

Reducing Inequalities

Edited by
Renato Miguel Carmo • Cédric Rio
Márton Medgyesi

Reducing Inequalities

A Challenge for the European Union?

palgrave
macmillan

Editors

Renato Miguel Carmo
University of Lisbon
Portugal

Cédric Rio
Centre Maurice Halbwachs
Paris, France

Márton Medgyesi
TÁRKI, Social Research Institute and
Institute for Sociology
CSS Hungarian Academy of Sciences
Budapest, Hungary

ISBN 978-3-319-65005-0 ISBN 978-3-319-65006-7 (eBook)
<https://doi.org/10.1007/978-3-319-65006-7>

Library of Congress Control Number: 2017962339

© The Editor(s) (if applicable) and The Author(s) 2018

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Cover design by Tjaša Krivec

Printed on acid-free paper

This Palgrave Macmillan imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Contents

1	Introduction	1
	<i>Renato Miguel Carmo, Cédric Rio, and Márton Medgyesi</i>	
Part I	Inequality and Poverty in European Union	11
2	Disposable Income Inequality, Cohesion and Crisis in Europe	13
	<i>Michael Dauderstädt</i>	
3	Drivers of Growing Income Inequalities in OECD and European Countries	31
	<i>Guillaume Cohen and Maxime Ladaïque</i>	
4	Unemployment, Precariousness and Poverty as Drivers of Social Inequality: The Case of the Southern European Countries	45
	<i>Renato Miguel Carmo and Ana Rita Matias</i>	

5	Distributional and Categorical Inequalities in Europe: Structural Configurations	63
	<i>António Firmino da Costa, Rosário Mauritti, Susana da Cruz Martins, Nuno Nunes, and Ana Lúcia Romão</i>	
6	Income Poverty in the EU: What Do We Actually Measure? Empirical Evidence on Choices, Underlying Assumptions and Implications (Based on EU-SILC 2005–2014)	75
	<i>Orsolya Lelkes and Katrin Gasior</i>	
7	Poverty and Social Exclusion Indicators in the European Union: The Role of Non-Monetary Deprivation Indicators	97
	<i>Brian Nolan and Christopher T. Whelan</i>	
8	Inequality of Outcomes and Opportunities Among the Young	115
	<i>Márton Medgyesi</i>	
Part II	European Union against Inequality	135
9	The European Union Social Tools in Question	137
	<i>Cédric Rio</i>	
10	European Union Policy on Gender Equality: The Scope and Limits of Equality in the Single Market	149
	<i>Gwenaëlle Perrier</i>	
11	European Union and Human Rights: Reducing Inequalities and Asymmetries in the Context of the Economic Crisis	161
	<i>Beatriz Tomás Mallén</i>	

12 Normative Arguments for a European Social Union <i>Antoon Vandewelde</i>	187
13 Hayek's Trap and the European Utopia We Need <i>Philippe Van Parijs</i>	213
14 Wealth, Taxation and Inequality <i>Thomas Piketty and Frederico Cantante</i>	225
15 Conclusion: Back to the Future – Towards a European Social Agenda <i>Renato Miguel Carmo, Cédric Rio, and Márton Medgyesi</i>	241
Index	249

List of Figures

Fig. 2.1	Development of inequality in the EU (2005–2015). Source: Eurostat, authors' calculations	19
Fig. 3.1	Level of income inequality, 2013 or latest year. Source: OECD Income Distribution Database (http://oe.cd/idd). Note: non-OECD EU countries are shown in light blue. *The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law	33
Fig. 3.2	Trends in income inequality, Gini coefficient. Source: OECD Income Distribution Database (http://oe.cd/idd)	34
Fig. 3.3	Employment growth 1995–2013, by type of employment. Source: OECD (2015), <i>In It Together: Why Less Inequality Benefits All</i> . Note: Working-age (15–64) workers, excluding employers as well as students working part-time. Non-standard workers include workers with a temporary contract, part-timers and own-account self-employed	37

x List of Figures

- Fig. 3.4 Trends in redistribution. Source: OECD Income Distribution Database (<http://oe.cd/idd>).
Note: Redistribution is measured as the percentage difference between inequality (Gini coefficient) of gross market income (before taxes and transfers) and inequality of disposable income (after taxes and transfers) 40
- Fig. 4.1 Spatial clustering of income inequality among European Union countries, measured by S80/S20 and the Gini coefficient (2014). Legend: BE (Belgium); BG (Bulgaria); CZ (Czech Republic); DK (Denmark); DE (Germany); EE (Estonia); EL (Greece); ES (Spain); FR (France); HR (Croatia); IT (Italy); CY (Cyprus); LV (Latvia); LT (Lithuania); LU (Luxembourg); HU (Hungary); MT (Malta); NL (Netherlands); AT (Austria); PL (Poland); PT (Portugal); RO (Romania); SI (Slovenia); SK (Slovakia); FI (Finland); SE (Sweden); UK (United Kingdom). Source: Eurostat, EU-SILC, 2016.
Note: Data for Ireland not available 48
- Fig. 4.2 People at risk of poverty or social exclusion and S80/S20 ratios, EU-28 (2014). Legend: BE (Belgium); BG (Bulgaria); CZ (Czech Republic); DK (Denmark); DE (Germany); EE (Estonia); EL (Greece); ES (Spain); FR (France); HR (Croatia); IT (Italy); CY (Cyprus); LV (Latvia); LT (Lithuania); LU (Luxembourg); HU (Hungary); MT (Malta); NL (Netherlands); AT (Austria); PL (Poland); PT (Portugal); RO (Romania); SI (Slovenia); SK (Slovakia); FI (Finland); SE (Sweden); UK (United Kingdom).
Source: Eurostat, EU-SILC, 2016.
Note: Data for Ireland not available 50
- Fig. 4.3 Risk of poverty or social exclusion (%), in Greece, Spain, Portugal and EU27, between 2005 and 2015.
Source: Eurostat, EU-SILC, 2016 50
- Fig. 4.4 Households' ability to make ends meet (from great difficulty to very easily) (%), in some European countries (2015). Source: Eurostat, EU-SILC, 2016.
Note: The values presented concerning 'Inability to make ends meet' are the sum of percentage of the categories:

	‘Households making ends meet with great difficulty’ and ‘Households making ends meet with difficulty’	51
Fig. 4.5	Average rating of financial satisfaction (0—Very low satisfaction; 10—Very high satisfaction) by first and fifth income quintiles, in EU-28 countries (2013). Source: Eurostat, EU-SILC, 2013, ad hoc module well-being	52
Fig. 4.6	Evolution of the employment and unemployment rate (15–64 years), 2000, 2008, 2015. Source: EU Labour Force Survey (Eurostat)	53
Fig. 4.7	Evolution of the youth unemployment rate and long-term unemployment (2000–2015). Source: EU Labour Force Survey (Eurostat)	55
Fig. 4.8	Evolution of the percentage of employees with temporary and involuntary temporary contracts (2000–2015). Source: EU Labour Force Survey (Eurostat). Note: Involuntary temporary contracts correspond to the percentage of respondents that could not find permanent job	56
Fig. 4.9	Involuntary part-time work (15–64 years) and income inequality (S80/S20), EU-28. Source: Eurostat. Note: Involuntary part-time employment as percentage of the total part-time employment, from ages 15 to 64	57
Fig. 4.10	Trends in involuntary part-time work, by age group, in the southern countries and EU-28, in 2000, 2008 and 2015. Source: Eurostat. Note: Involuntary part-time employment as percentage of the total part-time employment	58
Fig. 6.1	Estimating poverty rates with margins of error. Source: European Commission, Eurostat, cross sectional EU-SILC 2014 UDB August 2016. Note: Proportion of population at risk of poverty across the EU, 2013 income year and confidence intervals. 95% confidence interval for each country (meaning that there is a 95% probability of the true figure being within the calculated range)	79
Fig. 6.2	Poverty threshold differs substantially across the EU. Source: European Commission, Eurostat, cross sectional	

	EU-SILC 2014 UDB August 2016. Note: Monetary value of the at-risk-of-poverty threshold for households of two adults with two children under 14, in EUR and PPS, 2013 income year	80
Fig. 6.3	Risk of poverty based on different thresholds. Source: European Commission, Eurostat, cross sectional EU-SILC 2014 UDB August 2016.	
Fig. 6.4	Note: At-risk-of-poverty rate gap and relationship with the at-risk-of-poverty rate, 2013 income year The relationship of poverty risk and poverty gap. Source: European Commission, Eurostat, cross sectional EU-SILC 2014 UDB August 2016. Note: At-risk-of-poverty gap and relationship with the at-risk-of-poverty rate, 2013 income year	82
Fig. 6.5	Comparing trends of the anchored and the standard poverty risk. Countries with a relatively low 'standard' poverty risk in 2013 (9%–15%). Source: European Commission, Eurostat, cross sectional EU-SILC 2005–2014. Note: Change in the at-risk-of-poverty rate anchored in income year 2004 and the at-risk-of-poverty rate, 2004–2013 income year. The indicator 'anchored in the income year 2004' is defined as the percentage of the population whose equivalised disposable income is below the 'at-risk-of-poverty threshold' calculated in relation to the base year 2004 and then adjusted for inflation. Data for anchored at-risk-of-poverty rates for Bulgaria, France 2007–2009, Romania and Croatia is not available. Break in series: Austria 2007, Spain 2008, United Kingdom 2012	83
Fig. 6.6	At-risk-of-poverty rate among migrants, by region of origin, 2013 income year. Source: European Commission, Eurostat, cross sectional EU-SILC 2014 UDB August 2016. Note: Grey bars show at-risk-of-poverty rates for the total population. Estimates are based on a low number of observations (20–49) in Bulgaria for non-EU migrants. Estimates for Romania (EU and non-EU), Bulgaria (for EU) and Slovakia (for non-EU) are omitted due to a very low number of observations (<20)	86
		91

Fig. 7.1	Elements of the EU poverty and social exclusion target by country for EU-SILC 2014. Source: Eurostat, 2014 SILC data, <i>ilc_pees01</i> extracted on 15/10/2016	105
Fig. 8.1	Young people neither in employment nor in education and training (NEET rates), 15–29 years old (%). Source: Eurostat database, <i>edat_lfse_20</i> table, extracted on 02/05/2016	117
Fig. 8.2	Evolution of the unemployment rate in different age groups (percentage point change, 2008–2014). Source: Eurostat database, <i>lfsa_urgaed</i> table, extracted on 07/03/2016	118
Fig. 8.3	Change in prevalence of temporary work among those in employment (percentage point change, 2008–2014). Source: Eurostat database, <i>lfsa_etpga</i> table, extracted on 08/03/2016	119
Fig. 8.4	Change in involuntary part-time work among those working part-time (percentage point change, 2008–2014). Source: Eurostat database, <i>lfsa_eppgai</i> table, extracted on 12/09/2016	120
Fig. 8.5	Relative income poverty among the 15–29 age group. Source: Own calculation based on EU-SILC UDB 2009, 2011, 2013. Note: poverty threshold is 60% of median equivalised household income	122
Fig. 8.6	The association index (odds ratio) of being low educated when having low-educated parents compared to high-educated parents, 25–59 age group, 2011. Source: Grundiza and Lopez Vilaplana (2013)	125

List of Tables

Table 2.1	Level and change in per capita income at purchasing power parities	17
Table 2.2a	The poorest (dark grey) and richest (light grey) quintiles in the EU (euros) (2015)	21
Table 2.2b	The poorest (dark grey) and richest (light grey) quintiles in the EU (PPP) (2015)	22
Table 2.3	Different measures of European-wide inequality (quintile ratios)	23
Table 5.1	Income by European country in PPS and euros, age group 25–64, 2012 (national averages)	66
Table 5.2	European income deciles in PPS, age group 25–64, 2012 (brackets and averages)	67
Table 5.3	European income deciles by social class and country, age group 25–64, 2012	69
Table 5.4	Educational inequalities in Europe by social class and country, age group 25–64, 2012 (average years of schooling completed)	70

2

Disposable Income Inequality, Cohesion and Crisis in Europe

Michael Dauderstädt

2.1 Introduction

During the present crisis beginning in 2008, people worry about rising inequality, weaker social protection and the divergence of income levels between the core and the periphery of the European Union (EU). The financial crisis has been blamed on inequality (Rajan 2010; OECD 2015) as poor strata of the population (in the United States, but also in Europe's periphery) borrowed funds to acquire housing or maintain consumption levels in spite of low and stagnating wages. On the side of lenders, high inequality contributed to an overhang of savings as the rich have a higher propensity to save, and investment in the real economy stagnates in the face of weak demand.

When governments increased their debt to bail out a financial sector where bankers and investors had enjoyed astronomical revenues and incomes, public discontent had increased (Occupy Wall Street). Prominent economists like Piketty (Piketty 2013) and Stiglitz (Stiglitz 2012) pointed out the rising levels of wealth, debt and the related income

M. Dauderstädt (✉)
Friedrich Ebert Foundation, Bonn, Germany

inequality and warned about their consequences. Even mainstream institutions such as the International Monetary Fund (IMF) or the Organisation for Economic Co-operation and Development (OECD) criticised the negative impact of rising inequality (Kumhof and Rancière 2010; Gupta 2014; Ostry et al. 2014; OECD 2015).

Concerns about declining cohesion within Europe grew as southern European countries faced shrinking economies and rising poverty and unemployment. The following chapter discusses the dimensions of inequality in the EU and analyses their relationship with the crisis.

2.2 The Dimensions of European Inequality

Inequality can be considered between different entities (such as countries, regions, households, individuals) with regard to different qualities (such as income, wealth, life expectancy) using different indicators and measures. Here, we focus on (disposable)¹ income inequality within the EU. The analysis of inequality in a multi-country context implies certain problems, which have been discussed in depth on a global level by Milanovic (2016) and Bourguignon (2015). They differentiate between three types of international inequality: (1) between nations regardless of their population; (2) between nations weighted by population; (3) between people (households). The last measure takes into account the distribution of income within and between countries.

To compare incomes in an international context, one can use two measures: (1) at exchange rates and (2) at purchasing power parity (PPP). The use of these two different measures makes a lot of sense when one compares income levels between countries with different currencies, as the value (e.g. converted into Euros) might change with the (real) exchange rate, which depends on variations in the nominal exchange rate and on inflation, which are different from country to country. Prices might change at different rates within countries between different regions, too.

The analysis of international inequality and its results depend on the choice of indicator, too. First, there is an almost ethical question: Are absolute differences between incomes more relevant than relative ones? Are poor people content to see their income grow faster than that of the

rich or do they want to reduce the absolute difference? In the context of convergence between countries (see section 2.2.1 below), the first concept is called beta convergence; the second sigma convergence, as the standard deviation, indicated in mathematics by the Greek letter sigma, measures absolute differences. To offer a (not unrealistic) numerical example: if at the beginning of the comparison the average GDP/capita of the richer country is 5 times the one of the poorer country and the rich country's economy grows at an annual rate of 2% and the poor at 5%, it would take the poor country 55 years to catch up, and only after 24 years would the absolute difference between the two average incomes begin to shrink (it would still increase for the first 24 years in spite of the higher growth rate).

Second, an indicator of international inequality should better be decomposable into intra- and inter-country inequality. This condition is fulfilled by the Theil index² and the quintile ratio (S80/S20), but not by the Gini index. The Gini index varies between 0 in the case of perfect equality and 1 in the case that all income goes to one entity (e.g. household). If one compares only the degree of poverty rather than the distribution of income as such, the Foster–Greer–Thorbecke (FGT) index is decomposable as well.³ The indicator we use most often is the ratio between the average income of the richest and poorest quintiles (= 20%) of the respective population (the so-called quintile ratio S80/S20).

If one analyses income inequality in a multi-country setting like the EU, different dimensions are of interest.

- (A) Disparities between EU Member States measured in terms of average per capita income; in this case, the inequality within the countries is neglected;
- (B) Disparities between regions of the EU; in this case, the inequality within the regions is neglected;
- (C) Disparities between households within countries;
- (D) Disparities between households within the EU as a whole taking into account both inequalities, (A) and (C).

The reduction of disparities between countries (dimension A) and between regions (dimension B) is usually called 'convergence' or 'cohesion'. The funds used by the EU to reduce regional inequalities are cohesion

funds. There are regular reports by the EU on development of regional disparities.⁴ Dimension (C) refers to the well-known inequality within countries. Let us briefly consider the three other dimensions (A, B and C) before focussing on European-wide inequality (D).

2.2.1 Divergence and Convergence⁵

Greater wealth is one reason why poor countries joined the EU. For the EU itself, convergence is an official goal. Historically, for the first two poor countries that became Member States (Ireland in 1972 and Greece in 1981), progress was slow. Portugal and Spain (entry in 1986) experienced good catch-up growth for several years. For the post-communist countries of Central and Eastern Europe (CEE), catching up has been key. The biggest success story so far has been Ireland, which showed spectacular growth in the 1990s (i.e. 20 years after entry), thus becoming the second-richest country in the EU (measured at per capita GDP).

Income disparities within the EU are huge. The poorest countries (Bulgaria, Romania and the Baltic states) have per capita incomes below €20,000, while this figure exceeds €70,000 for the richest country (Luxemburg) (see Table 2.1). The differences become greater when one compares incomes at exchange rates, as PPPs reflect lower price levels in poorer countries (in particular rents and services).

Regarding different forms of convergence (beta and sigma, see above) one can see that there has been beta convergence since 1999 as most new Member States in CEE (top of Table 2.1) have grown much faster than the core EU countries (bottom of Table 2.1). But there was no clear sigma convergence in the EU. Only after 2007, income disparities between countries have declined by approximately 5% or 10% if measured by the standard deviation of their average per capita income at exchange rates or at PPPs, respectively. If one calculates the S80/S20 ratio for the EU as a whole by adding up countries until their total aggregate population reaches a fifth of the EU (about 100 million), the ratio has declined between 2005 and 2014 from around 5.4 to 3.7 at exchange rates and from 2.6 to 2.0 at PPP.⁶ This ratio neglects income disparities within countries.

Table 2.1 Level and change in per capita income at purchasing power parities

	2006 (in € PPP)	2015 (in € PPP)	Change (in %)
EU (28 countries)	24,687	28,924	17.2
Euro area (19 countries)	26,662	30,659	15.0
Bulgaria	9381	13,305	41.8
Romania	9381	16,487	75.7
Poland	12,344	19,958	61.7
Latvia	13,578	18,511	36.3
Lithuania	13,825	21,404	54.8
Croatia	14,318	16,776	17.2
Hungary	15,306	19,668	28.5
Slovakia	15,306	22,271	45.5
Estonia	15,800	21,404	35.5
Malta	19,256	25,742	33.7
Portugal	19,503	22,271	14.2
Czech Republic	19,996	24,585	22.9
Slovenia	21,231	24,007	13.1
Greece	23,206	20,536	-11.5
Cyprus	24,440	23,428	-4.1
Spain	25,181	26,610	5.7
Italy	25,921	27,478	6.0
France	26,415	30,659	16.1
Finland	28,143	31,238	11.0
Belgium	28,637	33,841	18.2
Germany	28,884	36,155	25.2
United Kingdom	30,118	31,816	5.6
Denmark	30,365	35,866	18.1
Austria	30,859	36,733	19.0
Sweden	30,859	35,577	15.3
Netherlands	33,327	37,312	12.0
Ireland	36,043	41,940	16.4
Luxembourg	63,199	78,384	24.0

Source: Eurostat and calculations by the author

Since the beginning of the crisis, recovery in Europe has been unequal. The resulting divergence does not appear in the general measures as most of the poorer Member States in CEE returned to their former growth path while the depressed, austerity-struck economies of Ireland, Greece, Spain, Portugal and Cyprus belonged to the European top or middle 'class', regarding income per capita. Has there been convergence after all? The answer depends on the measure or metric. If one measures relative disparities (e.g. by using S_{80}/S_{20}), countries did converge. If one considers absolute differences (e.g. by using standard deviation), countries did not converge.⁷

2.2.2 Regional Cohesion

Income (average per capita income) disparities between regions are higher than between Member States (see above A) because regional income disparities within countries are high and tend to increase. Many economic activities are concentrated in growth centres, often the country's capital. In Great Britain, for instance, the ratio of average income between London and Wales (the poorest region) is 1:5. In the EU as a whole, the richest region (on the NUTS-2 level⁸) is the City of London with a per capita income (at PPP) of more than €80,000 compared to €7200 in the Romanian border region Nord-Est.

For the EU as a whole, regional inequality (measured by the standard deviation) has increased (no sigma convergence). Nonetheless, there has been beta convergence as regions in poorer Member States have grown faster thanks to the faster growth of their national economies. If one calculates a European S80/S20 ratio by creating the poorest and richest European quintiles (of 100 million people) by adding up poorest and richest regions neglecting intra-region inequalities, the resulting values are 4 in 2000 and 2.8 in 2011. This decline again reflects the catching-up growth of poorer Member States. Within countries, regional inequality has increased. For the 22 Member States of the EU-28 that are divided into NUTS-2 regions (all except the smaller countries Luxemburg, Malta, Cyprus and the three Baltics), the standard deviation increased on average by 106% between 2000 and 2011, while within the new Member States, the rise was even stronger. Regional inequality in Romania increased by 300%.⁹

2.2.3 National Inequality

Recently, concerns about national inequality have increased. Even international institutions not known as progressive or concerned about social justice such as the OECD and the IMF have started to publish critical studies of inequality and its consequences for growth and stability.¹⁰ On average in the EU, inequality within countries has hardly increased. The average of the national S80/S20 ratios has remained at about 5 (see the

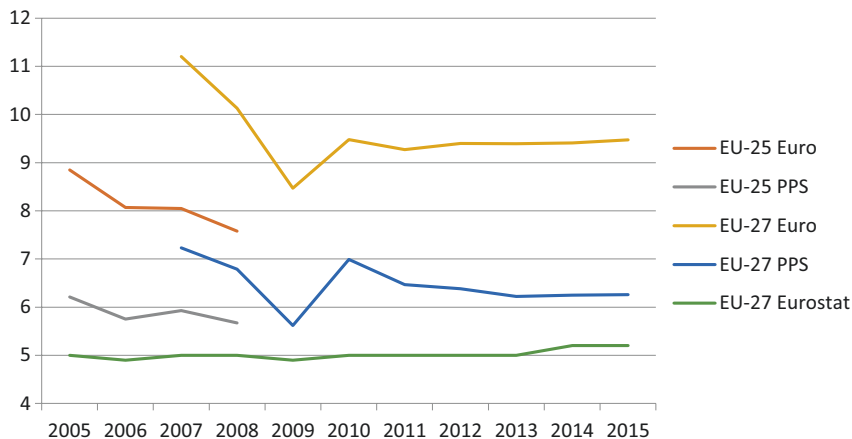


Fig. 2.1 Development of inequality in the EU (2005–2015)

Source: Eurostat, authors' calculations

bottom curve in Fig. 2.1 below). But that average hides substantial disparities. In Croatia, Denmark and France, the ratio increased between 2007 and 2013 by more than 15%, in Greece by 10%, while it declined by more than 10% in Romania, the United Kingdom and the Netherlands.

National inequality is affected by redistributive policies such as progressive taxation, social protection and transfer payments to old, sick and unemployed people. The resulting distribution of disposable income is more equal than the primary distribution of market income. However, the effect of these policies varies widely among Member States. The differences between the Gini coefficients for market and disposable income range from 0.14 (e.g. Finland, Slovenia, France) to 0.09 (Spain, Netherlands) and 0.08 (Estonia).¹¹

2.2.4 European-Wide Inequality

While much research and statistical evidence focuses on the first three dimensions of inequality (A, B and C), European-wide inequality (D) is more difficult to calculate and rarely assessed. Using the S80/S20 ratio as an indicator, Eurostat, the statistical office of the EU, offers a value which

it calculates as the weighted (by population) average of the national S80/S20 values. This measure is obviously false¹² as it neglects the enormous income differences among countries and assumes that the richest (poorest) quintile of the EU population (about half a billion people) consists of the sum of the richest (poorest) national quintiles. This mistake can be corrected by constructing the true richest and poorest quintiles of the EU.

How do we construct the richest and the poorest EU quintiles, which comprise each around 100 million people? If we had income data for all EU households, we could calculate the income of the bottom and the top quintiles and get a relatively good S80/S20 ratio for the EU as a whole. If we do not have these detailed data, we can approximate the value by building the bottom and top quintiles in different ways.

The easiest (but also very rough) estimate would use Member States and their average GDP/capita, thus neglecting the disparities within the countries. By ordering Member States according to their average GDP/capita, we can form the desired EU quintiles by adding up countries from the bottom respectively from the top until we have arrived at 100 million people. Usually this means cutting off part of the last country's population when the limit of 100 million is reached. This is approach 1 in Table 2.3.

In quite a similar way one can use regions. The distortion will be lower because regions are smaller and an appropriate selection of regions can fit the actual poorest (or richest) quintile of the whole EU more closely. But the inequality within regions is neglected. This is the approach 2 in Table 2.3.

In our approach we wanted to get even closer. Thus we constructed our EU quintiles out of the 135 national quintiles¹³ derived from the EU-SILC data (household survey). We ordered these 135 quintiles by average per capita income (see Tables 2.2a and 2.2b). For the poorest EU quintile, we began from the bottom, for the richest quintile from the top and selected as many national quintiles as necessary to make up 100 million people (= a fifth of the EU population). We were then able to sum the total income of these quintiles in order to get the income of the EU quintile. The ratio between the incomes of the poorest and the richest quintiles thus construed yields the S80/S20 ratio for the EU as a whole.

Table 2.2a The poorest (dark grey) and richest (light grey) quintiles in the EU (euros) (2015)

2015	Income per capita in euros				
	Member state	Q1	Q2	Q3	Q4
Bulgaria	1256	2388	3350	4557	8902
Romania	685	1563	2310	3134	5674
Latvia	2243	4081	5828	8110	14579
Lithuania	2005	3625	5186	7451	14395
Poland	2512	4217	5562	7220	12366
Estonia	3169	5580	7947	11089	19663
Hungary	2220	3571	4586	5915	9530
Slovakia	3419	5623	6900	8430	12088
Czech Republic	4214	6123	7424	9185	14777
Portugal	3436	6232	8416	11234	20656
Greece	2714	5443	7515	10103	17626
Malta	6768	10166	13485	17321	28082
Spain	4549	9499	13360	18375	31255
Slovenia	6280	9831	12321	15060	22553
Italy	5996	11593	15884	20959	35014
Cyprus	6780	10281	13827	18563	35251
Germany	9339	15845	20723	26782	44788
France	11219	16924	21471	27179	48094
Belgium	10891	16621	21753	27484	41578
United Kingdom	9540	15808	21043	28373	49901
Austria	11649	18413	23340	29250	47099
Finland	12920	18868	23766	29711	45929
Netherlands	11346	16957	21346	26600	43367
Sweden	12974	20904	26651	33104	48790
Ireland	10528	16159	21617	28475	47391
Denmark	14056	22553	28388	35248	57340
Luxembourg	17385	26925	35081	45258	73832

Source: Eurostat and authors' calculations

Table 2.2b The poorest (dark grey) and richest (light grey) quintiles in the EU (PPP) (2015)

2015	Income per capita in PPP				
	Q1	Q2	Q3	Q4	Q5
Bulgaria	2595	4933	6921	9414	18388
Romania	1289	2941	4347	5898	10679
Latvia	3114	5665	8092	11259	20241
Lithuania	3194	5774	8260	11867	22929
Poland	4499	7552	9961	12930	22147
Estonia	4190	7380	10509	14664	26002
Hungary	3858	6207	7971	10281	16563
Slovakia	5042	8293	10175	12433	17827
Czech Republic	6615	9612	11654	14419	23196
Portugal	4203	7623	10294	13740	25263
Greece	3177	6371	8796	11826	20631
Malta	8367	12568	16671	21414	34718
Spain	4928	10290	14472	19906	33858
Slovenia	7691	12040	15090	18444	27620
Italy	5825	11263	15431	20362	34016
Cyprus	7527	11414	15350	20609	39136
Germany	9202	15613	20420	26390	44131
France	10417	15715	19937	25237	44657
Belgium	10019	15291	20012	25284	38250
United Kingdom	8068	13368	17795	23993	42199
Austria	10909	17244	21858	27393	44109
Finland	10564	15427	19432	24293	37553
Netherlands	10331	15440	19436	24220	39487
Sweden	10332	16648	21224	26364	38856
Ireland	5737	8804	11778	15515	25822
Denmark	10101	16208	20402	25332	41209
Luxembourg	14435	22356	29128	37579	61304

Source: Eurostat and authors' calculations

Table 2.3 Different measures of European-wide inequality (quintile ratios)

Approach	Indicator (S80/S20)		Earliest	Year	Latest	Year
	Using	Neglecting				
1	Average national incomes	Intra-country inequality	2.6 (PPP) 5.4 (€)	2005	2,0 (PPP) 3.7 (€)	2014
2	Average regional incomes	Intra-region inequality	4 (PPP)	2000	2.8 (PPP)	2011
3	Average of national ratios weighted by population, (Eurostat value)	Inter-country inequality	5 (PPP)	2005	5 (PPP)	2013
4	National quintiles, taking into account both inequalities	Intra-quintile inequality	7 (PPP) 11 (€)	2007	6.2 (PPP) 9.4 (€)	2014

Source: Eurostat and authors' calculations

The composition of the EU quintile has changed only slightly over the years. The poorest quintile generally comprises the four or five poorest quintiles of Bulgaria and Romania, the three or four poorest in the Baltic States, Poland and Hungary, the two poorest in the Czech Republic, Slovakia and Portugal, and one each from Greece, Malta, Spain, Slovenia and Italy. The richest EU quintile comprises the three richest quintiles of Luxembourg and Denmark, the two richest of Ireland, Sweden, the Netherlands, Finland, Austria and France, as well as the richest from the United Kingdom, Belgium, Germany, Cyprus, Italy and Spain. If a country grows strongly and moves up in the EU ranking of per capita incomes, its national quintiles will show up less in the poorest and more in the richest EU quintile.¹⁴

The Tables 2.2a and 2.2b show the national quintiles and the subsets that form the richest and poorest European quintiles in 2015.

If we summarise the different ways to calculate a S80/S20 ratio for the whole EU, one can measure European-wide inequality by constructing the respective quintiles of about 100 million people and calculating the ratio between the richest and the poorest quintile, which delivers different S80/S20 ratios depending on the approach:

1. Summing up whole nations (or parts thereof) to create the EU quintiles neglects intra-country inequality,
2. Summing up whole regions neglects intra-region inequality,
3. Summing up the poorest and richest national quintiles, as the official Eurostat value does, neglects inter-country inequality.
4. Our approach (Tables 2.2a and 2.2b) takes both dimensions into account.

The following Table 2.3 provides an overview of the values resulting from the different approaches in different years.

2.3 The Development of European Inequality

As illustrated in Fig. 2.1,¹⁵ the EU S80/S20 ratio resulting from our method (4th approach) is much higher than the official and inaccurate Eurostat value. While the latter is about 5, our value ranges between 6 and 7 (at PPP) and 9 and 10 (in euros). For comparison, other major economies, according to the UN Human Development Report, have mostly lower values of 4.9 (India), 7.3 (Russia), 8.4 (United States) and 9.6 (China).¹⁶ National S80/S20 values for EU Member States are between 3 and 4 (in relatively egalitarian Scandinavian countries) and 6 and 7 (in Spain, Greece, Baltics); the direction of change is also sometimes different. While the Eurostat value (lowest curve in Fig. 2.1) is relatively stable, the true value declined until 2009, increased shortly after the great recession and has stagnated since.

The decline of European-wide inequality was mostly due to the catch-up growth of poorer countries (see section 2.2.1 above), as intra-country inequality did not change much (see section 2.2.3 above). After a short but substantial rise of inequality during the great recession, the former trend continued, albeit much more slowly. Measured in terms of PPPs, inequality has still fallen. If one considers the changes in the income of the richest and poorest quintiles in the EU between 2011 and 2014, one sees the opposite development, depending on how one measures it. In exchange rate terms, the income of the richest quintile increased by 3.9% between 2011 and 2014, while in terms of PPP, it rose by only 1.9%. In the case of

the poorest quintile, it was the other way around: income in exchange rate terms rose by only 2.4%, while in terms of PPP, it rose by 6.3%.

What underlies this discrepancy? Basically, it was the different development of exchange rates and inflation. Especially in poorer countries and in countries compelled to pursue austerity policies, the trend between 2011 and 2014 was deflationary development or below-average inflation. This applies in particular to Greece, Ireland, Portugal and Spain (GIPS), but also to many of the new Member States.

More recently, a study on European inequality using Gini and Theil indexes has been published (Bönke and Schröder 2015), which covers the years 2004–2011 and most (but not all) EU Member States. Calculating a European Gini index is difficult as the Gini cannot be decomposed into intra-country and inter-country components without a residual, while the Theil can. The authors arrive at a Gini value of around 0.32 and a Theil of 0.16. Both values declined since 2004 for the EU-22 until the crisis and stagnated afterwards, thus confirming our findings. In contrast, after 2009 within the Euro zone, inequality increased, according to the authors. It was the deep recession in the southern periphery that showed up in the supranational inequality indicator, if one excludes the non-Euro countries in CEE.

The different development of inequality according to different approaches, particularly approaches 3 and 4 illustrated in Fig. 2.1, is also responsible for different poverty dynamics in the EU. Poverty is measured here as the share of households with an income below 60% of the median income. While national poverty rates (using national median incomes) stagnated, EU-wide poverty (using the median EU income) decreased substantially between 2005 and 2011 (Goedemé et al. 2014).

2.4 Crisis and Inequality

Up to the threefold crisis—financial market crisis, great recession and sovereign debt panic—Europe, which is committed to social cohesion, was able to point to solid progress. Unemployment was falling; life expectancy was rising; and income inequality, although increasing in some countries, was declining in the EU as a whole thanks to growth in the

poorer Member States. After falling substantially up to the great recession of 2009, convergence within the EU suffered a setback in 2010, but then appeared to resume its long-term trajectory of income convergence. Since 2011, however, this process has practically ground to a halt, especially in euro terms (rather than in PPP).

Inequality has contributed to the crisis in various ways. Rising inequality in the United States led to more borrowing by the poor and higher savings of the rich, in search of yield. The collapse of the mortgage market triggered the financial crisis. In Europe, imbalances resulted from inequality, too. Large export surpluses in Germany in particular reflect the lack of internal demand due to stagnating wages and the growing savings of the rich. These savings then financed the current account deficits of the countries in the poorer EU periphery, which have been eager to catch up with the richer core. It was this, unfortunately debt-driven, boom that fuelled growth and reduced inequality in the EU.

After the financial market crisis and great recession of 2008, many poorer countries—especially in Central and Eastern Europe—were able to resume their growth path. It was the countries affected by the sovereign debt panic and austerity policies—Greece, Ireland, Portugal, Spain and Cyprus—that fell back. Because they do not figure among the poorest countries in the EU, however, their deep crisis scarcely increased European-wide inequality, but only retarded its reduction.

This effect continues to be felt, but now—after 2012—some of the new Member States (Bulgaria, Czech Republic, Slovenia) have experienced a slump, while two large, wealthy countries—Germany and the United Kingdom—exhibited weak, but above-average, growth. The economies of some richer countries—such as Finland, Italy, Belgium and Denmark—shrank, while many new Member States continued to grow strongly (Baltic States, Poland, Romania, Hungary, Slovakia). Thus, the main cause of the stagnating inequality is not the diverging development of domestic inequality, but the end of strong catch-up growth in some poorer EU Member States.

The key finding with regard to recent years is the notable slowdown of the former decline in inequality. Social Europe's promise to reduce income differences in the EU is no longer really being kept. Without vigorous growth in the poorer countries, inequality remains high. But where is

growth supposed to come from? Germany and important EU bodies continue to rely on structural reforms and austerity policies, whose effects on growth are scarcely discernible. The policies forced upon the countries in the Southern periphery suffer from conflicting goals: Austerity, internal devaluation and growth hardly reinforce each other. Reducing government spending harms growth. Lowering wages to improve competitiveness reduces tax revenues and slows down budget consolidation. Growth and structural competitiveness (higher productivity, better quality, export diversification) require appropriate public policies such as improved education and more spending on research and development.

Given these multiple, self-imposed constraints on fiscal policy, demand growth had to rely on monetary policy and exports. But the European Central Bank (ECB's) more assertive policy (after 2012) could only reduce interest rates and stabilise asset prices without restoring vigorous growth. The weakness of the euro vis-à-vis other currencies (one consequence of the loose monetary policy) has supported exports. But without sufficient internal demand, growth remains weak.

In the meantime, at least, the new (elected in 2014) European Commission has recognised that other policies are needed. However, the planned European Fund for Strategic Investment is on too small a scale and depends on a somewhat questionable willingness on the part of private investors to leverage the relatively meagre public resources of €16 billion on a massive scale (by a factor of 15). It is doubtful that the expected total volume of almost €300 billion of additional private resources will be mobilised. The effects will take much time to be felt in the form of higher growth and lower unemployment due to a complex process of project identification, evaluation and implementation.

In order to reduce disparities between countries, investment funds should be concentrated in poorer Member States. Within countries, the build-up of wealth resulting from investment will primarily benefit richer households. This holds in particular when the EU funds are used to reduce risks for the private investors and policies to improve the investment climate aim exclusively at lower wages, more flexible labour markets and weaker social protection. But the greatest obstacle to investment remains the lack of demand. Only stronger demand based on widespread income growth will lead to sustainable growth. In order to achieve this, investment must create jobs that deserve the label 'decent work'.

Notes

1. Income after taxes and social transfers.
2. The Theil index varies between 0 and N (with N the number of compared units).
3. See Goedemé et al. (2014) for an application on Europe.
4. For the latest, the sixth report of 2014 see: http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/cohesion6/6cr_en.pdf
5. For a detailed analysis, see Dauderstädt (2014).
6. Calculation by the author using Eurostat data; see also Table 2.3.
7. For a more in-depth discussion of the influence of different metrics on multi-country inequality, see Nino-Zarazua et al. (2016).
8. Nomenclature for Territorial Units for Statistics (NUTS) is the EU classification of regions; NUTS-1 are big regions such as German 'Länder'; NUTS-2 are smaller regions defined for regional policy measures.
9. Calculation by the author using Eurostat data.
10. See OECD (2011), OECD (2015), Kumhof and Ranciere (2010), Gupta (2014).
11. See OECD (2011); the OECD average is 0.1.
12. See also Atkinson et al. (2010), p. 109.
13. Today we would need 140 as Croatia has joined the EU as its 28th member state. In order to facilitate the comparison over time, we still use 135 (=5 × 27).
14. For a detailed explanation, see Dauderstädt (2008) or Dauderstädt and Keltek (2011).
15. Taken from Dauderstädt and Keltek (2015, 2016).
16. The figures might nevertheless not be fully comparable as data sources and methodologies of household surveys vary from country to country.

References

- Atkinson, A. B., Marlier, E., Montaigne, F., & Reinstadler, A. (2010). Income poverty and income inequality. In A. B. Atkinson & E. Marlier (Eds.), *Income and living conditions in Europe* (pp. 101–131, here p. 109). Luxembourg: Eurostat and Publications Office of the EU.
- Bönke, T., & Schröder, C. (2015). *European-wide inequality in times of financial crisis*. DIW Discussion Papers 1482.

- Bourguignon, F. (2015). *The globalization of inequality*. Princeton and Oxford: Princeton University Press.
- Dauderstädt, M. (2008). *Ungleichheit und sozialer Ausgleich in der erweiterten Europäischen Union*. Wirtschaftsdienst, 3/2008.
- Dauderstädt, M. (2014). Convergence in crisis. European integration in jeopardy. Retrieved from <http://library.fes.de/pdf-files/id/ipa/11001.pdf>
- Dauderstädt, M., & Keltek, C. (2011). Immeasurable inequality in the European Union. *Intereconomics*, 1, 44–51.
- Dauderstädt, M., & Keltek, C. (2015). Social Europe in crisis. Retrieved from <http://library.fes.de/pdf-files/id/ipa/11513.pdf>
- Dauderstädt, M., & Keltek, C. (2016). No progress on social cohesion in Europe. Retrieved from <http://library.fes.de/pdf-files/id/ipa/12668.pdf>
- Goedemé, T., Collado, D., & Meeusen, L. (2014). *Mountains on the move: Recent trends in national and EU-wide income dynamics in old and new EU Member States*. ImPRovE Working Paper No. 14/05, Antwerp. Retrieved from <http://improve-research.eu>
- Gupta, S. (2014). *Fiscal policy and income inequality*. IMF Policy Paper, International Monetary Fund, Washington, DC.
- Kumhof, M., & Rancière, R. (2010). *Inequality, leverage and crises*. IMF Working Paper WP/10/268, International Monetary Fund, Washington, DC. Retrieved from <https://www.imf.org/external/pubs/ft/wp/2010/wp10268.pdf>
- Milanovic, B. (2016). *Global inequality. A new approach for the age of globalization*. Cambridge and London: The Belknap Press of Harvard University Press.
- Nino-Zarazua, M. et al. (2016). Global inequality: Relatively lower, absolutely higher. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/roiw.12240/abstract>
- OECD. (2011). *Divided we stand: Why inequality keeps rising*. Paris: Organisation for Economic Co-operation and Development.
- OECD. (2015). *In it together: Why less inequality benefits all*. Paris: Organisation for Economic Co-operation and Development.
- Ostry, J. D., Berg, A., & Tsangarides, C. G. (2014). *Redistribution, inequality and growth*. IMF Staff Discussion Note 14/02, International Monetary Fund, Washington, DC. Retrieved from <http://www.imf.org/external/pubs/ft/sdn/2014/sdn1402.pdf>
- Piketty, T. (2013). *Le capital au XXIe siècle*. Paris: Seuil.
- Rajan, R. G. (2010). *Fault lines: How hidden fractures still threaten the world economy*. Princeton: Princeton University Press.
- Stiglitz, J. (2012). *The price of inequality*. New York: Norton.

Michael Dauderstädt Dr. rer. pol., dipl. math. Study of mathematics, economics and development policy in Aachen, Paris and Berlin. Between 1980 and 2013, he served in various positions with the Friedrich Ebert Foundation; since 2013, he has been a freelance consultant. His areas of specialisation include international political economy, European integration, German economy and alternative growth models.