

# The Economics of Poverty and Inequality: Global Challenges in the 21st Century

University of Barcelona, July 1-5, 2024

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## Overview of the course

One of the critical global challenges of the 21<sup>st</sup> century is to overcome poverty and address inequalities around the world. Consequently, goal number 1 of the sustainable development goals seeks to 'end poverty in all its forms everywhere' while further goals aim for zero hunger, better health, better education and lower inequalities, among others.

This course will introduce participants to selected topics in research on poverty or inequality, which are essential for any attempt to meet this challenge, including questions of measurement, analysis, conceptual integration, available data and their limitation as well as the policy context of poverty measures.

This course has been primarily designed for master and PhD students. A background in statistics and econometrics is expected and prior knowledge in public economics or development economics is an advantage. While some lines of research involve formal reasoning, economic intuition is emphasised throughout the course. Lab sessions require basic Stata skills. Students are expected to bring their own notebooks, but a Stata license will be provided for the duration of the course. The working language of the course will be English.

## Introduction to the field

Poverty and inequality measures are studied from different perspectives, including both theoretical and empirical research. At the same time they are also highly policy-relevant by themselves. For instance, poverty and inequality measures play a crucial role in assessing current levels and monitoring recent developments. Good poverty and inequality measures can already urge to take political action or call for an update of political priorities.

Moreover, well-designed poverty and inequality measures can reflect a policy success or failure and so policymakers are confronted with incentives which are closely related to the actual living conditions on the ground. Notwithstanding, further research is often needed to rationalise the broader trends or to carefully evaluate recently implemented policies.

Consequently, research on poverty and inequality measurement emphasises for a long time that is essential to clearly understand how the different measures behave and respond to a particular change in the underlying distribution. For instance, the widely applied headcount ratio (often also called the poverty rate), is unresponsive to a poor person becoming worse off, which is highly problematic for the incentives of policymakers. This literature, which frequently involves formal reasoning, also helped to reveal the implicit and explicit value judgements embodied in such measures. Thereby, this line of research also naturally relates to questions traditionally covered in public economics and social choice theory.

Related empirical analyses usually refer to individual countries or a particular world region. While analyses at the global level become more popular due to data availability, their focus is usually on countries of the global south. In recent years, developments in China and India have been of particular interest due to number of people affected and thus also for poverty and inequality at the global scale. While poverty measures do exist in richer countries as well, related findings receive much less attention. In contrast, inequality, in particular in terms of income and wealth became a more important topic in richer countries over the last 10–20 years as well. Pervasive themes in empirical research since its inception are data availability and quality—independent of the geographical focus. Even though the data situation improved substantially over the last decades, it is still a major constraint of empirical research. Consequently, empirical researchers aim to get the most out of the available data and issues related to survey design and imputations frequently surface. Similarly, a gendered perspective or analyses of intrahousehold inequalities are also often constrained by data availability.

An important trend at least since the 1990s is to look into shortfalls, achievements and inequalities in non-monetary dimensions which gained particular momentum with agreement on the Millennium Development Goals (MDGs), the subsequent Sustainable Development Goals (SDGs) and related efforts to monitor progress. Non-monetary outcome variables can take various forms ranging from life-expectancy to school attendance or drinking water quality. Each of them has been studied in different ways, including cross-country comparisons of levels, trends and inequality or multivariate analyses. Moreover, the better data situation also led multidimensional poverty measures to become more popular in practice. Finally, in recent years it became more common to consider global poverty and climate change as the twin challenge of the century, which has to be analysed and addressed together.

## Time table

	Monday [1 July]	Tuesday [2 July]	Wednesday [3 July]	Thursday [4 July]	Friday [5 July]
8.45 – 9.00	Welcome				
9.00 – 10.00	Introduction [NS]	Measurement 2: Inequality [IP]	Analysis 4: Inequality of opportunity [XR]	Student Presentations [NS, NQ, CO]	Frameworks 1: Social choice and Welfare [NQ]
10.00 – 11.00	Measurement 1: Poverty [NQ]	Analysis 2: Monetary inequality [NS]	Analysis 4: Inequality of opportunity [XR]	Analysis 5: Multidimensional poverty [NS]	Analysis 6: Evaluation of anti-poverty programs [NQ]
11.00 – 11.30	Coffee break				
11.30 – 13.00	Analysis 1: Monetary poverty [NS, NQ]	Analysis 3: Inequality in non-monetary dimensions of wellbeing [IP]	Measurement 3: Multidimensional poverty [NS]	Student presentations [NS, NQ, CO]	Analysis 7: Inequality and climate change [JT]
13.00 – 14.00	Lunch break				
14.00 – 15.30	Lab 1: The Poverty and inequality platform [PIP] [SK]	Frameworks 2: The capability approach [SA]	Policy: Poverty measures in the Arab region [CO]	Lab 2: Analysis of poverty and inequality [NQ]	Lab 3: Analysis of multidimensional poverty [NS]

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## Readings

### Introduction

#### Content

- Overview of the course
- Stylised facts on poverty, well-being, deprivations, and related inequalities.
- The central role of measurement and the construction of social indicators.

#### Core readings

- Stiglitz, Sen, and Fitoussi [2011] advocate for a more comprehensive measurement of well-being beyond monetary aspects. See Atkinson et al. [2002, ch. 2] or Marlier and Atkinson [2010] for a discussion of key principles for the construction of social indicators. Atkinson [2019] elaborates on the idea of triangulation across poverty measures. Roser [2022] illustrates how evidence-based reasoning can lead to more nuanced conclusion about the state of the world.

#### References

- Atkinson, A. B. [2019]. *Measuring Poverty around the World*. Princeton Univers. Press.
- Atkinson, T., B. Cantillon, E. Marlier, and B. Nolan [2002]. *Social Indicators: The EU and Social Inclusion*. Oxford: Oxford University Press.
- Marlier, E. and A. B. Atkinson [2010]. "Indicators of Poverty and Social Exclusion in a Global Context". *Journal of Policy Analysis and Management* 29.2, pp. 285–304.
- Roser, M. [2022]. "The world is awful. The world is much better. The world can be much better." *Our World in Data*. <https://ourworldindata.org/much-better-awful-can-be-better>.
- Stiglitz, J., A. Sen, and J.-P. Fitoussi [2011]. *Mismeasuring Our Lives: Why GDP Doesn't Add Up*. New York, London: The New Press.

### Frameworks 1: Social Choice and Welfare

#### Content

- Review of welfare economics: fundamental theorems, positive and normative economic analysis
- Review of social choice and welfare: Arrow's impossibility theorem, informational basis for welfare comparisons, social welfare functions
- Poverty and inequality measurement from a social welfare perspective

## Core readings

- Hindriks and Myles [2013, ch. 2 & 13] gives an accessible textbook introduction to the background material on welfare economics and social choice. Sen [1999] provides a non-technical overview of social choice and welfare, and its application to poverty and inequality measurement.

## Further readings

- On the background material, Ng [2003] is accessible and comprehensive, while Mas-Colell, Whinston, and Green [1995, ch. 16, 21 & 22] gives a technical textbook presentation. Sen [2017] is an expanded edition of his 1970 book, which contains both technical and non-technical chapters.

## References

- Hindriks, J. and G. D. Myles [2013]. *Intermediate Public Economics*. Second edition. Cambridge, Massachusetts: The MIT Press.
- Mas-Colell, A., M. D. Whinston, and J. R. Green [1995]. *Microeconomic Theory*. Oxford University Press.
- Ng, Y.-K. [2003]. *Welfare economics: towards a more complete analysis*. Springer.
- Sen, A. [1999]. "The Possibility of Social Choice". *American Economic Review* 89.3, pp. 349–378.
- Sen, A. [2017]. *Collective choice and social welfare*. Expanded edition. London: Penguin Books. 601 pp.

## Frameworks 2: The Capability Approach

### Content

- History and motivation of the capability approach
- Capabilities, and functionings and agency
- Implications for economics
- Issues for measurement

### Core readings

- Alkire et al. [2015, ch. 6] provides a textbook presentation focused on questions of poverty measurement; Alkire [2005] covers many aspects useful for introductory purposes. Robeyns and Byskov [2020] offer an encyclopedic overview. Seminal original contributions include Sen [1980], Sen [1985], Sen [1992], and Sen [1999].

## Further readings

- Robeyns [2017] provide a more comprehensive account of the capability approach.

## References

- Alkire, S. [2005]. “Why the Capability Approach?” *Journal of Human Development* 6.1, pp. 115–133.
- Alkire, S. et al. [2015]. *Multidimensional Poverty Measurement and Analysis: A Counting Approach*. Oxford: Oxford University Press.
- Robeyns, I. [2017]. *Wellbeing, Freedom and Social Justice: The Capability Approach Re-Examined*. Open Book Publishers.
- Robeyns, I. and M. F. Byskov [2020]. “The Capability Approach”. In: *The Stanford Encyclopedia of Philosophy*. Ed. by E. N. Zalta and U. Nodelman. Stanford University, Stanford: The Metaphysics Research Lab.
- Sen, A. K. [1980]. “Equality of What?” In: *The Tanner Lecture on Human Values*. Ed. by S. M. McMurrin. Vol. 1. Stanford University: Cambridge University Press, pp. 195–220.
- Sen, A. K. [1985]. *Commodities and Capabilities*. 12th ed. New Delhi: North-Holland Publishing.
- Sen, A. K. [1992]. *Inequality Reexamined*. 3rd ed. Russell Sage Foundation book. New York: Russell Sage Foundation.
- Sen, A. K. [1999]. *Development as Freedom*. Oxford: Oxford University Press.

## Measurement 1: Poverty

### Content

- The concept of poverty and core principles for constructing a poverty index [identification and aggregation]
- Desirable properties for a poverty index [axiomatics]; selected indices and their properties
- Extensions such as chronic poverty indices, dominance conditions and partial poverty orderings

### Core readings

- Useful textbook presentations include Deaton [1997, ch.3], Hindriks and Myles [2013, ch. 14], Alkire et al. [2015, ch.2]. Zheng [1997] provides a technical survey of the literature on poverty indices.

### Further readings

- Seminal contributions include Sen [1976], Foster, Greer, and Thorbecke [1984], and Atkinson [1987].

## References

- Alkire, S. et al. [2015]. *Multidimensional Poverty Measurement and Analysis: A Counting Approach*. Oxford: Oxford University Press.
- Atkinson, A. B. [1987]. "On the Measurement of Poverty". *Econometrica* 55.4, pp. 749–64.
- Deaton, A. [1997]. *The Analysis of Household Surveys: A Microeconomic Approach to Development Policy*. World Bank Series. Washington D.C.: World Bank Publications.
- Foster, J., J. Greer, and E. Thorbecke [1984]. "A Class of Decomposable Poverty Measures". *Econometrica* 52.3, pp. 761–66.
- Hindriks, J. and G. D. Myles [2013]. *Intermediate Public Economics*. Second edition. Cambridge, Massachusetts: The MIT Press.
- Sen, A. K. [1976]. "Poverty: An Ordinal Approach to Measurement". *Econometrica* 44, pp. 219–231.
- Zheng, B. [1997]. "Aggregate Poverty Measures". *Journal of Economic Surveys* 11.2, pp. 123–162.

## Measurement 2: Inequality

### Content

- Motivation for inequality measurement
- Desirable properties of inequality measurement [axiomatics]
- Selected inequality measures including Gini index, Generalized entropy measures, and the Atkinson index
- Decompositions of inequality

### Core readings

- Two comprehensive overviews are Cowell [2000] and Cowell [2011] with the first one being more technical. Deaton [1997, ch.3] provides a useful introduction to welfare, inequality and poverty measurement.

### Further readings

- Seminal contributions to the field include Atkinson [1970] and Shorrocks [1980].

### References

- Atkinson, A. B. [1970]. "On the measurement of inequality". *Journal of Economic Theory* 2.3, pp. 244–263.
- Cowell, F. [2011]. *Measuring Inequality*. Oxford University Press.

- Cowell, F. A. [2000]. "Measurement of inequality". In: *Handbook of Income Distribution*. Ed. by A. Atkinson and F. Bourguignon. Vol. 1. Handbooks in Economics. Elsevier. Chap. 2, pp. 87–166.
- Deaton, A. [1997]. *The Analysis of Household Surveys: A Microeconometric Approach to Development Policy*. World Bank Series. Washington D.C.: World Bank Publications.
- Shorrocks, A. F. [1980]. "The Class of Additively Decomposable Inequality Measures". *Econometrica* 48.3, pp. 613–625.

### Measurement 3: Multidimensional poverty

#### Content

- Motivation for multidimensional poverty measurement
- Desirable properties of measures
- The dual cutoff counting approach
- Normative decisions
- Selected measures of multidimensional poverty

#### Core Readings

- A textbook presentation of the covered material is Alkire, Foster, Seth, et al. [2015, ch.4–6], a seminal contribution is Alkire and Foster [2011a], the global Multidimensional Poverty Index [MPI] has been proposed by Alkire and Santos [2014].

#### Further Readings

- Important contributions to the literature include Atkinson [2003] and Bourguignon and Chakravarty [2003], prominent critiques are Ravallion [2011] and Ravallion [2012] and a related responses are Alkire, Foster, and Santos [2011] and Alkire and Foster [2011b]. For a report on the global MPI see UNDP-OPHI [2019], for a report of the national MPI see NSO Malawi and MFEA [2022].

#### References

- Alkire, S. and J. Foster [2011a]. "Counting and Multidimensional Poverty Measurement". *Journal of Public Economics* 95.7–8, pp. 476–487.
- Alkire, S. and J. Foster [2011b]. "Understandings and Misunderstandings of Multidimensional Poverty Measurement". *Journal of Economic Inequality* 9.2, pp. 289–314.



- Alkire, S., J. Foster, and E. M. Santos [2011]. "Where Did Identification Go?" *Journal of Economic Inequality* 9.3, pp. 501–505.
- Alkire, S., J. Foster, S. Seth, et al. [2015]. *Multidimensional Poverty Measurement and Analysis: A Counting Approach*. Oxford: Oxford University Press.
- Alkire, S. and M. E. Santos [2014]. "Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index". *World Development* 59, pp. 251–274.
- Atkinson, A. B. [2003]. "Multidimensional Deprivation: Contrasting Social Welfare and Counting Approaches". *Journal of Economic Inequality* 1.1, pp. 51–65.
- Bourguignon, F. and S. Chakravarty [2003]. "The Measurement of Multidimensional Poverty". *Journal of Economic Inequality* 1.1, pp. 25–49.
- NSO Malawi and MFEA [2022]. *The Second Malawi Multidimensional Poverty Index Report*. Report. Malawi: National Statistical Office of Malawi; Ministry of Finance and Economic Affairs.
- Ravallion, M. [2011]. "On Multidimensional Indices of Poverty". *Journal of Economic Inequality* 9.2, pp. 235–248.
- Ravallion, M. [2012]. "Mashup Indices of Development". *The World Bank Research Observer* 27.1, pp. 1–32.
- UNDP-OPHI [2019]. *Global Multidimensional Poverty Index 2019: Illuminating Inequalities*. Report. New York and Oxford: United Nations Development Programme [UNDP], the Oxford Poverty, and Human Development Initiative [OPHI].

## Analysis 1: Monetary poverty

### Content

- Measurement of the welfare indicator: data sources, consumption expenditure vs income, comparability within and across countries [equivalence scales, purchasing power parity]
- Determination of poverty thresholds: cost of basic needs, absolute vs relative poverty measurement, the World Bank's extreme and societal poverty lines
- Selected analyses related to the World Bank's measures, such as key insights from levels and trends, computation of nowcasts, analyses of shared prosperity and the covid pandemic.
- Complementary analysis using selected national measures, including both absolute and relative poverty measures.

### Core Readings

- Ravallion [1994] covers many of the key issues on indicator measurement and poverty thresholds; Deaton [1997] is also helpful. Regularly published World Bank reports are World Bank [2020a] and World Bank [2022].

## Further Readings

- Deaton and Grosh [2000] and Deaton and Zaidi [2002] are key references for consumption measurement in a low-income context; World Bank [2020b] is the latest ICP report on global purchasing power parities. On relative poverty see in particular Sen [1983] and Ravallion and Chen [2011]. Important papers underlying the World Bank measure are Ravallion, Datt, and van de Walle [1991] and Ravallion, Chen, and Sangraula [2009]; Decerf, Ferrando, and Quinn [2022] axiomatise the societal poverty line.
- A comprehensive but unfortunately unfinished attempt to discuss poverty around the world is Atkinson [2019]. Lakner et al. [2022] explore the role of inequality for poverty reduction. Mahler, Castañeda Aguilar, and Newhouse [2022] compare different approaches for nowcasting, Mahler, Yonzan, and Lakner [2022] offer an analysis of the covid pandemic.

## References

- Atkinson, A. B. [2019]. *Measuring Poverty around the World*. Princeton Univers. Press.
- Deaton, A. [1997]. *The Analysis of Household Surveys: A Microeconomic Approach to Development Policy*. World Bank Series. Washington D.C.: World Bank Publications.
- Deaton, A. and M. Grosh [2000]. "Consumption". In: *Designing household survey questionnaires for developing countries: lessons from ten years of LSMS experience*. Ed. by M. Grosh and P. Glewwe. The World Bank. Chap. 5.
- Deaton, A. and S. Zaidi [2002]. *Guidelines for constructing consumption aggregates for welfare analysis*. Tech. rep. 135. The World Bank.
- Decerf, B., M. Ferrando, and N. Quinn [2022]. *Global income poverty measurement with preference heterogeneity: Theory and application*. Center Discussion Paper 2022-07. Tilburg University Center for Economic Research.
- Lakner, C., D. G. Mahler, M. Negre, and E. B. Prydz [2022]. "How much does reducing inequality matter for global poverty?" *The Journal of Economic Inequality* 20.3, pp. 559–585.
- Mahler, D. G., R. A. Castañeda Aguilar, and D. Newhouse [2022]. "Nowcasting Global Poverty". *The World Bank Economic Review* 36.4, pp. 835–856.
- Mahler, D. G., N. Yonzan, and C. Lakner [2022]. *The Impact of COVID-19 on Global Inequality and Poverty*. Policy Research Working Paper Series 10198. The World Bank.
- Ravallion, M. [1994]. *Poverty Comparisons*. Vol. 56. Taylor & Francis.
- Ravallion, M. and S. Chen [2011]. "Weakly Relative Poverty". *Review of Economics and Statistics* 93.4, pp. 1251–1261.
- Ravallion, M., S. Chen, and P. Sangraula [2009]. "Dollar a Day Revisited". *The World Bank Economic Review* 23.2, pp. 163–184.
- Ravallion, M., G. Datt, and D. van de Walle [1991]. "Quantifying Absolute Poverty in the Developing World". *Review of Income and Wealth* 37.4, pp. 345–361.

Sen, A. K. [1983]. "Poor, Relatively Speaking". *Oxford Economic Papers* 35.2, pp. 153–169.

World Bank [2020a]. *Poverty and Shared Prosperity 2020: Reversals of Fortune*. Washington DC: The World Bank.

World Bank [2020b]. *Purchasing power parities and the size of world economies: Results from the 2017 International Comparison Program*. The World Bank.

World Bank [2022]. *Poverty and Shared Prosperity 2022: Correcting Course*. Washington DC: The World Bank.

## Analysis 2: Monetary inequality

### Content

- Key empirical findings, including assessments of levels and trends in income and wealth inequality both at the country and the global level.
- Absolute and relative inequality measures.

### Core Readings

- Alvaredo et al. [2023] assess levels and trends of country-level income inequality using popular databases. Contributions to the inequality analysis of the global income distribution include Lakner and Milanovic [2016], Niño-Zarazúa, Roope, and Tarp [2016], and Gradín [2024]. The regular reports of the World Inequality Lab [Chancel et al. 2022] present recent insights and developments.

### Further Readings

- Contributions to the recent discussion on unobserved incomes in inequality measurement are Auten and Splinter [2023] and Piketty, Saez, and Zucman [2023]. A more policy-oriented account is provided by Atkinson [2015].

### References

Alvaredo, F., F. Bourguignon, F. H. G. Ferreira, and N. Lustig [2023]. *Seventy-five years of measuring income inequality in Latin America*. LSE Research Online Documents on Economics 120557. London School of Economics and Political Science, LSE Library.

Atkinson, A. B. [2015]. *Inequality. What can be done?* Includes bibliographical references (pages 315-359) and index. Cambridge, Massachusetts: Harvard University Press. 1384 pp.

Auten, G. and D. Splinter [2023]. "Income Inequality in the United States: Using Tax Data to Measure Long-Term Trends". *Journal of Political Economy*. Forthcoming.

Chancel, L., T. Piketty, E. Saez, and G. Zucman [2022]. *World Inequality Report 2022*. Tech. rep. Paris: World Inequality Lab.

Gradín, C. [2024]. "Revisiting the trends in global inequality". *World Development* 179, p. 106607.

Lakner, C. and B. Milanovic [2016]. "Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession". *The World Bank Economic Review* 30.2, pp. 203–232.

Niño-Zarazúa, M., L. Roope, and F. Tarp [2016]. "Global Inequality: Relatively Lower, Absolutely Higher". *Review of Income and Wealth* 63.4, pp. 661–684.

Piketty, T., E. Saez, and G. Zucman [2023]. *Comment on Auten and Splinter [2023]*. Technical Note 2023/09. Paris: World Inequality Lab.

### Analysis 3: Inequality in non-monetary dimensions

#### Content

- Inequality for bounded variables: (i) Attainment and shortfall distributions, (ii) the boundary effect
- Inequality in education: (i) Data and methods, (ii) Empirical findings
- Inequality in health: (i) Data and methods, (ii) Empirical findings
- Inequality in Human Development (i) Data and methods, (ii) Empirical findings

#### Core Readings

- Good references for the measurement of inequality for bounded variables are Lambert and Zheng [2011] and Lasso de la Vega and Aristondo [2012] and Permanyer, Seth, and Yalonetzky [2022].

#### Further Readings

- For the measurement of inequality in education, good references are Jordá and Alonso [2017], Morrison and Murtin [2013], and Permanyer and Boertien [2019] and Permanyer and Boertien [2021]. For health inequalities Edwards [2011], Goesling and Firebaugh [2004], and Permanyer and Scholl [2019] and Permanyer and Bramajo [2023]. For the measurement of inequality in human development, Smits and Permanyer [2019] and Permanyer and Smits [2020] and Permanyer and Suppa [2022].

#### References

Edwards, R. D. [2011]. "Changes in World Inequality in Length of Life: 1970–2000". *Population and Development Review* 37.3, pp. 499–528.

- Goesling, B. and G. Firebaugh [2004]. "The Trend in International Health Inequality". *Population and Development Review* 30.1, pp. 131–146.
- Jordá, V. and J. M. Alonso [2017]. "New Estimates on Educational Attainment Using a Continuous Approach [1970–2010]". *World Development* 90, pp. 281–293.
- Lambert, P. and B. Zheng [2011]. "On the consistent measurement of attainment and shortfall inequality". *Journal of Health Economics* 30.1, pp. 214–219.
- Lasso de la Vega, C. and O. Aristondo [2012]. "Proposing indicators to measure achievement and shortfall inequality consistently". *Journal of Health Economics* 31.4, pp. 578–583.
- Morrison, C. and F. Murtin [2013]. "The Kuznets curve of human capital inequality: 1870–2010". *The Journal of Economic Inequality* 11.3, pp. 283–301.
- Permanyer, I., S. Seth, and G. Yalonetzky [2022]. *Inequality measurement for bounded variables*. ECINEQ Working Paper 602. Society for the Study of Economic Inequality.
- Permanyer, I. and D. Boertien [2019]. "A century of change in global education variability and gender differences in education". *PLoS ONE* 14.2. Ed. by S. M. Brownie, e0212692.
- Permanyer, I. and D. Boertien [2021]. "Global Trends in Education Inequality: 1950–2010". *Journal of Human Development and Capabilities* 22.4, pp. 615–646.
- Permanyer, I. and O. Bramajo [2023]. "The Race between Mortality and Morbidity: Implications for the Global Distribution of Health". *Population and Development Review* 49.4, pp. 909–937.
- Permanyer, I. and N. Scholl [2019]. "Global trends in lifespan inequality: 1950–2015". *PLoS ONE* 14.5. Ed. by M. H. Brenner, e0215742.
- Permanyer, I. and J. Smits [2020]. "Inequality in Human Development across the Globe". *Population and Development Review* 46.3, pp. 583–601.
- Permanyer, I. and N. Suppa [2022]. "Racing ahead or lagging behind? Territorial cohesion in human development around the globe." *Regional Studies* 56.12, pp. 2086–2101.
- Smits, J. and I. Permanyer [2019]. "The Subnational Human Development Database". *Scientific Data* 6.190038, pp. 1–15.

## Analysis 4: Inequality of opportunity

### Content

- Motivating the importance of responsibility or effort in the measurement of inequality.
- Principles that should guide equality of opportunity
- How do we measure inequality of opportunity?
- Addressing empirical difficulties: Identification of circumstances and efforts

## Core Readings

- Useful overviews are provided in Ramos and Van de Gaer [2016], Roemer and Trannoy [2015], Roemer and Trannoy [2016], and Ferreira and Peragine [2015].

## Further Readings

- The seminal original contribution is Roemer [1998].

## References

- Ferreira, F. H. G. and V. Peragine [2015]. *Equality of Opportunity: Theory and Evidence*. IZA DP. 8994. IZA Institute of Labor Economics.
- Ramos, X. and D. Van de Gaer [2016]. “Approaches to Inequality of Opportunity: Principles, Measures and Evidence”. *Journal of Economic Surveys* 30.5, pp. 855–883.
- Roemer, J. E. and A. Trannoy [2015]. “Equality of Opportunity”. In: *Handbook of Income Distribution*. Ed. by A. Atkinson and F. Bourguignon. Elsevier. Chap. 4, pp. 217–300.
- Roemer, J. E. and A. Trannoy [2016]. “Equality of Opportunity: Theory and Measurement”. *Journal of Economic Literature* 54.4, pp. 1288–1332.
- Roemer, J. E. [1998]. *Equality of Opportunity*. Cambridge Massachusetts: Harvard University Press.

## Analysis 5: Multidimensional poverty

### Content

- Disaggregations, decompositions, and interlinkages
- Robustness and mismatch analysis
- Changes over time, projections and micro-level dynamics

### Core readings

- A textbook treatment of commonly applied analyses of multidimensional poverty is provided in Alkire, Foster, et al. [2015, ch. 7–9]. Recently proposed novel analyses include Alkire, Nogales, et al. [2021], Alkire, Nogales, et al. [2023], Suppa, Alkire, and Nogales [2022], and Suppa [2018].

### Further readings

- Common forms of multidimensional poverty analysis applied to the global MPI are provided in Alkire and Santos [2014], Alkire, Kanagaratnam, et al. [2022], Alkire, Roche, and Vaz [2017], and UNDP-OPHI [2020]. Important parts of the global MPI data are documented in Suppa and Kanagaratnam [2023].

## References

- Alkire, S., J. Foster, et al. [2015]. *Multidimensional Poverty Measurement and Analysis: A Counting Approach*. Oxford: Oxford University Press.
- Alkire, S., U. Kanagaratnam, R. Nogales, and N. Suppa [2022]. “Revising the Global Multidimensional Poverty Index: Empirical Insights and Robustness”. *Review of Income and Wealth* 68.S2, S347–S384.
- Alkire, S., R. Nogales, N. N. Quinn, and N. Suppa [2021]. “Global multidimensional poverty and COVID-19: A decade of progress at risk?” *Social Science & Medicine* 291, p. 114457.
- Alkire, S., R. Nogales, N. N. Quinn, and N. Suppa [2023]. “On track or not? Projecting the global Multidimensional Poverty Index”. *Journal of Development Economics* 165, p. 103150.
- Alkire, S., J. M. Roche, and A. Vaz [2017]. “Changes Over Time in Multidimensional Poverty: Methodology and Results for 34 Countries”. *World Development* 94, pp. 232–249.
- Alkire, S. and M. E. Santos [2014]. “Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index”. *World Development* 59, pp. 251–274.
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- Suppa, N., S. Alkire, and R. Nogales [2022]. *The many forms of poverty: Analyses of deprivation interlinkages in the developing world*. OPHI Research in Progress 63a. University of Oxford: Oxford Poverty and Human Development Initiative [OPHI].
- Suppa, N. and U. Kanagaratnam [2023]. *The global Multidimensional Poverty Index: Harmonised level estimates and their changes over time*. OPHI Research in Progress 66a. University of Oxford: Oxford Poverty and Human Development Initiative.
- UNDP-OPHI [2020]. *Global Multidimensional Poverty Index 2020: Charting pathways out of multidimensional poverty*. Report. New York: United Nations Development Programme [UNDP], the Oxford Poverty, and Human Development Initiative [OPHI].

## Analysis 6: Evaluation of anti-poverty programmes

### Content

- Experimental methods for impact evaluation [randomised controlled trials]
- The impact of various programmes on monetary and multidimensional poverty
- Key critiques of this approach: are anti-poverty programmes necessary or sufficient for poverty reduction?

### Core Readings

- The 2019 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel was awarded jointly to Abhijit Banerjee, Esther Duflo and Michael Kremer “for their experimental approach to alleviating global poverty”. The scientific background [Committee for the Prize in Economic Sciences in Memory of Alfred Nobel 2019] gives a good overview of the field. Studies covered will include Blattman et al. [2016] and Malaeb and Uzor [2022] on the monetary and multidimensional poverty impacts of an integrated programme of microenterprise support for extremely poor women in northern Uganda. The relevance of such programmes for poverty reduction at scale is examined critically by Pritchett [2020].

### Further Readings

- Duflo, Glennerster, and Kremer [2007] is a comprehensive guide to implementing an experimental programme evaluation. The 2019 Nobel laureates’ Prize Lectures address the impact of RCTs on the practice of economics [Banerjee 2020], policy [Duflo 2020] and innovation [Kremer 2020], in each case illustrating with examples from their own work and the broader field. Bédécarrats, Guérin, and Roubaud [2020] draw together a broad range of critical responses to the rapidly expanding role of RCTs in the field of development economics.

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## Analysis 7: Inequality and climate change

### Content

- Climate Change
- Inequality and Free Riding in Public Goods
- Climate Change Inequalities
- Climate Policy and Inequality
- Just transition

### Core Readings

- Bel and Teixidó [2020], Chakravarty et al. [2009], Chancel [2022], Fowlie, Holland, and Mansur [2012], Fremstad and Paul [2019], Jakob et al. [2020], Spencer et al. [2017], Teixidó-Figueras et al. [2016], Teixidó and Verde [2017], Sterner [2012], and Labandeira [2023].

### References

- Bel, G. and J. J. Teixidó [2020]. “The political economy of the Paris Agreement: Income inequality and climate policy”. *Journal of Cleaner Production* 258, p. 121002.
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## Policy: Poverty measures in the Arab region

### Content

- Multidimensional poverty measures in political and administrative processes
- National multidimensional poverty indices in the Arab region
- Multidimensional poverty indices as a policy tool

### Core Readings

- The second Arab Multidimensional Poverty Report [UNESCWA et al. [2023](#)] and Multidimensional Poverty Index Assist Tool [UNESCWA [2024](#)].

### Further Readings

- The handbook UNDP and OPHI [[2019](#)] provides further background on the construction of national MPIs.

### References

- UNDP and OPHI [2019]. *How to Build a National Multidimensional Poverty Index [MPI]: Using the MPI to inform the SDGs*. Tech. rep. New York: United Nations Development Programme.
- UNESCWA et al. [2023]. *Second Arab Multidimensional Poverty Report*. Tech. rep. E/ESCWA/CL2.GPID/2022/4. Beirut, Lebanon: UNESCWA.
- UNESCWA [2024]. *MAT - Multidimensional Poverty Index Assist Tool*. Available under <https://mat-training.unescwa.org/>.

## Lab 1: The World Bank's PIP

### Content

- How to access, explore, visualize, and download poverty and inequality estimates of the World Bank from the Poverty and Inequality Platform [PIP] using the User Interface [UI].
- Installation of the pip.ado to access the PIP Stata wrapper.
- Interacting with the Application Programming Interface [API] using the PIP Stata wrapper: load, explore, visualize, and analyze PIP survey-year data in Stata.

### Core Readings

- The poverty and inequality platform is documented in World Bank [2023b]; the data itself is World Bank [2023a].

### Further Readings

- Further readings on global poverty estimates include Mahler, Castañeda Aguilar, and Newhouse [2022] and Mahler, Yonzan, and Lakner [2022] and World Bank [2022].

### References

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- World Bank [2023b]. *Poverty and Inequality Platform Methodology Handbook*. Edition 2023-09.

## Lab 2: Analysis of Poverty and inequality

### Content

- Using Stata to visualise income and consumption expenditure distributions.
- Using Stata to calculate and estimate poverty and inequality measures
- Inference for poverty and inequality measurement.

## Core Readings

- Useful Stata commands for visualisation of distributions and poverty and inequality measurement are documented in Issue 48 of the Stata Technical Bulletin [Jenkins [1999a](#); Jenkins [1999b](#); Jenkins and van Kerm [1999](#); van Kerm [1999](#)].

## Further Readings

- The Stata User's Guide [StataCorp [2023](#)] provides a good introduction to the software. Key references on statistical inference for poverty and inequality measurement include Davidson and Duclos [[2000](#)] and Biewen and Jenkins [[2006](#)].

## References

- Biewen, M. and S. P. Jenkins [2006]. "Variance Estimation for Generalized Entropy and Atkinson Inequality Indices: the Complex Survey Data Case". *Oxford Bulletin of Economics and Statistics* 68.3, pp. 371–383.
- Davidson, R. and J.-Y. Duclos [2000]. "Statistical Inference for Stochastic Dominance and for the Measurement of Poverty and Inequality". *Econometrica* 68.6, pp. 1435–1464.
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- Jenkins, S. and P. van Kerm [1999]. "sg107: Generalized Lorenz curves and related graphs". *Stata Technical Bulletin* 48, pp. 25–29.
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## Lab 3: Analysis of multidimensional poverty

### Content

- Deprivation indicator construction for the global MPI
- Manual computation of selected estimates
- Introduction to the MPI toolbox `mpitb`
- Replication of selected estimates of the global MPI

## Core Readings

- Alkire, Kanagaratnam, and Suppa [2023b] provide more details about the indicator construction of every country. Suppa [2023] provides the documentation `mpitb`, the MPI toolbox.

## Further Readings

- Alkire, Kanagaratnam, and Suppa [2023a] provide details on the harmonisation of indicators and regions over time, whereas Suppa and Kanagaratnam [2023] provide an introduction to the database of the global MPI providing harmonised level estimates and their changes over time.

## References

- Alkire, S., U. Kanagaratnam, and N. Suppa [2023a]. *A methodological note on the global Multidimensional Poverty Index [MPI] 2023 changes over time results for 84 countries*. OPHI MPI Methodological Note 57. Oxford Poverty and Human Development Initiative [OPHI].
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