

INCOME INEQUALITY: ECONOMIC DISPARITIES AND THE MIDDLE CLASS IN AFFLUENT COUNTRIES

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INCOME INEQUALITY

*Economic Disparities and the Middle Class
in Affluent Countries*

Edited by Janet C. Gornick and Markus Jäntti

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*For Joachim R. Frick (1962–2011)—scholar, data
provider, teacher, advisor, international collaborator,
husband, father, and friend.*

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FOREWORD

Anthony B. Atkinson

I am delighted that one of my first tasks as president of LIS is to contribute the foreword to this book edited by Janet Gornick, director of LIS, and Markus Jäntti, research director. I have been associated with LIS since the early days of its 30-year history, and I have followed with great interest its development and expanding horizons. And, as a researcher, I have benefited much from using LIS data.

The history is important. It is thanks to the farsightedness of LIS's founders, Gaston Schaber, Lee Rainwater (its first research director), and Tim Smeeding (its first director), that researchers today have access to the comparable cross-country data provided by LIS via its two databases—the *Luxembourg Income Study (LIS)* and the *Luxembourg Wealth Study (LWS)*—that have been employed to such advantage in this book. The assembly of microdatasets and, above all, the ex post harmonization of the data according to a common template involve a major investment of time. Such social science infrastructure cannot be created overnight.

We should therefore be looking ahead to future needs and be planning the infrastructural investments that we need to make today. Such planning is particularly important at the present time because of the major threat to one of LIS's core ingredients: the household survey. Despite the advances in technology and methodology, household surveys are labor-intensive and expensive, and around the world national statistical offices are subject to budget cuts. The survey instrument itself faces its own problems in the form of declining response rates and inability to expand the range of questioning to meet the increased need for data linked across different domains. These concerns have led to increased interest in the use of administrative records and to the exploration of data linkage methods. However, it is important

that such developments continue to provide individual researchers with the kind of access currently available via LIS.

LIS has been expanding its geographical coverage, and this is most welcome. Thus, while the chapters in this book largely concentrate on high-income countries, future LIS-based research will be able to encompass important middle-income countries. Each such development, however, leads one to ask for more. How else could the scope of LIS be widened? One priority immediately suggests itself. The economic crisis has highlighted the need for both up-to-date data and annual data. The events in which we are interested, such as the financial crisis that began in 2007, do not occur neatly vis-à-vis the intervals between waves of LIS data. Although LIS has shortened the interval from five to three years, more frequent data and more up-to-date data are needed, and this will require additional resources. Expansion means investment.

Substantively, the chapters in this book clearly demonstrate the importance of looking at the distribution as a whole. We cannot focus on just one part of the distribution in isolation. Some economists say that they are concerned about poverty but not about inequality. However, as Richard Tawney famously noted in 1913, “What thoughtful rich people call the problem of poverty, thoughtful poor people call with equal justice a problem of riches.” In between is situated the “middle class,” and this book reflects increased interest in distributional changes affecting those around the median. For those who see the growth of a middle class as a sign of development and as a guarantee of democracy, there are concerns about the possible “hollowing out of the middle” in high-income countries. It is perhaps reassuring to remind ourselves that such concerns are not new. In *The Grasmere Journal*, Dorothy Wordsworth in May 1800 records that a neighbor “talked much about the alteration of the times and observed that in a short time there would be only two ranks of people, the very rich and the very poor.” The difference today is that the observations that we make about “the alteration of the times”—like those in this book—can be more firmly based in empirical evidence.

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We thank Lee Rainwater, Tim Smeeding, and the late Gaston Schaber, who, 30 years ago this year, decided to build a database of harmonized microdata and grant access to the data to social science researchers around the world.

And last but not least, we are deeply grateful to LIS's many data providers and funders, who are based in more than 40 countries and supranational institutions. Their contributions enable all of us at LIS to carry out our work.

Janet Gornick, LIS Director
Markus Jäntti, LIS Research Director

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I N C O M E I N E Q U A L I T Y

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Introduction

Janet C. Gornick and Markus Jäntti

Few social and economic conditions are more compelling or more vexing than inequality. For many, concerns about inequality are largely instrumental. Their unease is focused not on inequality per se but on the possibility that inequality may have troublesome social, economic, and political consequences. For others, the presence of high or increasing levels of inequality raises concerns about equity and justice. These concerns, in turn, prompt questions about whether (or to what extent) public and private institutions function equitably with regard to opportunities, outcomes, or both.

Inequality has long attracted the attention of comparative scholars, especially those interested in studying variation across relatively similar countries. Cross-country comparisons provide a fruitful approach for inequality scholarship, largely because inequality itself varies sharply across countries, even among countries at similar levels of economic development. In addition, many of the institutions widely understood to influence inequality also vary cross-nationally, as do several of the problematic consequences that have been linked to inequality. For these reasons, cross-national comparisons offer a natural framework for inequality research.

This book presents inequality research carried out by 17 established researchers (or research teams), each of which address a different facet of inequality. The collection has several unique features. First, all of the chapters are focused specifically on income inequality. Second, nearly all of the included studies use cross-national research designs; the comparative chapters are complemented by four case studies selected to build upon the explicitly comparative chapters. Third, most of the chapters integrate

into their inequality analyses an assessment of the status of the middle class, in most cases defined in relation to the income distribution. As we argue below, many inequality scholars have long focused on poverty, and recently several have assessed the top of the income distribution; empirical studies that integrate questions about inequality with analyses focused on the middle of the income distribution have been remarkably few and far between.

Fourth and finally, all of the chapters use microdata that are available—or will be available—through LIS (formerly known as the Luxembourg Income Study), a longstanding archive that provides researchers with cross-nationally harmonized income and wealth microdata, mostly from high-income countries. As we describe in more detail below, the use of a common data source provides the methodological backbone of this book, as it maximizes the use of common concepts as well as definitional and measurement practices. It also imposes a degree of both geographic and temporal consistency. The 12 cross-national studies (Chapters 1–12) use data drawn from a common group of 28 countries included in the income and/or wealth databases made available through LIS, and they all focus on the time period from about 1980 to about 2004.

While the common use of the LIS data has numerous conceptual and methodological advantages, it also has at least two disadvantages. One is that this collection is limited almost entirely to assessments of high-income countries (as we discuss in detail later in this Introduction). The other is that the time period covered in the harmonized LIS data ends before the start of the global financial crisis that has, not surprisingly, raised a host of new questions about economic well-being across the affected countries. (The reality of data archives such as LIS that harmonize data *ex post* from a large number of countries is that a lag time of five to seven years is standard.) In this sense, these chapters might be considered as a baseline study that could catalyze a follow-up in a few years.

In the next section, we introduce the focal concept that underlies this book: income inequality. We next offer a brief overview of prior research, discuss measurement and methodological issues, and present empirical snapshots based on the harmonized LIS data. We then introduce the five substantive parts of the book, providing highlights from each chapter. In the Conclusion, we offer a synthesis of findings from across the 17 studies and offer comments about future research directions.

INCOME INEQUALITY

Inequality Matters

In her book on changing U.S. income inequality, Rebecca Blank (2011) identified several claims, primarily instrumental, that should motivate widespread concern about inequality, especially about rising inequality. First, she argued, rising inequality may indicate declining income, and thus decreasing well-being, among individuals and households at the bottom of the income distribution. Rising inequality, more specifically, might signal rising poverty rates. Poverty, in turn, has demonstrably negative consequences for individuals, families, and communities. (For a comprehensive review of the multi-faceted effects of poverty, see the Urban Institute's "Consequences of Poverty" series.¹)

Second, Blank argues, inequality may depress economic mobility, which is generally interpreted as a measure of openness and opportunity in an economy. A substantial and growing literature, much of it cross-national, suggests that high levels of inequality may thwart mobility (see, e.g., Björklund and Jäntti 2009). Focusing on the United States, Blank observes that constraints on mobility, in turn, worsen other types of disparities as well: "Since a disproportionate share of low-income families are headed by people of color . . . , children from these families may face particularly reduced economic opportunities in a time of rising inequality, intensifying racial differences as well" (2011, 5).

Third, inequality might harm economic growth, although Blank acknowledges that both the direction and size of this effect are in dispute. Indeed, the claim that high levels of inequality may depress economic growth has been the subject of an extensive debate in recent years, but there is no clear consensus about how this effect operates (see, e.g., Aghion, Caroli, and García-Peñalosa 1999; Forbes 2000; Voitchovsky 2009). Recent scholarship suggests there is no single answer to this question. Voitchovsky (2005), using data from LIS, found that inequality in the upper end of the distribution increases growth, whereas inequality in the lower end is detrimental to growth. This is consistent with the view that the impact of inequality on growth depends on where in the distribution the inequality resides. As Bowles and Gintis (1998, 13) aptly observed, the prevailing view is probably best summed by concluding that "under favorable circumstances egalitarian outcomes are not incompatible with the rapid growth

of productivity and other valued macroeconomic outcomes”; subsequent research has not overturned their observation.

And, in fact, economic growth and trends in income inequality are closely related. Economic growth measures change in aggregate income, while inequality trends capture how that growth accrues differentially to households in different parts of the income distribution. As any change in aggregate income must, by definition, benefit households somewhere in the distribution, economic growth is expected to shift the income distribution. On the assumption that more income growth is beneficial, one reason to be concerned with changing patterns of inequality is that they may indicate differential rates of income growth across the income distribution. If all households’ incomes increase at the same pace, then, by definition, inequality is unchanged. If, on the other hand, incomes grow more rapidly among the affluent, inequality increases. If incomes grow more rapidly among the poor, inequality declines. Assessing inequality trends can illuminate how economic growth is distributed across the income spectrum.

The fourth concern that Blank raised is that inequality may have harmful effects on political processes. A core value in many modern societies is that of democracy. What exactly constitutes democracy is subject to intense debate, but a common interpretation is that all persons should enjoy equal political representation. It is, therefore, worrisome that inequality seems to adversely affect political participation and the nature of political decision making. Whether or not the poor vote may be seen as an exercise of choice. But for those who hold fundamental democratic values, it is of concern that when public opinion varies along the income distribution, policy makers (in the United States, at least) respond much more strongly to views held by the affluent than by the poor (see, e.g., Gilens 2005). Bartels (2009) found that U.S. senators appear to be more responsive to the views of the affluent than to those of the middle class; the views held by the bottom third of the income distribution have no apparent effect on senators’ voting patterns. Also focused on the U.S. case, Stiglitz (2012, 117) argues that one of the main costs of inequality is that “our democracy is being put at peril.” The United States’ high level of inequality, Stiglitz concludes, is causing voter disillusionment, widespread distrust, perceptions of unfairness, and ultimately disenfranchisement.

Other instrumental arguments have received much attention in the literature on the adverse consequences of inequality on non-income outcomes.

In their popular book *The Spirit Level*, Wilkinson and Pickett (2009) argue that large income disparities—within a country—have harmful effects on a multitude of outcomes, including physical and mental health, infant mortality and life expectancy, crime and incarceration, and educational performance. Research is ongoing on the association between income inequality and these diverse non-income outcomes. Thus far, there is little consensus regarding the existence of these effects and/or the nature of any underlying causal mechanisms. However, given the high-stakes nature of these claims, they certainly merit our attention.

Yet another reason that scholars should be interested in inequality is that many people are themselves concerned about inequality, so it should be of concern to those who study public opinion and its consequences. McCall and Kenworthy (2009) presented evidence suggesting that (despite popular perceptions to the contrary) Americans do, in fact, care about inequality of outcomes. According to McCall and Kenworthy, Americans in substantial numbers believe that government should address increased inequality, although not necessarily through traditional processes of redistribution. Likewise, cross-national research on attitudes toward inequality also turns up evidence that the widely held belief that Americans are less concerned with inequality of outcomes than are citizens in other countries may not be true. Osberg and Smeeding (2006), for example, reported that across 27 countries (including most LIS countries), a clear majority agreed with the statement that “income differences are too large.” While a relatively small fraction of U.S. respondents indicated that they strongly agreed with that statement, that fraction was even lower in Germany and Norway. Osberg and Smeeding concluded that citizens in all of the included countries share a general concern for inequality of outcome, specifically with regard to income.

Furthermore, concern about income inequality has risen sharply in several high-income countries since late 2011, when social protests focused on domestic economic issues sprung up in many countries. In the United States, these protests began in September 2011, when a group of activists gathered in lower Manhattan and launched the “Occupy Wall Street” movement, which quickly spread to other U.S. cities and states. Between September and November of 2011, references to income inequality in the American national media increased by a factor of five (Byers 2011). Since then, media coverage about inequality and the declining status of the middle

class has been extensive in the United States and in other countries (see, e.g., Giles 2011).

And, of course, there are ample intrinsic reasons to care about inequality. That said, there is, in fact, no clear line between the instrumental and the intrinsic, as they inform each other. Nevertheless, many regard inequality as inherently undesirable, such that, all else equal, more equality is preferred to less. A well-known exposition of this perspective on equality is that outlined in Arthur Okun's (1975) classic book *Equality and Efficiency: The Big Tradeoff*. To Okun, both equality and efficiency (the latter measured with respect to income levels) are desirable, but the pursuit of greater efficiency comes at the cost of more inequality, so a compromise must be sought between the two. Not surprisingly, this assessment—how much leaking from the famous leaky bucket is too much?—can only be settled on normative grounds. Traditionally, those on the political left tend to place relatively more weight on the value of equality, while those on the political right favor efficiency (and unfettered market outcomes more generally).

Indeed, not everyone agrees that income inequality should be a matter for concern. Feldstein (1998) provided one vantage point on why inequality need not prompt worry. He argues that increases in inequality, measured by (for example) the Gini coefficient, should not necessarily be interpreted as problematic. For Feldstein, many who are concerned with inequality are “spiteful egalitarians”—that is, they regard someone with unchanged real income as being worse off if others experience increased income. According to Feldstein's view, the only real distributional concern should be poverty, to the extent that poverty signals absolute deprivation.

Debates about relative deprivation are by no means new. The question as to whether an individual can reasonably feel relatively deprived has been examined in depth by many scholars, perhaps most prominently by Amartya Sen (see, e.g., Sen 1983). Sen often cites a famous passage from *The Wealth of Nations* (Smith 1776/1976) that states that the ability to “appear in public without shame” required access to quite different goods in, say, the Roman empire than in the Scotland and England of the late eighteenth century, and indeed that even Scotland and England were different in this respect. What counts as making ends meet or having a reasonable standard of living can vary significantly both across time and space (on this point, see Frank 2007). This line of thought raises challenges to the notion that only

real income levels, or absolute deprivation, matter. Concerns about relative deprivation require that we pay close attention to inequality.

Many schools of political philosophy give inequality of resources a prominent role, although exactly what kind of inequality is thought to be problematic varies. For example, the so-called Rawlsian position, following John Rawls's (1971) *Theory of Justice*, focuses on the standard of living of the least well-off (see Roemer 1996). Importantly, however, the utilitarian position is that, all else equal, more equality is preferred to less. But all else may not be equal. In the event that more inequality is associated with greater mean income, the less equal distribution is chosen only if the adverse distributional consequences do not outweigh the increase in mean income. That is, the utilitarian ethical position is very close to the view put forward by Okun.

Measurement of Income and Its Distribution

The chapters in this book mostly rely on a few key income concepts. The chapters on employment and gender (Chapters 7–9 in Part IV) rely heavily on labor market earnings, with Chapter 8 augmented by the imputed value of unpaid work. The chief measure of income in the rest of the book is household disposable income, adjusted for household size. (In the LIS literature, income adjusted for household size is generally referred to as “equivalized.”) Although the chapters on wealth also draw heavily on the concept of net worth (which is defined in detail in Chapter 10), when these authors assess disparities, they generally rely on the income distribution. Only Chapter 5 examines the effects of redistribution per se on inequality; these researchers compare inequality in pre-tax, pre-transfer income with that of post-tax, post-transfer income.

Disposable Income Defined. Using the definition that is standard in the LIS literature, disposable income includes all cash and near-cash earnings, capital income, other private income, public transfers, less direct taxes. This follows closely the international standard for the measurement of disposable income, with the exception of imputed rents, the most important being imputed rents from owner-occupied housing (Expert Group on Household Income Statistics [The Canberra Group] 2001). (See Chapter 12 by Bradbury for more on this.) Other sources of income that may be

important are omitted, including non-cash public transfers (in essence, the value of public services), non-cash private income (such as the value of in-kind employer-provided benefits), and unrealized capital gains.

As Atkinson (1997a, 2003) has pointed out, while the income definition used in this book is a common one, other quite reasonable definitions are possible because money income is obviously only a partial measure of economic well-being. On the other hand, Atkinson (2003) also observed that the distribution of disposable income can be relied on as a gauge on inequality based on the revealed preference of governments, which frequently rely on disposable income when producing public inequality statistics.

The case can be made for studying consumption rather than income. The chief difference between household consumption and household income consists of savings and the consumption value of durables. While it is possible that both cross-country variation and within-country changes in the inequality of consumption are different from those for income, no broadly comparable database of household consumption exists. However, in Chapter 12, Bradbury uses *Luxembourg Wealth Study (LWS)* data to examine how inclusion of housing expenditure changes our assessment of the living standards of the elderly. Furthermore, in Chapter 16, Vanneman and Dubey compare inequality results based on consumption versus income, as do Leibbrandt, Finn, and Woolard in Chapter 17.

The Equal-Sharing Assumption. Most income distribution statistics assume, for lack of better information, that all household members share the same standard of living (Jenkins and O'Leary 1998). Most of the chapters make that assumption, as do we in the empirical work presented later in this Introduction. However, Chapters 7 to 9 do address how inequality is affected by differences in spouses' labor market earnings.

Inequality in an Annual Cross Section Compared with Multi-Year Income. We also rely on annual rather than the more long-run measures of income that many economists would argue are more relevant for gauging well-being (see Burkhauser and Couch 2009). Because incomes tend to fluctuate from year to year, the distribution of annual income tends to overstate inequality in permanent income, which is arguably a more reliable or stable measure of individual well-being. Moreover, inequality of annual income may increase over time because transitory shocks are increasing across time rather than because inequality of permanent income is rising. Likewise,

differences across countries may be driven by differences in transitory shocks rather than in permanent income.

When it comes to cross-country variation, however, the limited evidence that is available on this score suggests that country inequality rankings—that is, cross-country variation in levels of inequality—are largely unaffected by extending the measurement period of income from one to multiple years (Burkhauser and Poupore 1997; Aaberge et al. 2002). It is possible that changes in inequality are driven, to different degrees, by transitory or permanent variation. While there are some cross-nationally comparable data that allow the examination of longitudinal income inequality, they do not allow for as broad a range of countries to be examined as are examined in this book. Using longitudinal data for Germany, the United Kingdom, and the United States, however, Daly and Valletta (2008) found that changes in transitory earnings did not account for the trend in earnings inequality in these three countries in the 1990s. The variance of annual (age-adjusted, logged) earnings followed roughly the same pattern as do their estimates of permanent earnings inequality, at least among prime-aged male household heads.

The Definition of the Middle Class. Many of the chapters in this book concentrate on the middle class. But what exactly is meant by the “middle class”? There is no consensus on the definition of the middle class, even within disciplinary traditions. Sociologists typically invoke definitions that extend beyond income measures, often incorporating educational attainment and/or occupational characteristics, with the overarching aim of capturing power relations. Economists more often identify the middle class with respect to the income distribution (especially in high-income countries) or vis-à-vis the consumption distribution (typically in lower-income countries). The authors in this book have taken this more economic approach, defining the middle class, specifically, relative to each country’s income distribution.² As a result, what we (and many of the authors) refer to as the “middle class” might more accurately be described as those households that fall in the “middle”—that is, in the middle of the income distribution. Nevertheless, throughout this book, the terms *middle* and *middle class* are used interchangeably.

The reliance on income-based definitions has two advantages in the context of this book. First, the common data source—the *LIS* and *LWS*

Databases (discussed in the next section)—are most suited to this approach because the income data are extremely detailed, as well as highly standardized, across countries. Constructing cross-nationally comparable measures of education and occupation is much more difficult in the *LIS/LWS* data and, in fact, in all cross-country databases. Second, using this clearly quantifiable income-based framework enables a high level of comparability across the chapters.

Furthermore, within this income-based framework, the authors generally approach defining the middle class in one (or both) of two ways, both of which are common in the relatively limited comparative literature on the middle class (for a review, see Pressman 2007). One approach identifies a portion of the distribution, generally by defining specific decile groups as the middle class.³ Several chapters use this strategy, in most cases defining the middle class as those households with income between the 20th and 80th percentiles—in other words, “the middle 60.” A second approach establishes an interval defined by percentages of median household income. Several chapters use that method, most often defining the middle class as those households with income between 75 and 125 percent of the national median⁴—although some drew different intervals. For example, Frick and Grabka (Chapter 13) chose 70 to 150 percent (further disaggregating into lower-middle, middle-middle, and upper-middle), and Chauvel (Chapter 4), using a similar framework, selected 75 to 250 percent and also disaggregated the middle class into subgroups. Ólafsson and Kristjánsson (Chapter 15) selected 75 to 150 percent when studying Iceland, while Vanneman and Dubey (Chapter 16) used 50 to 200 percent in their study of India (where the distribution is especially skewed).

These two approaches, of course, enable different questions to be answered. Both approaches allow researchers to compare *characteristics* of the middle class (e.g., absolute income levels, intra-household earnings ratios, wealth holdings, political behavior) across countries, time periods, and/or income definitions. The latter approach also enables analysts to compare the *size* of the middle class, likewise across countries, time periods, and/or income definitions. Both sets of questions are raised in this book.

The Global Distribution of Income. What is the appropriate geographical unit for studying inequality? All of the chapters focus on distributions within countries (or, in the case of the chapter on India, within

sub-national units). In recent years, there has been a vigorous debate about what has been happening to the world distribution of income—that is, the distribution among all persons in the world (see, e.g., Bourguignon and Morrisson 2002; Milanovic 2007). While that debate has yielded valuable insights, in our view, studies on levels and/or trends in economic well-being within countries—such as we present in this book—are warranted for several reasons. In particular, while economies have become increasingly integrated and interdependent, most economic and social policy making still operates at the national (or sub-national) level. Moreover, even if one were to focus on the world income distribution, the central building block for understanding that consists of the distribution within individual countries.

While the analysis of the distribution of income among all persons in the world has considerable merit—every person’s well-being should, after all, matter equally—the examination of income distributions within individual countries is clearly meaningful as well. One reason is that data sources are, almost without exception, national (at least originally), so data definitions and concepts are much more uniform within countries. But importantly, there are relatively few possibilities for, say, UK policymakers to affect the distribution of income in, say, India, although they have a reasonable likelihood of influencing the UK distribution of income. In other words, because policy making is mostly nationally based, it surely makes sense to examine the distribution of economic well-being nationally as well.

Dowrick and Akmal (2005) assessed both inter-country inequality (the inequality of mean income across countries) and global inequality, highlighting problems associated with comparing real incomes across countries. Critiquing both those who use standard estimates of purchasing power parity (PPP)–adjusted exchange rates and current exchange rates, their estimates do suggest a moderate increase in global inequality between 1980 and 1993.

KEY ELEMENTS OF THE BOOK: A SHARED FRAMEWORK AND THE USE OF COMMON DATA

We commissioned the 17 studies that are presented in this book. When we did, we imposed four core requirements. First, a central component of each study had to be income, earnings, and/or wealth inequality—across households, within households, or both. We urged the authors focused on income

inequality to emphasize comprehensive measures of income, especially post-tax and post-transfer (disposable) income (see Chapters 1 to 4). We engaged two sets of authors to assess interactions between income inequality and political outcomes (see Chapters 5 and 6). We invited the authors of three of the commissioned chapters to extend their analyses to gender disparities in employment outcomes and specifically to assess the interplay between gender disparities and income inequality more generally (see Chapters 7 to 9). We asked four researchers (or research teams) to focus their inequality analyses on wealth (see Chapters 10 to 13). Finally, we invited four chapters focused on country cases (Chapters 14 to 17), which we introduce below.

Second, the empirical component of each study had to be cross-national in design. Exceptions to this requirement were made for one of the wealth studies (see Chapter 13, which used single-country data to assess a question that has clear implications for cross-national wealth comparisons) and the four single-country studies that close this book. (We return to these below.)

Third, we asked several of the researchers to include within their inequality analyses some assessment of the middle class. While we did not impose a single definition of the middle class, we encouraged authors to define this group with respect to the income distribution.

Finally, we required that the researchers draw heavily on microdata that are available—or will be available—through LIS, a data archive that provides cross-nationally harmonized income and wealth microdata. We invited the contributors to supplement their use of the LIS data with other datasets as well, including either macro-level data or other microdata, provided that they drew mainly on LIS data to analyze inequality levels and trends and/or to define and assess the status of the middle class.

We imposed the use of this common data source to maximize (across the chapters) conceptual commonality, empirical comparability, and geographic and temporal consistency. Relying on LIS data allowed all of these authors to assess inequality with respect to a shared set of income, employment, and wealth concepts. The use of the harmonized LIS data ensured a high degree of comparability in the contents of key variables, across countries and time periods. Furthermore, the common use of LIS data also enhanced consistency across the chapters in the selection of both countries included and time periods studied.

LIS (the institution) is home to two microdatabases: the *Luxembourg Income Study Database* (also known as LIS) and the *Luxembourg Wealth*

Study Database (known as *LWS*).⁵ (Detailed information is available from <http://www.lisdatacenter.org>.) These two databases contain microdata from several high- and middle-income countries. The LIS staff gathers datasets and harmonizes them, ex post, into a common template; that means they construct a common set of variables and a standard set of rules that determine the placement and treatment of variables from the original datasets. The LIS staff also makes available an extensive catalogue of documentation that provides information on the scope of the datasets included in the databases, characteristics of the original surveys, the rules of variable construction, variable availability (across datasets), and features of the institutions that correspond to the tax and transfer variables.

The *LIS Database* contains harmonized microdata from a large number of mostly high-income countries. The *LIS* datasets contain variables on market income, public transfers and taxes, household- and person-level characteristics, labor market outcomes, and, in some datasets, expenditures. The *LIS Database* currently includes harmonized microdata from 39 countries: 23 European countries; the United States, Canada, and Australia; Israel and Russia; South Korea and Taiwan; 6 Latin American countries (Brazil, Colombia, Guatemala, Mexico, Peru, and Uruguay); and China, India, and South Africa. These data currently span nine time points: (approximately) 1970–1975, 1980, 1985, 1990, 1995, 2000, 2004, 2007, and 2010. (As this book goes to press, some additional *LIS* microdatasets corresponding to 2007 and 2010 have become available.) Over-time data are not available for all of the countries included in *LIS*, because newly participating countries typically provide data from only the most recent time point. When data are available over time, they are available in the form of repeated cross sections.

The *LWS Database*, a new companion to the *LIS Database*, contains harmonized microdata from several high-income countries. The *LWS* datasets include variables on assets and debt, market and government income, household characteristics, labor market outcomes, and, in some datasets, expenditures and behavioral indicators. The *LWS Database* currently includes harmonized microdata from 12 countries: 9 European countries (Austria, Cyprus, Finland, Germany, Italy, Luxembourg, Norway, Sweden, and the United Kingdom), plus Japan, Canada, and the United States. These *LWS* datasets correspond (variously) to years between 1994 and 2006. As with the *LIS Database*, over-time data are not available for all of the

participating countries, and, when available, the data take the form of repeated cross sections. (See the Appendix to this Introduction, Table A1, for a complete list of countries currently included in the *LIS* and *LWS Databases*, with the standardized two-letter abbreviations that are used throughout this book.)

LIS—Expanding Horizons

LIS has traditionally concentrated its data work on high-income countries. According to the World Bank's country classification system (based on per capita income), of the 39 countries currently in the *LIS Database*, 28 are high-income and 11 are middle-income countries. Those 11 countries include 6 from Latin America, as well as China, India, Romania, Russia, and South Africa. The *LWS* datasets are entirely from high-income countries. A current priority at LIS is adding a substantial number of microdatasets from middle-income countries—first to *LIS* and eventually to *LWS* as well. At press time, that effort is well underway.

The chapters address inequality almost entirely in high-income countries. The 12 comparative chapters (Chapters 1 to 12) utilize datasets from high-income countries, with only two exceptions: one chapter includes Mexico and one includes Russia. This is simply because this group of commissioned authors started their work before a recent spate of middle-income datasets (from Latin America, and India and South Africa, thus far) was added to the LIS data archive.

Finally, among the 17 commissioned chapters are 4 (see Part VI) that assess inequality in selected countries for which microdata had not yet been added to the *LIS Database* when the chapters were commissioned. These countries include Japan (Chapter 14), Iceland (Chapter 15), India (Chapter 16), and South Africa (Chapter 17). We selected these four countries for specific reasons. We asked researchers using datasets from Japan and Iceland, both high-income countries, to prepare studies based on them, as they represent two substantively unique and interesting cases with respect to income distribution. In both of these chapters, the authors (using single-country datasets) include some results from after the global financial crisis. We also invited chapters focused on two of the incoming middle-income countries: India and South Africa. These two are included because, like Japan and Iceland, there is widespread interest in their income distributions, especially because rapid change is underway. When this book goes

to press, India and South Africa will also be included in the *LIS Database*, and income datasets from Japan and Iceland are in the pipeline and will be added soon.

INCOME INEQUALITY IN CROSS-NATIONAL
PERSPECTIVE: A LOOK AT LEVELS AND TRENDS

The Literature

There is a vast and growing literature that documents cross-country variation in income inequality, as well as trends, much of it using the *LIS* micro-data. The contributions of *LIS*-based analyses were summarized by Förster and Vleminckx (2004). Research based on *LIS* data has the advantage of using data that have been harmonized in multiple ways—for example, all *LIS* data have been annualized, and standardized income aggregates have been constructed and made available. Other decisions are left to researchers, but the data allow them to implement common practices across the countries included in their analyses, such as the method for adjusting for household size (i.e., the choice of equivalence scale) or, say, how to treat negative or zero incomes.

In their groundbreaking report prepared for the OECD, Atkinson, Rainwater, and Smeeding (1995) used the *LIS* data from the middle 1980s to establish the first widely accepted cross-country rankings of inequality across high-income countries. Using Gini coefficients to measure inequality, they found that the Nordic countries had the least inequality, followed by continental European countries, Canada, Australia, and the southern European countries, with the United States having the highest (Atkinson et al. 1995).

Many researchers have used the *LIS* data to examine and explain inequality levels and changes. Most recently, Immervoll and Richardson (2011) assess whether, and to what extent, government redistributive policies slowed or accelerated the trend toward greater income inequality over the last two to three decades. Wang and Caminada (2011) analyzed income inequality and the redistributive effect of social transfers; using a simulation approach, they decomposed income inequality into income tax and transfer sources. Grimm and colleagues (2009) examined how indices of human development vary across the income distribution. Cowell and Fiorio (2009) developed decomposition techniques to assess changes in inequality

in the United States and Finland. Scholtz (2008) analyzed whether inequality change between 1985 and 2005 took place near the bottom or top of the distribution. Orgiazzi, Breen, and García-Peñalosa (2008) examined which income sources accounted for cross-country variation in levels and trends in inequality. Mohl and Pamp (2008) assessed links between inequality and redistributive spending, while Checchi and García-Peñalosa (2008) studied links between labor market institutions and income inequality.

While inequality increased in many (but not all) OECD countries in the late 1990s and early 2000s, the broad pattern of cross-country variation identified by Atkinson and colleagues (1995) and again by Förster and Vleminckx (2004) remains in place (OECD 2008). The focus of much of the research on cross-national variation in inequality has been on examining and accounting for *changes* in income inequality (see, e.g., Atkinson 2003; OECD 2008, 2011a; McCall and Percheski 2010). Accounts of the factors underlying changes in income inequality have focused mainly on developments that shift the distribution of labor market income, demographic factors (especially those that affect the sorting of persons with different earnings capacity into different family types), and changes to taxes and transfers.⁶

Many inequality scholars (mostly using data from sources other than *LIS*) have focused their analyses on specific regions. Gasparini and Lustig (2011) reported that income inequality actually declined in most Latin American countries in the 2000s, after having risen earlier. Surveying inequality changes in central and eastern Europe, Heyns (2005) observed that while most of these former state socialist countries experienced increases in overall inequality, the timing, size, and nature of those increases varied substantially.

Arguably, most assessments of inequality trends in high-income countries have focused on the effect of changes in labor markets—importantly, technological shifts, increased international trade, and changes in institutions affecting wage setting. The three explanations need not be mutually exclusive, and, indeed, Atkinson (1997b, 1999, 2003) has made the case that none of them alone can account for the observed trends in earnings inequality. For example, while increased international trade—globalization—is often thought to account for changes in earnings distributions, Atkinson argued that the observed patterns cannot easily be accounted for within a standard economic model of international trade—that is, the Heckscher-Olin model.

McCall and Percheski (2010) reviewed evidence of how changes in family structure and in married women's labor supply (mostly in the U.S. context) have affected income inequality. While the evidence is not clear-cut, it does appear that decreases in married-couple families have tended to increase inequality, while changes in women's employment behaviors and earnings have tended to decrease inequality. Whether or not marital homogamy (i.e., within-couple similarities) increases or decreases income inequality remains open to debate, and, to the best of our knowledge, little is known about how the pure effect of homogamy varies cross-nationally.

Incomes at the very top of the distribution have been increasing in many countries, something observed first in the United States (Piketty and Saez 2003), and later in many other countries as well (Atkinson and Piketty 2007, 2010). As suggested by McCall and Percheski (2010), explanations for the evolution of incomes at the very top should focus on different factors than those that account for overall inequality. In particular, changes in compensation practices for top private-sector officials and the market for top-end jobs are a common focus in this literature.

Furthermore, labor market income can be, and most likely is, affected by changes in capital markets. Atkinson (1997a) reported that the interest rate can affect the skill premium, which affects both the wage differential among persons with different educational qualifications and how the supply of skills reacts to changes in demand. In particular, the premium to higher education increases when real interest rates increase. Compensation of top private-sector officials may depend on returns in the financial sector as well as, for example, differential tax treatment of different types of compensation.

Mahler (2004) found that the evidence that suggests large inequality effects from globalization tends to be weak, a finding that is supported by Roine, Vlachos, and Waldenström (2009). Gustafsson and Johansson (1999), on the other hand, do find some support for the view that imports of manufactured goods are associated with greater inequality.

Public policy can both counteract and reinforce changes in inequality that stem from the market. For example, progressive income taxes can dampen the effects of increased earnings inequality. Rules that lead capital incomes to be taxed at lower rates than labor earnings again provide incentives to convert executive compensation into capital income (rather than labor income) and will thus lead to greater inequality.

A Contemporary Portrait of Income Inequality Based on LIS Data

We build on existing literature on levels and trends in income inequality, using the *LIS* microdata and drawing on the most recent “wave” of *LIS* data—that is, the data centered on 2004. In Figure I.1, we plot the Gini coefficient for each country against median disposable income, expressed

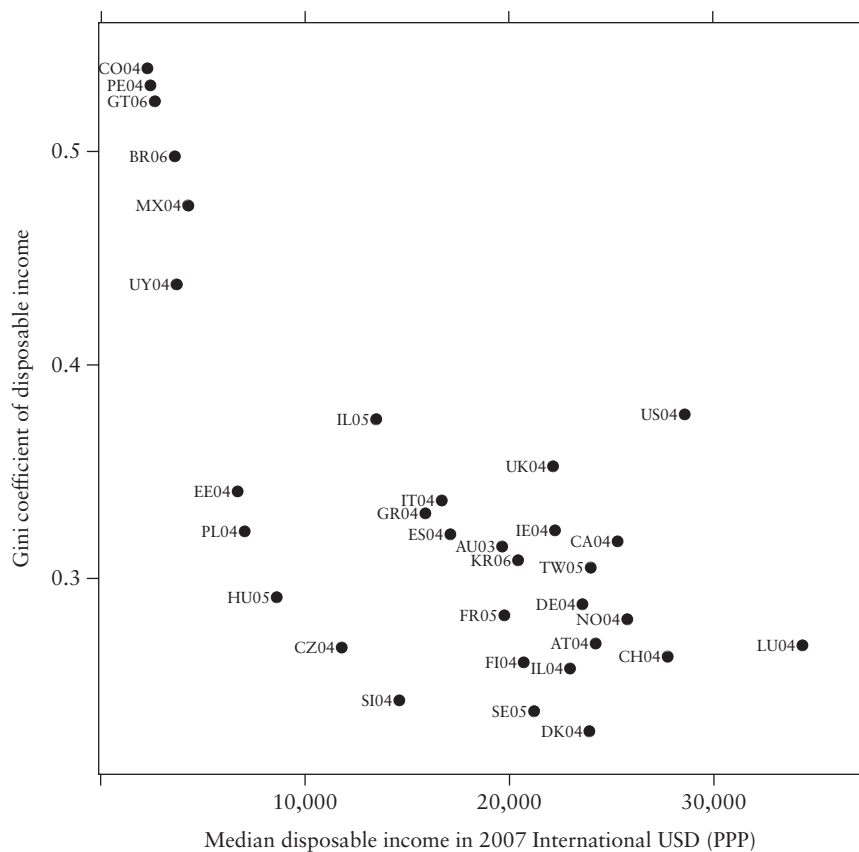


Figure I.1. Inequality and real income levels—the Gini coefficient and median disposable income in selected countries (approximately 2004)

SOURCE: Authors’ calculations from the *LIS Database*.

NOTE: Disposable incomes, adjusted for household size using the square root of household size, have been inflated to within-country 2007 prices using national consumer price indices for all items (IXOB) from OECD (2011b) and have been converted to international dollars using the PPPs for Actual Individual Consumption (A01) in 2007 from OECD (2011c). See Appendix Table A1 to this Introduction for country abbreviations.

in PPP-adjusted income (in 2007 prices). When assessing these inequality estimates, it is useful to keep in mind that they are based on sample data, so they are associated with sampling error. Atkinson (2003) cited evidence to suggest that, with samples of about 30,000, a difference in the Gini coefficient of about 0.01 indicates a statistically significant difference. He further applies the rule of thumb that a difference of about 0.03 is substantively meaningful. Because some of the *LIS* datasets have fewer than 30,000 observations, a conservative reading calls for applying the 0.03 standard.

The broad pattern of cross-country variation in inequality of disposable income has changed little since the publication of Atkinson, Rainwater, and Smeeding (1995), as can be seen in Figure I.1 (see also OECD 2008). Compared to Atkinson and colleagues, we have added data for six Latin American countries—Brazil, Colombia, Guatemala, Peru, Mexico, and Uruguay—that were unavailable in the earlier studies. We have also added several former state socialist countries: the Czech Republic, Estonia, Hungary, Poland, and Slovenia. Taken together, this extended group of countries spans a wide range of real household disposable income, from a low in Colombia of USD2,186 to a high of USD35,001 in Luxembourg (measured after adjusting for purchasing power using OECD PPPs for Actual Individual Consumption).

The country ranking in Figure I.1 indicates that the Latin American countries have inequality levels that are substantially higher than the rest, with Colombia reporting the highest level (0.539), followed by Peru (0.531) and Guatemala (0.528). Mexico, the only Latin American country that is a member of the OECD, tops the OECD inequality rankings with a Gini coefficient of 0.475. The U.S. Gini coefficient is 0.377, which makes it the second most unequal among the OECD countries, followed by Israel (0.375) and the United Kingdom (0.352). The ranking continues with Estonia, Italy, Greece, Poland, Spain, Ireland, Canada, Australia, Korea, and Taiwan, all with Gini coefficients above 0.30. The next group of countries includes Hungary, Germany, France, Norway, Luxembourg, Austria, the Czech Republic, Switzerland, Finland, and the Netherlands, all in close succession. Slovenia (0.243), Sweden (0.238), and Denmark (0.229) have the lowest levels of inequality.

We note that in very few cases do the differences between two adjacent countries exceed the 0.01 rule of thumb for statistical significance, and even more rarely is the economically significant difference of 0.03 exceeded. However, the broad patterns we observe are consistent with evidence from

other sources—based, albeit in part, on the same sources (OECD 2008; Ward et al. 2009).

Measured across all these countries, inequality and median income are strongly negatively associated (rank correlation -0.60), and even after omitting the Latin American countries, the correlation is negative (rank correlation -0.26). Of course, we make no claim that this correlation is causal. Whatever relationships underlie this correlation, they are complex and affected by multiple factors.

To shed further light on the distribution of real income across the *LIS* countries, in Figure I.2, we plot the real disposable household income at the 10th, 50th (median income), and 90th percentiles of the distribution in each country, now ordered by the living standard of the 10th percentile. One of the ways in which inequality matters is that for a given level of real median income, greater inequality in a country may indicate that those at the bottom of the distribution have less purchasing power than those in another country with less inequality. For example, while the United States ranks second in median (and 90th percentile) income, it ranks as 14th with respect to the purchasing power of those at the 10th percentile (on this, see e.g., Rainwater and Smeeding, 2003). The U.S. official poverty line in 2007 (converted here from the line for a family of four, using our equivalence scale) is USD10,325, indicating that the 10th percentile incomes are just above the U.S. poverty line in 15 of our study countries—the 13 countries with 10th percentile incomes greater than those in the United States, as well as the United States and France—and are lower in the rest of the countries.

The United States and Luxembourg at USD64,087 and USD62,182, respectively, do have substantially higher real income at the 90th percentile than do the rest of the countries included here. Canada, Switzerland, Taiwan, and the United Kingdom fall next with incomes just below USD50,000. Taken across all countries, however, real income levels at different points in the distribution are quite highly correlated. Even the rank correlation between the 10th and 90th percentiles, which is lower than that of either of these with the median, is 0.88.

In Figure I.3, we summarize trends in income inequality as measured by the Gini coefficient of disposable income for 27 *LIS* countries included in the 2004 wave of the *LIS* data—and for which we have observations at multiple time points. Bearing in mind that inequality often changes episodically rather than in even trends (Atkinson 1997a), the most common pattern in evidence in Figure I.3 is of increasing inequality. There are, however,

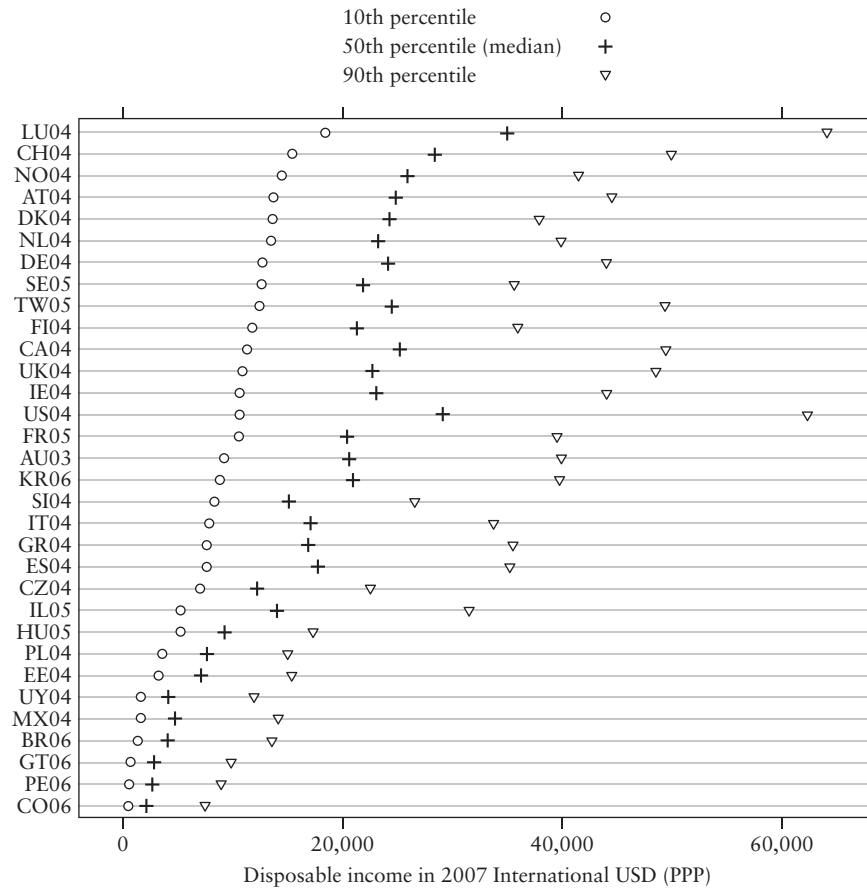


Figure I.2. Real income in selected parts of the distribution of disposable income—selected countries (approximately 2004)

SOURCE: Authors' calculations from the LIS Database.

NOTE: Disposable incomes, adjusted for household size using the square root of household size, have been inflated to within-country 2007 prices using national consumer price indices for all items (IXOB) from OECD (2011b) and have been converted to international dollars using the purchasing power parities for Actual Individual Consumption (A01) in 2007 from OECD (2011c).

many exceptions to this. For example, inequality decreases quite substantially in the 2000s in Switzerland; decreases somewhat in Spain, Greece, Mexico, Sweden, and Slovenia; is nearly flat in Australia; and is even flatter in France, Italy, Ireland, Hungary, and the Netherlands. Among those countries where inequality has risen substantially, especially the United States and the United Kingdom, the change occurred mostly before the 2000s.

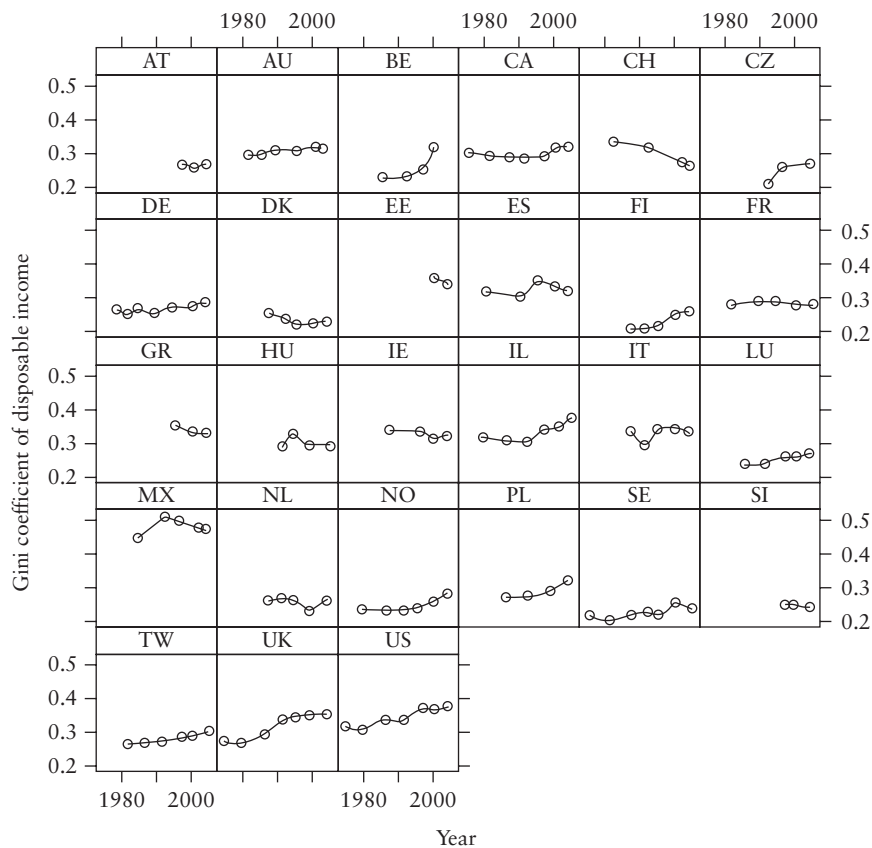


Figure I.3. Inequality trends in comparative perspective—Gini coefficients of disposable income in selected countries in all LIS waves

SOURCE: Authors' calculations from the LIS Database.

Here, we do not assess the reasons that shape the diverging trends across countries. Instead, we refer the reader to recent work by the OECD (2011a) for a detailed analysis of the trends and the factors underlying them.

SUBSTANTIVE AREAS OF RESEARCH IN THIS BOOK

Income: Trends in Household Income Inequality

Part I focuses on trends in income inequality. The background to Chapter 1, discussed in greater detail above, is that inequality has increased in many

LIS countries, but the shape of that increase varies substantially (Alderson, Beckfield, and Nielsen 2005). In Chapter 1, Arthur Alderson and Kevin Doran examine the shape of changes in the income distribution across *LIS* countries. Their point of departure is that the same change in aggregate inequality, as measured by, for example, the Gini coefficient, can come about in multiple ways, depending on what drivers are affecting the distribution of income. For instance, changes at the top of the distribution, driven by shifts in the compensation of top employees, generate different effects on the shape of the distribution than, for example, changes in the labor market participation of those at the bottom of the distribution. Alderson and Doran use relative distribution methods to explore the changing shape of within-country income distributions over time.

Specifically, they index all *LIS* datasets within a country to a base-year median and examine how subsequent distributions compare with the base-year distribution. In most cases, increased inequality takes place by households moving both toward the top and toward the bottom of the distribution, so the middle tends to hollow out. That hollowing out is usually distributed unevenly; in some countries, such as the United Kingdom and the United States, households have moved more toward the top than toward the bottom (“upgrading”), whereas in other countries, such as Sweden and Germany, there is relatively more movement toward the bottom (“downgrading”).

The Middle Class: The Middle Class in the Income Distribution

Part II focuses on inequality and the position of the middle class. The authors in this section extend their inequality analyses in a common direction: they all take a deliberate and sustained look at the middle class. The vast literature on income inequality has long been tied to scholarship on low-income households (see, e.g., Ferreira and Ravallion 2009; Nolan and Marx 2009), and, in fact, the concept of relative poverty—which establishes poverty thresholds relative to the income distribution—is inextricably linked to inequality. Many studies that use the *LIS* data specifically intertwine analyses of inequality and poverty (see, e.g., Smeeding, O’Higgins, and Rainwater 1990; Rainwater and Smeeding 2003; Förster and Vleminckx 2004). Likewise, a spate of recent scholarship on inequality has focused attention on top incomes (see, e.g., Atkinson and Piketty 2007; Leigh 2009). In contrast, while several single-country and cross-national studies of

inequality have reported variations on the linked phenomena of polarization and “the hollowing out of the middle,” relatively little inequality scholarship has focused its attention on the economic status of the middle class per se—as the authors in this part do systematically.

Although inequality scholarship has given relatively short shrift to the status of the middle class, there is in fact a large literature that concerns the importance of having a strong and stable middle class, and that literature addresses countries at all income levels. Estache and Leipziger (2009), in the introduction to their book *Stuck in the Middle*, observed that the “essential role of the middle class has been recognized by politicians in many regions. It is a recurring theme in the United States [and] in Europe, but it is also an essential concern in many developing regions” (9). In their article “Why You Should Care about the Threatened Middle Class,” Littrell and colleagues (2010) emphasized two claims that are widespread in this literature: a strong middle class is a prerequisite for a well-functioning democracy, and a secure middle class is vital for economic growth. Birdsall (2010) argued that the links between the middle-class strength and both democracy and growth operate in both directions; she describes both links as “virtuous circles.” Focusing on developing countries, Ravallion (2010) observed that there are intrinsic and instrumental reasons to be concerned with the status of the middle class. He identified the core instrumental arguments for expanding the size of the middle class: fostering entrepreneurship, shifting the composition of consumer demand, and building political support for policy and institutional reforms that are conducive to growth and, in turn, effective in poverty amelioration.

A recent body of scholarship tackles the question of the effects of inequality per se on the well-being of the middle class. Perhaps the most colorful presentation is by Robert Frank in his widely cited 2007 book *Falling Behind: How Rising Inequality Harms the Middle Class*. Frank argues that rising inequality has inflated the ranks of the wealthy, and their high-end consumption patterns have influenced consumption among the middle class. As a result, although middle-income families earn only modestly more than they did in past decades, they have been induced to buy more expensive homes (as well as cars and appliances). Paying for these items squeezes out other types of consumption and drives these middle-class families into debt. Frank sums up his argument: “Increased spending at the top of the income distribution has imposed not only psychological

costs on families in the middle, but also more tangible costs. In particular, it has raised the cost of achieving goals that most middle-class families regard as basic” (43).

The central question addressed in Chapter 2 is how the position of the middle class depends on the way it is defined. Chapter 3 examines whether increased income inequality has led to stunted income growth for the middle class. An associated line of inquiry concerns how the life chances of different birth cohorts have changed over time, especially with respect to their chances of attaining a middle-class income position. This question is addressed in Chapter 4.

In Chapter 2, Anthony Atkinson and Andrea Brandolini examine how assessments of characteristics of the middle depend on which definition of the middle class is used. Taking issue with conventionally adopted approaches, they argue for relying on income cutoffs, not proportions of the population (such as the middle 60 percent). Income cutoffs are commonly taken as defining the middle class as individuals with incomes between 75 and 125 percent of median income, but they suggest that the upper threshold needs to be set considerably higher—for example, at 200 percent of the median. This can lead to a different picture of the changes over time. They go on to argue that the middle class should be defined not only in terms of income but also by taking into account occupation and, ideally, wealth holdings as well. The middle-income class includes a substantial fraction of those identified by labor market position to be “working class” and “top class,” in addition to those in traditionally middle-class positions. Also, many in the middle-income class turn out to be financially vulnerable in the sense of having low net worth. They conclude that a purely income-based analysis of the middle class may be insufficient and argue for integrating analyses of income, labor market position, and property holding. In this respect, they argue, there needs to be closer integration between the literatures in economics and sociology.

In Chapter 3, Lane Kenworthy assesses whether increased income inequality is associated with slower growth in the real income level of the middle class. Starting from the observation that this is the case in the United States, Kenworthy uses *LIS* data to examine if this also holds in other affluent countries. Examining middle-class real income at the 25th, 50th (median), and 75th percentiles of adjusted disposable household income, he finds that middle-class income growth is only modestly related to changes

in levels of inequality. Kenworthy concludes that inequality is not a key driver of changes in absolute income among the middle class.

In Chapter 4, Louis Chauvel examines how those in the middle of the income distribution fare across different birth cohorts. Chauvel distinguishes between the lower-middle class (75 to 125 percent of median income) and the upper-middle class (125 to 250 percent of median income). Chauvel studies four countries, using *LIS* data from the mid-1980s to the mid-2000s, to assess whether changes in the economic fortunes and prospects for middle-class membership of different cohorts vary “episodically” and/or differ by the standard typologies of welfare state regimes. His study countries include Norway (representing the social democratic regime), France (corporatist), Italy (familialistic), and the United States (liberal). Chauvel concludes that France exhibits the greatest instability in age-income profiles, and Norway reports the most stability. In France, the post-war cohort (born during the years 1945 to 1950) is at a considerable advantage, while the cohort born from 1965 to 1970 is at a substantial disadvantage, when these cohorts are followed over time. In a regression analysis of middle-class membership, Chauvel again finds that in France the 1945–1950 cohort stands out as having better fortunes than others, with more pronounced differences across cohorts than in the other countries. Interestingly, while the cohort differences in the odds of being in either the lower-middle or upper-middle class are largest in France, the odds of reaching upper-middle-class membership decline for cohorts born in the 1960s and later in all four countries.

Politics: Inequality, Political Behavior, and Public Opinion

Part III focuses on politics and distribution. As we noted in at the beginning of this Introduction, inequality may affect civic engagement and the political process more generally (Gilens 2005; Blank 2011). There is an extensive theoretical and empirical literature on the interconnections among voting, inequality, and redistribution. (For reviews, see Borck 2007 and Savoia, Easaw, and McKay 2010; see also, for example, Alesina and Rodrik 1994; Benabou 2000; and Perotti 1996.) In earlier research on income inequality, much emphasis was placed on how politics affects inequality—that is, the political determinants of inequality. Mahler (2004), Brady and Leicht (2008), and Bradley and colleagues (2003) examined inequality and redistribution; these researchers concluded that the political composition of

national governments affects inequality. More left-leaning governments are associated with less inequality, and right-leaning governments with more. Roine and colleagues (2009), in turn, found that government transfers and progressive taxation substantially redistribute income from the top of the distribution downward.

Most of this cross-national research has been conducted using the country-year as the observation unit. As we pointed out above, similar changes in aggregate inequality can come about in multiple ways, so a more disaggregated approach is advantageous. Moreover, most cross-national research to date has been focused on the effect of politics on inequality and redistribution—the central topic of Chapter 5. We know much less about the reverse process—that is, how inequality affects the formation of political preferences across countries. That is the subject of Chapter 6.

In Chapter 5, Vincent Mahler, David Jesuit, and Piotr Paradowski use *LIS* data from 1980 and later to examine links between government redistribution of income and political participation. They study the way in which redistribution affects income shares and how this has changed over time. They especially emphasize the role of government taxes and transfers in determining who ends up in the middle three income quintile groups (their measure of the middle class). Their results suggest that, over time, redistribution has generally decreased, although, even in the mid-2000s, redistribution still plays a substantial role in evening out the distribution of market income. They use data drawn from surveys of political participation and electoral turnout, ordered by income quintile group, as well as country-period level variables, such as the partisan composition of national government and the strength of labor unions, to assess the determinants of redistribution in different parts of the income distribution. While Mahler and colleagues' results suggest that political participation affects redistribution, the relationship between the two varies across the income distribution and by mode of participation, even within the middle-income classes.

In Chapter 6, István Tóth and Tamás Keller assess how redistributive preferences relate to personal attitudes and perceptions, as well as to the overall inequality in the societies in which people live. The conceptual framework is given by the median voter theorem, which suggests that greater inequality may lead to greater redistribution. Tóth and Keller point out, however, that voters differ along many dimensions other than their actual incomes, all having consequences for actual preferences for redistribution.

In addition, they argue that not only individual attributes but also contextual effects play a role in preference formation. They measure preferences for redistribution and subjective well-being and attitudes, using data from the Eurobarometer survey and income inequality estimated from *LIS* data around 2004. Reliance on Eurobarometer data for preferences and attitudes limits the analysis to only European Union member countries and, because the welfare state attitudes were only surveyed in 2009, to a single time point.

Their findings suggest that a significant part of the large observed cross-country variance of redistributive preference relates to the level of actual (and perceived) inequality in various societies. Those who live in highly unequal countries hold favorable attitudes toward redistribution. The difference in redistributive preference between high- and low-income respondents is largest in countries not with the lowest or highest levels of overall income inequality but those with medium inequality. They also find that the middle class will be more favorable to redistribution if society is perceived to consist of relatively more poor than rich persons. Other findings are largely in line with earlier literature: those with fewer resources and those who expect living standards to decline will be in favor of more redistribution, while those who believe poverty is poor individuals' own fault are less favorably disposed. Their theory-relevant conclusion is that for a better understanding of the preconditions and consequences of the median voter theorem, in addition to the actual income distribution, the self-evaluation of the income skew in general and the median voter in particular should also be analyzed.

Employment: Women's Work, Inequality, and the Economic Status of Families

Part IV addresses the role of women's work in the economic status of families. Two facts are well documented in the comparative literatures on women's employment and family economic security. First, across the industrialized countries, women's attachment to the labor market has increased over the last four decades; most substantially, women's employment rates have risen (especially among married mothers), and gender earnings gaps have narrowed. At the same time, despite making substantial gains, in all high- and middle-income countries, women's employment outcomes still lag men's, especially among the subset of adults who are parents. Compared to

their male counterparts, women (especially those with children) are less likely to be employed, they work fewer average hours per week, they are less likely to be employed in remunerative occupations, and on average they earn less, both hourly and annually (see Gornick 2004 for a review; also see Pettit and Hook 2010). While many researchers have assessed gender gaps in employment outcomes overall, others have focused on employment and/or earnings differentials between women and men within couples (see, e.g., Winkler 1998; Smith 2010). Second, rising employment among women implies that women's earnings are an increasingly influential component in household income. Cancian and Reed (2009) report that in the United States, for example, the employment rate of married women with preschool-age children rose from 41 to 68 percent between 1970 and 1990, but then leveled off, showing little change between 1990 and 2006. During that same interval, 1969 to 2006, the poverty rate among families increased modestly. Had female employment not increased during those years, the increase in poverty would have been more than double what it was.⁷ Mishel, Bernstein, and Shierholz (2009) further illuminate the U.S. case with a focus on married-couple families with children. They assessed changing income among these families between 1979 and 2006 and found that real family income grew in each quintile group: by 7.4 percent in the bottom fifth, by 24.3 percent in the middle fifth, and by 66.2 percent in the top fifth. Mishel and colleagues report that, in these families, wives' increased contributions to family income were hugely influential. For example, in the middle fifth, that nearly 25 percent increase would have been about only 5 percent in the absence of increasing wives' contribution to household income.

These two literatures together—one on patterns of gender employment gaps across countries and over time and the other on the effect of wives' earnings on household income—combine to motivate a specific question regarding economic outcomes among families headed by couples: what is the impact on income inequality across households of women's changing and/or varying level of engagement in paid work? In short, is women's paid work equalizing or dis-equalizing with regard to inter-household income inequality? This question is addressed in detail in Chapters 7 and 8.

In addition, a growing literature has established that work-family reconciliation policies (such as child care, leave programs, and working time regulation) play a substantial role in shaping women's employment outcomes and, by extension, gender differentials between women and men

overall and within couples (for a review of this literature, see Hegewisch and Gornick 2011). A number of scholars have assessed the effects of other institutions, such as public employment, employment protection legislation, and taxation (see, e.g., Gustafsson 1992; Gornick and Jacobs 1998; Jau-motte 2003; OECD 2005, 2006; Rubery 2010). The effect of institutions on wives' contributions to household earnings is central to Chapter 9.

In Chapter 7, Susan Harkness begins by reviewing the growing cross-national literature on the question of the effect of women's employment on inter-household inequality. Although it is often argued, especially in popular discourse, that women's rising employment, combined with homogamy, has increased inter-household income differentials, in fact, several studies (both single-country and cross-national) find otherwise. That is largely because, in most countries, women's increased contributions to household earnings have raised household income at the bottom of the income distribution much more than at the top. In her own empirical work, Harkness assesses the impact of women's earnings on household income inequality, using *LIS* microdata on 17 countries at approximately 2004. She employs both standard decomposition methods and three counterfactuals: no women work for pay; all women work for pay; and employment is unchanged, but there is no gender pay gap. Harkness concludes that, overall, women's employment has an equalizing effect on the income distribution in all countries. If, for example, all women worked for pay (imputing regression-adjusted female wages for the currently non-employed women), total earnings inequality would fall in all countries by an amount ranging from 24 percent in Germany and Luxembourg to over 60 percent in Greece and Italy. She also finds that closing the earnings gap (by imputing regression-adjusted men's earnings to all women) would also have an equalizing effect but one that is smaller than the effect of increased employment rates.

Harkness disaggregates some of her findings by class, taking a close look at middle-earning couples. One key finding is that, in terms of couples' employment patterns, this middle-earning group—defined as the middle three income quintile groups with respect to couples' earnings—resembles the top fifth more than it does the bottom fifth. Across the 17 study countries, in households in the bottom fifth, the minority of households (generally between 20 and 40 percent) include two earners, which is, of course, what places them so low in the distribution. In contrast, in 14 of

the 17 countries (all except for three southern European countries), the majority of middle-income couples include two earners, as is the case in all countries for couples in the top fifth of the earnings distribution.

In Chapter 8, Nancy Folbre, Janet Gornick, Helen Connolly, and Teresa Munzi extend Harkness's empirical analysis, using an approach that is unusual in this literature. They start by observing that most studies of the impact of higher, or increasing, levels of women's employment on earnings inequality ignore the amount of time that women, and men, devote to unpaid work. To remedy that, Folbre and colleagues use cross-national time-use microdata to construct estimates of time spent in unpaid child care and domestic work; using aggregate data, they estimate the market value of these unpaid work hours. Then, by matching on subgroup characteristics, they impute the value of unpaid work into the *LIS* microdata; that enables them to assess women's contribution to couples' total market earnings (from paid work), as well as their contribution to couples' "extended" earnings, where extended earnings is the sum of the value of paid and unpaid work. Folbre and colleagues decompose household market earnings and arrive at results similar to Harkness's. They then turn to extended earnings and conclude that incorporating the imputed value of unpaid work has a further equalizing effect on the inter-household income distribution in all countries, albeit to varying degrees across countries.

In Chapter 9, Margarita Estévez-Abe and Tanja Hethey-Maier assess what is essentially the prior question: What institutional factors shape women's employment outcomes and, by extension, women's relative contribution to couples' earnings? Their key findings are that the strictness of labor market regulation (i.e., employment protections) has a significant negative effect on wives' relative contribution to household income, while generous paid leaves increase wives' contributions. Surprisingly, they found no significant effects of the size of the public sector or the generosity of public child care provisions (both expected to boost wives' relative earnings), or of the magnitude of tax penalties on second earnings (expected to depress wives' contributions), although, with all three institutional factors, the coefficients were generally in the expected direction. Estévez-Abe and Hethey-Maier also focus portions of their analysis on middle-class couples, which they define as households with disposable income between 75 and 125 percent of national median household income. Like Harkness, they

find that couples report different earnings patterns at different parts of the income distribution and, furthermore, that institutional factors appear to influence the ways couples' earnings patterns vary by class.

Wealth: The Distribution of Assets and Debt

For over two decades, the *LIS Database* has allowed comparative researchers to study income distributions, using harmonized data, across a large number of high-income (and increasingly middle-income) countries. At the same time, there were few options for assessing the distribution of wealth cross-nationally, and most studies that were carried out had to rely on unharmonized data (see, e.g., Guiso, Haliassos, and Jappelli 2001; Jäntti and Sierminska 2008).

The purpose of the *LWS Database*—established in 2007—is to facilitate such cross-national comparisons; for an overview of the data, see Sierminska, Brandolini, and Smeeding (2006). The national wealth datasets that the *LWS Database* contains are, unfortunately, too diverse to allow for a single comprehensive definition of net worth to be created. Nevertheless, a small but growing comparative literature has developed, based on the *LWS* data.

Sierminska, Brandolini, and Smeeding (2006) present estimates of wealth levels across countries; their results indicate that the ordering of countries by wealth inequality is somewhat surprising with respect to what we know about income inequality. For example, they report that Sweden, one of the most equal countries with respect to the income distribution, has the greatest level of wealth inequality. While this is accounted for by a large fraction of households with substantial housing debt, this result raises pressing questions about the links between income and wealth. Moreover, median levels of net worth are exceptionally high in Italy, followed by the United States, which suggests that country rankings by real income levels may be markedly different from those based on wealth. These questions are addressed in detail in Chapters 10 and 11.

Much work remains to be done on developing the concept of net worth to arrive at internationally comparable benchmarks. Two major components of wealth across countries are housing and pension wealth. Housing is included in the *LWS* measures of net worth, although most pensions are not.

Principal residence constitutes between one-half to three-quarters of overall household net worth in most of the *LWS* countries (Sierminska et al.

2006). However, comparisons of income inequality rarely take into account the value of owner-occupied housing. How important this is for cross-country comparisons of economic well-being varies with the prevalence of owner-occupied housing. Variation in home-ownership patterns may also affect comparisons of economic well-being across groups *within* countries, especially the elderly compared to the working-age population. This issue is examined in Chapter 12.

The omission of much pension wealth from net worth comparisons is also problematic. An important source of institutional variation across countries is the income maintenance system for the elderly. It is customary to talk of “pillars” of the pension system. The “first pillar” is defined as the basic (flat-rate and sometimes means-tested) legislated pension. The “second pillar” includes legislated pensions that are conditioned on labor market and earnings histories. The “third pillar” consists of assorted voluntary private and occupational systems. The extent to which future pension rights are defined as part of an individual’s or a household’s wealth varies across countries. In general, however, net worth excludes the value of “first pillar” and “second pillar” pension wealth, which is especially problematic given that these increasingly provide the bulk of the incomes of the retired; in addition, net worth only infrequently includes “third pillar” pension wealth. And, in fact, the inclusion of pension wealth, where available, in estimates of net worth is not uncontroversial. Pension wealth is like other assets in that it can provide an income stream, but in general pension wealth cannot be sold, and in many cases (this varies from country to country) pension holders have limited, if any, rights to bequeath their pension wealth to family members when they die. Pension wealth is quantitatively important, however, and examining how the distribution of wealth changes when it is added to net worth is a crucial topic in wealth research. This is addressed in Chapter 13.

In Chapter 10, Eva Sierminska, Timothy Smeeding, and Serge Allegrezza examine the net worth of households in Italy, Luxembourg, Sweden, the United Kingdom, and the United States. Specifically, they examine all households as well as single-parent and two-parent families separately. Their analysis focuses on levels of net worth, portfolio composition, and the wealth package of households with an emphasis on home-ownership rates and home values. They find large differences across countries in wealth levels, driven to a great extent by differences in home values. Rates of home

ownership vary less; holdings of financial assets account for a relatively small share of cross-country variation in wealth levels. In analyzing the affordability of home ownership across the income distribution, they find that home-value-to-income ratios are highest where home values are highest: in Luxembourg, Italy, and Germany. They conclude that this is also true among the middle class, suggesting that, in these countries, housing is the least affordable for middle-class households.

In Chapter 11, Markus Jäntti, Eva Sierminska, and Philippe Van Kerm use *LWS* data for Germany, Italy, Luxembourg, Sweden, and the United States to explore the joint distribution of income and wealth. Many authors argue that wealth matters because the capacity to finance consumption out of wealth can be important when incomes are low. Examination of the joint distribution of disposable income and net worth can suggest ways in which these two resources capture similar levels of well-being. It turns out that income and wealth are highly, but not perfectly, correlated. Net worth is much more unequally distributed than disposable income, but households at similar income levels have quite varying levels of net worth. Descriptive bivariate regressions of disposable income and net worth against age, education, and family structure variables capture a reasonable fraction of the overall variance of both income and wealth. The coefficient estimates are qualitatively similar, but the differences among groups vary across countries. Even after that part of the similarity in net worth and disposable income that is accounted for by systematic differences across groups defined by age, education, and family structure has been accounted for, net worth and disposable income remain highly positively associated.

In Chapter 12, Bruce Bradbury assesses the role that housing plays in supporting consumption by the elderly. Bradbury notes that home ownership, the rate of which varies substantially across countries, supports consumption by providing a flow of housing services that would otherwise require expenditures on rent. The failure to include such imputed rents from owner-occupied housing may distort the impression of the economic well-being of the elderly, both relative to younger cohorts within countries and relative to the elderly in other countries. Moreover, economic inequality among the elderly may be different if housing consumption is taken into account. Bradbury uses *LWS* data for Canada, Finland, Germany, Italy, Sweden, the United Kingdom, and the United States, along with national data for wealth and income in Australia, to explore to what extent inclusion

of housing consumption alters conclusions about the economic well-being of the elderly.

Bradbury concludes that taking housing into account can lead to quite different conclusions about retirement living standards from those found when examining income alone. Taking housing into account means that the “replacement rate” (i.e., the income or consumption level of the elderly relative to the non-aged) is substantially increased in the United States and Australia but unchanged in Sweden. Defining the middle class in terms of the three middle-income quintile groups, Bradbury finds that, among the elderly population, incorporating housing consumption reduces the gaps between the middle, top, and bottom in most countries, and substantially so in Australia. Both Australia and the United States have a particularly high rate of home ownership among the older population. The distributional impact of home ownership on retirement living standards, however, is very different in the two countries. Housing wealth is strongly correlated with income in the United States but weakly correlated in Australia, implying a reinforcing of income-based inequality in the former but not the latter country. Taken together, Bradbury’s results suggest that home ownership and housing wealth are of central importance in understanding both the average standard of living of the elderly and the inequality in those living standards.

In Chapter 13, Joachim Frick and Markus Grabka examine how the distribution of net worth in Germany changes when pension wealth is included. Their assessment focuses on a single dataset included in the *LWS Database: Germany in 2007*. This is because the inclusion of pension wealth requires the authors to access microdata on pension entitlements from administrative records that had to be statistically matched onto the data that underlie the German *LWS* dataset, the German Socio-Economic Panel (SOEP). While the exact consequences for the distribution of net worth of adding pension entitlements depends on several assumptions—key being the assumed rate of return to pension assets—it is clear that average net worth is considerably higher, and much more evenly distributed, once it has been augmented by pension wealth.

At the same time, Frick and Grabka find that there are large differences across occupational groups, depending on the generosity of pension arrangements. Adding pension entitlements is especially important for the middle class (defined as falling within the band of 70 to 150 percent of the median). Among the lower middle class (defined as 70 to 90 percent of

the median) net worth triples, while it doubles for the upper middle class (defined as 130 to 150 percent of the median). It is also likely that the extent to which net worth changes when pension wealth is incorporated depends on individual labor market histories and on institutional arrangements that regulate how pension entitlements are divided following marital dissolution; as a result, the effect of accounting for pension wealth is likely to be different between men and women. The authors end by strongly recommending that pension entitlements be included in comparisons of net worth across countries.

Country Case Studies: Inequality in Japan, Iceland, India, and South Africa

As noted earlier, we invited four country case study chapters—two from high-income countries (Japan and Iceland) and two from middle-income countries (India and South Africa)—all new or incoming participants in the *LIS* and/or *LWS Databases*. We include chapters on Japan and Iceland because they each provide a unique look at a high-income country that is rarely included in cross-national inequality comparisons. Furthermore, both chapters (using data prior to being harmonized by *LIS*) offer at least a glimpse at post-crisis outcomes. We invited chapters focused on India and South Africa because they are two of the largest middle-income countries and are also among the most interesting due to their rapidly shifting income distributions.

In Chapter 14, Colin McKenzie uses data from two Japanese household panel surveys—the Keio Household Panel Survey (KHPS) for the period 2004–2009 and the Japan Household Panel Survey (JHPS) for 2009—to examine income and consumption inequality levels and trends, income mobility, and the concentration of assets in Japan.

Using annual household income to compute Gini coefficients, McKenzie finds that there is little change in income inequality in Japan during the period 2004–2009. In contrast, short-term income mobility in the middle to late 2000s declined relative to 2000–2001 for all income quintile groups except the top group. Finally, comparing the asset holdings of Japanese households with those in other countries included in the *LWS Database* suggests that Japan falls somewhere in the middle of this cross-national range. The principal residence forms the largest component of Japanese households' wealth portfolio in all quintile groups. McKenzie also finds

that debt appears to be concentrated in the 35- to 55-year-old age group. The proportion of Japanese households reporting positive net worth is approximately the same as in Finland and the United Kingdom.

In Chapter 15, Stefán Ólafsson and Arnaldur Kristjánsson use data from the tax authorities in Iceland to examine how inequality evolved between the early 1990s and 2009—that is, before, during, and after the remarkable economic bubble in Iceland that deflated in 2008. They find that, starting from largely Nordic levels of inequality, income inequality in Iceland soared as the bubble built up—with the Gini coefficient increasing from 0.28 in 1992 to 0.44 in 2007 and then decreasing to 0.34 in 2009.

They define the middle class in two different ways—as the three middle-income quintile groups and as those with income in the range of 75 to 150 percent of the median—and find that the bubble did not lead to substantial income growth for the middle class by either definition. For much of the period 1994–2007, the very top income earners in Iceland benefited from far greater income growth than the rest. While the subsequent bust (2007–2009) led to a decline in real income of about a quarter for the top decile group, all earners experienced income declines. The authors also find that the increase in inequality occurred mainly through an increase in financial earnings but was reinforced by a change in the tax regime in 1997, which shifted the burden of taxation toward the middle- and lower-income groups.

In Chapter 16, Reeve Vanneman and Amaresh Dubey assess inequality in India—one of the countries that is central to *LIS*'s expansion into middle-income countries. The authors draw on data from the 2005 India Human Development Survey, the first nationally representative survey that gathered detailed income data in India. After accounting for inter-regional price differences in India, the authors estimate that a lower-bound estimate of the Gini coefficient for income inequality is 0.48—a level that is well above that found in most high-income countries. It is also well above earlier estimates of Indian inequality that relied on expenditure data.

Taking up what they refer to as “horizontal inequality,” Vanneman and Dubey assess variation across the Indian states (of which there are 22 after they combined a few smaller states). They find that there is sharp variation across states in both income levels and income inequality—in fact, as much variation as is seen across the high-income countries contained in the *LIS Database*. Households in the highest-income Indian states have

three times the median income as those in the low-income states, and Gini coefficients vary, across states, by 17 points. In addition, across states, inequality in the upper part of the income distribution (i.e., between middle-income and affluent households) is almost uncorrelated with inequality in the lower part of the income distribution (i.e., between middle-income and poor households).

Vanneman and Dubey define middle-income households in India as those households whose (size-adjusted) income is above 50 percent and below 200 percent of the all-India median. This interval, they report, contains about 60 percent of Indian households, with about one-fifth falling below and one-fifth falling above. Their analysis highlights the complexity of defining the middle class in a case such as India. They note that although this is a conventional relative definition of the middle class, when they assess real income levels, “this middle-income group is not what would be considered middle class in any global sense.” They conclude that a more recognizable “middle class” might actually be those households they have identified as affluent—that is, households with incomes above twice the Indian median.

In Chapter 17, Murray Leibbrandt, Arden Finn, and Ingrid Woolard use survey data from two points in time—1993 and 2008—to assess changing inequality in South Africa. Their analysis is based on income and expenditure data from the 1993 Project for Statistics on Living Standards and Development and the 2008 base wave of the National Income Dynamics Study.

They find that inequality has increased since the end of Apartheid in 1994, due to an increased share of income going to the top decile group. They also report that social grants have become a more important source of income in the lower decile groups. However, income source decompositions reveal that the labor market was and remains the key driver of aggregate inequality. Their results also indicate that inequality within each racial group has risen over time, while between-race inequality has declined. Furthermore, they note that income and expenditure data indicate consistent stories, but the expenditure data suggest larger changes in inequality over time.

Leibbrandt and colleagues observe that operationalizing a concept of the “middle class” in the South African context is a challenging task—largely due to the heavily skewed nature of the income distribution (toward the richest decile group). The consequence of this is that there is little difference between the income accruing to households in the lower, compared

APPENDIX TABLE A1
List of countries in the LIS and LWS Databases with country abbreviations and wave/year correspondence in the LIS Database

A: COUNTRIES, TWO-LETTER ABBREVIATIONS IN THE LIS AND LWS DATABASES

<i>Country</i>	<i>Abbreviation</i>	<i>In the LIS/LWS Database</i>
Australia	AU	LIS
Austria	AT	LIS, LWS
Belgium	BE	LIS
Brazil	BR	LIS
Canada	CA	LIS, LWS
China	CN	LIS
Colombia	CO	LIS
Cyprus	CY	LWS
Czech Republic	CZ	LIS
Denmark	DK	LIS
Estonia	EE	LIS
Finland	FI	LIS, LWS
France	FR	LIS
Germany	DE	LIS, LWS
Greece	GR	LIS
Guatemala	GT	LIS
Hungary	HU	LIS
India	IN	LIS
Ireland	IE	LIS
Israel	IL	LIS
Italy	IT	LIS, LWS
Japan	JP	LWS
Luxembourg	LU	LIS, LWS
Mexico	MX	LIS
Netherlands	NL	LIS
Norway	NO	LIS, LWS
Peru	PE	LIS
Poland	PL	LIS
Romania	RO	LIS
Russia	RU	LIS
Slovak Republic	SK	LIS
Slovenia	SI	LIS
South Africa	ZA	LIS
South Korea	KR	LIS
Spain	ES	LIS
Sweden	SE	LIS, LWS
Switzerland	CH	LIS
Taiwan	TW	LIS
United Kingdom	UK	LIS, LWS
United States	US	LIS, LWS
Uruguay	UY	LIS

(continued)

APPENDIX TABLE A1
(Continued)
B: WAVE/YEAR CORRESPONDENCE IN THE
LIS DATABASE

<i>Wave</i>	<i>Year (circa)</i>
Historical	1967–1975
I	1980
II	1985
III	1990
IV	1995
V	2000
VI	2004
VII	2007
VIII	2010

SOURCE: <http://www.lisdatacenter.org/our-data/lis-database/documentation/list-of-datasets/> (LIS) and <http://www.lisdatacenter.org/our-data/lws-database/documentation/lws-datasets-list/> (LWS).

to the middle, decile groups. (This finding echoes the results for India, reported in Chapter 16). Nevertheless, using household income (per capita), they define the middle class as “the middle 60.” Using this definition, they assess change over time in the factors allocating individuals into or out of the middle class. They find that rising within-race inequality makes race a weaker predictor of being in the middle class in 2008, compared with 1993. In 2008, all racial groups—except whites—have some members with increased probabilities of exiting the middle class by moving upward and other members with increased probabilities of exiting the middle class by moving downward. In contrast, having tertiary education is shown to unambiguously push people out of the middle class and upward.

In closing, these 17 empirical chapters—taken together—demonstrate the advantages of adopting a multi-dimensional approach to the study of inequality—that is, an approach that integrates measures of income, employment, and wealth. This book further extends conventional analyses of inequality by casting a light on the middle of the income distribution—a segment that often receives short shrift in the inequality literature—and by addressing fundamental questions about the interplay between inequality and political outcomes. This multi-dimensional and multi-faceted approach allows us to construct a complex portrait of inequality across high-income countries, as it was on the eve of the global financial crisis that marked the end of the first decade of the twenty-first century.

NOTES

1. This series is available online at <http://www.urban.org/poverty/consequencesofpoverty.cfm>.
2. Chapter 2, by Atkinson and Brandolini, is a partial exception. In one portion of their empirical analysis, they incorporate information on occupation and wealth.
3. Estache and Leipziger (2009) take this approach as well, but emphasize there is no clear agreement on which deciles to include: “Although there is a wide range of definitions of the middle class, from economic to sociological, we focus here on the most traditional economic definition that defines the middle class in terms of the income decile that the population belongs to. . . . This is itself a subject of debate, since there is no consensus on the specific deciles that define the middle class” (9). Pressman (2007) observes, however, that the middle 60 is the most commonly used definition in this literature.
4. The 75 to 125 percent definition is generally attributed to Lester Thurow, who argued for this definition in 1986 (Wogart 2010).
5. For clarity, when we refer to the institution LIS, it is not italicized. *LIS* and *LWS Databases* are italicized.
6. Burkauer, Feng, and Jenkins (2009) point to a potential problem in studies of inequality trends, at least using U.S. data, which is that top-coding procedures have changed and that may affect both the magnitude and timing of the U.S. trend in inequality.
7. Rising rates of single parenthood operated in the opposite direction—that is, pushing the poverty rate above what it would have been in the absence of changes in family structure. Also see McCall and Percheski (2010) on this point.

For additional results, please see the online appendices by following the link in the listing for Income Inequality on the Stanford University Press website: <http://www.sup.org>.

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