lowest income quintile staying in the same group after four years,
- Share of individuals in the middle income quintile moving to the bottom quintile after four years,
- Share of individuals in the middle income quintile moving to the bottom quintile after four years,
- **EDUCATION , OCCUPATION, HEALTH and EARNING** across generations,
- Participation rates for 0-2 year-olds in formal childcare and pre-school services,
- Enrolment rates for 3-5 year-olds in pre-primary education or primary education or primary school,
- Score in mathematics by socio-economic status of parents,
- Percentage of 25-64 year-olds whose social class is higher or lower than of their parents (Social category is defined by ESEC based on occupation type),
- Percentage of 25-64 years old whose social class is higher or lower than their parents,



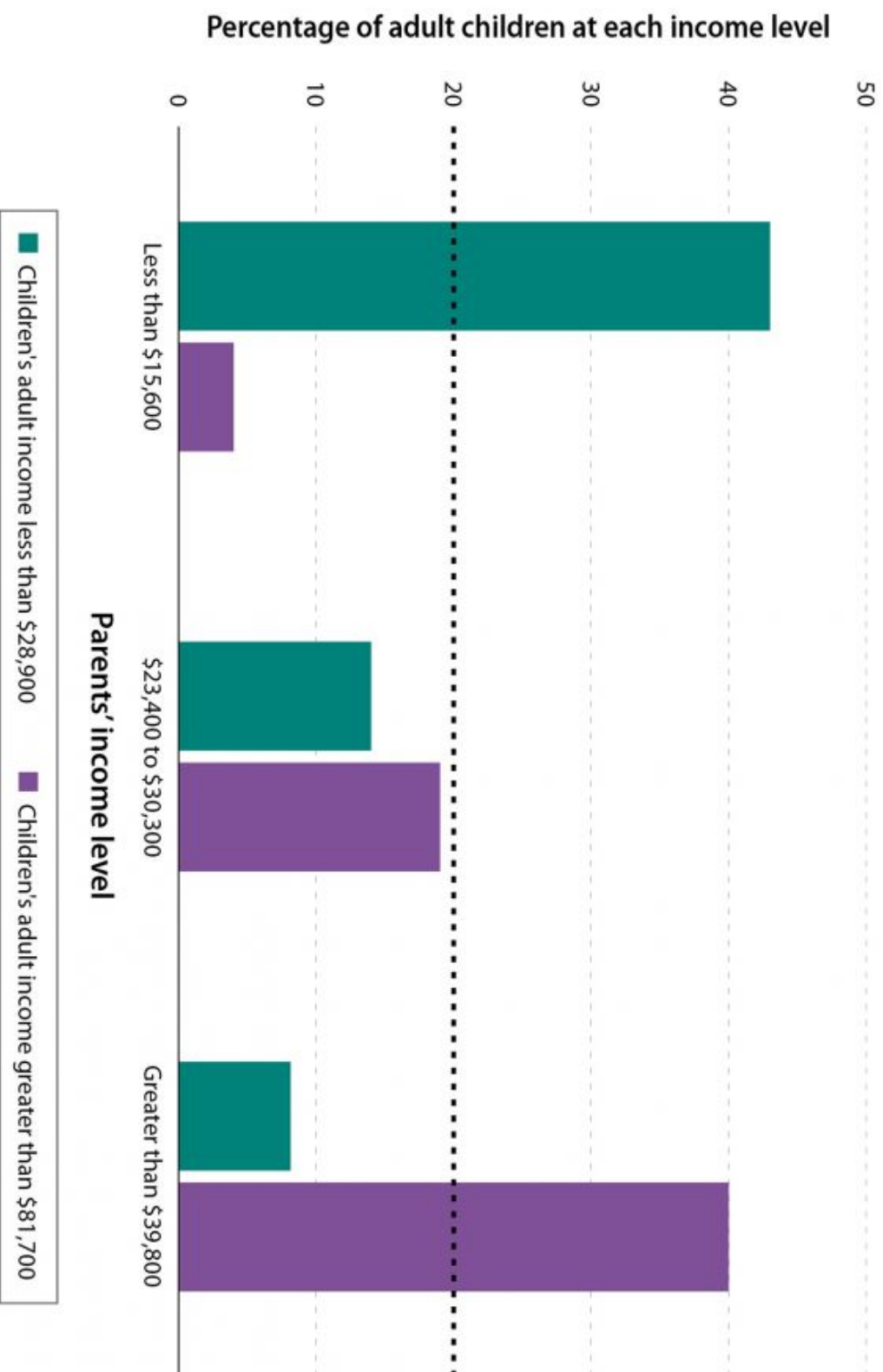
# OTHER SOCIAL MOBILITY INDICATORS

## OECD INDICATORS:

- **Share of income quintile changes over a four-year span,**
- **Share of income quintile changes over a nine-year span,**
- **Position income mobility by initial income quintile (over 4 years and over 9 years),**
- **Upward and downward movement for individuals in the middle income quintile over 4 years,**
- **Percentage of people of working-age population remaining in the bottom income quintile (over 4 ,6 and 9 years),**
- **Share of people remaining in the upper quintile over four years,**
- **Share of people remaining in the top quintile (over 4, 6 or 9 years),**
- **Persistence in the bottom and top income quintile, Longitudinal income trends at the bottom of distribution (in last 30 years),**
- **Persistence in the top income quintile,**

## Probability of Children's Income Level, Given Parents' Income Level

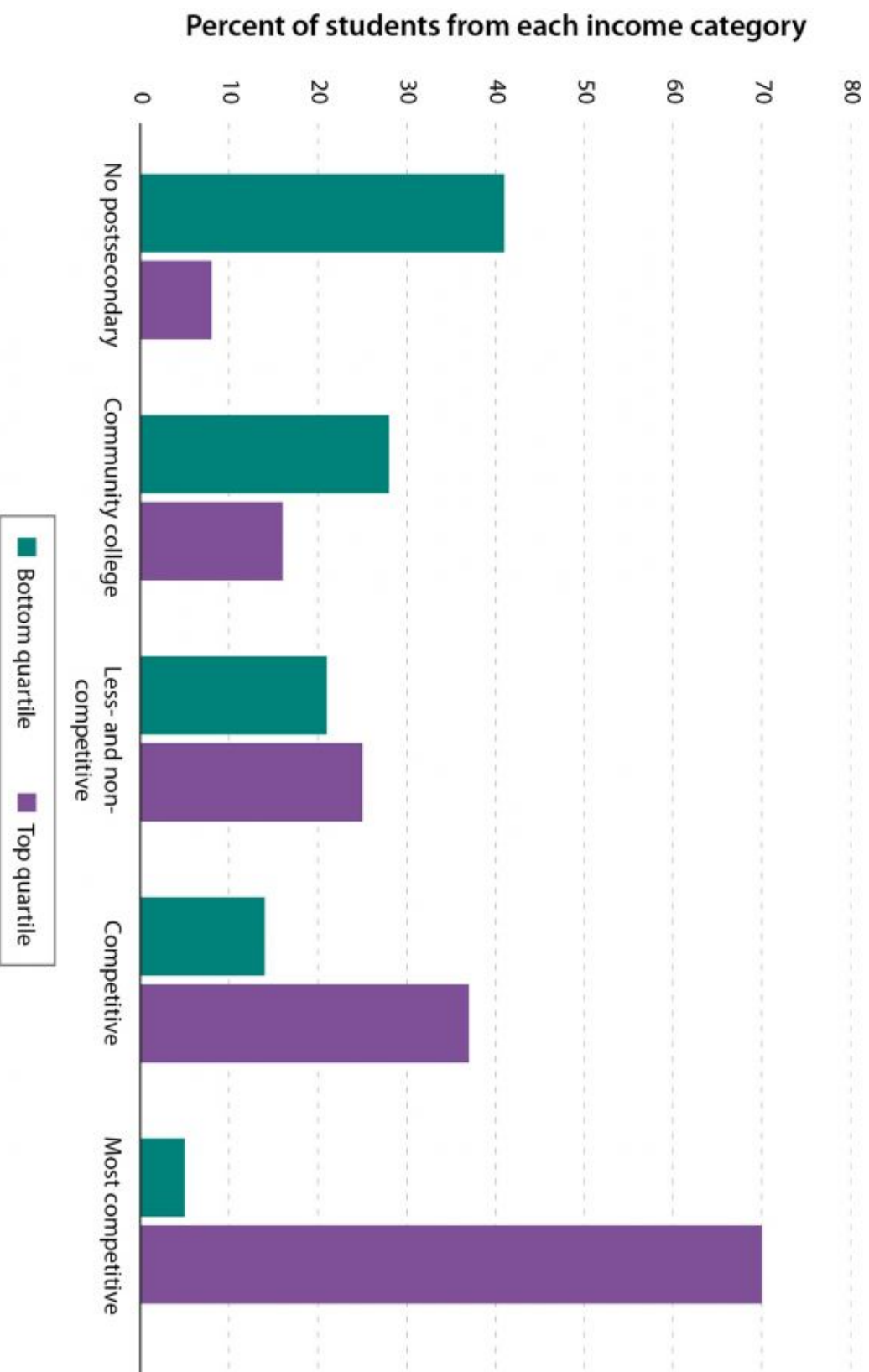
Children born into low-income families are likely to remain at the low end of the income distribution as adults.



Source: Pew Charitable Trust, Economic Mobility Project (2012).

## Socioeconomic Distribution at Colleges by Selectivity

A student at one of America's most-selective universities is fourteen times more likely to be from a high-income family than from a low-income family.



## Income mobility accross generations

Number of generations it would take for those born in low income families to approach the mean income in their society





## MISSING FIGURES FOR THE WESTERN BALKANS

- Limited number of longitudinal data
- Limited number of survey that allow linking parental background to child's information



## WHY WE NEED TO MEASURE INEQUALITY AND SOCIAL MOBILITY?

- Measuring changes in inequality and social mobility helps determine the effectiveness of policies aimed at affecting inequality and generates the data necessary to use inequality as an explanatory variable in policy analysis.
- Later, description of microsimulation models and a monitoring tool