McKinsey Global Institute

The social contract in the 21st century

Outcomes so far for workers, consumers, and savers in advanced economies

February 2020

McKinsey Global Institute

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Preface

What the social contract is—and how and why it changes—has preoccupied philosophers, economists, and social scientists for at least four millennia, encompassing the Code of Hammurabi, Plato's *Republic*, and the European Enlightenment when, among others, Jean-Jacques Rousseau used the term in his 1762 book, *On the Social Contract*. At its core, the social contract is the implicit relationship between individuals and institutions. History suggests that the discussion about the social contract is most active in times of broad economic, social, and political upheaval.

It is thus perhaps not surprising that the subject has once again become topical, given the shifts fueled by technology and globalization in market and political economies since the start of the 21st century—not to mention the 2008 financial crisis. Public sentiment, as expressed in opinion polls over the past few years, suggests that we are living in a new era of rising discontent, mistrust of institutions, and an economy that does not work well for everyone. This remains true despite significant progress in some economic indicators, including employment rates and GDP growth, along with technological advancements and improvements in education and longevity.

Discussion of the social contract often encompasses the political economy and society's institutions, including governments, as well as issues of values and social justice in communities small and large, local and global. In this research, our focus is on its economic aspects. This report is the latest MGI publication focusing on shifting economic outcomes for different groups of individuals. Previous publications include 2016 reports on income stagnation, consumer trends, and investment returns, and 2019 papers on inequality and on labor share of national income.[1]

The research was led by James Manyika, chairman of the McKinsey Global Institute, Anu Madgavkar, and Tilman Tacke, MGI partners based in Mumbai and Munich, respectively. MGI directors Sven Smit and Jonathan Woetzel provided input, guidance, and support, as did Jan Mischke, an MGI partner in Zurich. The research team was led at different stages by Abdulla Abdulaal, Maggie Desmond, and Manuel Schönfeld. Team members were Yunnan Jiang, Joh Hann Lee, Kimberley Moran, Katie Parry, and TJ Radigan.

We are grateful to external academic advisers who guided and reviewed our work: Martin Baily, senior fellow at the Brookings Institution; Richard Cooper, professor of international economics at Harvard University; Harold James, professor of history and international affairs at Princeton University; Hans-Helmut Kotz, program director at the SAFE Policy Center at Goethe University and resident fellow at the Center for European Studies at Harvard University; Dani Rodrik, professor of international political economy at the John F. Kennedy School of Government at Harvard University; Michael Spence, Nobel laureate and professor of economics at New York University's Stern School of Business and senior fellow at the Hoover Institution; and Laura Tyson, Distinguished Professor of the Graduate School at the University of California, Berkeley.

This research has benefited from a growing body of work on various aspects of the implicit social contract. We are particularly grateful to the following authors, whose work was a core

[1] Previous McKinsey Global Institute reports include *Urban world: The global consumers to watch,* March 2016; *Diminishing returns: Why investors may need to lower their expectations,* May 2016; *Poorer than their parents? Flat or falling incomes in advanced economies*, July 2016; *A new look at the declining share of labor income in the United States*, May 2019; and *Inequality: A persisting challenge and its implications*, July 2019.

source of data and research for us throughout this report: Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*, 2019; Peter Hall and David Soskice, *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, 2001; and Joseph Stiglitz, Amartya K. Sen, and Jean-Paul Fitoussi, *Measurement of economic performance and social progress*, 2009. We also gained insight from OECD publications, primarily *Under pressure: The squeezed middle class,* and *How's life? Measuring well-being*.

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This report was edited and produced by Peter Gumbel, MGI editorial director, together with production manager Julie Philpot, graphics design team leader Vineet Thakur, and senior graphic designers Laura Brown, Jayshree Iyer, Richard Johnson, Pradeep Rawat, and Patrick White. Nienke Beuwer, MGI director of external communications, helped disseminate and publicize the report. Lauren Meling, MGI digital editor, ensured digital and social media diffusion. We are grateful to Kaizeen Bharucha, Amanda Covington, Deadra Henderson, Bettina Lanz, and Sarah Portik for personnel and administrative support.

This report contributes to MGI's mission to help business and policy leaders understand the forces transforming the global economy. As with all MGI research, this research is independent and has not been commissioned or sponsored in any way by business, government, or other institution. We welcome your comments at MGI@mckinsey.com.

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In brief

The social contract in the 21st century: Outcomes so far for workers, consumers, and savers in advanced economies

Individuals in advanced economies have been exposed to significant changes in the economy over the first two decades of the 21st century. These changes have been driven by technology and globalization, the economic crisis of 2008, and shifting market economy and institutional dynamics. While many of the developments have brought opportunities and economic growth, this research examines what the economic outcomes have been so far for individuals as workers, consumers, and savers and the extent to which these outcomes reflect a shifting balance between the individuals and institutions involved. We focus on outcomes in 22 OECD countries since the start of this century. Our findings include:

— Work opportunities have increased everywhere, and to record levels in some countries, but work security and income growth have declined or expanded unevenly. In the 22 countries we studied, 45 million more working-age people were employed in 2018 than in 2000—31 million of them women. The gains in employment were primarily driven by growth in alternative work arrangements. While work benefits such as paid leave have improved, wages have stagnated for many workers. Polarization toward high- and low-skill employment has eroded seven million middle-skill and middle-wage jobs in 16 European countries and the United States, despite the strong job growth overall.

— As consumers, individuals have benefited from improved access and lower prices for discretionary goods and services, such as communications, clothing, and recreation. However, rising housing prices, which account for 37 percent of general inflation, together with higher healthcare and education costs and spending, have absorbed between 54 and 107 percent of the gains in income for average households in Australia, France, the United Kingdom, and the United States since 2002.

— Household saving rates have fallen at a time when individuals have to save for longer retirement and assume greater responsibility for saving. Since 2000, pension levels guaranteed by the public sector or employers have declined by an average of 11 percentage points. Yet household saving rates fell in 11 of the 22 countries; in 2017, more than half of individuals did not save for old age. While mean individual wealth has returned to pre-crisis levels in 11 countries in our sample, median wealth is still 23 percent lower on average.

— Changes in individual outcomes across the three arenas have been propelled by the changing role of institutions, which are cushioning individuals to a lesser degree from the effects of the forces at work in the economy. For example, employment protections are now lower, a higher share of healthcare and education costs is private, and guaranteed pension levels have dropped. While spending on public-sector wages and various government transfers to individuals rose from an average of 38 percent of GDP in 2000 to 41 percent in 2018, it was largely because of higher aging-related costs. This pattern of greater "individualization" of the social contract prevailed in most of the 22 economies, despite differing market systems and levels of government spending.

— As a more individualized social contract evolves, different groups of individuals are affected differently. Outcomes have been favorable for about 115 million workers equipped for high-skill jobs, individuals for whom discretionary consumption is relatively high compared with their spending on basics, and savers able to accumulate capital. However, more than 120 million middle-skill workers in Europe and the United States experienced declining employment and stagnating wages at a time when the cost of basics rose faster than general inflation. Low-income individuals experienced challenging outcomes in their roles as consumers and savers. Young people have less secure employment, spend more on meeting basic needs, and have just one-third of the average adult wealth compared with two-thirds a generation ago. Women in general, and minorities in some countries, have fared less well than others in incomes and savings.

— While individuals have achieved many gains that will need to be sustained and expanded, the bottom three quintiles of the population—about 500 million people—have experienced challenges. We identify ten key questions to address if outcomes are to improve and be inclusive as the century progresses. These include: how to reduce job fragility and wage stagnation at a time of changing work arrangements; how to address rapidly rising costs of housing and, in some countries, healthcare and education; how to mitigate the risk of saving shortfalls for some; and how to address the challenges faced by particularly vulnerable groups, including the young and lower-income households.

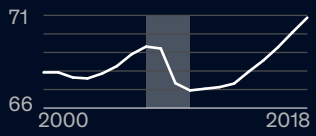
— Policy makers, business leaders, and individuals will need to focus on two fronts. The first is sustaining and expanding the gains achieved through continued economic and productivity growth; business dynamism; investment in economies, technology and innovation; and continued focus on job growth and opportunity creation. The second is tackling the challenges individuals face, especially those most affected. Leaders are beginning to respond to these opportunities and challenges to varying degrees. However, more is needed given the scale of the opportunities and challenges, if the outcomes for the next 20 or more years of the 21st century are to be better than the first 20 and increase broad prosperity.

21st-century social contract:
Economic outcomes for individuals so far

Outcomes have changed for people in their roles as workers, consumers, and savers in 22 OECD countries

Outcomes for workers

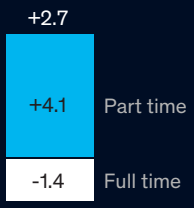
Unprecedented job growth
Employment rate, % of 15–64 population



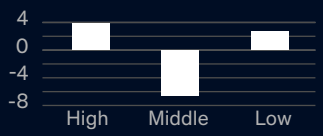
Of 45M new jobs, 31M for women

Part-time work drove job growth

Change in employment rate 2000–18, percentage points



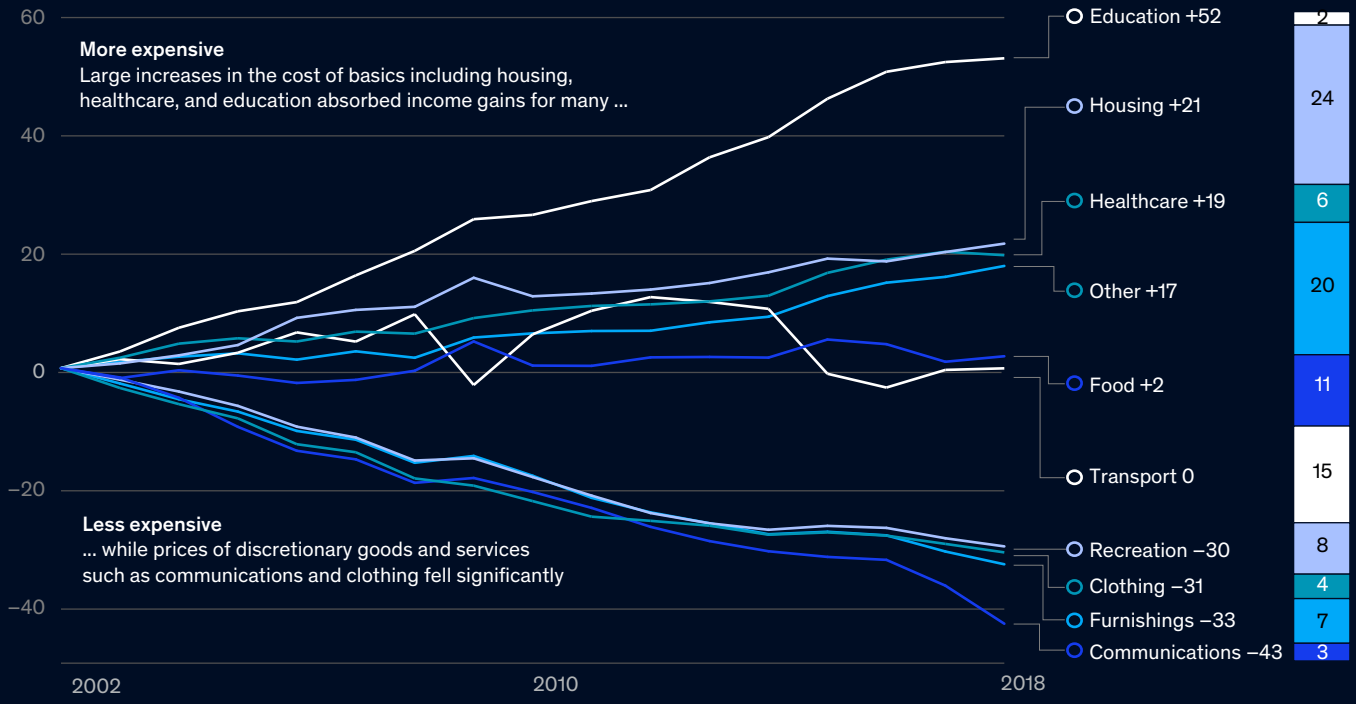
More polarized labor market
Europe and US employment share change by skill/wage level 2000–18, percentage points



Outcomes for consumers

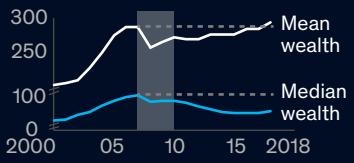
Change in category consumer prices, indexed to overall inflation, percentage points

Share of consumer spending, %



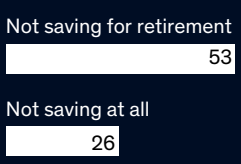
Outcomes for savers

Mean individual wealth recovered but median is still below pre-crisis level
$ thousand



Insufficient guaranteed pensions, 2018

Not enough personal saving
% of 15+ population



Growing indebtedness

23%

of US households in 2017 had zero or negative net worth, vs 16% in 2001

Institutions have shifted more responsibility onto individuals

Two priorities for the next decades of the 21st century

1. Sustain and expand the gains

Tech progress

Productivity and economic growth

Higher employment and opportunity creation

2. Find solutions for the most adversely affected groups

Low-skill, low-wage
~335 million
Stagnant wages, more costly housing, and negative savings (–14% of disposable income).

Women and minorities
~295 million
Still lag in employment, savings, and wages; female pay is 85¢ per $1 for men.

Trailing regions
~215 million
Uneven locus of economic activity, job growth, and innovation.

Young people
~180 million
Less stable employment, less wealth, and a harder climb onto the housing ladder than elders.

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Executive summary

Life has changed substantially for individuals in advanced economies in the first two decades of the 21st century as a result of trends including disruptions in technology, globalization, the economic crisis of 2008 and its recovery, and shifting market and institutional dynamics. Overall, the 21st century has brought opportunities and economic growth and the prospect of more to come as the century progresses, through developments in science, technology and innovation, and productivity growth. In many ways, outcomes so far for individuals have been for the better. Yet the relatively positive perspective on the state of the economy, based on national-level GDP and job growth indicators, needs to be complemented with a fuller assessment of the economic outcomes for individuals as workers, consumers, and savers.

In doing so, this research finds that opportunities for work have expanded, employment rates have risen to record levels in many countries, and many benefits have improved, although not everywhere. At the same time, work polarization and income stagnation, while varying in magnitude across countries, have grown. While the availability and cost of many discretionary goods and services have fallen sharply, the cost of basic necessities such as housing, healthcare, and education has grown and is absorbing an ever-larger proportion of incomes. Coupled with wage stagnation effects, this is eroding the welfare of the bottom three quintiles of the population by income level (roughly 500 million people in 22 countries). Public pensions are being scaled back, and roughly the same three quintiles of the population do not or cannot save enough to make up the difference. Moreover, in the post-crisis macro and monetary policy environment especially, the investment opportunities for a majority of households have been unattractive. While the average wealth for individuals has recovered to pre-crisis levels, the wealth of the median individual is still almost one-fourth below pre-crisis levels. This contributes to rising economic insecurity and wealth inequality.

In addition to changes in the outcomes for individuals, we also find quantifiable evidence that individuals have had to assume greater responsibility for their economic outcomes in the past two decades. While this research focuses on actual shifts this century, many of these outcomes and shifts and underlying trends began decades earlier.

These changes in outcomes for individuals and the roles of institutions point to an evolution in the "social contract": the arrangements and expectations, often implicit, that govern exchanges between individuals and institutions. While many have benefited from the evolution in the social contract, for a significant number of individuals the changes are spurring uncertainty, pessimism, and a general loss of trust in institutions.[1] Some policy makers and business leaders are responding with a public reevaluation of their role and purpose in society.[2]

In this research, we aim to go beyond sentiment, to examine, in a fact-based way, how particular aspects of the implicit and various social contracts have changed and, where possible, to measure those changes. We focus on advanced economies, covering 22 Organisation for Economic Co-operation and Development (OECD) countries that together constitute 57 percent of global GDP, although the questions are germane for emerging economies as well.[3]

1 Trust in government fell in more than half of the Organisation for Economic Co-operation and Development (OECD) economies between 2006 and 2016, and almost half the people polled in 16 OECD economies believe the average person in their country is worse off today than 20 years ago. *What worries the world*, Ipsos Public Affairs, September 2018.

2 For example, see "Business Roundtable redefines the purpose of a corporation to promote 'an economy that serves all Americans,'" Business Roundtable, August 19, 2019.

3 Our research covers Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, South Korea, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

The goal of this research is not to suggest undoing the gains and opportunity-creating developments including from technological progress, economic growth and productivity, and the evolution of institutions where beneficial—quite the opposite. Indeed, much will be required to sustain and further accelerate the gains and create conditions for more as the 21st century progresses—topics we have discussed in our other research.[4] The goal here is to shed light on outcomes to date for individuals in order to motivate action to ensure that the exciting opportunities and potential for economic prosperity are inclusive and shared by all.

The social contract is a very broad concept, covering multiple facets of everyday life, including notions of economic, social, and political arrangements as well as values, justice, and many other aspects of society and social arrangements at the local and global levels.[5] History suggests that the discussion about the social contract is most active in times of broad technological, economic, social, and political upheavals. The start of the 21st century has been characterized by broad shifts in advanced economies fueled by advances and disruptions from technology and globalization, as well as shifts in the structure and role of markets and institutions, shifts in political economies, and the effects of the 2008 financial crisis. In this research, we focus on the economic aspects of the social contract, specifically on the three key economic roles for individuals as workers, consumers, and savers. These three roles cover existential and aspirational needs of individuals to generate income to meet consumption needs today, enhance economic security, save for the future, and generally progress (see Box E1, "Assessing shifts in the social contract").

Gauging shifts in the social contract remains an imperfect science, and more data and research, especially of a comparative and disaggregated nature, are needed to complete the picture. Nonetheless, our findings suggest that significant enough shifts have occurred that business leaders, governments, and individuals may want to reevaluate the gains, benefits, and opportunities being created and the challenges that have emerged, and, through their actions, address them to achieve better and more inclusive outcomes in the next decades of the 21st century.

The relatively positive perspective on the state of the economy in the 21st century so far needs to be complemented with a fuller assessment of the economic outcomes for individuals as workers, consumers, and savers.

For workers, employment has risen amid growing labor market polarization and wage stagnation

Notwithstanding the financial crisis of 2008, the first two decades of the 21st century have seen work opportunities expand and employment participation rise to record levels in most countries. Work arrangements have been changing, and alternative employment, notably part-time work, has experienced the fastest growth. Women have entered the workforce in significant numbers. However, work is increasingly shifting away from middle-income workers, average wages have stagnated in many countries since 2000, and income growth has been weak.

[4] See, for example, the following McKinsey Global Institute reports: *Solving the productivity puzzle: The role of demand and the promise of digitization*, February 2018; *Skill shift: Automation and the future of the workforce*, May 2018; *Notes from the AI frontier: Modeling the impact of AI on the world economy*, September 2018; *Globalization in transition: The future of trade and value chains*, January 2019.

[5] The social contract has preoccupied philosophers and social scientists from Plato and Socrates in ancient Greece to Thomas Hobbes and Jean-Jacques Rousseau in the 17th and 18th centuries to John Rawls in the 20th. For a historical discussion, see Chapter 1.

Box E1

Assessing shifts in the social contract

A growing body of research focuses on economic satisfaction and well-being and on various other elements of life related to the social contract.[1] We chose to focus on three specific aspects of the implicit and various national social contracts outlined in Exhibit E1. For workers, this includes access to work, sufficient benefits (such as paid holidays), quality of work (such as training and career progression), stable employment, and wage growth. As consumers, people expect affordable prices that enable access to basic and discretionary goods and services, as well as improving quality. Here, we assess how costs of goods and services have grown or fallen relative to general inflation and also try to understand the share of consumer expenditures and share of income these goods and services absorb. For savers, the focus is building wealth and adequate provisions for retirement and economic security through participation in a high-return, stable capital market.[2] Here we assess individual savings as well as savings by institutions on their behalf.

Using these indicators, we analyze how outcomes for individuals have changed over the first 20 years of the 21st century in our sample of 22 OECD countries. We look at outcomes for populations at an aggregate level and at specific economic and social groups, including people of different ages, income levels, and genders.

This research builds on and integrates perspectives from previous MGI research that has examined questions of income advancement, consumption sufficiency, and inequality in economic outcomes, among others.[3] We draw on research by many other researchers.[4]

Our research has several shortcomings that would have helped paint a fuller picture. Indeed, many researchers (including ourselves) have done focused studies on country, sector, or demographic segments. Wherever possible, we have tried to provide reference to such research. Given our goal of assessing patterns and shifts in the three arenas of work, consumption, and saving across 22 countries, there were many elements of each of them that we would have wanted to examine—for example, private workplace benefits, multiple job holding, mortgage payments by house owners, and private pensions and inheritance. However, a lack of comprehensive and comparable data for all the countries in our sample limited our analysis, and indeed the other kinds of measures in Exhibit E1 we would ideally have included. Hence the need for more data and further research.

1 Sources we examined include the OECD's Better Life Index; Joseph Stiglitz, Amartya K. Sen, and Jean-Paul Fitoussi, *Measurement of economic performance and social progress*, 2009; the UN Human Development Index and Sustainable Development Goals; and Matthew Taylor, *Good work: The Taylor review of modern working practices*, UK Government, 2017.

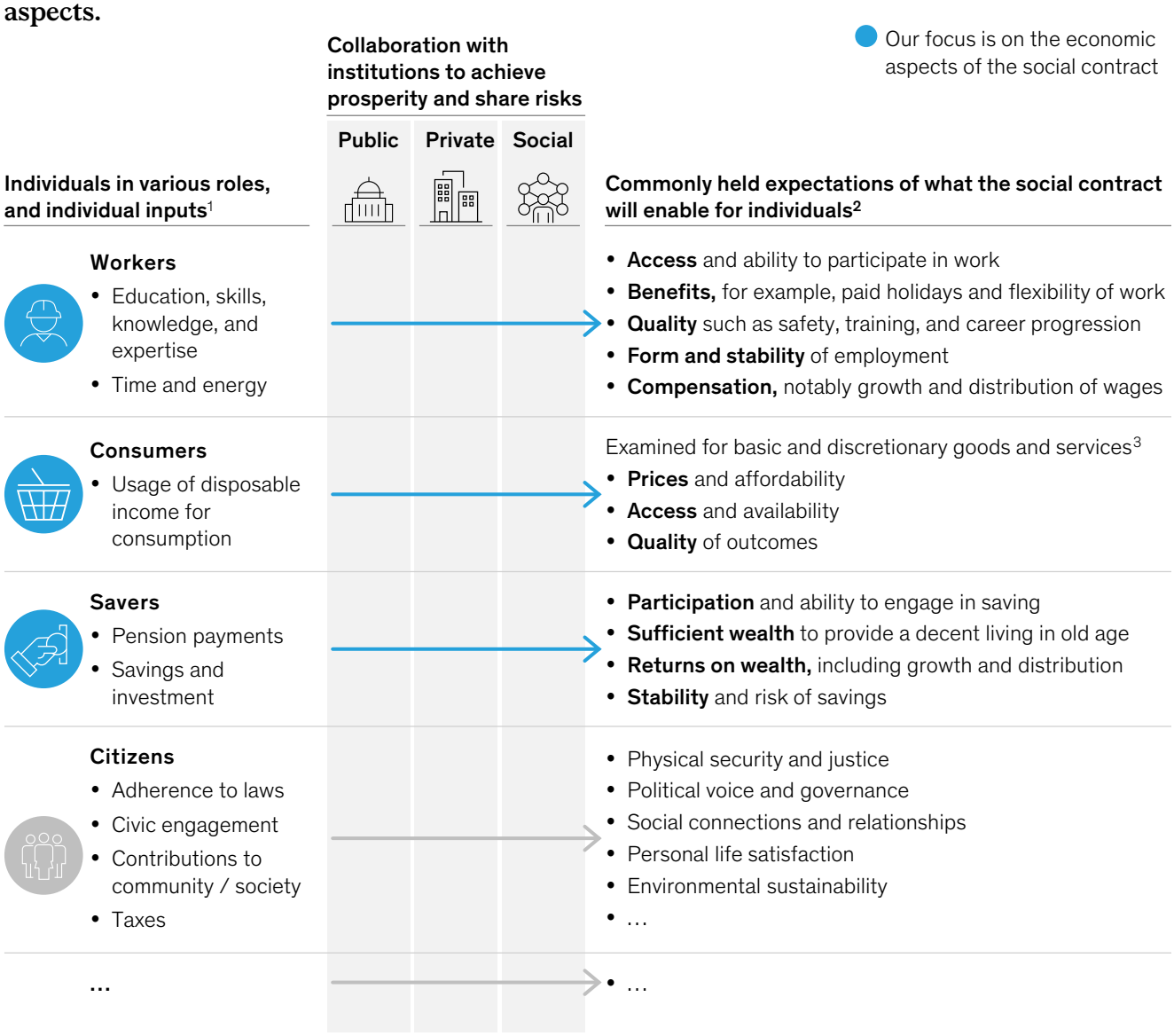
2 Tax policies have an important effect on some of the indicators we consider (for example, wages and saving rates), but due to data limitations, we do not attempt to correct for this.

3 Related McKinsey Global Institute reports include: *Poorer than their parents? Flat or falling incomes in advanced economies*, July 2016; *The power of parity: How advancing women's equality can add $12 trillion to global growth*, September 2015; *A new look at the declining share of labor income in the United States*, May 2019; and *Inequality: A persisting challenge and its implications*, June 2019.

4 See, for example, Nemat Shafik, "A new social contract," *Finance & Development*, International Monetary Fund (IMF), December 2018, Volume 55, Number 4; Lauren Damme, *Rethinking the American social contract*, New America Foundation, 2011; Maurizio Bussolo et al., *Toward a new social contract: Taking on distributional tensions in Europe and Central Asia*, World Bank, 2018; *Including institutions: Boosting resilience in Europe*, World Bank, 2019; *A new social contract*, National Economic and Social Rights Initiative, 2018; *Under pressure: The squeezed middle class*, OECD, 2019; Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*, second edition, New York, NY: Oxford University Press, 2019; Dennis J. Snower, *Toward human-centered capitalism: Exploring a new social contract*, Brookings Institution, November 2019; and Paul Krugman, *The Age of Diminished Expectations: US Economic Policy in the 1990s*, Cambridge, MA: MIT Press, 1994; Branko Milanovic, *Capitalism, alone: The future of the system that rules the world,* Harvard Univeristy Press, 2019.

Exhibit E1

Our framing of the social contract identifies commonly held expectations among workers, consumers, and savers in a system of exchange with institutions, but excludes noneconomic aspects.



[1] Individual inputs refer to commitments made by individuals in their roles as workers, consumers, and savers in the social contract. For example, workers commit their time and energy to an employer in return for paid employment.

[2] Based on literature review; extent of expectations varies across countries and individuals. Individual level of satisfaction is influenced by which expectations are most important to them and the extent to which those expectations are being met. Our selection of indicators within each dimension is not exhaustive but illustrative, and based on data available for comparison across 22 countries between 2000 (or earliest) and 2018 (or latest).

[3] Housing, healthcare, education, food, transportation, clothing, communications, recreation, and furnishings; other categories are restaurants and hotels, alcohol and tobacco, and miscellaneous goods and services.

Source: McKinsey Global Institute analysis

Employment has risen to record levels, primarily driven by alternative work, and some aspects of work quality have improved

The share of the working-age population in employment has risen strongly in our 22 sample countries since the 2008 financial crisis, to 71 percent. In 2018, 45 million more working-age people were employed than in 2000 (Exhibit E2).[6] The rise is relatively consistent across countries, with the employment rate in 2018 higher than the level in 2000 in 18 of the countries; the exceptions were Denmark, Greece, Norway, and the United States.

[6] Eurostat Labor Force Survey, 2019; OECD Employment database, 2019. Demographics are an underlying reason for this trend, because the working-age population is declining in many countries.

In the United States, although the proportion of unemployed people (those actively seeking jobs) fell from 4.0 percent in 2000 to 3.9 percent in 2018, the lower employment rate relative to 2000 was due to a rising share of discouraged workers (those not seeking a job).[7]

Alternative work arrangements have gained in prominence over the past two decades, typically in the form of self-employment, temporary work, part-time work, workplace fissuring, and zero-hour contracts. The rise of alternative work arrangements has enabled greater labor market participation: for example, part-time paid work was the primary driver of the increase in overall employment between 2000 and 2018. Its share rose in 18 out of 21 countries, by an average of 4.1 percentage points, equivalent to 29 million jobs, while that of full-time employment declined by 1.4 percentage points.[8]

Opportunities expanded particularly strongly for women. Of the 45 million additional workers since 2000, 31 million are women. Female employment increased by 6.3 percentage points between 2000 and 2018. The growth in female employment in this period is seen almost everywhere except Norway and the United States, where it has declined by 1.3 and 2.2 percentage points, respectively. Some 14 million additional male workers were employed during this period, although their share of the working-age population fell by 0.4 percentage point on average.

Workers are also seeing improvements in some nonwage aspects of work quality. In 18 out of 19 countries surveyed by the OECD, workers report they are facing less strain in their jobs. More workers report receiving increased on-the-job training and express greater optimism about their opportunities for job progression. Certain worker benefits have improved, including parental leave and access to paid holidays. For those who want flexibility, the rise of alternative work arrangements has been a positive trend, and one that has enabled more women to enter the labor force.

Work and wage polarization has increased based on skills, and wages and incomes have stagnated for many workers

New work opportunities have benefited high-skill, high-wage workers and low-skill, low-wage workers, relative to the middle, which has been squeezed.[9] Between 2000 and 2018, the number of people in middle-skill, middle-wage occupations dropped by seven million in 16 European countries and the United States, although this trend has been slowing, particularly in the United States.

The polarization of work opportunities into high-skill and low-skill occupations (or high-wage and low-wage work in the United States) is due in part to the shift from manufacturing to service-sector jobs as well as a shift toward high-skill or low-skill jobs within industries, as a result of automation and globalization.[10] The growth in high-skill jobs offers real opportunities for workers to move up the income ladder if they are able to raise their skill levels. At the same time, it implies declining opportunities and wage stagnation for a significant share of the workers employed in middle-skill jobs.

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7 US Bureau of Labor Statistics, 2019. See Chad Bown and Caroline Freund, *The problem of US labor force participation*, Peterson Institute for International Economics, working paper number 19-1, January 2019.

8 Eurostat Labor Force Survey, 2019; OECD Employment database, 2019. The exceptions are New Zealand, Norway, and Sweden. Data missing for South Korea. Part-time includes both voluntary (3.2 percentage points) and involuntary (0.9 percentage point).

9 A note on the definition of skills: in this report, we have followed the OECD's classification of skills (see the technical appendix for details). However, it should be noted that in most data sets, skills tend to be measured on the basis of credentialed or professionalized skills or of educational attainment. This tends to leave out skilled workers whose skills are not measured in this way and not always captured in the data collection. Also, some data sets in our sample measure skill while others measure wage. For these reasons, in several places we use these terms interchangeably or as proxies for each other to capture the polarization of the labor market in the United States and European Union. Some researchers recognize that middle-skill jobs are typically those in the middle of the wage distribution in the United States. *OECD employment outlook 2017*, OECD, 2017; David Autor, "Work of the past, work of the future," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 1–32.

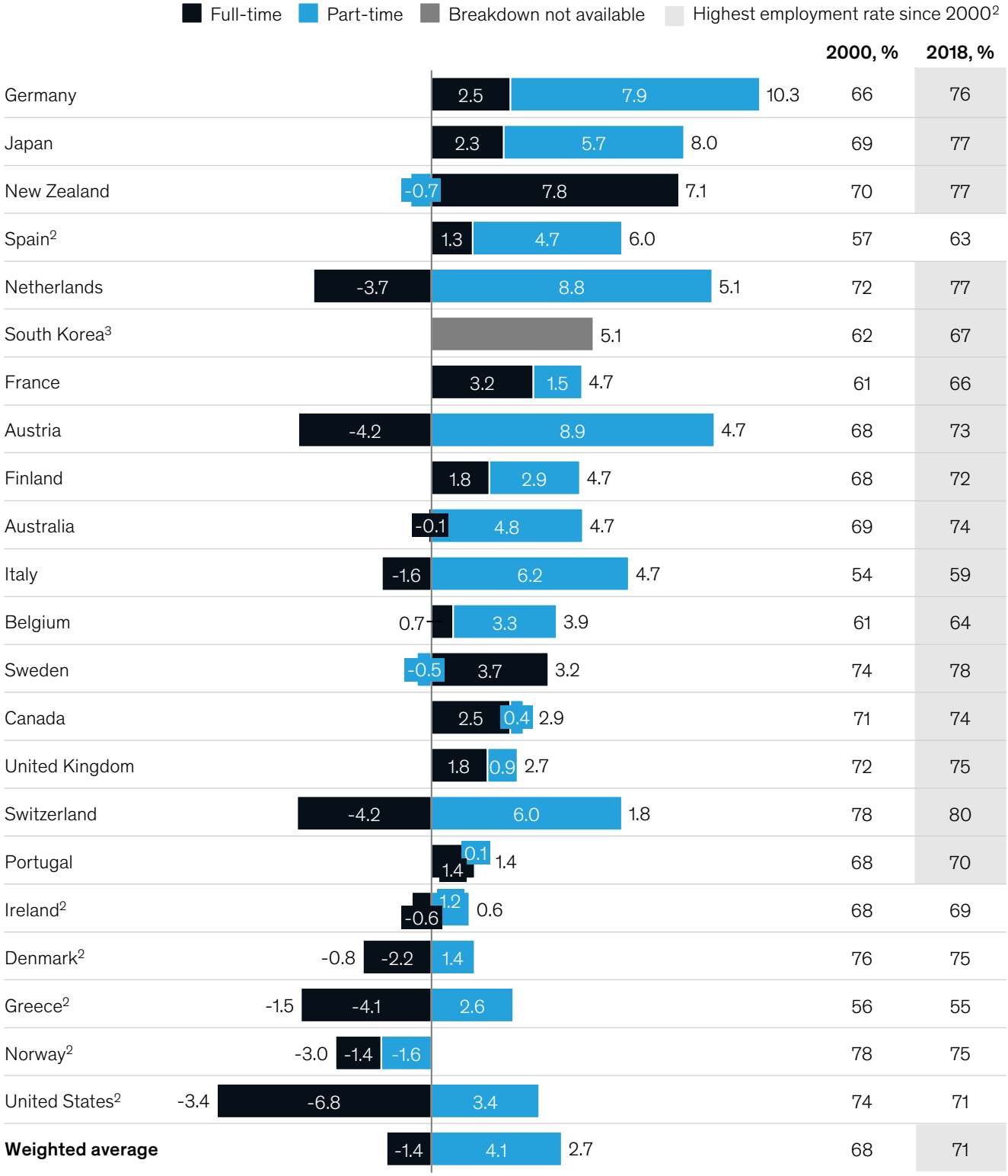
10 *OECD employment outlook 2017*, OECD, 2017; World Development Indicators, World Bank.

Exhibit E2

Employment in advanced economies is at historically high levels and has recovered after the financial crisis in most countries, largely due to rising part-time employment.

Change in employment rate, percent of working-age population (15–64 years), 2000–18

Percentage points[1]



[1] Calculated as employed people in working-age population (15–64) as a share of working-age population. Weighted by employment rates for each country by their share of total population aged 15 and over.

[2] Denmark, Greece, Ireland, Norway, and Spain peaked in 2007–08 , whereas United States peaked in 2000.

[3] Employment by full-time and part-time employment is not available for South Korea.

Note: figures may not add up to 100% due to rounding.

Source: OECD; McKinsey Global Institute analysis

0.7%

Annual average growth in real wages between 2000 and 2018 in our 22 sample countries

Wage stagnation has been a persistent challenge for many workers (Exhibit E3). Between 2000 and 2018, average wages grew just 0.7 percent per year in our 22 countries.[11] Although wage growth was positive in 20 out of 22 countries, the average growth rate was less than 1 percent over 18 years, and less than half the average annual GDP growth of 1.6 percent during the same period.[12] Moreover, wage growth substantially slowed even when comparing periods not directly affected by the pre-crisis economic boom and the crisis-related slump: average real wages grew by 1.6 percent annually between 1995 and 2000, but in 2013–18, growth fell to just 0.7 percent per year. Average real wage growth slowed in 19 out of 22 countries during the latter period, affecting as many as 200 million workers.[13]

Median income grew even more slowly than wages, by just 0.4 percent annually between 2000 and 2016, indicating unequal wage growth across income groups. Our previous research has showed that between 65 and 70 percent of households in 25 advanced economies faced flat or declining real market incomes (wages and income from capital) in the decade including the crisis.[14] Relative poverty rates even after taxes and transfers rose between 2000 and 2016; the share of the working-age population earning less than 50 percent of household median income increased from 11 percent to 13 percent over that period, equivalent to 14 million people in the 22 countries.

Global trends, including technology, globalization, and shifts in industry structure and employment arrangements, underlie many of the labor market changes

Work is changing in part because of global trends such as technological innovation and globalization. In the United States and 15 European countries, between 20 and 30 percent of the working-age population, or more than 160 million people, now engages in independent work, with a growing proportion leveraging digital platforms to do so. About 70 percent say they do so by choice.[15] Technological innovation has also created new types of work that did not previously exist, from drivers on ride-hailing apps and big data translators to professional video gamers and social media influencers.

These trends have been something of a double-edged sword. They have brought favorable outcomes in the aggregate and contributed to overall economic growth and, in some cases, job growth and opportunity creation. The trends have benefited individuals directly and indirectly, specifically as consumers and savers.[16] For workers who engage in independent work by choice, digital platforms have created opportunities. At the same time, these trends have contributed to work polarization, and outcomes have been less favorable for some. Growing automation adoption is proving disruptive for many workers, especially in sectors such as manufacturing that are highly susceptible.[17] Globalization, especially the build-out of value chains (that is, outsourcing) and the labor-cost arbitrage that sometimes accompanied it at the start of the 21st century, has taken a toll on some occupations and workers in advanced economies. More recently, the latter trend has started to shift as the proportion of globalization driven by low-cost labor arbitrage has declined in the aggregate.

Accompanying these disruptive trends is a shift in employment arrangements that made labor markets more flexible and increased the responsibility of individual workers for their

[11] The US private sector Job Quality Index compares the number of jobs paying above and below the weekly average wage, called high-quality and low-quality jobs, respectively. The concentration of high-quality jobs declined from 94.9 in 1990 to 79.0 in July 2019, and the average wage gap between high- and low-quality jobs has widened since 2004. See Daniel Alpert et al., *The US private sector Job Quality Index*, Cornell Law School, November 2019.

[12] World Economic Outlook database, IMF, October 2019.

[13] Estimated as 37 percent of the working-age population (share of middle-wage, middle-income occupations based on 16 European countries and the United States). Excludes Germany, New Zealand, and South Korea, where growth was positive.

[14] *Poorer than their parents? Flat or falling incomes in advanced economies*, McKinsey Global Institute, July 2016.

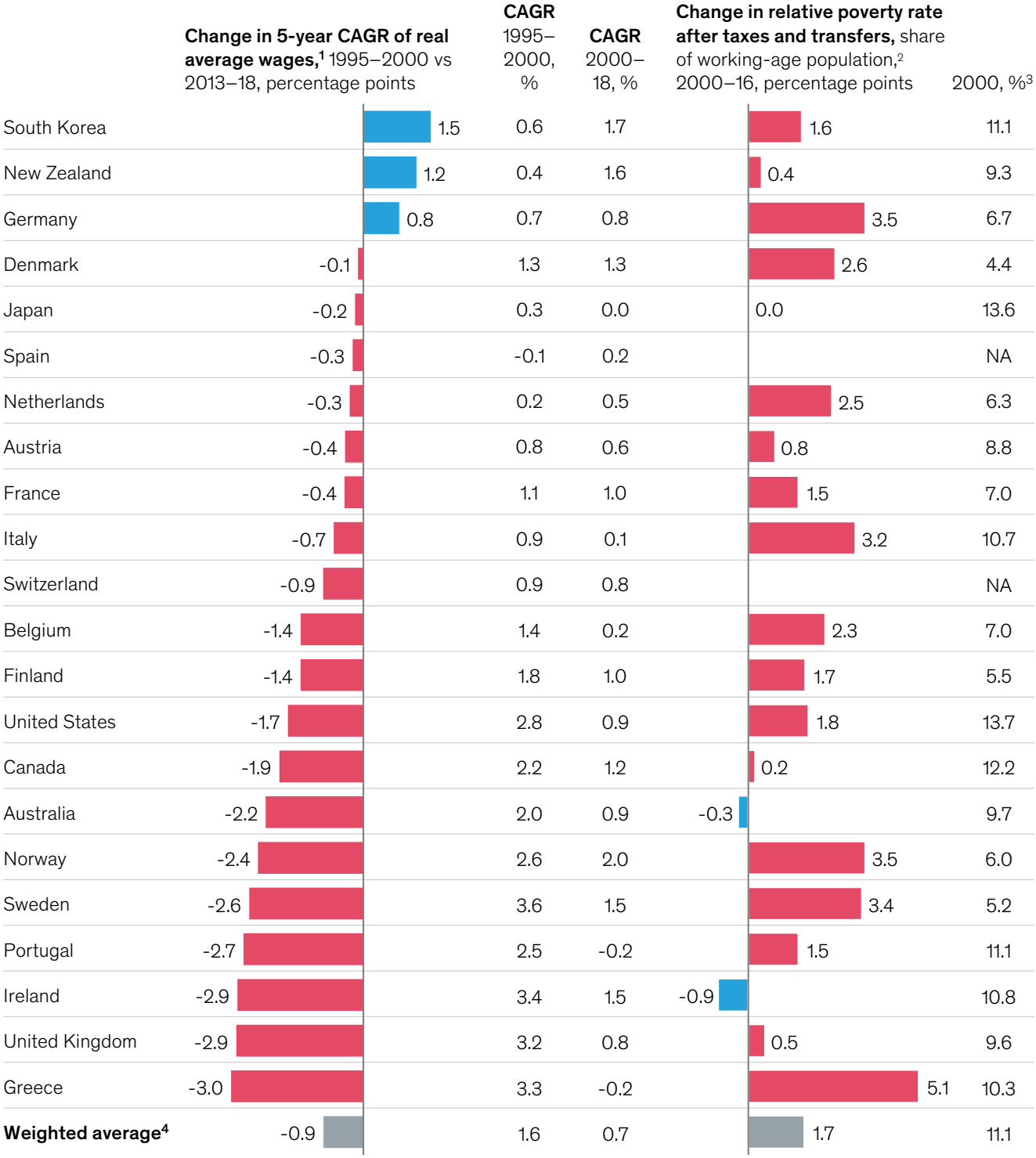
[15] *Independent work: Choice, necessity, and the gig economy*, McKinsey Global Institute, October 2016.

[16] See *Globalization in transition: The future of trade and value chains*, McKinsey Global Institute, January 2019; *"Tech for Good": Smoothing disruption, improving well-being*, McKinsey Global Institute, May 2019; David H. Autor, David Dorn, and Gordon H. Hanson, "The China shock: Learning from labor-market adjustment to large changes in trade," *Annual Review of Economics*, October 2016, Volume 8.

[17] Daron Acemoglu and Pascual Restrepo, *Robots and jobs: Evidence from US labor markets*, NBER working paper number 23285, March 2017.

Exhibit E3

Average real wages stagnated while relative poverty increased.



[1] N=22. Compound annual growth rate (CAGR) for average wages represents 5 years ending with date listed (e.g., 1995–2000 for 2000). Average wages are in 2018 dollars, which have been converted using average exchange rate for 2018 and CPI for 2018.

[2] Poverty rate after taxes and transfers is measured as share of working age population whose income falls below 50 percent of median household income of total population. Definition of poverty rate changes in 2012. To create a long time series, income definition prior to 2011 was used until 2011 and new income definition was used after 2012. Exceptions are Austria, Canada, and Finland, for which new income definition is available earlier than 2012. Data availability by country varies. Figures for most countries cover 2000–16. Exceptions are: Austria, 2007–16; Belgium, Portugal, Greece, 2004–16 ; Denmark, 2000–15; Finland, Norway, Sweden, 2000–17; Ireland, 2004–15; Japan, 2000–15; South Korea, 2006–17; New Zealand, 2000–14.

[3] 2000 or earliest year available.

[4] Weighted average is average of full set of countries weighted by their share of total population aged 15 and over.

Source: OECD; McKinsey Global Institute analysis

own employment and wage outcomes. For example, employment protection that governs the dismissal of regular workers and hiring of temporary workers has decreased over the past two decades, according to OECD research. Some argue that reducing employment protection increases the flexibility of labor markets, since it enables firms to respond quickly to changes in the business environment while also enabling workers to find jobs that best match their skills.[18] However, lower employment protection is likely to make workers more vulnerable to job displacement during difficult economic times and could lead to lower investment in the current workforce, thereby reducing the growth of good jobs.[19] Wage negotiation mechanisms have also been changing: the share of workers governed by collective agreements declined in 14 of our 22 countries, by five percentage points on average, with the most significant declines in Germany, Greece, and Ireland.[20]

In addition to technology, globalization, and changes in employment arrangements, other factors have also played a role. These include a shifting balance between capital and labor, the growing role of intangibles such as intellectual property products, changes in industry structure, mix, and performance, and "superstar" effects, as a small proportion of large firms captures a larger share of income. For example, the labor share of income has been declining in advanced economies; in the United States, it fell by 5.4 percentage points between 1998–2002 and 2012–16. Had this decline not occurred, the average worker would be paid $3,000 more in real terms.[21]

For consumers, discretionary goods and services are cheaper, but cost of housing and other basics has risen

The past two decades have seen strongly contrasting outcomes for individuals as consumers. We assessed nine goods and services in some detail: communications, clothing, recreation, and furnishings, consumption of which is primarily discretionary in nature; transportation and food, which are both discretionary and basic; and housing, healthcare, and education, which are primarily basic in nature. While the cost of discretionary goods and services has been falling and creating consumer surplus, the cost of basics—especially housing, which accounts for 24 percent of household consumption—has risen much faster than general consumer prices and is absorbing a substantial part of households' income. Given that the ratio of discretionary goods to basics varies across income groups, this is particularly challenging for lower-income individuals (often young or old).

~90%

Decline in cost of data between 2012 and 2017, as usage surged tenfold

For most discretionary goods and services, availability has expanded, costs have fallen, and consumer surplus has risen

Prices for clothing, communications, recreation, and furnishings are falling relative to general consumer prices in all regions (Exhibit E4).[22] Holding all else constant (volume of goods and services consumed, prices of other goods and services, and wages in real terms), the average person can work six fewer weeks a year and still consume the same amount of these categories as in 2000 in ten sample countries. This has drastically improved affordability and access, leading to expanded consumption of discretionary goods and services; for instance, between 2012 and 2017, the cost of data fell by almost 90 percent and usage surged tenfold in nine countries in our sample.[23] Food costs tracked general consumer prices, while transportation costs were higher in Europe but lower in the United States.

[18] See "Protecting jobs, enhancing flexibility: A new look at employment protection legislation," in OECD employment outlook 2013, OECD, 2013.
[19] Dani Rodrik and Charles Sabel, *Building a good jobs economy*, working paper, November 2019.
[20] Collective agreements are legal agreements negotiated at the firm, sector, or national level that cover mutually agreed-upon wage levels, wage increases, and nonworking conditions such as vacation arrangements, training, and employment protections, among other factors.
[21] *A new look at the declining labor share of income in the United States*, McKinsey Global Institute, May 2019.
[22] As measured by the all-items Harmonised Index of Consumer Prices calculated by Eurostat for 15 European economies in our sample and the United States. The index attempts to capture quality changes, but the European Central Bank says, "Work is underway … to ensure that all countries use comparable techniques for quality adjustment."
[23] Strategic Analytics, 2018.

Technology has helped unlock new consumption in discretionary categories. Some of it takes the form of "free" services for consumers, such as social media, communications, and information services (although consumers often pay for these services through providing their personal data and through advertising costs factored into the prices of goods and services). The combination of falling prices and improving quality has led to an increase in consumer surplus, the wedge between what consumers are willing to pay and what they actually pay for goods and services.[24]

Globalization has increased competition in traded goods such as clothing and electronics, as China, Vietnam, and other emerging economies have become key lower-cost manufacturing centers. This has led to significant price improvements, greater choice, and increased availability for consumers in advanced economies that are the focus of this research.

Institutional moves to deregulate markets for some discretionary goods and the reduction of trade barriers to allow for greater competition have played a role in improving economic outcomes for consumers. Between 2000 and 2013, the OECD index for product-market regulation fell in telecommunications, transportation, and utilities by 33 percent on average for 22 advanced economies.[25] Overall, price declines were steepest in markets that are most exposed to technology, globalization, and deregulation, such as communications, while sectors less exposed to these trends have improved less significantly.

The cost of housing and, in some countries, education and healthcare has soared, absorbing much of the income gains for many

Unlike the cost of many discretionary goods, the costs of housing, healthcare, and education have risen faster than general consumer prices across countries in our sample, meaning that the same consumption level requires a higher share of income.[26] Holding all else constant, consumers in ten countries in our sample would have to work an average of an additional four weeks a year (ranging from zero in Japan to ten weeks in Australia) to consume the same amount of housing, healthcare, and education that they did two decades ago. Basics that have risen the most have tended to be non-traded or in markets with significant supply constraints that limit competitive dynamics.

Housing is the primary cause of this loss in purchasing power in most countries since it accounts for about one-fourth of consumption spending on average (ranging between 17 and 28 percent).[27] Housing costs have increased significantly in almost all 20 countries for which data are available, accounting for 39 percent of the change on average in 15 European countries and the United States between 2002 and 2018. Japan and South Korea were the exceptions; housing costs there tracked general consumer prices.

Healthcare prices increased sharply in Australia and the United States. In the United States, healthcare represents 9 percent of spending and is the second most significant driver of the change in consumer prices, accounting for 17 percent. In Europe, where private spending on healthcare is lower, healthcare constituted just 3 percent of the change in consumer prices. Education costs jumped in all countries except Japan, and almost doubled in the

[24] For example, the OECD has estimated that quality and price changes in the broadband market from 2006 to 2010 increased consumer surplus by $1,035 per subscriber on average for the 22 countries. Shane Greenstein and Ryan McDevitt, *Measuring the broadband bonus in thirty OECD countries*, OECD, 2012. National income statistics do not include free services, so consumption of discretionary goods and services may be higher in reality. See Hal Varian, "The value of the internet now and in the future," *Economist*, March 10, 2013.

[25] The index measures product-market regulation on a scale of 0 to 6; the average of sector indexes fell from 3.1 to 2.1. Methodology for 2018 data has been changed and is not comparable to earlier periods.

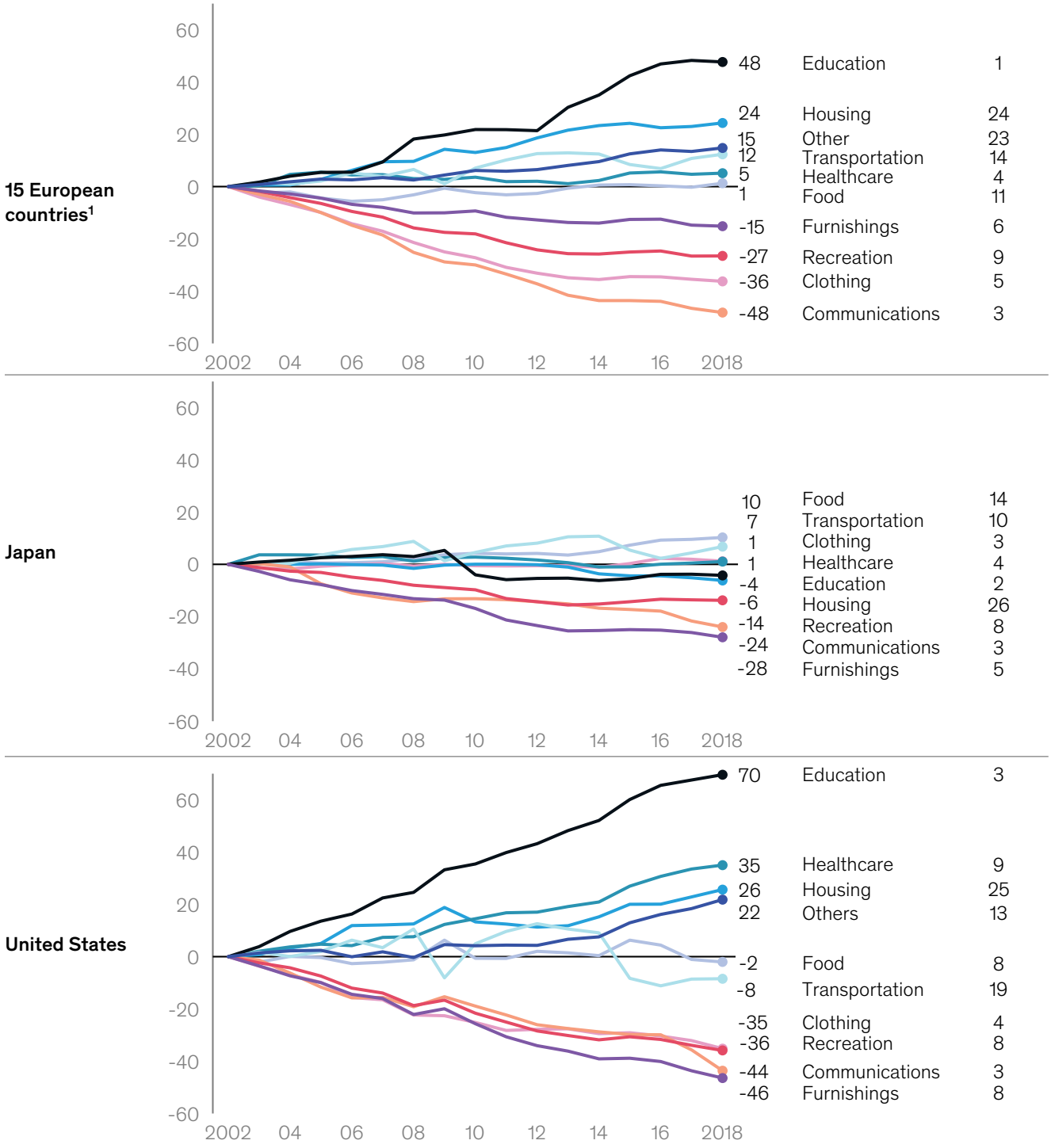
[26] Consumer prices of housing include actual rentals, maintenance, and utilities, and exclude housing purchases or imputed rents (although house prices, rents, and mortgage interest costs could move differently over short periods, the relationship is strong in the long run). Healthcare consumer prices include medical products, outpatient services, and hospital services, and exclude health insurance (which is part of miscellaneous goods and services). Education consumer prices include pre-primary and primary, secondary, post-secondary, and tertiary education as well as education not definable by level.

[27] On average, home ownership is 66 percent in our country sample, from a low of 43 percent in Switzerland to a high of 83 percent in Norway.

Exhibit E4

Consumer prices of discretionary goods and services such as communications fell significantly, while basics such as housing outpaced general consumer prices in 15 European countries and the United States, and Japan witnessed relatively moderate variations.

Category consumer price vs all-items consumer price index
Harmonised Index of Consumer Prices (HICP) and consumer price index (CPI), 2002–18, indexed to 2002, percentage points



[1] Consumption-weighted average of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, and United Kingdom (data not included for Switzerland).

Note: Value of 0 can be interpreted as "consumer prices in this category match all-items consumer price index." Others category includes alcohol and tobacco, restaurants and hotels, and miscellaneous goods and services (omitted for Japan due to missing data, representing 25% of consumption). Housing includes actual rentals, maintenance, and utilities but excludes housing purchases or imputed rents. Healthcare includes medical products, outpatient services, and hospital services; but excludes health insurance (which is part of miscellaneous goods and services). Education includes pre-primary and primary, secondary, post-secondary non-tertiary, and tertiary education, and education not definable by level.

Source: Eurostat; Harmonised Index of Consumer Prices; Japan Statistics Bureau; McKinsey Global Institute analysis

United Kingdom partly due to cuts in university fee subsidies that started in 2010; however, education accounts for just 2 percent of total consumption spending on average.

The increase in housing, healthcare, and education spending for consumers absorbed income gains to varying degrees in ten of our 22 countries between 2000 and 2017 (Exhibit E5). In countries where incomes increased (albeit more slowly than they had in the past), the largest erosion—107 percent of incremental income—was in the United Kingdom, meaning that the gains in income have been entirely absorbed by increased spending on basic goods and services.[28] In France, these price increases absorbed 87 percent of income gains. In countries where incomes declined —Italy, Japan, and Spain—increased spending on basics further eroded incomes by 6 to 29 percent.

1.1 pp

Decrease in housing overcrowding rates on average in the 22 countries

Rising costs of basics have come with improvements in some aspects of quality

Although data on quality of goods and services are often not comprehensive and can be difficult to measure, some evidence suggests improving outcomes. For example, housing overcrowding rates fell, albeit marginally, by 1.1 percentage points on average over the past two decades for our 22 countries.[29] Healthcare has seen major improvements: life expectancy at 65 has increased from 18 to 20 years, mortality from cancer decreased by an average of 15 percent between 2000 and 2016, and diabetes mortality declined by 20 percent between 2000 and 2015.[30] Technology promises to drive further improvements, with innovations such as predictive diagnosis algorithms, health monitor implants, and synthetic biology.

Access to education has also improved. Tertiary attainment rates increased from 28 to 42 percent of the 25- to 64-year-old population between 2000 and 2017, equivalent to more than 155 million people. The largest increases were in Ireland and South Korea, at 24 percentage points. Innovations and online courses have democratized access to knowledge. However, PISA scores for reading, science, and mathematics declined by 2 percent on average between 2000 and 2018.[31]

Individual and institutional savings have declined at a time when they matter more

Increasing longevity and declining birth rates are making saving for retirement both a greater imperative and a greater challenge. While access to and variety of saving and investment options have expanded, many households are not saving at all, and median wealth growth has been falling.

Improved life expectancy and aging are challenging both institutional and individual savings

As people live longer due to scientific and technological progress, the number of expected years spent in retirement in our 22 sample countries has increased, from 16 in 1980 to 20 in 2018.[32] These gains and expansions in productive working life are a hallmark of progress in the 21st century, yet they also pose a considerable challenge for both institutional and individual savers. Institutional pensions, whether provided by the public sector or by employers, will need to adjust to higher pension payouts and lower receipts, even after accounting for longer working lives. Individual savers will need to save more for themselves for their longer lives and to compensate for the shortfall in institutional saving. Although attractive investment opportunities are needed to ensure that individuals build their savings, the current economic

[28] For income, we consider the OECD data on household net adjusted disposable income, which includes wages and salaries, property income, social benefits in cash, and social transfers in kind (which also include healthcare-related transfers). The breakdown of household consumption is based on OECD national accounts data, which includes only household spending (excluding government spending) on various categories, including healthcare. See the technical appendix for details.

[29] OECD Affordable Housing database, 2019. Overcrowding is defined as the minimum number of rooms required for each couple, single adult, and child. See the technical appendix.

[30] Global Burden of Disease Collaborative Network, 2016; OECD Health statistics, 2019.

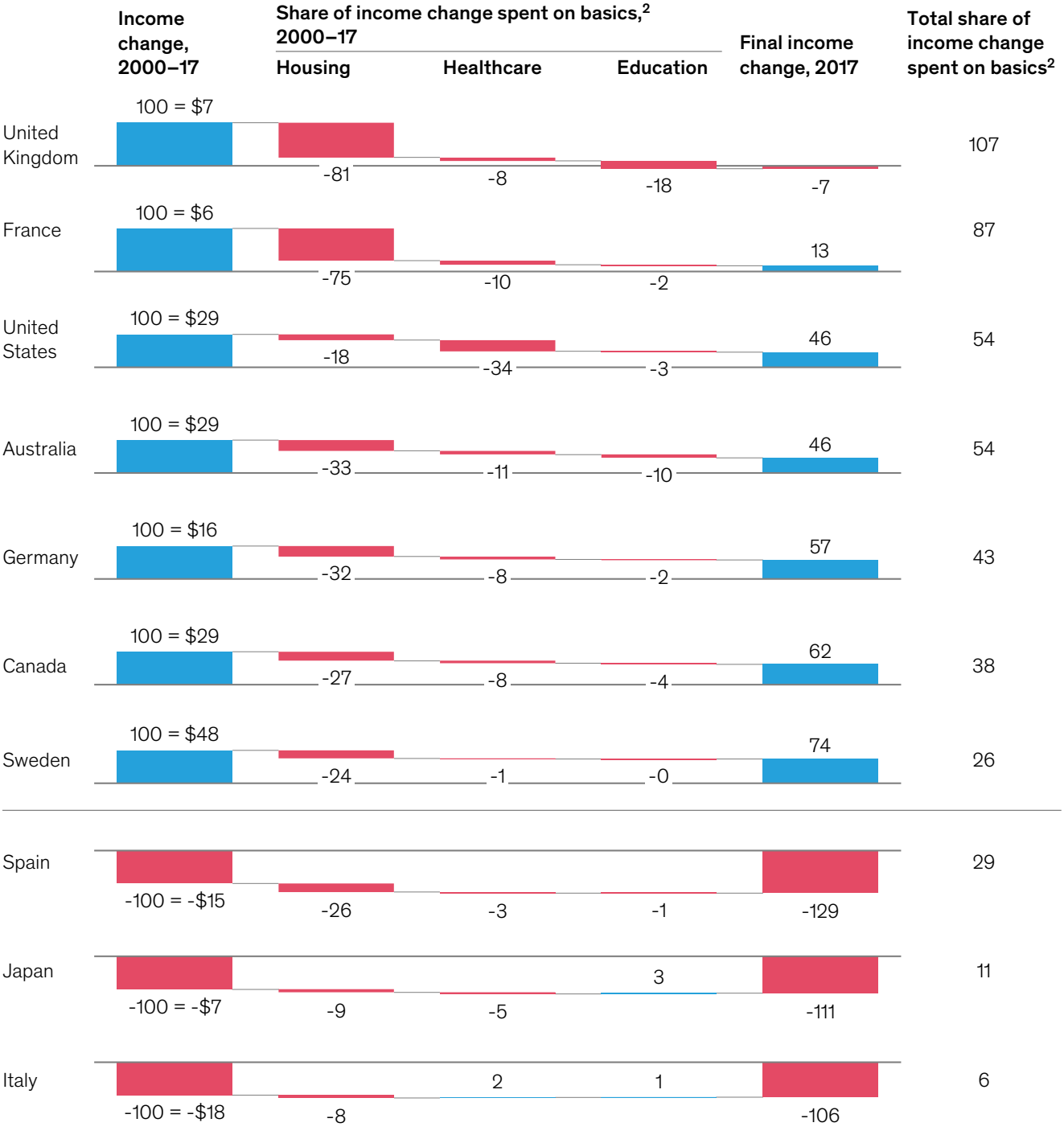
[31] OECD Education database, 2019.

[32] Expected number of years in retirement, OECD Employment database, 2019.

Exhibit E5

A significant amount of income gains was spent on basic goods and services, primarily housing.

Income and spending changes for average households, 2000–17[1]
Indexed to income in starting year, %



[1] Values expressed in real terms (i.e., adjusted for general consumer price increase). Starting date for Australia and Spain is 2001. Germany, Japan, Sweden, and UK databased on an average of results from OECD national accounts and household budget surveys (UK income change is based only on household budget survey due to data inconsistencies); figures for remaining countries are based on OECD national accounts due to data availability.

[2] We defined basic goods and services as housing, healthcare, and education.

Note: Household incomes rose between 2000 and 2017 in some countries. Household income can be affected by changes in tax rates or government transfers and incorporates other forms of income such as capital income. All of these factors can contribute to a rise in household income (incremental income) while growth in wages and salaries is low or negative. Not to scale. Figures may not sum to 100% because of rounding.

Source: OECD national accounts data; Eurostat household budget surveys; McKinsey Global Institute analysis

climate and the much-debated topic of secular stagnation raise questions about whether this is feasible.[33]

In response, more than half of OECD countries have raised the statutory retirement age, and some, including Denmark, Finland, Italy, and Sweden, now explicitly link the retirement age to life expectancy. By 2060 the normal retirement age will approach 66, which represents an increase of 1.5 years for men and 2.1 years for women compared with 2015.[34] Life expectancy has been increasing at a faster rate, however, which means that the proportion of an average life spent in retirement will continue to rise.

Governments and private-sector institutions concerned about fiscal sustainability have taken action over the past two decades to shift a larger responsibility to individuals for their own retirement savings. The net pension replacement rate that an average worker can expect to receive from her or his mandatory pension has decreased by 11 percentage points for the average person in our 22-country sample.[35] Net replacement rates, which measure how effectively a pension system provides a retirement income to replace preretirement earnings, now range from 92 percent in Italy to just 28 percent in the United Kingdom. Individuals need to increase their private savings in order to meet the net replacement rates provided by the government or private-sector employers in the early 2000s (Exhibit E6).

Many pension systems have changed from defined-benefit plans, for which institutions guarantee a minimum return and thus bear the market risk, to defined-contribution ones, for which individuals bear the market risk.[36] In 17 countries on average, the share of assets under management in defined-contribution plans rose by two percentage points between 2007 and 2017.[37] Countries that faced the largest decreases in the share of defined-benefit assets include Italy, which saw a drop of 13 percentage points, from 30 to 17 percent, and the United States, where assets dropped 11 percentage points, from 53 to 42 percent. This also raises the importance of financial literacy, particularly as financial products have become more complex.[38]

To compensate for the extended period in retirement and decreasing institutional savings in most countries, household private savings would need to increase. However, with widespread stagnation in wage and income growth in many economies and the increasing cost of basics, the household saving rate has fallen in half of our sample countries by more than five percentage points since 2000.[39] Moreover, household saving is concentrated on a subset of all households: across a broad range of our sample countries, surveys show that more than half of individuals did not save for old age in 2017, and a quarter did not save any money at all (Exhibit E7).[40] In France, Italy, and Spain, over two-thirds of adults did not save for old age in 2017. Similarly, 40 percent of Americans cannot come up with $400 in an emergency.[41]

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33 Secular stagnation, first proposed by Alvin Hansen in the 1930s, is a theory that says demographic factors are driving slower economic growth. Lawrence Summers, after the 2008 financial crisis, cited it in explaining the slow post-crisis recovery in advanced economies. However, others such as Ben Bernanke dispute Summers's theory, arguing that a global savings glut is the driving force behind the slow recovery. See Lawrence H. Summers, "The age of secular stagnation: What it is and what to do about it," *Foreign Affairs*, March/April 2016; Ben S. Bernanke, *Why interest rates are so low, part 3: The global savings glut*, Brookings Institution, April 1, 2015.

34 *Pensions at a glance*, OECD, 2017

35 The OECD defines the net pension replacement rate as the individual net pension entitlement divided by net preretirement earnings, taking into account personal income taxes and social security contributions paid by workers and pensioners.

36 Defined-benefit pensions provide a guaranteed payment in retirement, typically based on an employee's salary and the length of time worked for an employer. Defined-contribution pensions depend on the amount of money paid into the scheme by an employee or an employer and the rate of return on investment.

37 Simple average. Weighting by assets under management would increase the ratio to six percentage points due to the disproportionate size of the United States market.

38 Annamaria Lusardi and Olivia S. Mitchell, *The economic importance of financial literacy: Theory and evidence*, National Bureau of Economic Research working paper number 18952, April 2013.

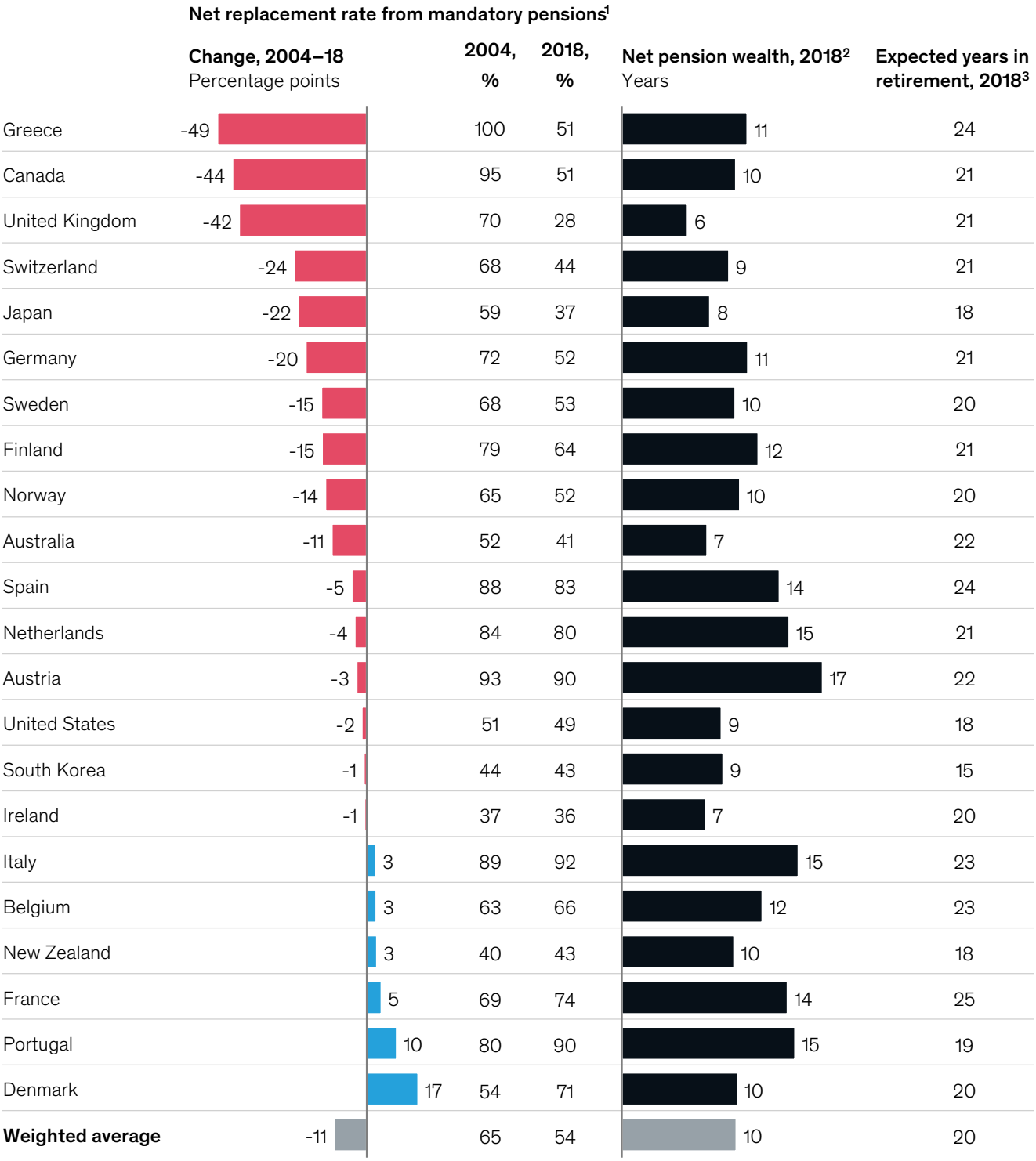
39 National accounts at a glance, OECD 2019.

40 The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution, World Bank, 2018.

41 Lawrence H. Summers, "Do Americans really need to be more thrifty?," *Washington Post,* January 7, 2020.

Exhibit E6

Net replacement rates from mandatory pensions have declined in 16 out of 22 countries by an average of 11 percentage points, and net pension wealth covers just ten years on average.



[1] Net replacement rate for mandatory pensions for male workers; data missing for female workers prior to 2010. Net pension replacement rate is identical for men and women except in Australia (2010–18), Switzerland (2018), and Austria (2004).

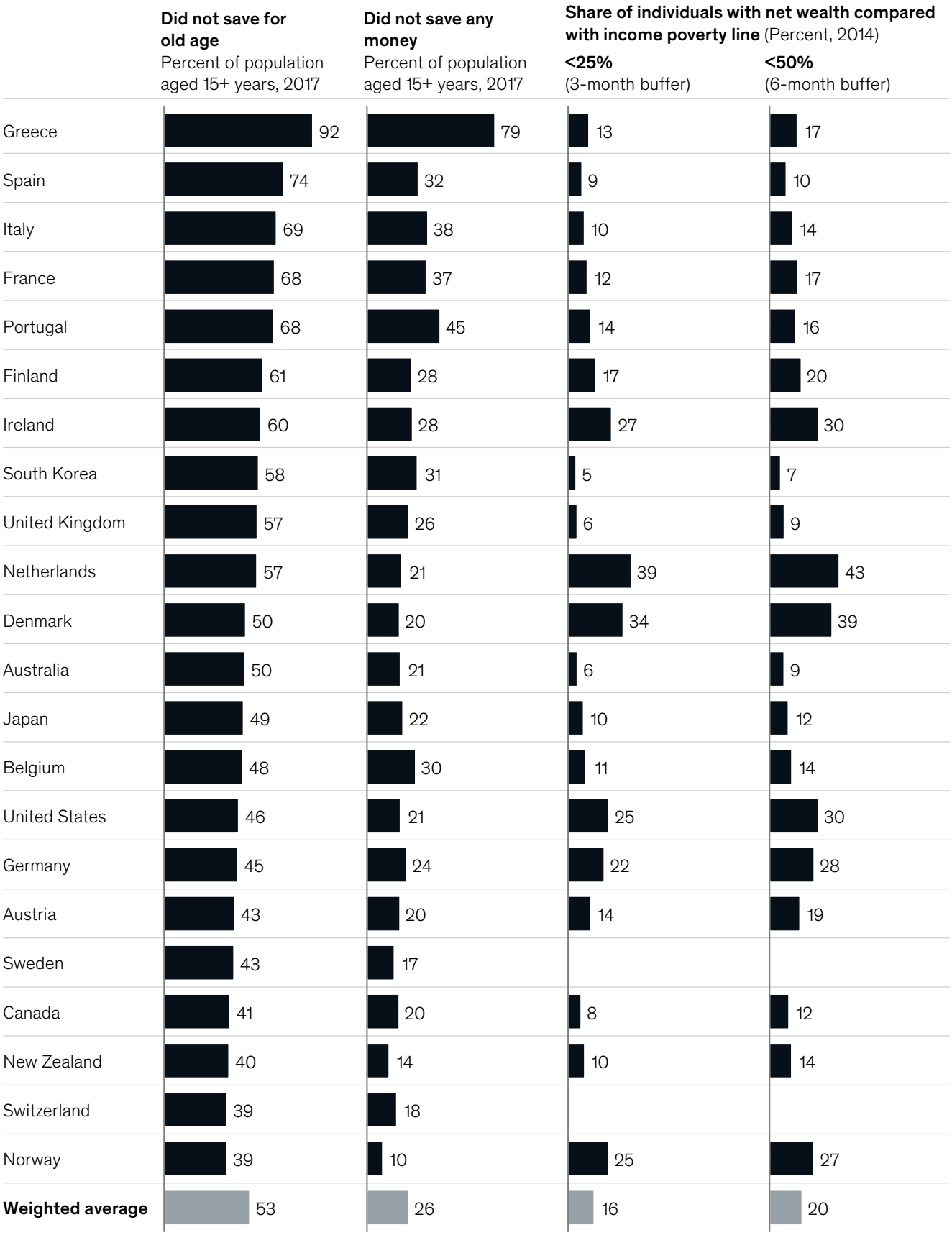
[2] Net pension wealth is present value of flow of pension benefits, taking account of taxes and social security contributions that retirees have to pay on their pensions. It is affected by life expectancy and by age at which people take their pensions, as well by as indexation rules. This indicator is measured as a simple average of multiple of annual net earnings for men and women. Assumes individuals consume their average net earnings each year in retirement.

[3] Expected years in retirement for both men and women taken as a simple average of male and female expected years in retirement.

Source: OECD; McKinsey Global Institute analysis

Exhibit E7

Over half of individuals in advanced economies did not save for old age, a quarter did not save any money, and 20 percent do not have enough wealth to cover six months of basic costs.



Source: World Bank Financial Inclusion Indicators; OECD; McKinsey Global Institute analysis

Opportunities to save have expanded, but savings and returns have been low for many, and indebtedness has risen

For those who do save, the internet has made saving, tracking, and investing wealth easier. Technology and the opening up of global markets have created many more opportunities, providers, products, and available services, and often at lower cost. Digital banking, digital savings, and new fintech products such as robo-advisers mean that good-quality investment advice is increasingly available with lower minimum deposit thresholds and lower fees.[42]

However, returns on investment have been low for many households, largely due to low productivity growth and low interest rates in most advanced economies. Personal wealth growth has been low or even negative since 2000 for about 170 million people (or 21 percent of the population over 15) in our 22 sample countries.[43] These are likely to be the same people who see the increasing cost of basics absorbing a large portion of their income gains.

While real mean individual net wealth has recovered to pre-crisis levels in many countries, real median net wealth has not recovered in 13 countries since the financial crisis; it declined from $104,371 to $80,659 on average in our 22 sample countries between 2007 and 2018 and has only just started to rise again.[44] Growth in real mean net wealth has also been sluggish since the crisis: annual growth has been close to zero for most of the post-crisis period. In the 22 countries in our sample, between 2015 and 2017 the real growth rate for mean net wealth was just 1 percent per year, and it was negative in seven countries (Belgium, Canada, Finland, Japan, the Netherlands, Norway, and the United Kingdom).

Lower-wealth households are particularly affected. They often lack access to higher-return capital market instruments, as their lack of financial capital means they cannot bear the risk. For example, in France, return on assets and portfolios for the bottom wealth decile was negative 0.2 percent between 1970 and 2014, compared with a positive 6.4 percent for the top wealth decile. Similarly, the bottom five deciles in the United States earned returns of between negative 1.9 and positive 0.8 percent, compared with 2.0 to 6.0 percent for the top five deciles.[45]

23%

Share of US households with zero or negative net worth in 2017, up from 16% in 2001

The proportion of individuals with zero or negative net worth has risen significantly in recent decades. In the United States, for example, the share of households with zero or negative net worth rose to 23 percent in 2017 from 16 percent in 2001. In some countries, debt has also become a more significant issue; on average, 13 percent of households are heavily indebted, with debt-to-asset ratios above 75 percent in 2014. The real net wealth of the bottom decile in the United States fell from negative $23,240 to negative $69,408 between 1999 and 2017.[46]

Young people between 15 and 30 years old, who make up about 180 million individuals in our sample countries, are especially affected. In France, in 1970, the average 30-year-old had 61 percent of average adult wealth; by 2010, that had almost halved to 32 percent.[47] In the United States, the equivalent figures for the average 30- to 34-year-old were 69 percent in 1984 and just 31 percent in 2017. In the United Kingdom, some 53 percent of people aged 22 to 29 had no savings. Of those who did, about 40 percent had less than £1,000 in the bank.[48]

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42 *The new dynamics of financial globalization,* McKinsey Global Institute, August 2017; Jill E. Fisch, Marion Laboré, and John A. Turner, "The emergence of the robo-advisor," in *The Disruptive Impact of FinTech on Retirement Systems*, Julie Agnew and Olivia S. Mitchell, eds.,Oxford, UK: Oxford University Press, August 2019.

43 Assumes that 47 percent of the population over 15 saved for old age, on average in 22 countries, based on World Bank Financial Inclusion Indicators data. Of these, 50 percent have low or negative wealth growth in countries in which median wealth growth has been less than 1 percent since 2000, and 20 percent in countries with median wealth growth greater than 1 percent; calculated using wealth data from Credit Suisse, *Global wealth databook 2018*, 2018.

44 Credit Suisse, *Global wealth databook 2018*, 2018. Deflated using the OECD CPI deflator.

45 Panel Study of Income Dynamics, public use data set. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI, 2019.

46 The extremely indebted households in the bottom decile differ from households in the second decile in a number of ways; they tend to be younger, to be better educated, and to have higher incomes.

47 Bertrand Garbinti, Jonathan Goupille-Lebret, and Thomas Piketty, *Accounting for wealth inequality dynamics: Methods, estimates and simulations for France (1800–2014)*, WID.world working paper series number 2016/5, World Inequality Database, 2016.

48 *How well are you doing compared with other young people?,* UK Office of National Statistics, October 2019.

Institutions have shifted responsibility for outcomes to individuals

Across the three arenas, changes in outcomes for individuals are propelled not only by disruptive global trends and slow GDP growth since the global financial crisis, but also by the evolution of the social contract itself, through the changing roles of public- and private-sector institutions, and interventions that shape individual or institutional responsibility for economic outcomes.

We developed two composite indexes to understand the role of institutions in the social contract and how these roles have shifted over the past two decades. The first gauges the extent to which institutions are intervening in the marketplace to manage market outcomes for individuals. The second focuses on the extent to which government spending cushions individual economic outcomes. Putting the indicators for market intervention and public-sector spending together highlights movements in the social contract.[49]

Exhibit E8 summarizes the shifts in both indexes at an aggregate level, and Exhibit E9 shows the shifts for each country. Our results suggest that in 19 out of 22 countries, institutions are intervening less in the marketplace, while governments in 18 out of 22 countries have somewhat stepped up their spending.[50] Some of the biggest changes in the extent of market intervention are a decline in employment protection for workers on temporary contracts, a substantial reduction in product-market regulations, and a sharp fall in the net replacement rate for mandatory pensions. In public-sector spending, the biggest change came from pensions, for which public spending in the 22 countries rose by 1.9 percentage points on average. This in turn was almost entirely a function of demographic change, namely longer life spans. Healthcare spending also rose by 1.1 percentage points; aging explains about 30 percent of that increase.

On average, market intervention by institutions declined by 13 points, while public-sector spending increased by three percentage points of GDP. This shift to lower market intervention and increased public-sector spending occurred in 15 out of 22 countries. The direction is broadly consistent, independent of the starting point of a country's institutional setup, for three groups of countries: (1) countries where both market intervention and public spending are high, such as Austria, Belgium, France, and the Scandinavian countries; (2) countries where intervention is high and public spending middling, such as Germany and the Netherlands; and (3) countries where market intervention is lower and public spending is also relatively low. This latter set includes Japan, South Korea, Switzerland, the United Kingdom, and the United States.

This general trend toward lower market intervention has had significant implications for individuals, especially as workers and savers, given the role that institutions have played historically in cushioning individual outcomes in these two arenas. Workers find they need to seek employment in an increasingly flexible market, negotiate terms individually, and adapt to work fragility. As institutions are less able to provide generous retirement benefits, individuals find they need to actively prepare for retirement and manage their own assets.

Some individuals are choosing to take responsibility for their own outcomes and have been able to take advantage of the opportunities created by these institutional shifts, such as the expansion of new technology-enabled work opportunities. But many individuals have not been able to adapt to the profound changes in the social contract and face challenging economic outcomes as a consequence.

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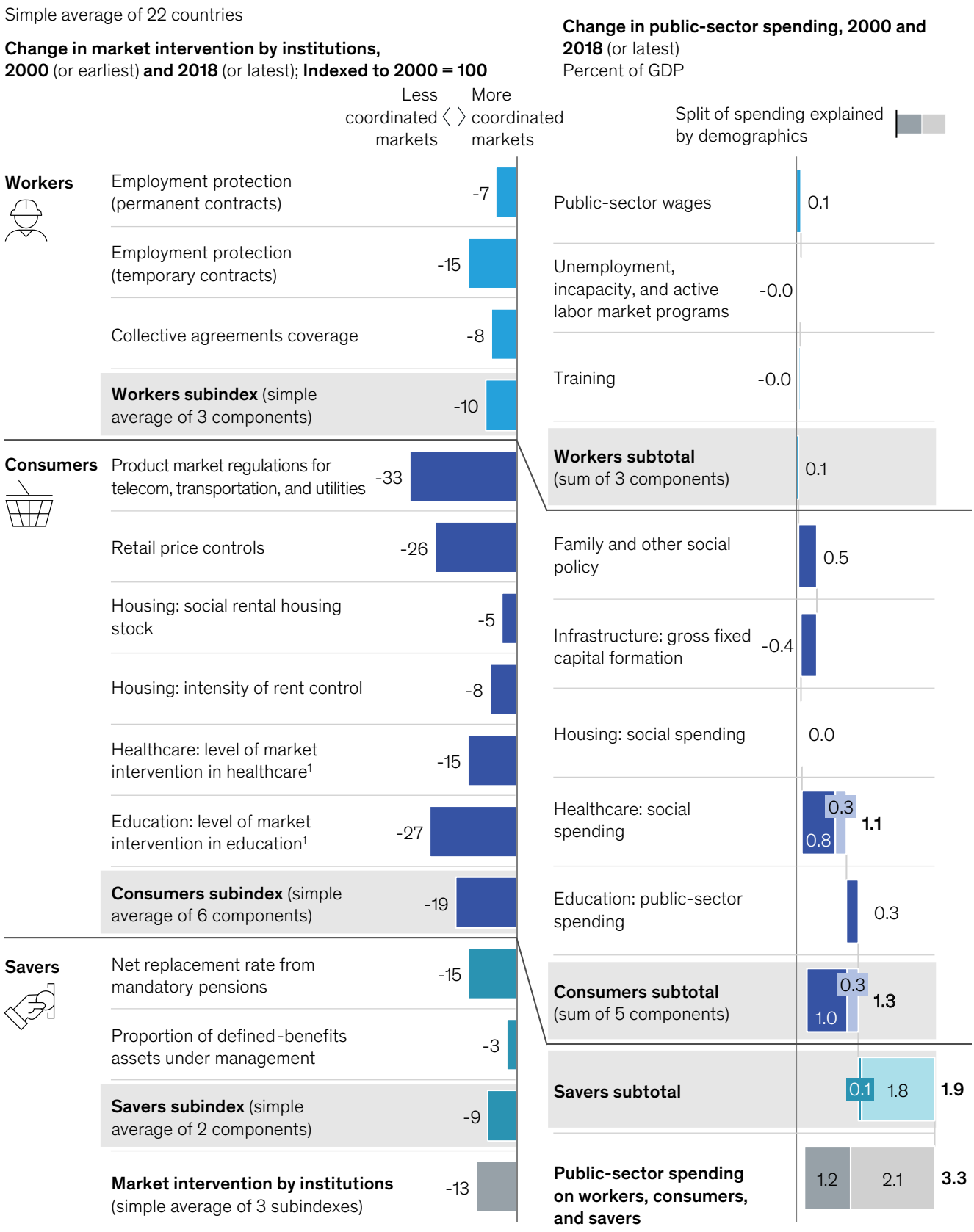
[49] We drew on research that distinguishes between different degrees of "coordinated" versus "liberal" market economies—that is, the institutional arrangements that govern how actors such as firms and employees interact with one another. In liberal market economies, firms and market mechanisms primarily drive exchanges between individuals and institutions, including in such areas as industrial relations, vocational training and education, corporate governance, interfirm relations, and relations with employees. More coordinated market economies rely more heavily on nonmarket forms of interaction. These can include factors such as employee protection and coordinated provision of vocational training. See Peter Hall and David Soskice, eds., *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Oxford, UK: Oxford University Press, 2001; and Gøsta Esping-Andersen, *The Three Worlds of Welfare Capitalism*, Princeton, NJ: Princeton University Press, 1990.

[50] Indicators for this included the level of public-sector wages, active labor market programs, and government spending on training; spending on housing, healthcare, education, infrastructure, and family and other social policies; and pension spending.

Exhibit E8

The role of institutions changed for workers, consumers, and savers.



[1] Index to proxy role of institutions: inverse of out-of-pocket voluntary spending in healthcare, and private spending.

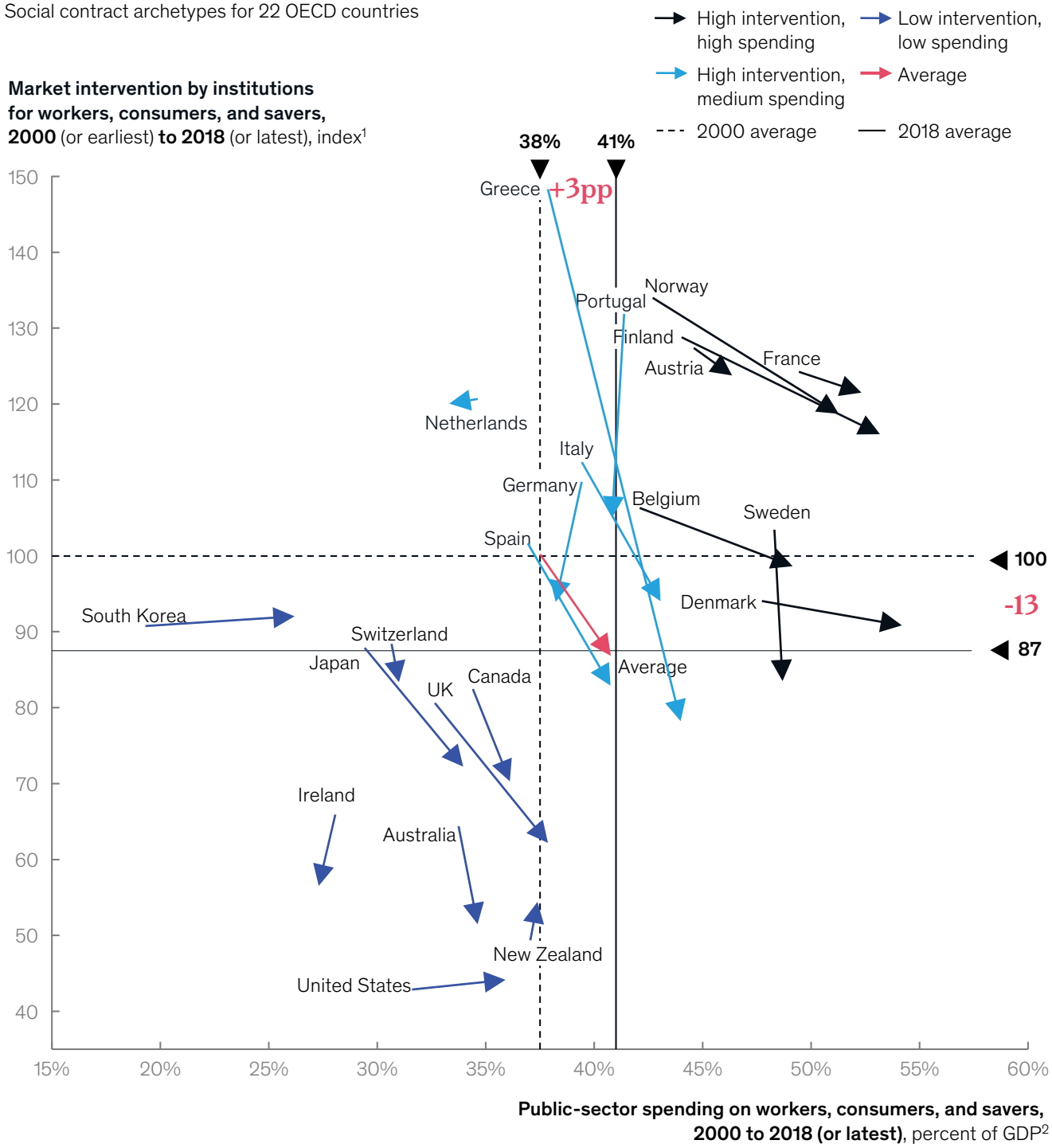
Note: Direction of some indicators flipped to show positive/negative outcome.

Source: OECD; Eurostat; World Bank; ILO; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

Exhibit E9

Market intervention for workers, consumers, and savers declined by 13 points, although public-sector spending increased by three percentage points on average.

Social contract archetypes for 22 OECD countries



[1] Composite index for workers, consumers, and savers weighted equally. Components include workers: employment protection (permanent contracts), employment protection (temporary contracts), and collective agreement coverage; consumers: product market regulations, retail price controls, social rental housing stock, intensity of rent control, inverse of voluntary out-of-pocket spending on healthcare, inverse of private spending on education; savers: net replacement rate from mandatory pensions, defined benefits assets under management.

[2] Includes public-sector wages, total social spending (directed at individuals and households) for unemployment, active labor market programs, training, family and other social policies, healthcare, housing, pensions, public spending on education, and government gross fixed capital formation for infrastructure.

Note: Our social contract archetypes are not intended to judge which type of social contract is better or worse. Different countries prioritize certain values that shape their social contract.

Source: Hall and Soskice (2001); OECD; Eurostat; ILO; World Bank; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

Outcomes for workers, consumers, and savers vary considerably by socioeconomic group

The greater individualization of the social contract in each of the three arenas has led to considerable varation among social and economic groups (Exhibit E10). Most socioeconomic groups have benefited in some areas, such as expansion in employment opportunities and the falling cost of discretionary goods and services. However, the extent to which they have gained differs, and certain groups have experienced some of the negative shifts in outcomes more starkly.

— **High-skill, high-income individuals have fared well.** Economic outcomes for the top two quintiles of the population (by income and wealth levels) in our 22 countries have improved since 2000, with those in the top quintile particularly benefiting. Considering occupational groups, approximately 115 million high-skill, high-wage workers in Europe and the United States have seen their employment share rise strongly, by almost four percentage points between 2000 and 2018, and their compensation has also grown. Saving rates for high-income groups rose as a share of disposable income between 2010 and 2015, and their overall share of total wealth has also risen.[51]

— **Middle-skill, middle-income workers have been squeezed out of the labor market.** Roughly 120 million middle-skill, middle-wage jobs in Europe and the United States have been "hollowed out" as jobs in this segment decline—although recent data suggest a slight recovery for middle-wage workers in the United States.[52] Our findings confirm this development: workers in the middle income quintile have experienced negative outcomes in employment, with the employment share dropping by more than 6 percent between 2000 and 2018, especially in Belgium, France, and Greece.

95M

low-skill, low-income individuals have been especially affected by a declining income share, higher housing costs, and falling savings

— **Consumption and savings outcomes have been worse for many low-skill, low-income individuals.** Notwithstanding the attention paid to the middle class, some 95 million low-skill, low-wage individuals in Europe and the United States have been especially affected, even though their employment share has risen. The share of total income for the bottom two quintiles declined by 1.2 percentage points between 2000 and 2017, from 20.4 to 19.2. As consumers, lower-income groups have been especially hard hit, particularly by the housing market. The cost of a minimally acceptable house is 43 percent of income for households in the poorest income quintiles compared with 7 percent of income for the richest households.[53] With rising costs of basics, the biggest deterioration has been in capacity to save, with median savings for the lowest wealth quintile as a share of disposable income dropping by 14 percent on average in Germany, Spain, Sweden, and the United Kingdom. The share of total wealth of the bottom 60 percent, already very low at 7.6 percent, has fallen to 7.3 percent.

— **Young people have fared less well than the elderly.** In general, young people between 15 and 30 years old have experienced deteriorating outcomes in all three arenas, while the elderly over the age of 65 have, with few exceptions, broadly benefited (Exhibit E11). The young, who make up about 180 million individuals in our sample countries, have difficulty obtaining well-paid, high-quality jobs and have a harder time climbing on the housing ladder, with much lower wealth than that age group two decades ago. Compounding the problem is the rising cost of housing; the cost of a minimally acceptable house is 23 percent of incomes for young people between 15 and 30 years old, versus 14 percent for people over 65. By contrast, old-age relative poverty is falling almost everywhere.

[51] See Annie Lowrey, "The hoarding of the American dream," *Atlantic,* June 16, 2017.

[52] See, for example, John Komlos, "Hollowing out of the middle class: Growth of income and its distribution in the US, 1979–2013," *Challenge*, 2018, Volume 61, Issue 4; Peggy Hollinger, "A hollowing middle class," *OECD Observer*, 2012; Nelson D. Schwartz, "Recovery finally yields big gains for average worker's pay," *New York Times*, January 6, 2017.

[53] See *Tackling the world's affordable housing challenge*, McKinsey Global Institute, October 2014. Definitions of minimum socially acceptable housing vary from country to country but include factors such as distance to work, access to a working toilet, and minimum space requirements.

Exhibit E10

Outcomes by income and wealth group: High-income groups have benefited, while low- and middle-income groups face negative outcomes.

Average of primarily 8 countries: France, Germany, Japan, Italy, Spain, Sweden, United Kingdom, and United States[1]

Worse than average — Better than average — No data

	Expectation	Outcome	Average	Income/wealth quintile: Lowest	2	3	4	Highest
Workers	Access	**Change in employment share** for low-, middle-, and high-skill, -wage occupations in 16 European countries and United States, percentage points, 2000–18	-	2.7	-	-6.6	-	3.9
	Compensation	**Change in real median wage** for low-, middle-, and high-wage occupations in United States, percent, 2000–18	3.8	5.3	-	1.1	-	7.3
		Change in share of income in 17 countries,[2] percentage points, 2000–17 (or latest)	-	-0.6	-0.6	-0.2	0.1	1.2
Consumers	Prices and affordability	**Change in share of spending** on housing, healthcare, and education in Germany, Spain, and United States, percentage points, 2000–17	5.7	9.1	7.1	5.5	4.0	2.7
	Access	**Cost of minimum acceptable housing** in Japan, United Kingdom, and United States, percent of disposable income, 2014	13	43	22	15	11	7
	Quality of outcomes	**Change in rate of housing overcrowding** in France, Germany, Italy, Spain, Sweden, and United Kingdom, percentage points, 2005–17	-0.1	0.9	0.2	-0.3	-1.3	0.1
		Change in share of people who rate health as good/very good in 10 countries,[3] percentage points, 2005–17	3.4	4.0	-	3.4	-	2.8
Savers	Participation	**Median savings** as share of disposable income in Germany, Spain, Sweden, and United Kingdom, percent, 2015	20	-14	9	20	29	40
		Change in median savings as share of disposable income in Germany, Spain, Sweden, and United Kingdom, percentage points, 2010–15	1.6	-3.1	-1.7	0.5	2.1	3.5
	Sufficient wealth	**Change of share of wealth in 16 countries,[4]** percentage points, 2009–16	-	-0.1	-0.1	-0.1	-0.9	1.2
	Returns on wealth	**Rate of return on wealth assets** by quintile in France and United States, percent, 2014 and 2017	2.8	0.0	0.6	3.2	4.4	5.8

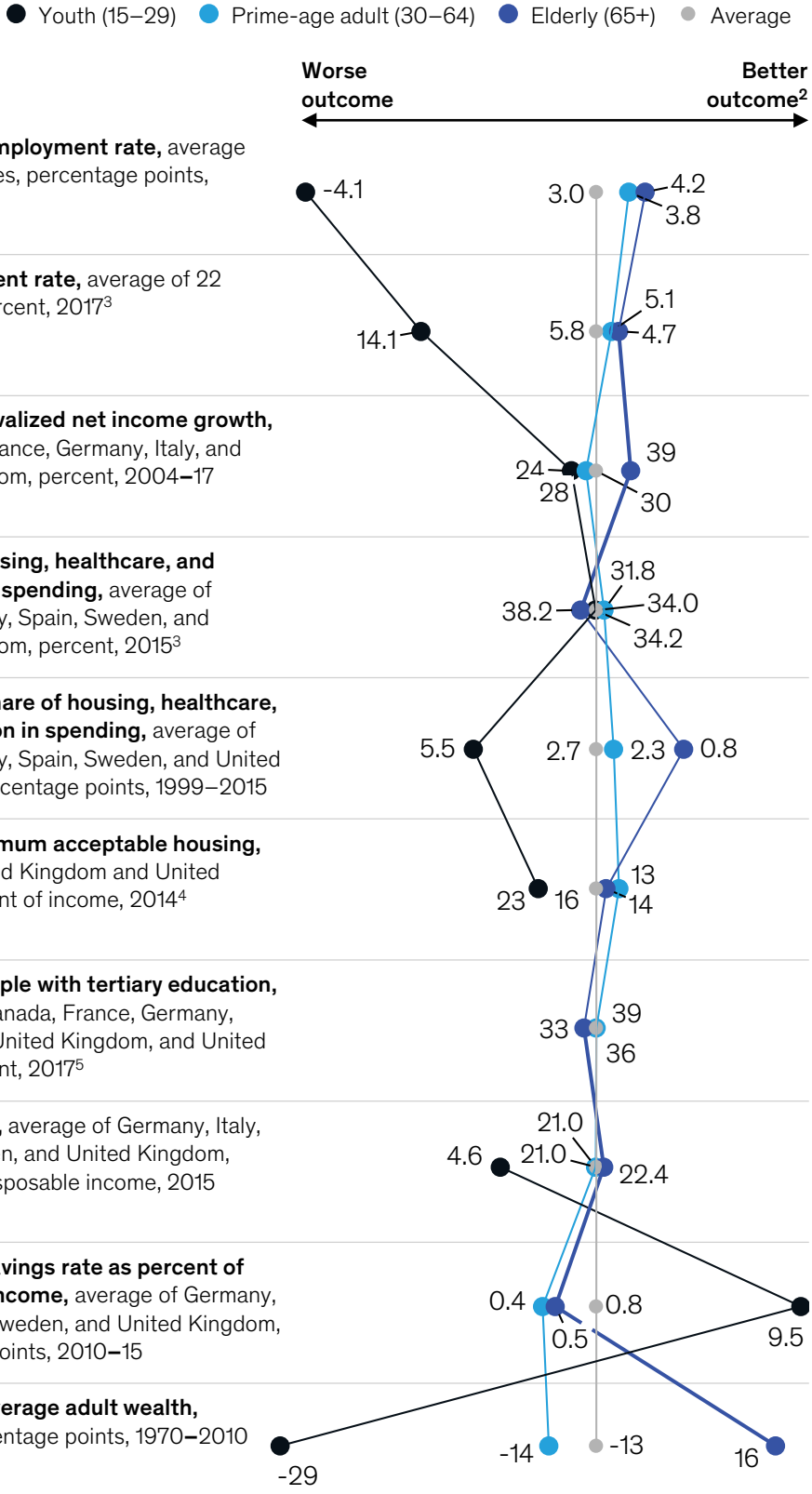
1 We focused on 8 countries and 11 indicators due to limited data covering both socioeconomic group and country. As a result, this chart focuses on a narrower set of outcomes to illustrate differences across socioeconomic groups. Data availability for each indicator and country varies.
2 Data missing for Australia, Japan, New Zealand, South Korea, and Sweden.
3 Countries include Australia, Canada, Japan, Germany, France, Italy, Spain, Sweden, United Kingdom, and United States.
4 Mapping data on change in share of wealth in bottom 60 percent to 1st, 2nd, and 3rd quintiles, average of top 5 percent and 10 percent to 4th quintile; and top 1 percent to 5th quintile.

Source: Eurostat; US Department of Labor; UNU-Wider; World Bank; national statistics agencies; McKinsey Global Institute analysis

Exhibit E11

Outcomes by age group: Younger generations are facing challenges.

Average of primarily 9 countries: Canada, France, Germany, Japan, Italy, Spain, Sweden, United Kingdom, and United States[1]



[1] Data limitations affected calculation of outcomes for workers, savers, and consumers by both age group and country. As a result, we focused on a narrower set of illustrative outcomes.

[2] Position of points are calculated as: (indicator value – average value)/average value; signs are reversed if a higher number indicates a worse outcome, e.g., sign for unemployment is reversed.

[3] Youth mapped to under 30; adult is averaged of 30–44 and 45–59; and elderly is 59 and over.

[4] Average cost of minimum acceptable housing in all cities with data availability.

[5] Youth not tracked because large proportion in/not eligible for tertiary education.

Source: Eurostat; OECD; US Department of Labor; national statistics agencies; McKinsey Global Institute analysis

85 cents

The amount a woman earns on average for every $1 a man earns in the 22 sample countries

— **Women have seen improvements but still lag behind men.** Women have made significant strides in catching up with men in the labor market, with over two-thirds of job growth from 2000 to 2018 attributable to women, and the number of working women rising from 175 million to 206 million. Yet parity remains elusive; the share of working women increased from 44 to 46 percent between 2000 and 2018. The gender pay gap has narrowed from 80 to 85 cents for every dollar a man earns. It ranges from a low of 96 cents in Belgium to a high of 65 cents in South Korea.[54] Unsurprisingly, as savers, women have a median level of net wealth that is just 62 percent of men's, although the gap narrowed in the past two decades.[55]

— **Minorities continue to face challenges.** For minorities in some countries such as the United States, families struggling the most tend to be black or Hispanic. The wealth of the median white family was ten times higher than that of the median black family and 7.5 times higher than that of the median Hispanic family in 2016.[56] Moreover, automation trends may be widening the racial wealth and income gap; for example, African Americans may have a higher rate of job displacement compared with other groups in 13 community archetypes analyzed, adding up to almost 19 million people by 2030.[57]

— **Rural areas in Europe and the United States fell behind.** Even within countries, outcomes for workers in certain geographic regions could be more challenging than in others. Urban areas saw faster employment recovery following the global financial crisis.[58] In the United States, previous MGI research has shown that more than two-thirds of job growth since 2007 has been concentrated in 25 cities and particular counties; our ongoing research in Europe highlights similar local and regional patterns.[59]

Adapting the social contract for the 21st century

Much has improved for individuals as workers, consumers, and savers in the first two decades of the 21st century—a period of massive upheaval and progress in technology, globalization, changing market dynamics, and a financial crisis. More progress through technological advances and innovation and more economic growth are expected. It is important that these gains are sustained and opportunities fully captured and expanded. As we have discussed in more detail in our other research, this can happen through continued economic and productivity growth; business dynamism; investment in economies, technology, and innovation; and continued focus on job growth and opportunity creation, and on competitiveness of companies and economies in a rapidly shifting global economy.[60]

54 Gender pay gap looks at median wages and does not adjust for different types of occupations, experience, responsibility, or performance of men and women. See "Gender wage gap statistics," OECD, 2019.

55 Average of eight European countries (Austria, Belgium, Germany, Netherlands, Spain, France, Greece, and Italy). See Eva Sierminska, *Wealth and gender in Europe*, European Commission, 2017.

56 Ana Kent, Lowell Ricketts, and Ray Boshara, *What wealth inequality in America looks like: Key facts and figures*, Federal Reserve Bank of St. Louis, August 14, 2019. An analysis of outcomes for individuals from different ethnicities in our 22 sample countries is not possible because of a lack of comparable data.

57 *The future of work in black America*, McKinsey & Company, October 2019.

58 *OECD Regional Outlook 2019: Leveraging megatrends for cities and rural areas*, OECD, 2019.

59 *The future of work in America*, McKinsey Global Institute, July 2019; *The future of work in Europe*, McKinsey Global Institute, forthcoming.

60 See, for example, the following McKinsey Global Institute reports: *AI, automation, and the future of work: Ten things to solve for*, June 2018; *Solving the productivity puzzle: The role of demand and the promise of digitization*, February 2018; *A future that works: Automation, employment, and productivity*, January 2017; and *Digital globalization: The new era of global flows*, February 2016.

200M

Approximate number of workers in the 22 countries affected by wage stagnation

At the same time, some outcomes have been challenging for many individuals. We highlight ten key problems that will need addressing in order to achieve better and more inclusive outcomes for individuals. We focus on those affecting large numbers of individuals and those likely to persist unless addressed, given current trends.[61]

1. **Persistent income polarization and wage stagnation.** The uneven distribution of economic gains and prolonged wage stagnation are taking place at a time of positive aggregate growth. Wage stagnation has affected roughly 200 million people in the 22 countries in our sample.[62] This could worsen given the impact of technology and automation.[63] What can be done to enable a higher share of income going to labor?

2. **Work fragility and transition supports in an evolving present and future of work.** Employment-related risks are rising and employment protection is on the wane, partly because of the increase in alternative work arrangements and growing challenges posed by automation and digitization. This issue is critical in a world in which, for example, 28 percent of workers are in independent work and that proportion is growing.[64] With automation, between 40 million and 150 million workers in advanced economies may need to switch job categories.[65] Therefore, how can flexible, dynamic labor markets be supported, while also reducing fragility for workers?

3. **Challenge of affordable housing.** Rising housing costs have grown considerably faster than inflation in many markets and are absorbing much of the income gains of low- and middle-income households; roughly 165 million people in the 22 countries are overburdened by housing costs.[66] The housing challenge also has cascading effects on individuals as workers. What can be done to unlock supply and other constraints?

4. **Rising expense of and growing demand for healthcare and education.** Healthcare and education costs have risen above general consumer prices. This significantly affects more than 125 million individuals who spend more than ten percent of their budgets on healthcare and education, as well as nearly 245 million people who are primarily supported by public funding.[67] The need for more healthcare and education is likely to rise as people live longer, and as the nature of work changes and reskilling and lifelong learning become more important. How can technology and the competitive dynamics that benefited discretionary goods and services be harnessed to make healthcare and education more affordable as well as adapt to changing needs?

5. **The growing savings and retirement problem.** In a century of longer life expectancy and aging, how can the capacity and incentives for individuals to save more, and more effectively, be expanded? Although aggregate wealth is growing, approximately 440 million people reported that they did not save for old age.[68]

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61 We provide high-level estimates for the number of individuals affected to give a rough order of magnitude. The list is not exhaustive or in order of priority.

62 Estimated as 37 percent of the working-age population (share of middle-wage, middle-income occupations based on 16 European countries and the United States). Excludes Germany, New Zealand, and South Korea, where wage growth was positive. OECD Population statistics, 2019.

63 See *Jobs lost, jobs gained: Workforce transitions in a time of disruption*, McKinsey Global Institute, January 2018.

64 Average of six countries (France, Germany, Spain, Sweden, United Kingdom, United States). See *Independent work: choice, necessity, and the gig economy*, McKinsey Global Institute, 2016.

65 Sum of Germany, Japan, and United States and other advanced economies; *Jobs lost, jobs gained: Workforce transitions in a time of disruption*, McKinsey Global Institute, January 2018.

66 Estimated as the 15+ population spending more than 40 percent of disposable income on housing. OECD Affordable Housing database, 2019.

67 Estimated as the population aged 15 to 24 years and over 60 in Australia and the United States, where healthcare and education spending as a share of household consumption is 10 and 12 percent, respectively, and the corresponding population of the other 20 countries in our sample where spending ranges from 3 to 7 percent. OECD Population statistics, 2019.

68 Equivalent to 53 percent of the population aged 15 and up in our 22-country sample. Financial inclusion indicators, World Bank; OECD Population statistics, 2019.

6. **The multiple pressures on low-income individuals.** Roughly 335 million low-income individuals in the 22 countries face difficulties as workers, consumers (especially with respect to basics such as housing), and savers, and their position has grown more precarious than it was in 2000.[69] How can social safety nets and other supports be revamped for the current era and challenges? What market-based mechanisms can be established to assist them?

7. **A new era of challenging outcomes for the under-30 generation.** Young people between 15 and 30 years old, who currently number 180 million, have less access than previous generations to well-paid, stable employment, affordable housing, and decent savings. What can be done to support younger generations in an era of more precarious work and rapidly changing labor-market skill dynamics?

8. **The persistent gender and race gaps.** Although more than 205 million working women have made strides in the labor market, they continue to lag behind men in employment, wages, and savings , and overall wealth. Similarly, the racial wealth and income gap in some countries, such as the United States, is both persistent and growing.[70] How can opportunities presented by the future of work be harnessed to narrow the gap?

9. **The growing challenges of place.** Certain regions and local economies, mostly in Southern Europe and in declining industrial areas in the United States, where more than 215 million people live, have not recovered fully from the global financial crisis, which continues to weigh on individual outcomes. Some have not kept pace with or benefited from the changes driven by technology, globalization, and shifting focus of market and economic activity, as well as investment, many of which could persist.[71] What can be done to better integrate regional labor markets into the growing economy?

10. **The risk of unsustainable government funding.** Tax collection and government revenue generation are not keeping pace with government spending, which has risen to support individuals coping with global trends. Healthcare and pension systems in particular are coming under stress because of aging populations. What can be done to ensure the sustainability of these public budgets?

Some institutions—public, private, and social—and individuals are starting to adapt and take action. Public-sector actions include new labor laws in some countries to protect those in alternative working arrangements. The United Kingdom, for example, has conducted a comprehensive review of modern working practices.[72] Several state- and national-level commissions are under way; the Aspen Institute's Future of Work initiative aims to identify concrete ways to address challenges facing American workers and businesses.[73] In housing, some cities are rethinking zoning and density laws to encourage supply, while others are proposing policies to limit rent increases.

In the private sector, one sign of a broader reappraisal came from the Business Roundtable in August 2019. The organization, made up of CEOs of major US companies, announced its members are redefining the purpose of a corporation as caring and delivering value for employees, customers, suppliers, and communities, as they do with shareholders.[74] A number of companies are moving to retrain their workforces, for example, while others are providing benefits to workers, including for child care and healthcare.[75] Several technology firms have announced plans to build housing for their workers, given the shortage of affordable

[69] Estimated as the population over 15 years in the bottom two quintiles of the income distribution. OECD Population statistics, 2019.
[70] OECD Population statistics, 2019. United States Census, 2010. Racial data availability for most countries in our sample is limited.
[71] *The future of work in America*, McKinsey Global Institute, July 2019; *The future of work in Europe*, McKinsey Global Institute, forthcoming.
[72] Kevin Barrow, "Two years since the Taylor Review: What next?," *HR*, October 1, 2018.
[73] The Aspen Institute, *Future of Work Initiative*, 2019.
[74] "Business Roundtable redefines the purpose of a corporation to promote 'an economy that serves all Americans,'" Business Roundtable, August 19, 2019.
[75] "Building the workforce of tomorrow, today," *McKinsey Quarterly*, November 2018.

accommodation near where they are located. Such initiatives tend to be selective and limited to high-skill, high-wage jobs at large corporations, however.

The social sector and other institutions, including philanthropic foundations and faith-based charities, are also playing a larger role in addressing some key challenges. And, as has happened for generations, families are helping their younger members with education and housing. In the United Kingdom, for example, parents collectively give £6.3 billion to support their children onto the housing ladder, high enough to rank them the tenth-largest mortgage lender in the country.[76]

Finally, individuals themselves are changing their behavior in light of these changes to the social contract. Many workers are opting for independent work as their primary source of income or to supplement their existing income.[77] Automation requires new and different workforce skills, and individuals today have many more opportunities to prepare themselves and learn or improve skills than they used to. Courses on online platforms are increasingly accessible, and lifelong learning is helping individuals to stay ahead.

While many actors are beginning to respond to these challenges to varying degrees through a variety of mechanisms, most efforts seem early, localized, and relatively small in scale and scope, compared with the extent of the challenges. Moreover, many have yet to fully take into account the effect of factors including climate change likely to impact work and other economic aspects of the social contract. Much of the impact of climate change is likely to be regressive, affecting economically vulnerable individuals the most. Therefore, concerted action is needed on two fronts: first, to make sure that the gains of the 21st century so far are sustained and scaled, and the potential for even more opportunities and economic prosperity is fully realized. Second, to make sure that the outcomes for individuals in the next 20 or more years of the 21st century are better and more inclusive than in the first 20 and that they increase broad and inclusive prosperity.

[76] "Bank of mum and dad 'one of UK's biggest mortgage lenders,'" BBC News, August 27, 2019.
[77] *Independent work: Choice, necessity, and the gig economy*, McKinsey Global Institute, October 2016.

1 The evolving social contract

More than a decade after the global financial crisis, economic growth is back—albeit relatively weakly—and the labor market is seemingly strong: unemployment rates have fallen to historic lows in many countries, and the employment rate is at a record high, above 70 percent in our 22 sample countries.

>70%

Employment rate in the 22 sample countries, a high since 2000

The public mood is far from buoyant, however. Polls suggest that many people are not feeling optimistic about their personal economic situation now and are no less pessimistic about the future.[78] One concern is that members of this generation and the next may end up being poorer than their parents.[79] Surveys show waning public trust in government and other societal institutions. In one global survey, 60 percent of respondents said they believed their country was "on the wrong track." Trust in government fell in more than half of the OECD economies between 2006 and 2016.[80] Income inequality and wage stagnation are causes of particular dissatisfaction. Almost half the people polled in 16 OECD economies said they believe the average person in their country is worse off today than 20 years ago.[81]

How to explain this apparent paradox between the glum mood and some genuinely positive developments? The latter include not just higher employment rates in most countries, but also continuously improving educational attainment, narrowing of the gender gap, and longer life expectancy, to name a few. In this research, we seek to go beyond perceptions and averages to examine how individuals are faring in three arenas that are core to the long-established notion of a "social contract." The three arenas are the different economic roles of individuals as workers in the labor market, as consumers in the market for goods and services, and as savers in the capital market.

In the three arenas, we find some evidence to suggest that an important societal shift is taking place. The implicit relationship between individuals and institutions based on sharing the responsibility for economic outcomes seems to be evolving. Individuals must assume a larger burden of responsibility for their economic outcomes than they did even two decades ago. This is creating myriad new opportunities for those able to seize them. Yet at the same time, many are struggling to cope with the shift. These structural changes have been occurring for a longer time, but we focus on the past 20 years for reasons of data availability.

As we describe in later chapters, the shifts toward an increasingly individual social contract are partly due to global trends such as automation, globalization, and changing demographics, and partly because institutions themselves have changed position, leaving individuals with greater responsibility for their economic outcomes. The 2008 financial crisis exacerbated a number of these trends, but the development started earlier and goes beyond the effect of the crisis itself.

In this opening chapter, we describe how we conducted our research and discuss some major global trends affecting individual economic outcomes, from technological innovation to shifting demographics.

78 For example, the annual United Nations World Happiness Survey shows that satisfaction in the ten countries at the core of our sample has declined by 4.2 percent since 2005.
79 *Poorer than their parents? Flat or falling incomes in advanced economies*, McKinsey Global Institute, July 2016.
80 *What worries the world*, Ipsos Public Affairs, 2018; McKinsey Citizen Development and Confidence Research, 2018; Gallup, 2016. See also *Inequality: A persisting challenge and its implications*, McKinsey Global Institute, June 2019.
81 *Global Attitudes Survey Q2 and Q3*, Pew Research Center, Spring 2018.

Measuring the evolution of the social contract

The starting point for our research was to identify commonly held expectations—that is, the economic outcomes that people say they care most about—in labor, consumption, and saving. To do this, we conducted a review of the burgeoning research on economic satisfaction and well-being.[82] At its core, the social contract is an implicit quid pro quo for individuals: they contribute a range of their talents, energy, time, skills, and income. They collaborate with public- and social-sector entities as well as private companies to achieve prosperity and share risks and responsibilities. In return, they expect some specific outcomes. While the social contract also refers to the values that define relationships among individuals, separate from specific institutional arrangements, in this research we focus on interactions between individuals and institutions.

There can be many different implicit arrangements, framing varied social contracts, in different parts of the economy and society. However, in the 22 OECD economies we examined, today's social contract is mostly managed through markets.[83] The public sector plays an orchestrating role through market regulation as well as a direct role as market participant, for example through providing public employment and public services, as well as through direct spending. The private sector is then the key operator in these markets. Alongside these actors is a galaxy of other institutions that also affect individual well-being and the social contract. They include philanthropic and nongovernmental organizations, as well as family and religious or social communities. The economic dependence of individuals on family and religious institutions has markedly decreased over the past decades: for example, single-parent households and divorce rates have increased.[84]

One dimension on which our study does not focus is the role of individuals as citizens. In exchange for contributing to society, citizens expect physical security, political representation, and strong governance. In addition, they seek a sense of community and relationships that drive personal life satisfaction. Another goal, of environmental sustainability in the face of climate risk, has also come to the fore. We also do not look at the role of individuals as parents and how they are shaping the social contract for their children.

The study does cover concerns of individuals as workers, consumers, and savers. In the labor market, expected outcomes include access to and the ability to participate in work, stability of labor, as well as quality and benefits, and compensation—both the growth of income and its distribution. For consumers, the outcomes center on the price, quality, and affordability of both basic and discretionary goods and services. For savers, expected outcomes include participation and the ability to engage in saving, some stability and risk limitation for savings, and, especially, sufficient wealth to provide a decent living in old age (Exhibit 1).

Our full sample of 22 OECD economies accounts for 57 percent of global GDP and a population of almost 1 billion. We focus on these countries in this research as a starting point for assessing the evolving social contract, since their residents' experiences as workers, consumers, and savers are relatively homogeneous. Emerging economies, such as China and India, are in a different stage of development and have their own versions of the social contract, which are also in transition.

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82 Sources we examined include the OECD's Better Life Index; Joseph Stiglitz, Amartya K. Sen, and Jean-Paul Fitoussi, *Measurement of economic performance and social progress*, 2009; the UN Human Development Index and Sustainable Development Goals; and Matthew Taylor, *Good work: The Taylor review of modern working practices*, UK Government, 2017. Also see the Social Progress Imperative; Andrea Garnero, Alexander Hijzen, and Sébastien Martin, *More unequal, but more mobile? Earnings inequality and mobility in OECD countries*, OECD Social, Employment and Migration working paper number 177, February 2016; "How good is your job? Measuring and assessing job quality," in *OECD employment outlook 2014*, OECD, 2014; Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*, second edition, New York, NY: Oxford University Press, 2019; and Daniel J. Benjamin et al., "Beyond happiness and satisfaction: Toward well-being indices based on stated preference," *American Economic Review*, September 2014, Volume 104, Number 9.

83 The 22 countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, South Korea, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

84 Jeanne Fagnani, *The future of families to 2030*, OECD, 2012.

Our analytical work focuses on a description of the development of economic outcomes and of the changes in the institutional architecture of the social contract. In looking at outcomes for individuals, we consider the average picture but also focus on groups that have experienced the largest changes (for example, middle-skill workers who face significant declines in employment) as well as those with the lowest levels of income and wealth, for example. We also analyze, where possible, differences related to age and gender.

Regarding the role of institutions, we constructed composite indexes that serve as proxies for two core elements of the social contract: the institutional responsibility via market intervention mechanisms, and public-sector spending aimed at mitigating individual risk. We describe these in detail in chapter 5.

This research builds on and integrates previous MGI work that has examined issues of income advancement, consumption sufficiency, and inequality in economic outcomes, among other topics.[85] We also draw on work by others.[86] Our attempt to provide an integrated perspective on the arenas of work, consumption, and saving was limited by a lack of comparable data. In the labor market, country analysis of nonwage benefits varies widely, and long-term data about independent work and entrepreneurship, for example, is lacking. Socioeconomic, age, and gender breakdowns for most components were often restricted to a subset of the 22 countries because of data limitations. For savers, detailed modeling of retirement savings gaps proved difficult because pension systems differ considerably.

In some cases, we reduced our 22 sample countries to a subset of ten for which we had comparable data. At times, we were limited to country-level data for only two or three countries. For a discussion of the data we used and how we overcame some gaps, see the technical appendix.

The role of institutions and individuals in the social contract

The notion of a social contract that binds people and institutions in society is an old one, going back at least to ancient Greece. History suggests that how people see the social contract, and what they expect it to provide in their own lives, can vary substantially depending on country and culture (see Box 1, "A (brief) history of the social contract and how it can change"). The role that institutions, both government and the private sector, and individuals play in the social contract is a fundamental part of the discussion.

Early modern philosophers envisioned a minimal role for the government: to protect individuals from violence or protect their property rights in return for recognizing the legitimacy of the state. To that end, governments must raise revenue—typically from taxes—in order to fund law enforcement, the judiciary, and other institutions necessary for maintaining law and order.[87] Over time, as the notion of markets developed, the role of government broadened to include responsibility for facilitating competition and free markets, allowing individuals to prosper from economic growth.

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85 See the McKinsey Global Institute reports *Poorer than their parents? Flat or falling incomes in advanced economies*, July 2016; *The power of parity: How advancing women's equality can add $12 trillion to global growth*, September 2015; *A new look at the declining share of labor income in the United States*, May 2019; and *Inequality: A persisting challenge and its implications*, June 2019.

86 Other seminal works on the social contract include Nemat Shafik, "A new social contract," *Finance & Development*, IMF, December 2018, Volume 55, Number 4; Lauren Damme, *Rethinking the American social contract*, New America Foundation, 2011; Maurizio Bussolo et al., *Toward a new social contract: Taking on distributional tensions in Europe and Central Asia*, World Bank, 2018; *Including institutions: Boosting resilience in Europe*, World Bank, 2019; National Economic and Social Rights Initiative, *A new social contract*, 2018; *Under pressure: The squeezed middle class*, OECD, 2019; *Dialogue series on new economic and social frontiers: Shaping the new economy in the fourth industrial revolution*, World Economic Forum, 2019; Ian Davis, "The biggest social contract," *Economist*, May 2005; *Rethinking society for the 21st century*, International Panel on Social Progress, 2018; Commission on Global Economic Transformation, *Macroeconomic management meets the new economy* and *Technological disruption in the global economy*, Institute for New Economic Thinking, 2019; Dennis J. Snower, *Toward human-centered capitalism: Exploring a new social contract*, Brookings Institution, November 2019; Paul Krugman, *The Age of Diminished Expectations: US Economic Policy in the 1990s*, Cambridge, MA: MIT Press, 1994.

87 See Anne-Marie Slaughter, *3 responsibilities every government has towards its citizens*, World Economic Forum, February 13, 2017.

Some of the extensive research on the social contract advocates the government's responsibility for providing goods and services, primarily those that individuals cannot provide themselves or that are frequently underprovided by private sources, such as economic infrastructure and social welfare.[88] For some political philosophers, the rationale for government involvement in the social safety net is to protect its citizens from risks beyond their control such as unemployment, poverty, and insufficient savings in retirement, among others. Others think it is to ensure equality of outcome, for example. However, the generosity of the social safety net is the subject of much debate.[89] Proponents of fiscal prudence, such as the World Bank and the International Monetary Fund, assert that the government should set a course between investing in the social safety net and maintaining a healthy balance sheet.[90]

A third approach sees the government as an investor in its citizens, with a heavy emphasis on investing in education that extends from early childhood development to university to retraining and reskilling programs as the world of work rapidly changes. In this approach, the government's role is to support individuals to better prepare for a rapidly changing environment, rather than necessarily protecting individuals from risks beyond their control.[91] In practice, governments protect and invest in their citizens and provide public goods and services. However, the extent to which the government takes on these responsibilities will vary depending on a society's intrinsic values.

The debate surrounding the role of the private sector in the social contract has been discussed by many economists, from Adam Smith to Milton Friedman. One school of thought argues that the relationship between the private sector and other actors in society should be purely economic and transactional: companies aim to maximize profit by selling goods and services to customers, provide wages to workers in return for labor, and should abide by regulations that govern their activities. Proponents of this view argue that by aiming to maximize profit, the private sector contributes to the well-being of citizens by creating economic growth.[92]

A second school of thought contends that the private sector should take on a more holistic role in the social contract, contributing to the security and well-being of workers while also focusing on longer-term objectives rather than short-term profits. Historically, private-sector companies such as the Ford Motor Company contributed to the well-being of workers by paying higher-than-market wages, while others such as Rowntree offered pensions, medical treatment, and a profit-sharing scheme.[93] This model is also common in countries such as France and Germany. In recent years, particularly after the global financial crisis, more private-sector leaders have begun to advocate for greater corporate social responsibility, particularly regarding sustainability and new technologies, and argue for "capitalism for the long term." This view is a shift in how businesses should view their role in society in some countries. Rather than profit in the short term, businesses should serve the interests of stakeholders, employees, customers, and others in order to maximize their long-term value.[94]

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88 See Peter Hall, "The changing role of the state in liberal market economies," in *The Oxford Handbook on the Transformation of the State*, Stephan Leibfried et al., eds, Oxford, UK; Oxford University Press, 2015, and Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*, second edition, New York, NY: Oxford University Press, 2019.

89 Gøsta Esping-Andersen, *The Three Worlds of Welfare Capitalism*, Princeton, NJ: Princeton University Press,1990.

90 *The state of social safety nets*, World Bank, 2018.

91 Anne-Marie Slaughter, *3 responsibilities every government has towards its citizens*, World Economic Forum, February 13, 2017.

92 See Peter A. Hall and David Soskice, "An introduction to varieties of capitalism," in *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Peter A. Hall and David Soskice, eds., Oxford, UK: Oxford University Press, 2001; Rawi Abdelal and John G. Ruggie, "The principles of embedded liberalism: Social legitimacy and global capitalism," in *New Perspectives on Regulation*, David Moss and John Cisternino, eds., Cambridge, MA: The Tobin Project, 2009.

93 See *What can businesses learn from the Rowntrees?,* Joseph Rowntree Foundation, March 15, 2016; Sarah Cwiek, "The middle class took off 100 years ago … thanks to Henry Ford?," NPR, January 27, 2014; Axel Haunschild, "Lifestyles as social contracts between workers and organizations," Schmalenbach Business Review, October 2011, Volume 63, Issue 4.

94 See Shanya Strom and Mark Schmitt, *Protecting workers in a patchwork economy,* The Century Foundation, 2016; Dominic Barton, "Capitalism for the long term," *Harvard Business Review,* March 2011.

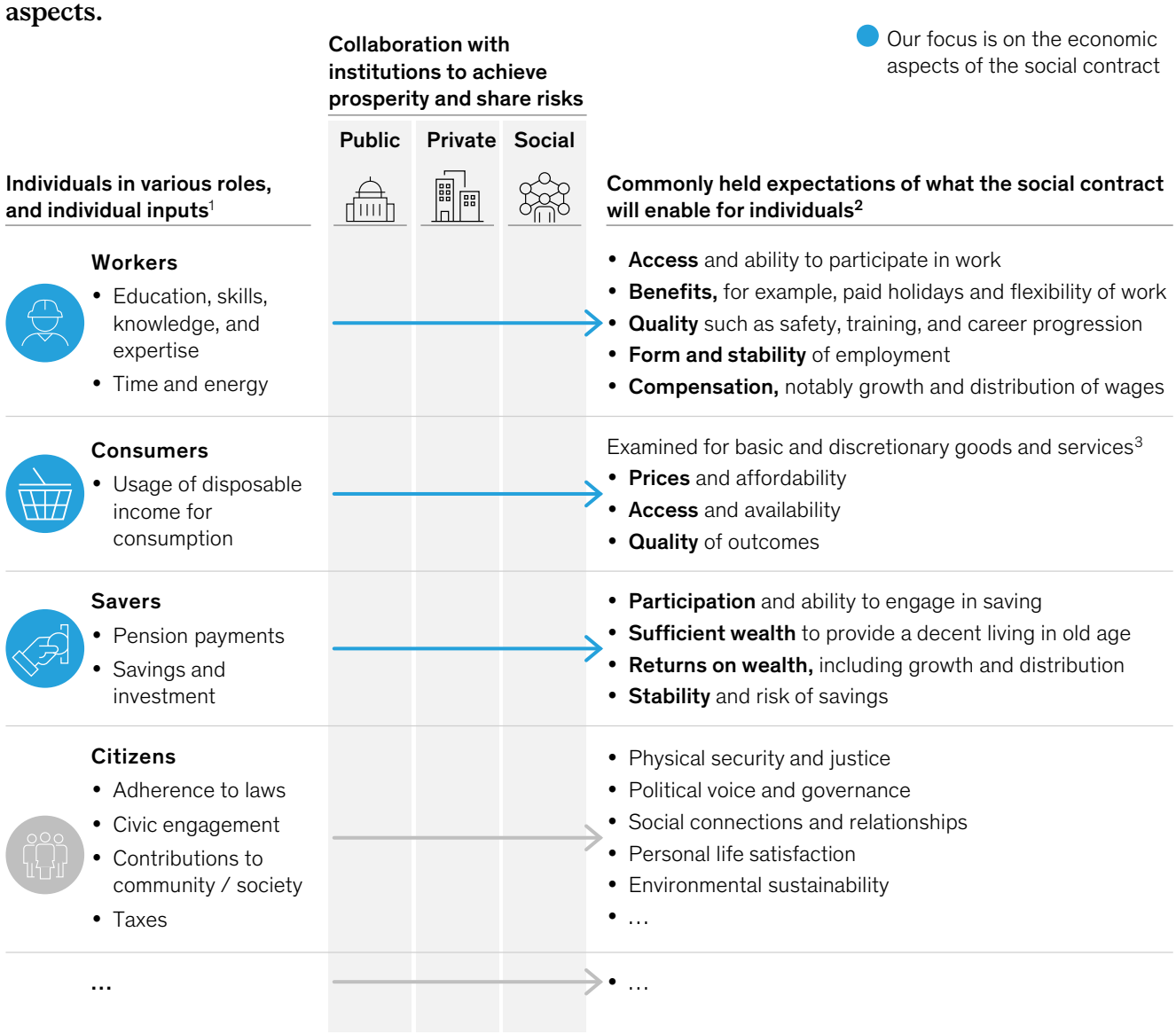
In certain schools of economic thought, it is understood that the individual's role is to maximize self-interest, which includes recognizing the legitimacy of the government. Many advocates argue that individuals are primarily responsible for their own well-being in society, which includes working hard, building their wealth, and relying on social welfare only when necessary.[95]

Another school of thought contends that individuals have responsibilities beyond maximizing their self-interest. In this framework, individuals who are more fortunate should help those

[95] See Nick Romeo and Ian Tewksbury, *Rebirth of the body politic*, Aeon, February 26, 2019; Tony Judt, *Ill Fares the Land*, New York, NY: The Penguin Press, 2010.

Exhibit 1

Our framing of the social contract identifies commonly held expectations among workers, consumers, and savers in a system of exchange with institutions, but excludes noneconomic aspects.



[1] Individual inputs refer to commitments made by individuals in their roles as workers, consumers, and savers in the social contract. For example, workers commit their time and energy to an employer in return for paid employment.

[2] Based on literature review; extent of expectations varies across countries and individuals. Individual level of satisfaction is influenced by which expectations are most important to them and the extent to which those expectations are being met. Our selection of indicators within each dimension is not exhaustive but illustrative, and based on data available for comparison across 22 countries between 2000 (or earliest) and 2018 (or latest).

[3] Housing, healthcare, education, food, transportation, clothing, communications, recreation, and furnishings; other categories are restaurants and hotels, alcohol and tobacco, and miscellaneous goods and services.

Source: McKinsey Global Institute analysis

who are less fortunate by paying higher taxes and supporting more redistributive policies. In some countries, the principle of "mutual obligation" is an important component of this approach. This principle says that while the more fortunate should support those who are less fortunate, the individuals receiving help should use it to become independent.[96]

Major trends are driving economic outcomes

Alongside the shifting balance between individuals and institutions, several major trends have shaped our economic environment and contributed to changing outcomes for individuals over the past two decades. The seven we highlight here are among the most significant in influencing these changing outcomes and contributing to the evolution of the social contract. However, we note that this list is not exhaustive. For example, it does not address the effects of a changing climate. Recent MGI research suggests that the nonlinear and nonstationary characteristics of physical climate risk could have potentially wide-ranging socioeconomic impacts which would affect the lives and work of millions of people globally.[97] Much of the impact will relate directly to issues in this report, including impact on work and workability, impact on physical assets including housing, as well as supply chains which may affect the costs of many goods and services. Moreover, the impact will likely be regressive, affecting economically vulnerable individuals the most. In our discussion in the following chapters of how outcomes have changed for workers, consumers, and savers, we identify which of these trends specifically played a major role:

Low productivity growth and structurally lower economic growth have become the norm, exacerbated by the cyclical global financial crisis and the subsequent slow recovery.[98] Between 2010 and 2014, productivity growth grew 0.5 percent on average in the United States and Western Europe, down from 2.4 percent between 2000 and 2004. This steep drop is partly due to the waning of a decade-long productivity boom brought about by the information and communications technology (ICT) revolution, as well as financial crisis aftereffects such as low private-sector investment and weak demand.[99] Lower aggregate growth translates into lower wage growth and lower returns on several asset classes, largely due to measures to counter the sluggish recovery. This has led to stagnating wages, declining wealth growth, and an environment of low interest rates, which affects returns on savings.[100]

Technology has fundamentally changed how we work, consume, and save. For workers, digital talent platforms such as LinkedIn enable finding new jobs more quickly and efficiently, while an estimated 15 percent of independent workers use online platforms such as TaskRabbit to match with potential customers. For consumers, technology has helped reduce the costs of many goods and services. Digital e-commerce platforms enable consumers to easily compare prices and switch providers for retail goods. Innovations in healthcare have contributed to significant increases in longevity through improved medical treatments. For savers, digital technologies have enabled many to access new financial services such as digital bank accounts and platforms for growing wealth at lower cost.[101] At the same time, growing automation adoption and the introduction of artificial intelligence in the workplace are likely to be disruptive. Prior MGI work suggests that between 40 million and 150 million workers in advanced economies may have to change occupational categories, and almost everyone's job will change to some degree.[102] One of the critical challenges will be upgrading worker skills to deal with new workforce requirements, as we outline in chapter 2.

96 See Stuart Butler, *Mutual obligation and the American social contract,* The Heritage Foundation, January 2009.
97 See *Climate risk and response: Physical hazards and socioeconomic impacts*, McKinsey Global Institute, January 2020.
98 *A new look at the declining labor share of income in the United States*, McKinsey Global Institute, May 2019.
99 *Solving the productivity puzzle: The role of demand and the promise of digitization*, McKinsey Global Institute, February 2018.
100 Some academics argue that slow total factor productivity growth and the decline in labor force participation in the United States are largely unrelated to the financial crisis and recession and were occurring regardless. See John Fernald et al., *The disappointing recovery of output after 2009*, National Bureau of Economic Research, working paper number 23543, June 2017.
101 For further details, see *Independent work: Choice, necessity, and the gig economy*, McKinsey Global Institute, October 2016, and *"Tech for Good": Smoothing disruption, improving well-being*, McKinsey Global Institute, May 2019.
102 See *Jobs lost, jobs gained: Workforce transition in a time of automation*, McKinsey Global Institute, December 2017, and *Skill shift: Automation and the future of the workforce*, McKinsey Global Institute, May 2018.

39%

share of global GDP from cross-border flows of goods, services, and finance in 2014, up from 24% in 1990

Globalization has increased competition across markets, driven by global flows of goods and services, the rise of emerging markets, and migration.[103] In 2014, global flows of goods, services, and finance accounted for 39 percent of global GDP, up from 24 percent in 1990.[104] In 2015, migrants made up 3.4 percent of the world's population yet contributed 9.4 percent of global GDP. Between 2000 and 2015, the number of migrants worldwide increased by 74 million.[105] Some research has pointed to growing trade and the build-out of supply chains in Asia as factors in the relative decline of middle-income jobs in advanced economies.[106] At the same time, global supply chains have reduced the cost of traded goods and services significantly.[107] For example, it is estimated that the United States received $260 billion in value from increasing variety of goods from globalization between 1972 and 2001. The payoff from trade expansion is equivalent to a GDP per US household increase from $7,014 to $18,131 between 1950 and 2016.[108] Global flows of capital have also created investment opportunities.

Demographic changes, including aging and the decline in birth rates in most advanced economies, have repercussions for the labor force, the availability of housing, and the sustainability of pension systems in advanced economies.[109] The demographic dividend that helped fuel rapid growth in global GDP between 1964 and 2014 has come to an end due to declining fertility rates, and many countries, such as Germany, Japan, and Italy, have already reached peak employment. Although increasing life expectancy in productive working life has been a hallmark of progress during this past century, old-age dependency ratios will more than double in advanced economies, increasing demand for healthcare, pensions, and other social obligations.[110]

Changing gender roles have enabled women to join the workforce at unprecedented rates. In the 1950s, many women were expected to remain in the domestic sphere, occupying the dual role of wife and mother, while their husbands were the primary breadwinners. Between 1950 and 2000, labor force participation for prime working-age women in the United States increased from 36 percent to 76 percent, while the rate for men remained constant at 88 percent.[111] More recently, between 1990 and 2018, the ratio of female to male labor force participation rates in OECD economies increased from 66 to 76 percent. This rapid rise has been replicated in other countries, empowering women to pursue professional careers, often while raising a family. Increased participation in the labor market empowered women as consumers and savers, although they still lag behind men on several fronts. Looking ahead, navigating transitions for the future of work could create opportunities in more productive, better paid jobs, but failing to do so could worsen existing challenges.[112]

Structural changes. A range of structural factors has affected companies, sectors, and economies in recent decades, with both direct and indirect impact on individuals. One of the major shifts is from manufacturing to services, with technical services growing the fastest. Intangible assets such as intellectual property products are also playing an increasingly prominent role. The labor share of income has declined in many countries as a result of these and other shifts, including the boom-bust commodity and real estate cycles. This has directly

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103 For further details, see *Outperformers: High-growth emerging economies and the companies that propel them*, McKinsey Global Institute, September 2018, and *People on the move: Global migration's impact and opportunity*, McKinsey Global Institute, December 2016.
104 *Digital globalization: The new era of global flows,* McKinsey Global Institute, March 2016.
105 *People on the move: Global migration's impact and opportunity*, McKinsey Global Institute, December 2016.
106 David H. Autor, David Dorn, and Gordon H. Hanson, "The China shock: Learning from labor-market adjustment to large changes in trade," *Annual Review of Economics*, October 2016, Volume 8; Didem Tüzemen and Jonathan Willis, "The vanishing middle: Job polarization and workers' response to the decline in middle-skill jobs," *Economic Review*, Federal Reserve Bank of Kansas City, 2013.
107 *Globalization in transition: The future of trade and value chains*, McKinsey Global Institute, 2019.
108 Gary Clyde Hufbauer and Zhiyao Lucy Lu, *The payoff to America from globalization: A fresh look with a focus on costs to workers*, Peterson Institute for International Economics policy brief number 17-16, May 2017; Christian Broda and David Weinstein, "Are we underestimating the gains from globalization for the United States?," *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, April 2005, Volume 11, Number 4.
109 For further details, see *Urban world: The global consumers to watch*, McKinsey Global Institute, March 2016.
110 *Global growth: Can productivity save the day in an aging world?,* McKinsey Global Institute, January 2015.
111 For further details, see *The power of parity: How advancing women's equality can add $12 trillion to global growth*, McKinsey Global Institute, September 2015.
112 *The future of women at work: Transitions in the age of automation*, McKinsey Global Institute, June 2019.

affected workers. Recent MGI research has shown that the labor share of income in the US private business sector declined by about 5.4 percentage points between the periods 1998 to 2002 and 2012 to 2016. Without such a decline since 1998, average worker pay might be about $3,000 per year higher.[113]

"Superstar" effects. Economic returns have become increasingly concentrated with the rise of superstar firms, sectors, and cities.[114] Over the past 20 years, the gap has widened between the top 10 percent of the world's largest firms by economic profit (superstar firms) and median firms. Superstar firms have 1.6 times more economic profit on average than superstar

[113] *A new look at the declining labor share of income in the United States*, McKinsey Global Institute, May 2019; *Making it in America: Revitalizing US manufacturing*, McKinsey Global Institute, November 2017.
[114] *Superstars: The dynamics of firms, sectors, and cities leading the global economy*, McKinsey Global Institute, October 2018.

Box 1

A (brief) history of the social contract and how it can change

The social contract is not a static construct, but one that has evolved throughout history. In ancient Greece, in about 400 BC, Plato's *Crito* and *The Republic* explore the notion that a legal system exists as a result of a type of contract between the individual and the state. Augustine and Aquinas discussed what it means to be a good citizen and explored the sphere of individual autonomy. The issue resurged in 17th-century Europe, with the question of how best to organize society and the place of the individual in a monarchy. It was notably debated by Thomas Hobbes and John Locke in England in the mid-17th century and by Swiss-born philosopher Jean-Jacques Rousseau in France a century later, in his 1762 book, *On the Social Contract*. The discussion has continued into our era; in *A Theory of Justice* (1971), John Rawls explored the principle of justice as fairness, to articulate a central idea that cooperation should be fair to all citizens, regardless of their family, ethnic, or other heritage.

Beyond these philosophical discussions, the social contract itself has evolved markedly over the centuries in the OECD economies we focus on in this report. Often, the most radical changes have taken place in periods of intense disruption, through war or revolution. At times, they have coincided with and been enabled by technological innovation.[1]

In the first half of the 19th century, during the first Industrial Revolution in England, real wages stagnated for roughly 50 years, from 1790 to 1840. During this period, first noted by economist Friedrich Engels in 1845 and since known as "Engels' pause," profits as a share of national income rose and the labor share of income declined.[2] Wages began to rise after the 1850s, which economic historians have attributed to improving labor productivity driven by the use of fossil-fuel-derived energy in place of human and animal labor.[3] From a social contract perspective, substantial reforms were introduced at the end of the 19th century that strengthened the right of individual workers in relation to their employers, a development accompanied by a significant increase in public-sector intervention. These reforms included the right to unionize,

1 For a detailed discussion of technology's impact through history, see chapter 1 of *Jobs lost, jobs gained: Workforce transitions in a time of disruption*, McKinsey Global Institute, January 2018.
2 Robert Allen, "Engels' pause: Technical change, capital accumulation, and inequality in the British Industrial Revolution," *Explorations in Economic History*, October 2009, Volume 46, Issue 4; for a discussion of historical wage trends, see Gregory Clark, "The condition of the working class in England, 1209–2004," *Journal of Political Economy*, December 2005, Volume 113, Number 6.
3 E. A. Wrigley, "Energy and the English Industrial Revolution," *Philosophical Transactions of the Royal Society: Mathematical, Physical, and Engineering Sciences*, March 2013, Volume 371.

limitations on child labor, the introduction of public high schools, urban planning to improve public health, elimination of debtors' prison, and the extension of the right to vote to landless workers.[4] In other words, the relationship between individuals and institutions shifted significantly toward concerted efforts that ultimately reduced individual responsibility for economic outcomes.[5]

By the end of the century, the beginnings of the modern welfare state were laid, in Germany, where Chancellor Otto von Bismarck implemented an old-age insurance program in 1889. Germany also introduced sickness insurance and a workers' compensation program; this comprehensive social welfare system provided a model for Britain's National Insurance Act and American New Deal legislation in the 1930s.[6] After the Second World War, many countries, especially in Europe, constructed or completed "cradle to grave" welfare states.[7]

Since then, notable evolutions have taken place. In the 1980s, US President Ronald Reagan and British Prime Minister Margaret Thatcher sought to reduce the role of the state, including by eliminating regulatory restrictions on the private sector. The collapse of Soviet Communism in 1991 and the accession of Eastern and Central European nations to the European Union a decade later entailed the embrace of a more market-based social contract in those countries.[8]

Moreover, over the past 50 years, the social contracts of men and women have been converging: the economic outcomes of most women were previously heavily dependent on their family situation (first parents, then husbands). Adjustments in the labor market and welfare systems have led to a drastic reorientation of women's social contract toward institutional counterparts.

4 Peter Mathias, *The First Industrial Nation: The Economic History of Britain 1700–1914*, New York, NY: Routledge, 2001.
5 Norman Gash, *Sir Robert Peel: The Life of Sir Robert Peel after 1830*, London, UK: Faber and Faber, 2011.
6 Wolfgang Mommsen, ed., *The Emergence of the Welfare State in Britain and Germany, 1850–1950*, London, UK: Routledge, 2018.
7 Nicholas Timmins, *The Five Giants: A Biography of the Welfare State*, London, UK: HarperCollins, 2001.
8 See Christopher Kirkland, "Placing the Thatcher reforms in the context of the capital/labour relationship," in *The Political Economy of Britain in Crisis: Trade Unions and the Banking Sector*, London, UK: Palgrave Macmillan, 2017; Linda J. Cook, *The Soviet Social Contract and Why It Failed: Welfare Policy and Workers' Politics from Brezhnev to Yeltsin*, Cambridge, MA: Harvard University Press, 1993.

firms did 20 years ago. We see the same concentration in superstar sectors: 70 percent of gains in gross value added and gross operating surplus have accrued to establishments in just a handful of sectors over the past 20 years. At the city level, superstar cities tend to be economic heavyweights, accounting for 8 percent of the world's population and 21 percent of global GDP. They tend to be among the most globally integrated and most innovative municipalities, and major financial hubs. Recent McKinsey Global Institute research suggests that there may be a "superstar ecosystem" with superstar sectors generating increased capital income for superstar firms, which contribute to increased concentration of wealth in superstar cities that have a disproportionately high share of asset-management activity and high-income-household investors.[115] These effects contributed to rapidly increasing housing prices in superstar cities, for example.

History holds many lessons about how the social contract has been perceived, how it can evolve, and what the outcomes can be. In the following chapters, we focus on the three arenas of the individual as worker, as consumer, and as saver to examine what has been changing in the first two decades of the 21st century.

115 *Superstars: The dynamics of firms, sectors, and cities leading the global economy*, McKinsey Global Institute, October 2018.

2 Individuals as workers

Work is a foundational component of the social contract, not just in our era but throughout history. How individuals contribute their labor, and how they are compensated for it, are themes that infuse philosophical and social treatises across the political spectrum, from Karl Marx to Friedrich Hayek, to name two of the multiple and varied voices on the topic. For many individuals, the labor market is key to their satisfaction—or discontent—with life. And the labor market is an economy's main instrument to share aggregate gains in the population.

There are several essential aspects of an individual's labor and the arrangements governing it as they relate to the social contract and individual expectations.[116] A critical starting point is access to work: can people find gainful employment? Second are the expected benefits (other than compensation) and quality of work: is there paid leave, including for maternity or paternity, for example, and is the work safe? What are the career development opportunities? One relatively recent development concerns the stability of work: is the job permanent or temporary, and how strong is the protection against being fired? A growing number of people are undertaking independent or "gig" work, either for the flexibility it brings or out of necessity. This can include part-time work as a way to supplement incomes. Finally, how well is the work compensated through wages and other income? Is this compensation commensurate with the skill and effort required? And does it enable the lifestyle to which individuals aspire? Recent MGI research into inequality suggests a widespread expectation that compensation will grow over time and will be distributed throughout society with some degree of fairness.[117]

In this chapter, we evaluate these expectations for workers in our sample of 22 OECD economies and the extent to which they have been met. Among the key findings are that employment is at record levels, and women, the elderly, and part-time workers have experienced the fastest growth. Much of this employment growth has affected high- and low-skill workers, however, with employment falling for middle-skill workers. Similar polarization has characterized wages, which have stagnated for middle-skill positions but grown for both high- and low-skill workers. Overall, income inequality has been increasing, and the rising levels of relative poverty indicate that workers at the lower end are falling behind, despite wage increases. These employment changes and wage developments are being driven in part by technological changes such as digital platforms, as well as by globalization. These turn out to be double-edged swords: technology, for example, has created new opportunities for job matching through digital platforms, even as it has accentuated the skills and wage polarization. At the same time, some institutional changes have also had an impact, for example by lowering employment protection and reducing collective agreements coverage.

[116] Sources we examined include the OECD's Better Life Index; Joseph Stiglitz, Amartya K. Sen, and Jean-Paul Fitoussi, *Measurement of economic performance and social progress*, 2009; the UN Human Development Index and Sustainable Development Goals; and Matthew Taylor, *Good work: The Taylor review of modern working practices*, UK Government, 2017.

[117] See *Poorer than their parents? Flat and falling incomes in advanced economies*, McKinsey Global Institute, July 2016, and *Inequality: A persisting challenge and its implications*, McKinsey Global Institute, June 2019.

Employment is at its highest level since 2000, with improved work benefits and quality

The past two decades have been turbulent ones on the labor market in many OECD economies, as economic growth stalled following the 2008 global financial crisis before recovering again, at times unevenly, in our 22 sample countries. In access to work and quality of work, two important aspects of the social contract, outcomes for individuals on the whole have improved. Employment has risen to its highest level since 2000, and workers see improved quality in lower stress, upgraded benefits such as parental leave, and more opportunities to develop their skills and careers through training.

Employment in 16 of our 22 sample countries is at a historical high, averaging 71 percent in 2018, but with large country variations

For the working-age population, between 15 and 64 years old, employment in the 22 sample countries grew by three percentage points—equivalent to some 45 million additional workers—between 2000 and 2018.[118] Employment rates are now at 71 percent of the working-age population on average, a historical high since 2000 (Exhibit 2).[119]

Employment rates in 2018 were higher than in 2000 in 18 out of 22 sample countries. The picture varies significantly among countries, however: Switzerland has the highest employment rate at 80 percent, while Greece has the lowest at 55 percent. Six economies are not at their highest levels of employment compared with 2000. Two of them, Denmark and Norway, nonetheless had high levels of employment, at 75 percent in 2018. Three others—Greece, Ireland, and Spain—have not yet fully recovered from the repercussions of the financial crisis. In the United States, although unemployment fell from 4.0 percent in 2000 to 3.9 percent in 2018, the decline was driven by a rising share of discouraged workers.[120] Many of these workers may be discouraged about finding work or may have dropped out due to illness and disability, among other reasons.[121]

31M

of the 45M additional workers employed between 2000 and 2018 are women

Of the 45 million additional workers employed between 2000 and 2018, 31 million are women (Exhibit 3). In 2018, female workers represented 46 percent of the total employed working-age population. Female employment rates increased by 6.3 percentage points between 2000 and 2018, with the highest growth occurring in Germany, Japan, the Netherlands, and Spain. Growth in female employment in this period is seen almost everywhere except Norway and the United States, where female working-age employment declined 1.3 and 2.2 percentage points, respectively. In the United States, the growth of female employment has been concentrated in certain roles that are in demand, primarily healthcare and social assistance. Recent MGI research suggests that demand for these roles could grow significantly by 2030.[122]

Between 2000 and 2018, employment rates for men stagnated on average in the 22 countries. In absolute terms, 14 million additional male workers were employed in this

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118 OECD Employment database.

119 Employment rate of 71 percent reflects the employed people in the working-age population (15 to 64) as a share of the working-age population. However, demographic factors play a role in the labor market. In all 22 countries, the share of the working-age population declined as a share of the population aged 15 and older. While the share of elderly people (65 and older) who are employed rose by 4.2 percentage points between 2000 and 2018, the share of the employed working-age population over the 15-and-up population declined by 1.4 percentage points. This occurred in 12 countries, ranging from a decline of 0.03 percentage point in the United Kingdom to a decline of 5.8 percentage points in the United States. By contrast, the employment rate increased in ten countries including Germany (4.8 percentage points), New Zealand (3.2), and Spain (3.2).

120 US Bureau of Labor Statistics, 2019. See Chad Bown and Caroline Freund, *The problem of US labor force participation*, Peterson Institute for International Economics, working paper number 19-1, January 2019.

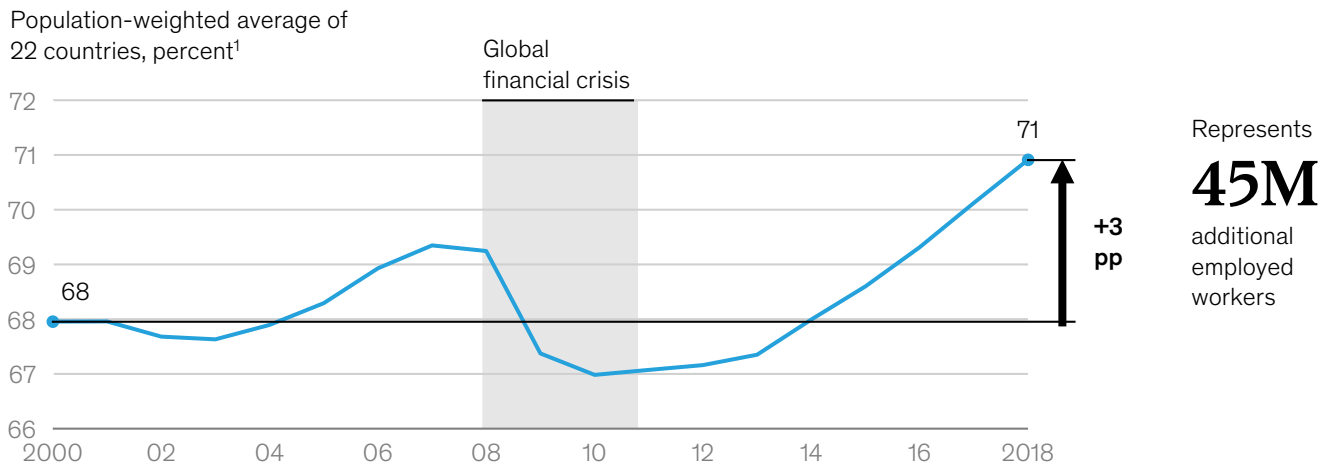
121 The rise in nonworking working-age persons may be due to early retirement, family care responsibilities, illness and disability, inability to move to areas with jobs, and being discouraged from finding jobs (for example, due to a lack of suitable jobs, lack of skills, or a criminal record). An alternative argument is that the quality of jobs (as measured by weekly wages) has declined and no longer meets the reservation wages of the working-age population, contributing to a rise in the nonworking working-age population in the United States. The reservation wage is the lowest wage at which a worker would accept a job. See Chad Bown and Caroline Freund, *The problem of US labor force participation*, Peterson Institute for International Economics, working paper number 19-1, January 2019; Edward Luce, "From financial crisis to inequality: How economists got it wrong," *Financial Times*, October 21, 2019; and Daniel Alpert et al., *The US private sector Job Quality Index*, Cornell Law School, November 2019.

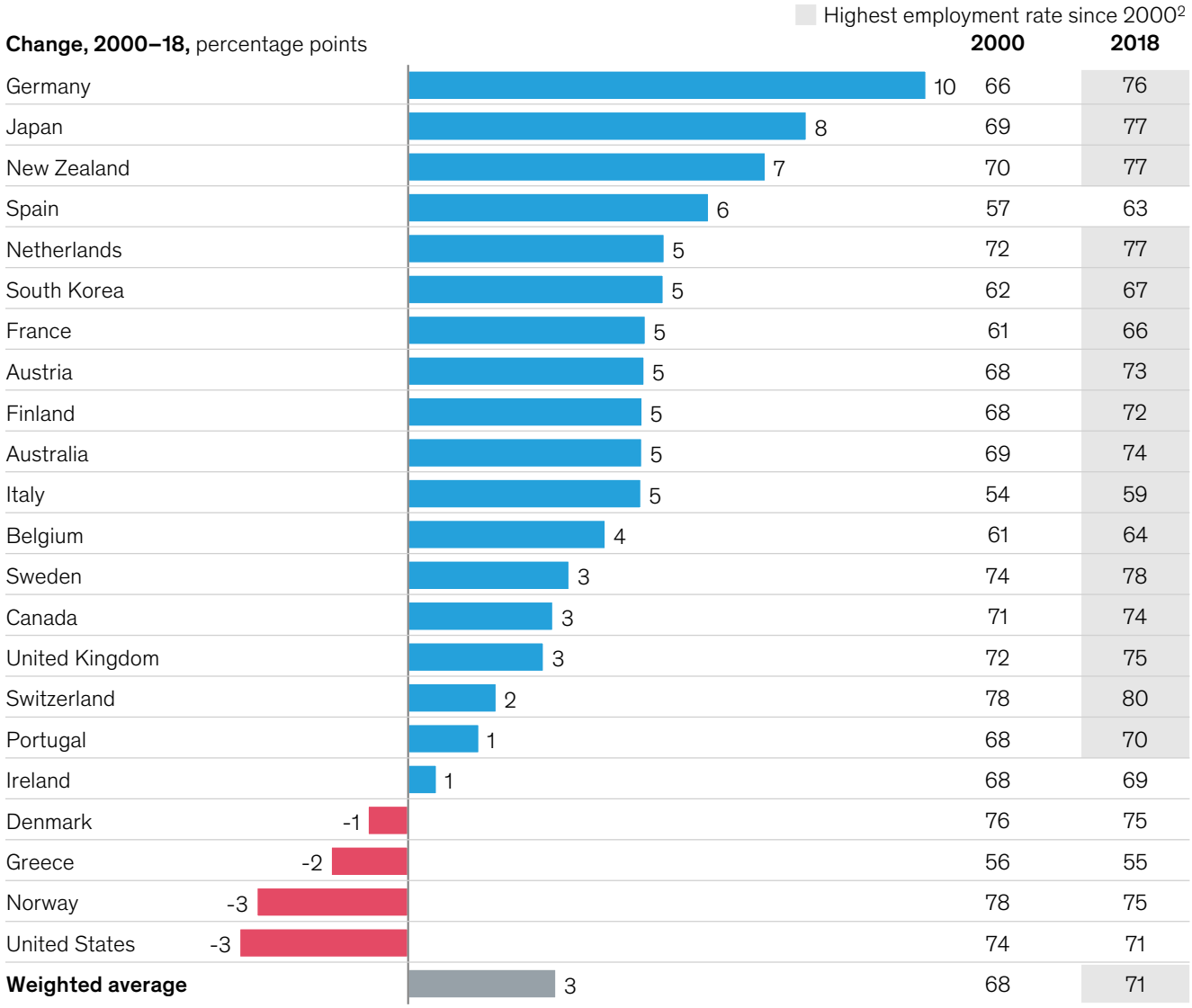
122 Occupational Employment Statistics, US Bureau of Labor Statistics; *The future of women at work: Transitions in the age of automation*, McKinsey Global Institute, June 2019.

Exhibit 2

Employment is at historically high levels and has recovered since the financial crisis in most countries.

Employment rate, percent of working-age population (15–64 years)





[1] Calculated as employed people in working-age population (15–64) as a share of working-age population. Weighted by employment rates for each country by their share of total population aged 15 and over.

[2] Denmark, Greece, Ireland, Norway, and Spain peaked in 2007–08; the United States peaked in 2000.

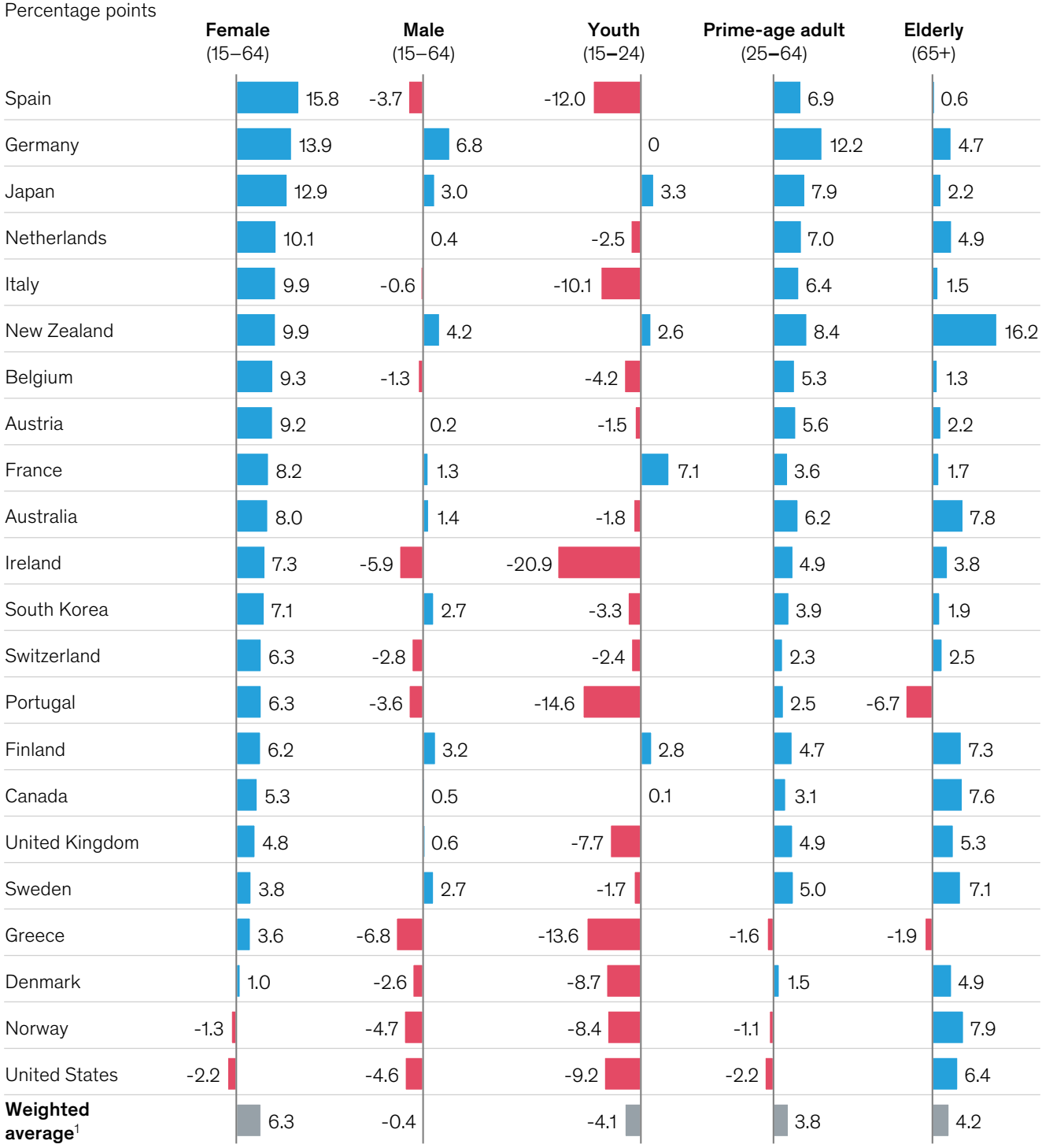
Note: Numbers may not sum due to rounding.

Source: OECD; McKinsey Global Institute analysis

Exhibit 3

Employment growth in most countries has been largely driven by women and prime-age adults.

Change in employment rate, 2000–18
Percentage points



[1] Calculated by weighting the employment share of each country by its share of the population aged 15 and older for all 22 countries.

Source: OECD; World Bank; McKinsey Global Institute analysis

period, although they represented a declining share of the total male working-age population. In 2018, male workers represented 54 percent of the total employed working-age population of 71 percent. Male employment increased in 12 out of 22 countries, most notably in Germany, where it rose by 6.8 percentage points. Declines were steeper in ten countries including Greece, Ireland, Norway, and the United States, which saw a decline of 4.6 percentage points in male employment.

Considering workers' ages also highlights significant differences. Employment increased for both prime-age (25 to 64 years old) and elderly (65 and up) adults on average in the 22 countries. Prime-age adult workers increased by 3.8 percentage points on average, equivalent to 49 million additional workers, although the numbers decreased in Greece, Norway, and the United States. Similarly, elderly workers increased their share of employment by 4.2 percentage points, from 10.5 to 14.8 percent, between 2000 and 2018, representing 14 million additional workers (over and above the 45 million additional working-age employees). The ratio declined only in Greece and Portugal. The increase in elderly employment is partly driven by higher retirement ages in some countries. In addition, although remaining in the workforce may be a choice for some older workers due to increased longevity and better health, many do not have enough savings set aside for retirement.[123]

4.1 pp

Size of decline in employment for young people aged between 15 and 24 in 2018 versus 2000

Employment declined for young people between the ages of 15 and 24 years, falling by 4.1 percentage points between 2000 and 2018 on average, equivalent to four million fewer workers. This was the case in 17 out of 22 countries. The declines in youth employment were particularly large in Ireland (20.9 percentage points), Portugal (14.6), Greece (13.6), Spain (12.0), and Italy (10.1). Finland, France, Japan, and New Zealand bucked the trend—in France, the increase was more than seven percentage points. This aggregate decline is partially driven by rising enrollment rates in tertiary degree programs, which are associated with improved labor market outcomes and therefore not necessarily a cause for concern. However, young people are more likely to be unemployed than workers aged 25 to 64 years, particularly in the Southern European countries where unemployment rates range from 20 to 40 percent for those aged 15 to 24.[124]

Workers have seen improvements in many aspects of work quality and benefits, but more is needed for 21st-century job quality

Along with the overall increase in employment, many workers say they are seeing improvements in a range of work benefits, including on-the-job training and leave, as well as greater flexibility to work remotely. Nonwage work quality and benefits merit a larger and deeper study, particularly regarding privately provided benefits in our 22 sample countries.[125] Due to data limitations, we use a few indicators, such as statutory benefits, as samples to illustrate trends.[126]

Work is seen as becoming less stressful. In 18 out of 19 countries surveyed by the OECD, workers report they are facing less strain in their jobs. In 2005, about one in three workers, 34 percent, said they faced more demands than resources to meet them, and in 2015,

[123] David Haass, "Retirement trends of baby boomers," *Forbes*, September 3, 2019; Bob Pisani, "*Baby boomers face retirement crisis—little savings, high health costs and unrealistic expectations,*" CNBC, April 9, 2019; Amelia Hill, "Work till you drop: When will you retire—and do you want to?," *Guardian*, January 30, 2017.

[124] See Martha Ross, *Decoding declines in youth employment,* Brookings Institution, June 1, 2016; Virginia Hernanz and Juan F. Jimeno, "Youth unemployment in the EU," *CESifo Forum*, June 2017, Volume 18, Issue 2, pp. 3–10; Jeremy Staff et al., "The Great Recession and recent employment trends among secondary students in the United States," *Longitudinal and Life Course Studies*, 2014, Volume 5, Number 2; OECD Labor Force statistics.

[125] In the United States, privately provided benefits represented 33 percent of total compensation for the median civilian worker in 2019. Total benefits include paid leave, supplemental pay, insurance, health insurance, retirement and savings, and legally required benefits. Employer costs for employee compensation: Compensation percentiles, US Bureau of Labor Statistics, June 2019.

[126] One method of measuring "job quality" includes the US Private Sector Job Quality Index, which measures the number of jobs paying above the weekly average wage divided by the number of jobs paying below the weekly average wage. This has declined since 1990, with the concentration of high-quality jobs falling from 94.9 in 1990 to 79.0 in July 2019. The authors also found that the gap in weekly average wages between high-quality and low-quality jobs has widened since 2004. Alternatively, Rodrik and Sabel define "good jobs" as positions that offer stable, formal employment with sufficient legal protections, enable at least a middle-class existence, and offer opportunities for progression.

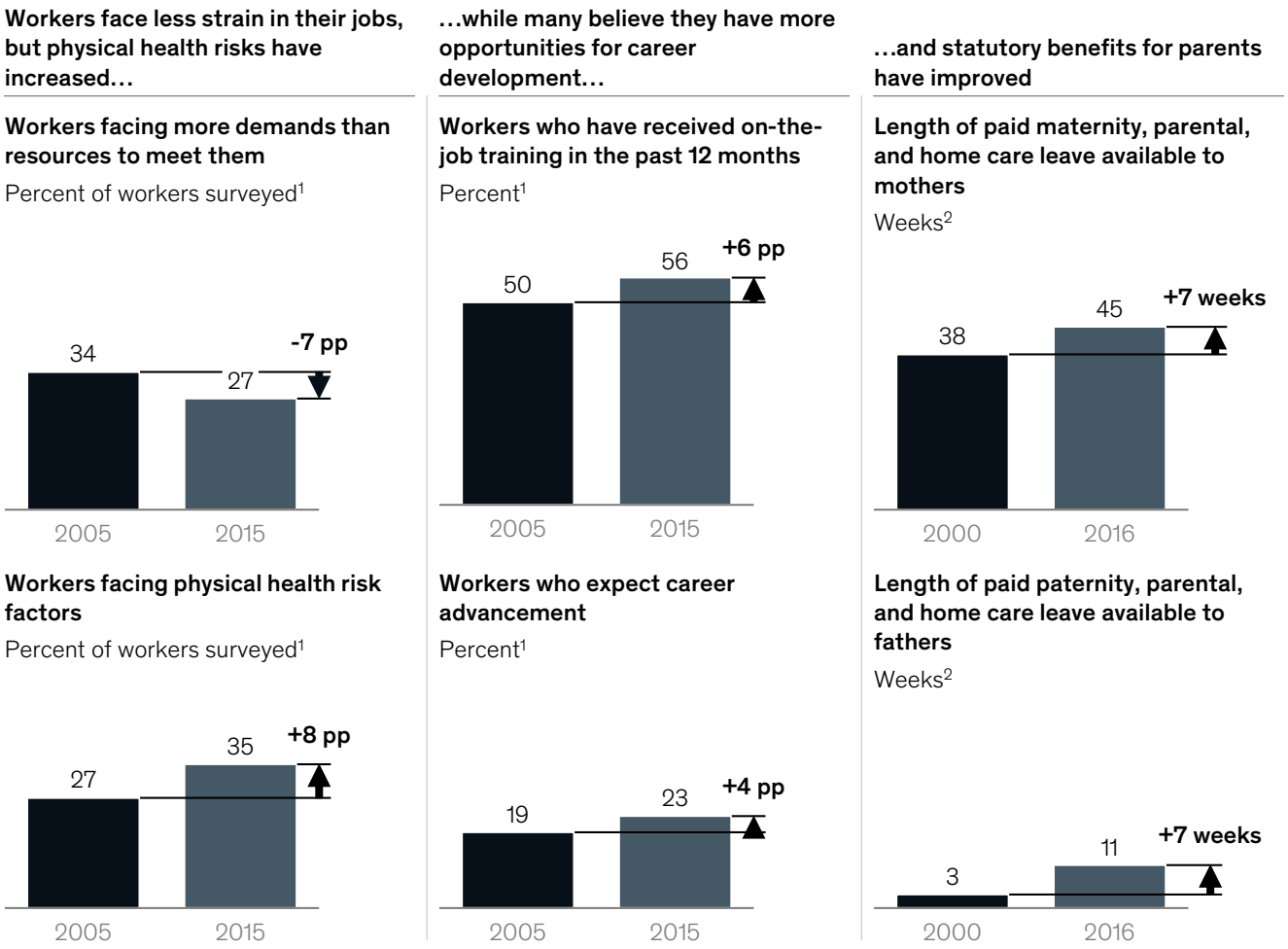
that had fallen to 27 percent on average, roughly one in four.[127] However, the share of workers experiencing physical health risk factors rose from 27 percent to 35 percent between 2005 and 2015. Although workers in 12 countries reported facing fewer physical health risk factors at work, there were substantial increases in the United States (26 percentage points), Australia (ten), and New Zealand (five).

More workers also report receiving increased on-the-job training and are more optimistic about their opportunities for job progression. Workers in 13 of the 19 countries surveyed by the OECD reported more training; on average, in 2015, 56 percent said they had received training in the previous 12 months, compared with 50 percent in 2005. The OECD also found heightened optimism about opportunities for job progression in 15 out of 19 countries (Exhibit 4).

Some benefits, including parental leave, have also improved. Maternity leave rose from 38 weeks in 2000 to 45 weeks in 2016, while paternity leave rose from three to 11 weeks over

Exhibit 4

Workers report more opportunities for career development in their jobs compared with the early 2000s, and statutory paid leave for both mothers and fathers has increased since 2000.



[1] N=19. Sample omits Canada, South Korea, and Switzerland. Weighted average for all countries, weighted by size of population aged 15 and older in all countries as a share of the total. Workers facing more demands than resources to meet them is "job strain," composite measure of physical health risk, on-the-job training, and career advancement, plus a number of other metrics.

[2] N=22. Number of weeks is simple average number of weeks for all countries in sample.

Source: OECD; McKinsey Global Institute analysis

[127] OECD Job Quality database, 2019.

the same period, on average for the 22 countries in our sample.[128] By 2016, workers in 21 of the countries had access to paid holiday days. The exception was the United States, which has no federal statutory minimum paid vacation or paid public holidays; in practice, most private employers offer paid vacation to employees.[129]

Despite these improvements, it is important to note that we do not have insight into how these benefits vary for full-time and part-time workers. Many part-time workers, and those in alternative arrangements, receive fewer benefits than full-time workers, particularly in job security, career development, and training, in addition to lower hourly wages. However, part-time workers typically have more flexibility in their working hours than full-time workers. As alternative work arrangements continue to grow, more will need to be done to measure and address the quality of jobs in these forms of employment.[130]

Independent work and new types of occupations are on the rise, enabled by digital innovation

Technology has opened up new opportunities for individuals to work independently, with digital platforms playing an especially significant role. Prior McKinsey Global Institute research estimates that between 20 and 30 percent of the working-age population, or more than 160 million people in the United States and 15 European Union countries, now engage in independent work. More than half of those working independently do so to earn supplemental income.

15%

share of independent workers currently using online marketplaces

Digital platforms are adding momentum to this development, thanks to the ubiquity of mobile devices, the enormous pools of workers and customers they can reach, and the ability to harness rich real-time information to make more efficient matches. About 15 percent of independent workers currently use online marketplaces, which are growing rapidly. Workers choosing to work independently report higher levels of satisfaction than not only those who need to work independently, but also those who choose more traditional jobs. Contrary to stereotypes, these independent workers span all demographic groups.[131]

In New York City, for example, about 13,500 yellow taxis were licensed to operate in the city for decades.[132] The rise of ride-hailing apps has seen the number of approved app-based transportation vehicles surge from about 12,000 in January 2015 to 80,000 in 2019—more than five times the number of licensed yellow cabs.[133] This rapid growth has enabled many ride-share workers to supplement their primary income. Yellow taxi drivers now face increased competition for rides and lower compensation, and many of these drivers have switched to ride-hailing apps.

Technological innovation more broadly has also created new types of work that did not previously exist, from drivers on ride-hailing apps and big data translators to professional video gamers and social media influencers. At the same time, growing automation adoption has proved disruptive for many workers, especially in highly susceptible sectors such as manufacturing; academic studies such as the work of Daron Acemoglu and Pascual Restrepo suggest that every robot per thousand workers in the manufacturing sector makes as many as six jobs obsolete.[134]

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128 The United States has no federal paid maternity leave policy, which our analysis captures. Some states, such as Massachusetts, require employers to provide unpaid maternity leave. Our analysis does not capture these state-level differences.

129 According to a Society for Human Resource Management survey, 97 percent of US organizations offer paid vacation or a paid time off plan. *2016 Employee Benefits: Looking back at 20 years of employee benefits offerings in the US*, Society for Human Resource Management, June 2016.

130 See *In it together: Why less inequality benefits all*, OECD, 2015; *Women at work: Trends 2016*, International Labor Organization, 2016; Anne Saint-Martin and Danielle Venn, "Does part-time work pay?," *OECD Observer*, 2010.

131 *Independent work: Choice, necessity, and the gig economy*, McKinsey Global Institute, October 2016.

132 Aarian Marshall, "New York City flexes again, extending cap on Uber and Lyft," *Wired*, June 15, 2019.

133 Ginia Bellafante, "Uber makes its pain New Yorkers' problem," *New York Times*, July 26, 2015.

134 Daron Acemoglu and Pascual Restrepo, *Robots and jobs: Evidence from US labor markets*, NBER working paper number 23285, March 2017.

Globalization, especially the build-out of value chains and labor-cost arbitrage that sometimes accompany it, has also taken a toll on some industries, occupations, and workers through outsourcing and offshoring. A lively debate is under way over the size and extent of that impact, and whether the impact of changing trade is larger than the effects from automation and other technological innovation.[135] A third disruptive trend for the labor market has been the environment of low economic and productivity growth following the financial crisis. For example, occupational shifts in Spain have led many skilled construction workers to accept lower-income jobs.[136]

As discussed below, while these trends have created myriad new opportunities in the labor market, they have also contributed to income stagnation and increased precariousness for many, and especially affected the demand for middle-skill workers.

Alternative work arrangements including part-time work have increased amid heightened polarization of the labor market and stagnant average wages

While employment overall has risen, the growth has been largely driven by alternative arrangements, such as part-time rather than full-time work (Exhibit 5). At the same time, full-time work declined in ten out of 21 sample countries, and by 1.4 percentage points on average.[137] The decline was steepest in the United States (Exhibit 6). In some countries and sectors, work that used to be full-time, permanent employment has changed in nature, with alternative work arrangements increasingly becoming the norm (see Box 2, "Alternative work arrangements are gaining in prominence, from 'zero-hour contracts' to 'workplace fissuring'").[138]

The rise in part-time employment was largely voluntary and translated into 23 million additional workers in the 16 out of 21 countries where it occurred, most notably in Austria, Germany, Japan, and the Netherlands.[139] The increase is typically attributed to the rising labor force participation of women who trade off increased flexibility for fewer working hours. This has contributed to the rise of dual-income families in advanced economies.[140]

Increased part-time work may be a conscious choice by some workers. However, according to the International Labor Organization, it has knock-on effects for the career prospects of many women. They include driving "occupational downgrading," or replacing high-skill, full-time work with lower-skill occupations that offer fewer hours and more flexibility yet fewer opportunities for career advancement and associated financial perks.[141]

2.1 pp

Decline in male full-time employment between 2000 and 2018. Female full-time employment rose 0.7 point in the same period

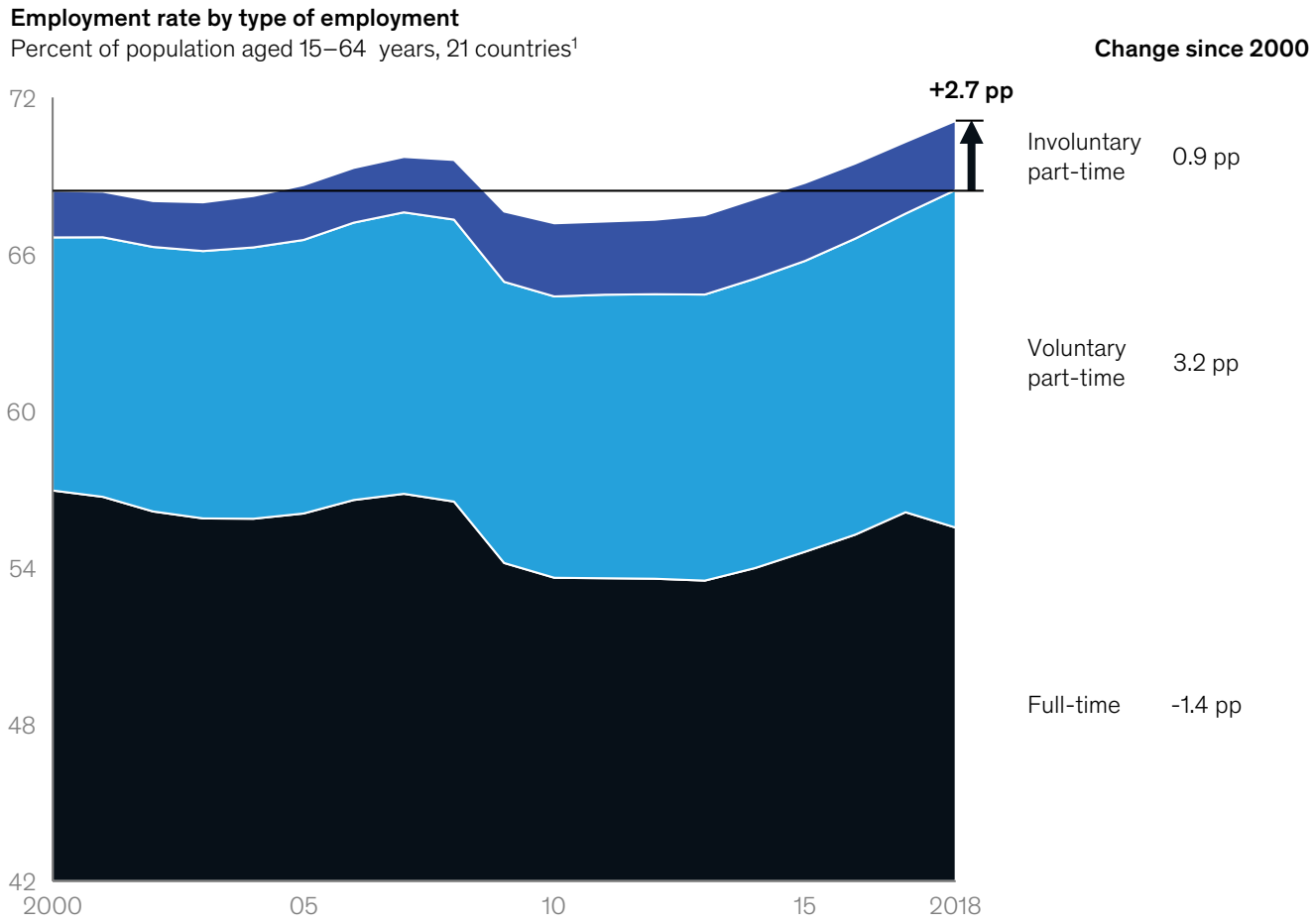
Involuntary part-time work also increased in 16 out of 21 countries by 0.9 percentage point between 2000 and 2018, driven by Italy and Spain, where this form of employment rose by 5.3 and 4.3 percentage points, respectively. According to the OECD, involuntary part-time employees want to work full time yet cannot find suitable jobs. The exceptions to this trend were Belgium, Canada, Japan, Norway, and Sweden.

The fall in male full-time employment drove the decline in full-time employment in 21 countries (excluding South Korea, for which there was no data). Between 2000 and 2018, male full-

135 David H. Autor, David Dorn, and Gordon H. Hanson, "The China shock: Learning from labor-market adjustment to large changes in trade," *Annual Review of Economics*, October 2016, Volume 8.
136 Pana Alves and Alberto Urtasun, "Recent housing market developments in Spain," *Economic Bulletin*, Banco de España, April 2019.
137 Exceptions are Belgium, Canada, Finland, France, Germany, Japan, New Zealand, Portugal, Spain, Sweden, and the United Kingdom. Data for South Korea not available.
138 Alternative work arrangements are work arrangements that differ from full-time, permanent employment, such as part-time work, temporary work, and self-employment. We focused on part-time work due to data limitations for other forms of alternative work arrangements (such as missing data and noncomparable populations of workers).
139 Voluntary part-time work is a technical term used by the OECD and refers to paid part-time work rather than to volunteering, which is typically unpaid.
140 Helen Barrett, "Employers baffled by dual-career couples with joint ambitions," *Financial Times*, June 15, 2018.
141 Sabine Laudage, "Part-time work and family building in OECD countries," *ifo DICE Report*, April 2015, Volume 13, Issue 1, pp. 46–49; *Women at work: Trends 2016*, International Labor Organization, 2016.

Exhibit 5

Employment growth has been driven by workers in both voluntary and involuntary part-time positions.



[1] Data missing for South Korea. Incidence of part-time work data are missing for Japan in 2000 and 2001 and for Ireland and Portugal in 2018. The latest available data has been used instead (e.g., 2002 for Japan and 2017 for Ireland and Portugal). Data for Ireland and the United Kingdom are missing for 2005 and 2008, so we have taken the average of the surrounding years (e.g., 2004 and 2006 for Ireland, and 2007 and 2009 for the United Kingdom). Data on full-time and part-time work missing for Australia in 2018; figures for 2017 used instead. Change in employment rate by type of employment calculated by taking absolute number of workers in each type of employment divided by total population aged 15 to 64 in the 21 countries, rather than weighting by the population aged 15 and older.

Source: OECD; Eurostat Labor Force Survey; McKinsey Global Institute analysis

time employment declined 2.1 percentage points, while female full-time employment rose 0.7 percentage point. However, male full-time employment represented 47.1 percent of the employed working-age population in 2018, higher than female full-time employment at 31.0 percent. Voluntary part-time employment grew for both men and women, rising 1.6 and 1.7 percentage points, respectively. In 2018, female voluntary part-time paid workers represented 13.0 percent of the employed working-age population in the 21 countries, compared with 5.2 percent for men (Exhibit 6).

Female involuntary part-time employment rose 0.6 percentage point, representing 2.5 percent of the employed working-age population in the 21 countries in 2018. Men also experienced an increase in involuntary part-time work, which rose 0.3 percentage point, representing 1.2 percent of the employed working-age population. Of the 21 countries, only Australia, Greece, and Spain followed the aggregate trend across all forms of employment. However, most countries experienced rising female employment across all forms of employment, while male part-time employment rose and male full-time employment declined.

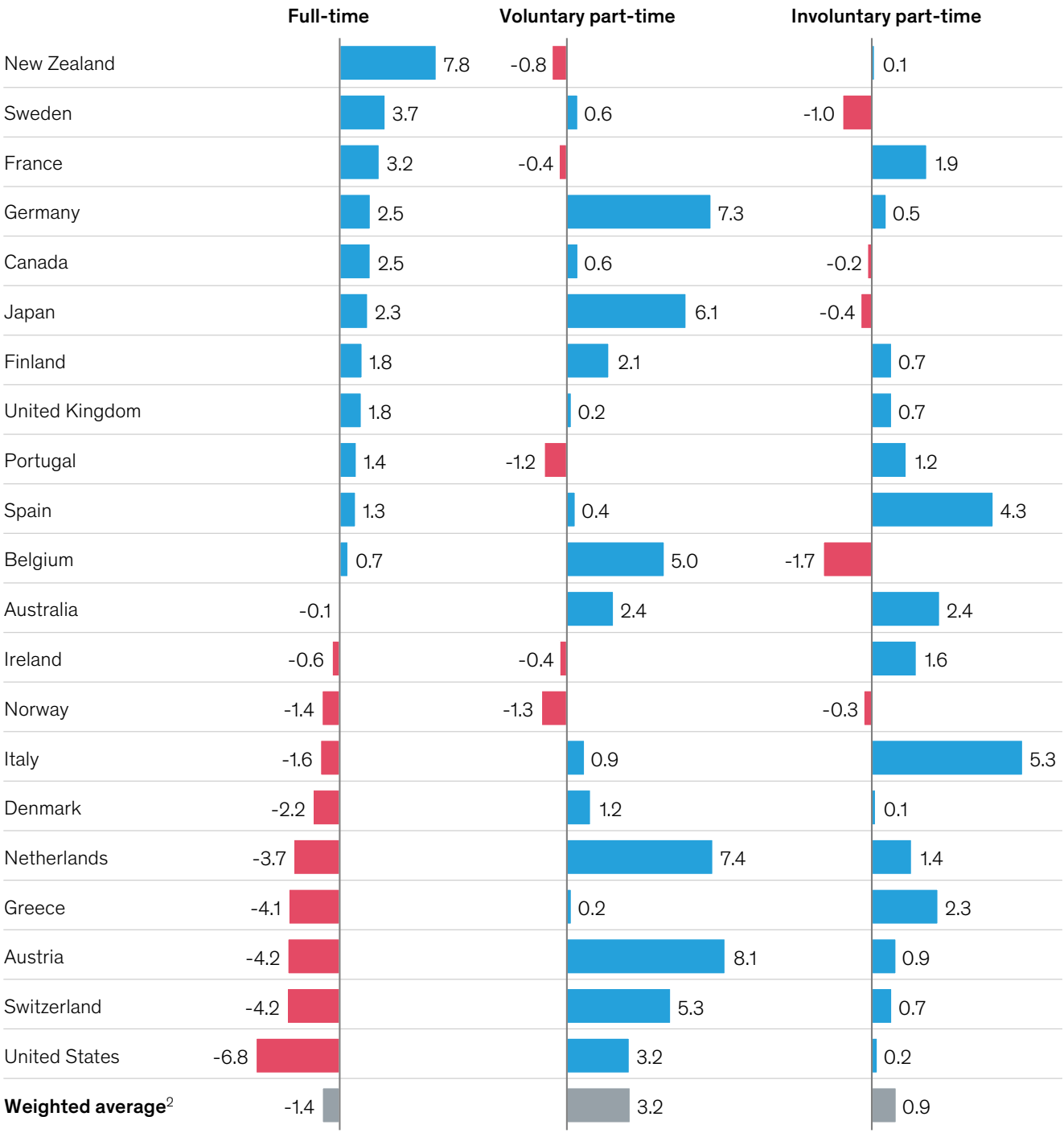
The share of workers on permanent contracts declined marginally by 0.1 percentage point between 2000 and 2018 on average in our 21 countries. However, this masks substantial

Exhibit 6

Full-time employment declined in many countries, while all other forms of employment increased, particularly voluntary-part time employment.

Change in employment rate,[1] 2000–18

Percentage points



12M
additional full-time workers, but share declined[2]

23M
additional voluntary part-time workers[2]

6M
additional involuntary part-time workers[2]

1 N=21. Excludes South Korea. Four million additional workers were employed in South Korea between 2000 and 2018.
2 Weighted average calculated by summing employed population divided by working-age population.

Source: OECD; World Bank; McKinsey Global Institute analysis

differences between countries. Temporary employment increased in 12 countries, most substantially in the Netherlands (7.8 percentage points) and Italy (6.9). In eight of these 12 countries, the share of male workers increased as a proportion of temporary workers, most substantially in Belgium and Norway. The share of female temporary workers increased, notably in Greece and Spain, by 6.9 and 8.7 percentage points, respectively. Permanent employment increased in nine countries, particularly in Spain (5.4 percentage points) and South Korea (4.6 percentage points).

The labor market is increasingly volatile. The employment rate for the working-age population in the 22 countries varied more between 2004 and 2018 than it did between 1990 and 2004. This was largely due to the 2008 financial crisis, which resulted in a sharp decline in employment rates, from 69.3 percent in 2007 to 67.0 percent in 2010. However, the post-crisis recovery has seen a substantial increase in employment rates, from 67.0 percent in 2010 to 70.9 percent in 2018. The increased volatility in 2004–18 compared with 1990–2004 was particularly notable for Greece. By contrast, the variability in employment rates declined in Sweden and Finland.

Workers face increased labor market risks.[142] According to the OECD's composite measure assessing the risk of job loss, the duration of unemployment, and the coverage provided by the welfare safety net, workers lost up to 4.5 percent of their previous earnings in 2016 compared with 3.4 percent in 2007 (Exhibit 7). These increased risks are particularly notable in Greece and Spain, where workers could lose up to 21.7 percent and 15.8 percent, respectively, of their previous earnings in 2016 compared with 6.6 percent and 4.2 percent in 2007.

In Spain, for example, 1.7 million jobs were lost in the construction sector, accounting for nearly half of all jobs lost between 2007 and 2013. Due to the nature of the required skills, many construction workers had difficulty finding equivalent jobs in other sectors, which put them at increased risk of long-term unemployment and even of dropping out of the labor market entirely.[143] By contrast, workers in Germany, Japan, and the United Kingdom faced lower levels of risk in the labor market. In these three countries, this was due to one or more of the following: lower risk of becoming unemployed, less time spent unemployed, and more generous unemployment benefits.

The labor market is increasingly volatile.

The employment rate for the working-age population in the 22 countries varied more between 2004 and 2018 than it did between 1990 and 2004.

[142] An alternative metric for labor market risk is income or wage volatility, which can be measured as the share of workers experiencing month-on-month variations in their income or year-over-year variations in income. Higher volatility related to income increases workers' uncertainty—and therefore risk—about whether their monthly or yearly income will meet their needs. However, due to data limitations, we could not assess income volatility in our sample countries.

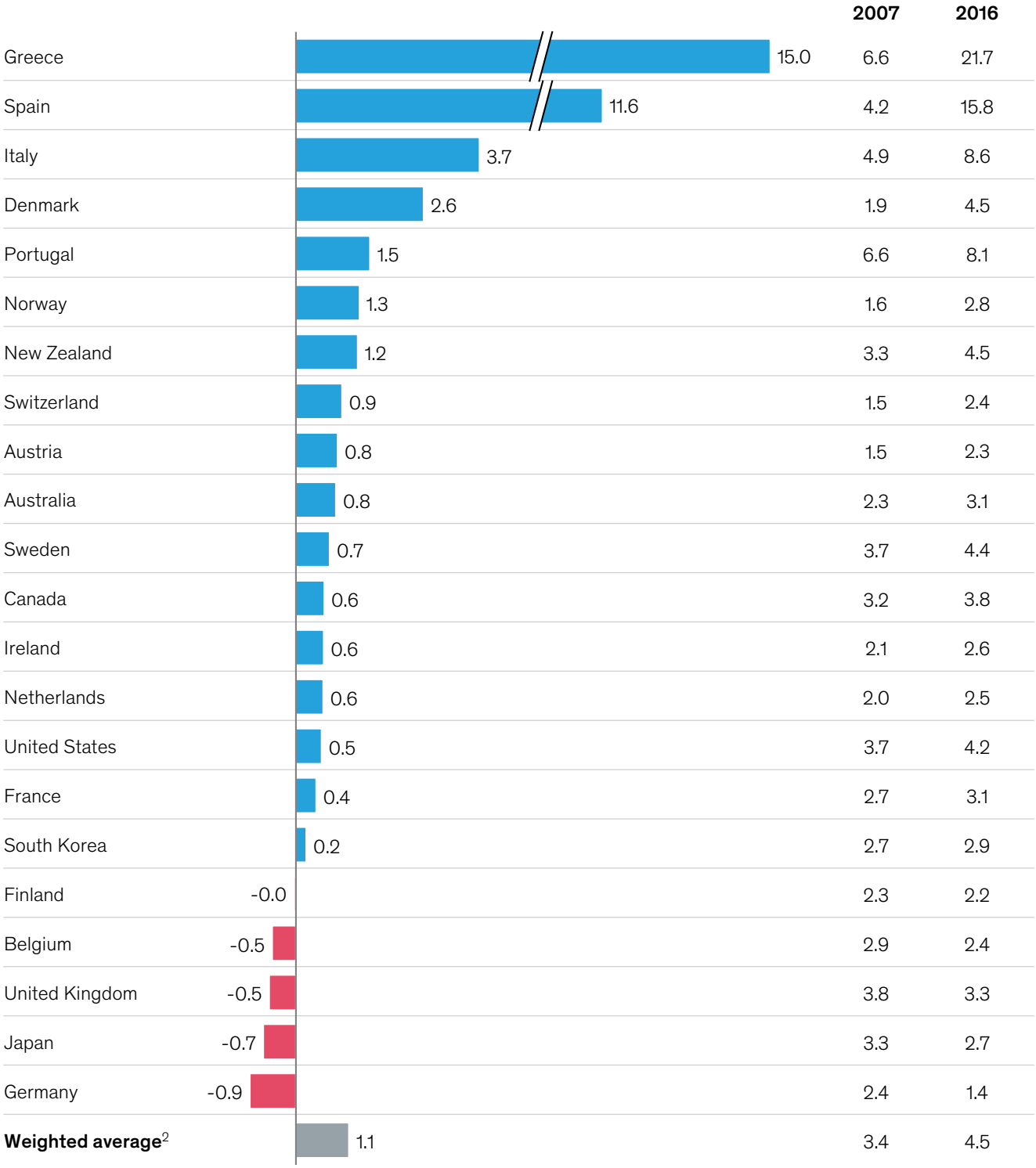
[143] Frédérique Cerisier and Alice Rustique, *Spain: Radical transformation of the labour market*, BNP Paribas EcoFlash, July 2017.

Exhibit 7

Periods of unemployment cost workers a larger share of their previous earnings in 2016 than in 2007.

Combined risk of becoming unemployed, duration of unemployment, and level of coverage provided by unemployment protection

Percent of previous earnings lost, percentage point change, 2007–16[1]



[1] OECD's measure of labor market insecurity calculates expected earnings loss associated with unemployment, which depends on risk of becoming unemployed, expected duration of unemployment, and degree of mitigation against these losses provided by government transfers to unemployed population (effective insurance).

[2] N=22. Weighted as a share of total population aged 15 and over in OECD countries.

Note: Numbers may not sum due to rounding.

Source: OECD; McKinsey Global Institute analysis

Box 2

Alternative work arrangements are gaining in prominence, from "zero-hour contracts" to "workplace fissuring"

Alternative work arrangements have gained in prominence over the past two decades, typically in the form of self-employment, temporary work, and part-time work. According to Eurofound, nearly one-third of European employees worked under alternative employment contracts in 2015.[1] The hourly pay for workers in these jobs may be lower than for full-time or permanent workers, and they are likely to lose out on additional benefits such as training, career development opportunities, and financial incentives such as bonuses, profit sharing, and overtime pay, among others. In the United States, workers in alternative arrangements may also lose out on healthcare benefits.[2]

Temporary work has increased substantially in Germany, for example. In 2016, approximately 5 percent of all employees worked as temporary agency workers, representing one million employees.[3] Most of these relationships are short-lived, according to official statistics: 31 percent lasted only a month, while 54 percent lasted less than three months. Only 12 percent lasted longer than 18 months.[4] In 2015, these temporary workers received wages 43 percent lower on average than the wages of core employees. Many of these workers are concentrated in low-pay sectors and, compared with permanent workers, face higher risk of losing their jobs. As a result, many temporary agency workers are at risk of relative poverty, even if they are employed. However, the German government has passed legislation aimed at ending abuse of these types of employment contracts, including restricting the length to 18 months and requiring temporary workers to receive the same pay as core employees after nine months.[5] Other reforms include implementing a national minimum wage and requiring companies to inform temporary workers of vacant positions.[6]

In the United Kingdom, "zero-hour" contracts—a form of employment under which workers are not guaranteed work yet must be available on demand for employers—have become increasingly controversial.[7] According to the Labor Force Survey, approximately 2.4 percent of the UK population was on these contracts in 2018, down from 2.9 percent in 2016. A survey of businesses indicated that the total could be as high as 6 percent, however.[8] The gap between the two surveys is largely due to methodological differences such as counting individuals whose primary jobs are zero-hour contracts, incorporating individuals with multiple contracts, or measurement errors. Zero-hour contract workers tend to earn 6.6 percent less per hour than employees on non-zero-hour contracts with similar characteristics and in similar roles, according to the Resolution Foundation.[9]

1 *Working conditions: Does employment status matter for job quality?*, Eurofound, 2018.
2 See *Women at work: Trends 2016*, International Labor Organization, 2016; *2016 employee benefits: Looking back at 20 years of employee benefits offerings in the US*, Society for Human Resource Management, June 2016.
3 Vinny Kuntz, "Germany's two-tier labor market," *Handelsblatt Today,* December 9, 2016.
4 Nathan Hudson-Sharp and Johnny Runge, *International trends in insecure work: A report for the Trades Union Congress*, National Institute of Economic and Social Research, May 2017.
5 See Walter Hanesch, *Reform of temporary agency work and service contracts in Germany*, European Social Policy Network Flash Report number 2017/05, European Commission, February 2017.
6 Nathan Hudson-Sharp and Johnny Runge, *International trends in insecure work: A report for the Trades Union Congress*, National Institute of Economic and Social Research, May 2017.
7 See Douglas Pyper and Feargal McGuiness, *Zero-hour contracts*, House of Commons Library, briefing paper number 06553, August 17, 2018.
8 Office of National Statistics, Business Survey, 2017.
9 *Zero-hour contract workers face a "precarious pay penalty" of £1,000 a year*, Resolution Foundation, December 30, 2016.

In the United States, a particular form of alternative work arrangement known as "workplace fissuring" has become increasingly prominent over the past two decades. It is defined as an arrangement in which workers are not employed by the company that benefits from their labor.[10] The phenomenon began with companies outsourcing noncore activities such as accounting and payroll, and has grown to include cleaning staff, security, and receptionists. Economists Larry Katz and Alan Krueger have estimated that the share of US workers on alternative employment contracts rose from about 11 percent in 1995 to 16 percent by 2015, with much of the change coming from workers employed by contract agencies.[11] According to economist David Weil, the rise of this form of work has contributed to increasing income inequality: as workplaces contract out a growing share of their activities, each supplier is expected to generate a financial return. Labor costs become an increasing share of overall costs further down the supply chain, which creates incentives to cut corners and pay workers lower wages.[12]

One example of how the nature of contracts has evolved can be found in the relations between airlines and their staff in the European Union since the early 1990s. Although the sector has seen significant growth and positive outcomes for consumers driven by competition, jobs in aviation that used to be prestigious, full-time, and permanent contracts with a single employer are being replaced with more complex forms of employment, including agency work, self-employment, and zero-hour contracts. The European Transport Workers' Federation says that "agency workers are far less likely to feel secure or enjoy work-life balance when compared with directly employed aircrew." [13]

This shift particularly affects low-cost airlines' cabin crews. As of 2019, 20 percent of cabin crew members and 18 percent of pilots in the European Union did not have a direct and permanent contract with a single carrier. These new contracts are overwhelmingly concentrated among low-cost airlines; 97 percent of cabin crew members contracted through an intermediary work for low-cost carriers. A majority of other airlines say they have not contracted aircrew through an intermediary (and saw no change in their organizations in this respect in recent years).[14]

10 See David Weil, *The Fissured Workplace: Why Work Became So Bad for So Many and What Can Be Done to Improve It*, Cambridge, MA: Harvard University Press, 2017.
11 See Lawrence F. Katz and Alan B. Krueger, "The rise and nature of alternative work arrangements in the United States, 1995–2015," *ILR Review*, March 2019, Volume 72, Issue 2.
12 See David Weil, "How to make employment fair in an age of contracting and temp work," *Harvard Business Review*, March 24, 2017.
13 *Briefing: Employment and working conditions in EU civil aviation*, European Parliament, April 2016.
14 *Study on employment and working conditions of aircrews in the EU internal aviation market*, European Commission, 2019; Ulrich Schulte-Strathaus, "Is the European Commission fulfilling its ambitious aviation strategy?," *Air and Space Law*, 2017, Volume 42, Issue 6.

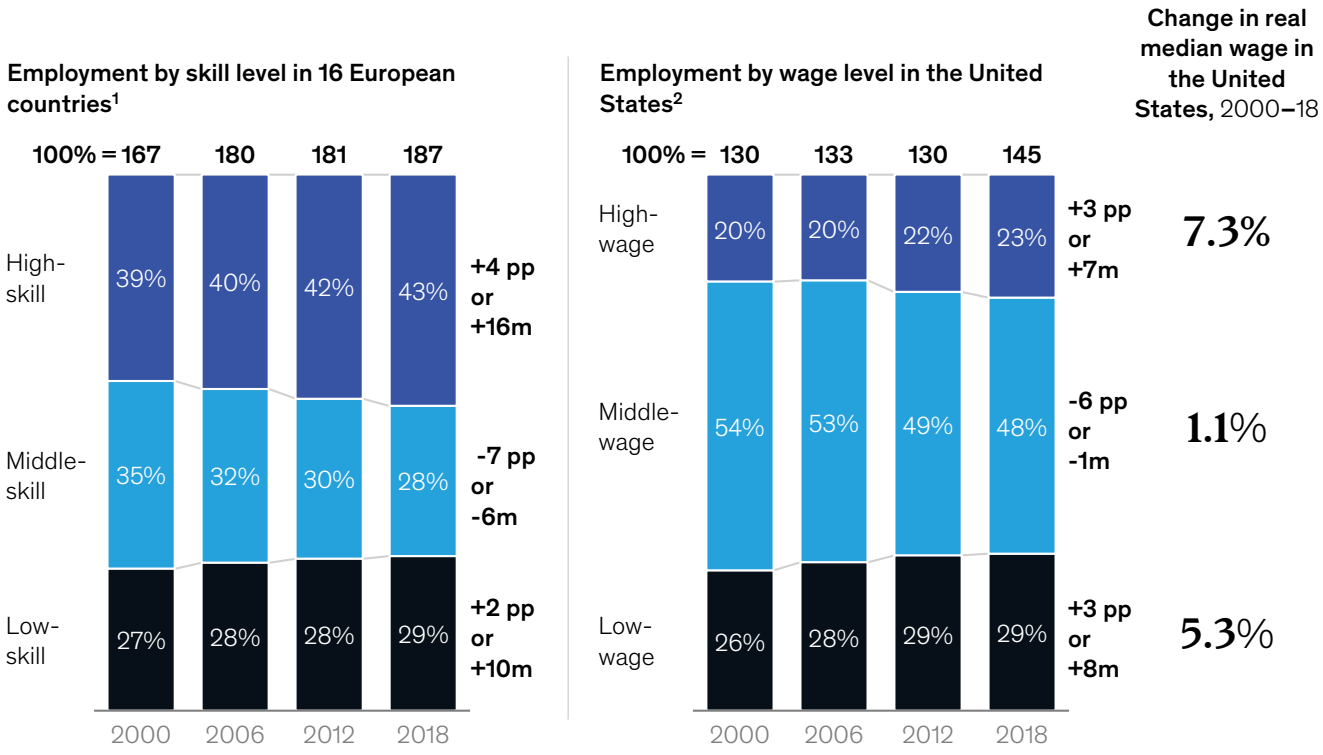
High-wage and low-wage jobs increased, but middle-skill, middle-wage positions declined, increasing income polarization

The employment picture in the countries in our sample varies considerably depending on workers' skill levels. Both high-skill and low-skill employment has increased, while the middle has been squeezed (Exhibit 8). Between 2000 and 2018, middle-skill occupations dropped by seven million jobs in 16 European countries and United States. (We use "middle-skill" and "middle-wage" interchangeably in this chapter to capture the polarization of the labor market in the United States and European Union.)[144]

Polarization is due in part to the shift from higher-productivity manufacturing to lower measured productivity service industry jobs, but the shift toward high-skill or low-skill jobs

Exhibit 8

Labor markets have been polarizing toward high- and low-skill occupations in Europe, and high- and low-wage occupations in the United States.



[1] N=16. Countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom.

[2] Annual or annualized median wages. Wage thresholds for 2018 were low, <$30,000; middle, $30,000–$60,000; high, >$60,000. For occupations that pay hourly, assumes a 40-hour workweek. OES data for US workforce is not fully comprehensive (e.g., excludes farming employment and self-employed).

Note: We recognize skill level and wage level are not always correlated, but due to data availability, we compare middle-skill jobs in Europe and middle-wage jobs in the United States. Percentage point change in the share of high-, middle-, and low-skill workers may not sum to 100% because of rounding.

Source: European Centre for the Development of Vocational Training (CEDEFOP); Bureau of Labor Statistics; Occupational Employment Statistics; McKinsey Global Institute analysis

[144] Most data sets measure skills on the basis of credentialed or professionalized abilities, educational attainment, grouping of occupation categories, or wage level, which tends to leave out skilled workers (such as artisans) whose skills are not measured in this way. Due to limited data across our sample and differences in classifying skills, we use "occupation category" and "wage" interchangeably to capture the polarization of the labor market in the United States and the European Union. For example, researchers such as David Autor recognize that middle-skill jobs are typically those in the middle of the wage distribution in the United States. David Autor, "Work of the past, work of the future," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 1–32. For the European Union, we have used the OECD's classification of high-, middle-, and low-skill occupations to divide workers into these categories.

within industries has been even more significant.[145] Between 2000 and 2018, middle-skill jobs declined seven percentage points in 16 European countries, while high-skill and low-skill jobs increased by four and two percentage points, respectively.[146] In the United States, middle-wage jobs declined six percentage points over the same period, while high-wage and low-wage jobs both increased by three percentage points.[147]

Income inequality has also increased; the top quintile's income share rose 1.2 percentage points between 2000 and 2016 to 41.1 percent. By this measure, income inequality increased in 12 out of 17 countries for which data are available; notable drops occurred in Belgium and the United Kingdom. In addition, relative poverty rates for the working-age population (after taxes and transfers) rose between 2000 and 2016 in 18 out of 20 countries for which data are available, with the exception of Australia and Ireland.[148] On average in the 22 countries, relative poverty increased from 11.1 percent, or 62 million people, to 12.8 percent over that period, representing 76 million people. Even countries that recovered relatively strongly following the global financial crisis, such as Germany, Norway, and Sweden, faced substantial increases in relative poverty rates.[149]

7.3%

Increase in wages for high-wage workers in the United States between 2000 and 2018

In the United States, median wage for middle-skill jobs (proxied by middle-wage jobs) grew by 1.1 percent between 2000 and 2018, whereas wages for high-skill and low-skill workers grew much faster, at 7.3 and 5.3 percent, respectively. Using Bureau of Labor Statistics major occupational groups, our analysis suggests that almost all middle-wage occupations, including office and administrative support, construction, and education and training jobs, faced slow employment, low wage growth, or both (Exhibit 9).[150] Exceptions were arts (and related fields) and protective services, as well as transportation to some extent. By contrast, three out of the four occupations that saw high employment and high wage growth were those paying annual salaries greater than $60,000. They included occupations requiring computer and mathematical skills, business and finance, and healthcare practitioners. Those in low-wage occupations such as healthcare support generally faced moderate employment, moderate wage growth, or both.[151]

The financial services sector in the United States is one example of an increasingly polarized workforce. Nearly 43 percent of financial services jobs have the potential to be automated by 2030.[152] Automation has the potential to affect both high- and low-skill jobs.

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145 Measuring productivity, particularly in service sectors, is a challenge. It is difficult to quantify output in many service sectors, especially healthcare and education, and quality improvements such as new technologies can be tough to capture. See the technical appendix for further information. In addition, according to Alpert et al., the overall decline in job quality in the United States since the 1990s has partially been driven by the decline in manufacturing jobs, which have largely been replaced by lower-quality service jobs. See *Solving the productivity puzzle: The role of demand and the promise of digitization*, McKinsey Global Institute, February 2018; Daniel Alpert et al., *The US private sector Job Quality Index*, Cornell Law School, November 2019.

146 One of the limitations of the data on occupational polarization is that we do not have longitudinal data that follows workers throughout their careers and tracks their changes across occupational categories. It is possible that many middle-skill workers are transitioning into higher-skill occupational categories, which may partially account for the growth in high-skill jobs and is not necessarily a negative development in the labor market. See the technical appendix for further information. See David Autor, "Work of the past, work of the future," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 1–32; *OECD employment outlook 2017*, OECD, 2017; and OECD Employment by Education Level, December 2019.

147 European Center for the Development of Vocational Training (CEDEFOP) Skills Forecast database, 2019; Occupational Employment Statistics, US Bureau of Labor Statistics, 2019.

148 Economists Gerald Auten and David Splinter have contradicted the existing literature on inequality, particularly in the United States. They argue that there has been little to no change in the after-tax income share of the top 1 percent. See the technical appendix for further information. Gerald Auten and David Splinter, "Top 1 percent income tax shares: Comparing estimates using tax data," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 307–11. See also, "Economists are rethinking the numbers on inequality," *Economist,* November 28, 2019.

149 We use relative poverty in place of national poverty measures because it is a standardized, comparable metric across OECD countries. The OECD definition reflects the share of the working-age population earning less than 50 percent of household median income.

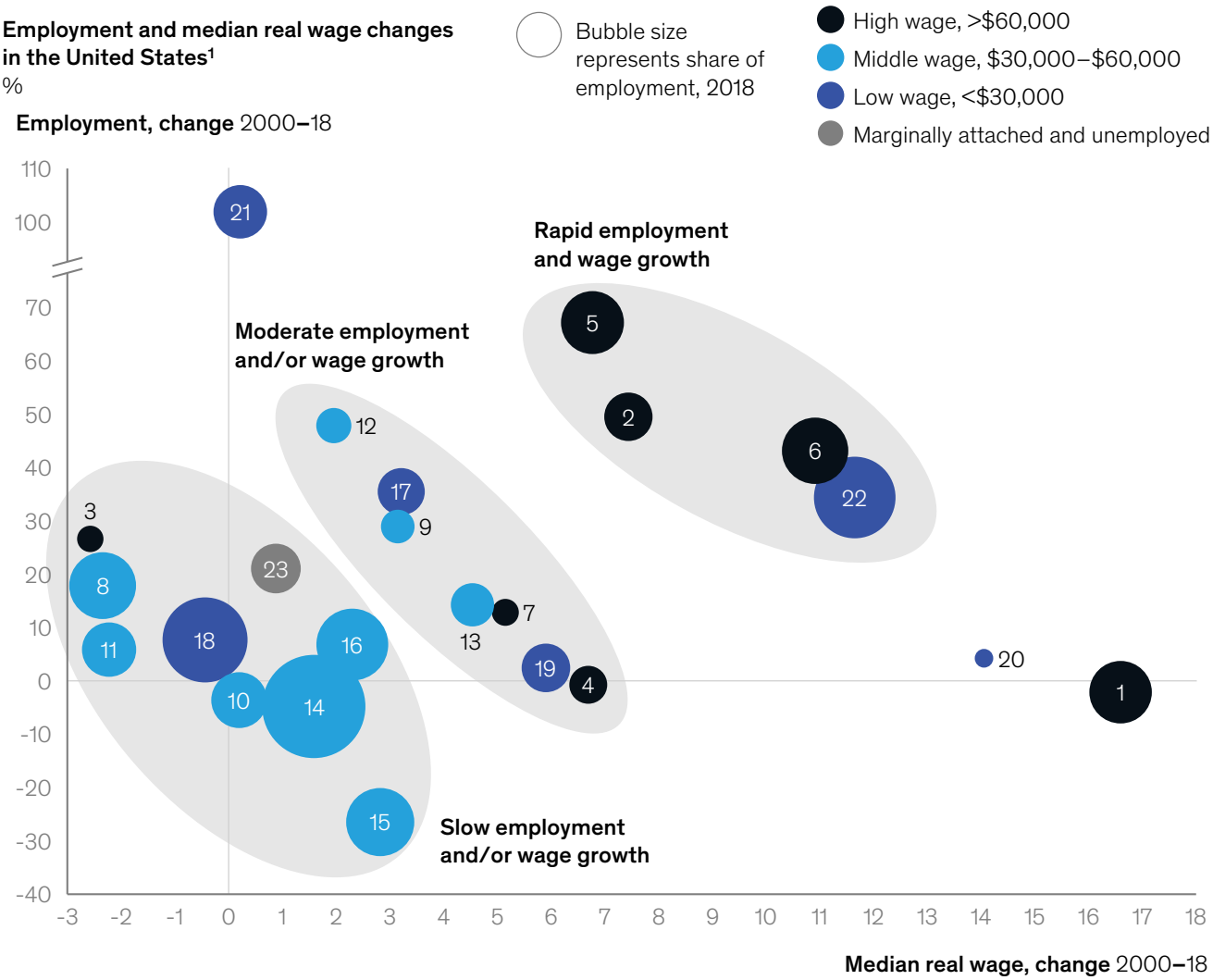
150 We used the US Bureau of Labor Statistics 2018 Standard Occupational Classification System, which aggregates thousands of occupations into 23 major groups. We excluded military-specific occupations to be consistent with other analyses of changes in employment or wages by employment.

151 Findings on the link between declining middle-skill jobs and the effect on wages are mixed. Some academics have found that the decline of middle-skill jobs has contributed to rising wages for low-skill jobs, thereby narrowing the gap between middle- and low-skill jobs. Other academics have found that job polarization has contributed to rising wage inequality, particularly between college-educated and non-college-educated workers. See the technical appendix for further information. See Michael Boehm, "Job polarisation and the decline of middle-class workers' wages," VoxEU, February 2014; David Autor, "Work of the past, work of the future," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 1–32.

152 *A future that works: Automation, employment, and productivity*, McKinsey Global Institute, January 2017.

Exhibit 9

In the United States, employment and wages rose for low- and high-wage occupations, while middle-wage occupations saw mixed employment growth and stagnating wages between 2000 and 2018.



Occupations
Highest to lowest 2018 wage

1. Management
2. Computer and mathematical
3. Legal
4. Architecture and engineering
5. Business and financial operations
6. Healthcare practitioners and technical
7. Life, physical, and social science
8. Education, training, and library
9. Arts, design, entertainment, sports, and media
10. Construction and extraction
11. Installation, maintenance, and repair
12. Community and social service
13. Protective services
14. Office and administrative support
15. Production
16. Transportation and material moving
17. Healthcare support
18. Sales and related
19. Building and grounds cleaning and maintenance
20. Farming, fishing, and forestry
21. Personal care and service
22. Food preparation and serving related
23. Marginally attached and unemployed

[1] Median real wage level in 2018; we proxied median wages for marginally attached and unemployed by using unemployment benefit replacement rate for single person with no children who earned average wage prior to losing their job.

Note: Total of 22 occupations: 6 low wage (29 percent of total employment), 9 middle wage (48 percent), and 7 high wage (23 percent).

Source: Bureau of Labor Statistics; Occupational Employment Statistics, 2018; OECD; McKinsey Global Institute analysis

Traditionally high-skill occupations such as equity traders are declining as financial services firms shift toward using trading algorithms and requiring software developers to manage their systems. Goldman Sachs estimates that it has automated 99 percent of equity trading jobs over the past 17 years by hiring high-skill software developers in place of equity traders.[153] At the same time, the rise of digital-only banks is forecast to affect demand for middle-skill bank tellers, spurring financial services firms to shift their workforce toward higher-skill IT jobs and lower-skill call-center positions, contributing to increased polarization within this sector.[154]

Incomes have stagnated for the average worker

The 2008 financial crisis and the low-growth and at times uneven recovery that followed have taken a toll on income growth across advanced economies. Productivity growth has also been sluggish. This economic weakness, together with increased competition for low- and middle-skill jobs, contributed to stagnating incomes for many.[155] Between 2000 and 2018, average real wages grew 0.7 percent per year on average in our 22 countries (Exhibit 10).[156] Average wages grew by less than 0.5 percent per year in Belgium, Spain, Italy, and Japan. In Greece and Portugal, average wages declined by 0.2 percent per year on average. In Ireland, New Zealand, Norway, and South Korea, average wages grew by 1.5 percent or more per year. Over the same period, GDP growth averaged 1.6 percent per year, ranging from 0 percent in Greece to 4.5 percent in Ireland.[157]

The aggregate wage growth figures mask substantial changes in average wage growth rates in the early 2000s compared with the late 2010s. In 1995–2000, average wages grew by 1.6 percent annually, but by 2013–18, the figure was 0.7 percent per year. Average real wage growth fell in 19 out of 22 countries during this period (the exceptions were Germany, New Zealand, and South Korea), with significant drops in Greece, Ireland, Portugal, and the United Kingdom.[158] Prior MGI research has shown that approximately 25 percent of individuals in six countries (up to 150 million people) faced real income declines between 1995—2005 and 2005—16 (Exhibit 11).[159]

153 Nanette Byrnes, "As Goldman embraces automation, even the masters of the universe are threatened," *MIT Technology Review*, February 7, 2017.

154 *Skill shift: Automation and the future of the workforce*, McKinsey Global Institute, May 2018.

155 See Era Dabla-Norris et al., *Causes and consequences of income inequality: A global perspective*, International Monetary Fund, 2015; Didem Tüzemen and Jonathan Willis, "The vanishing middle: Job polarization and workers' response to the decline in middle-skill jobs," *Economic Review*, Federal Reserve Bank of Kansas City, 2013; Adam Saunders, "Technology's impact on growth and employment," in *The Age of Perplexity: Rethinking the World We Knew*, Madrid, Spain: BBVA, Open Mind, Penguin Random House Grupo Editorial, 2018.

156 The US Bureau of Labor Statistics provides a breakdown of wages and nonwage benefits to estimate the total cost of employment. The median worker earns $0.40 per hour more in real terms in 2019 than in 2009, with wages and salaries declining from $18.80 per hour to $18.70 per hour, and benefits increasing from $8.70 per hour to $9.10 per hour. See the technical appendix for more information. See Employer costs for employee compensation: Compensation percentiles, Bureau of Labor Statistics, June 2019.

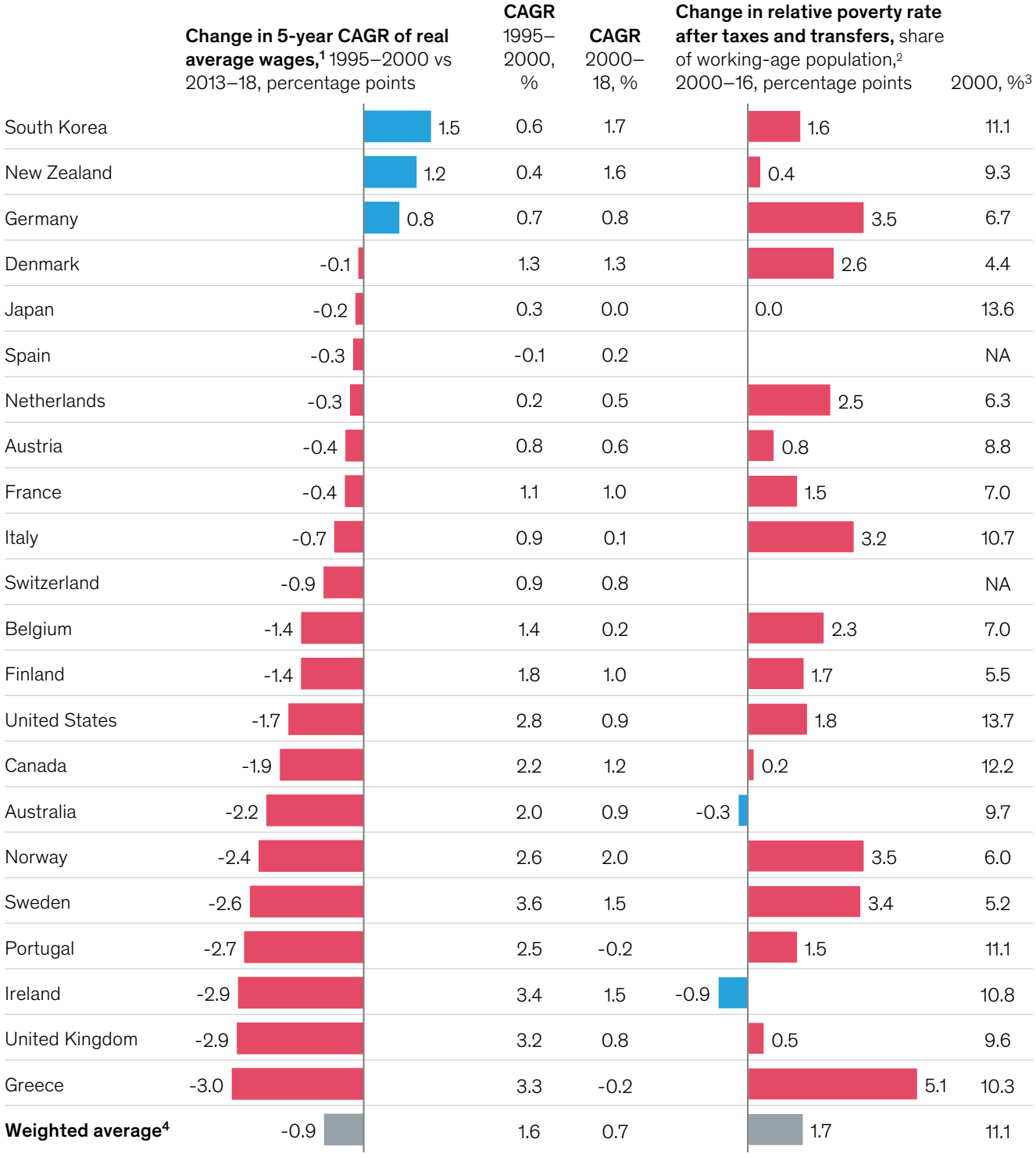
157 World Economic Outlook database, IMF, October 2019.

158 Recent statistics suggest that wage growth picked up in the United Kingdom and the United States, but the headline figures are typically quoted in nominal terms. In real terms, wage growth was lower in both countries. See the technical appendix for further information. See "UK wage growth picks up to 11-year high," BBC News, August 2019; Employee earnings in the UK: 2019, UK Office for National Statistics, October 2019; *Real average hourly earnings up 1.5 percent from August 2018 to August 2019*, US Bureau of Labor Statistics, September 2019.

159 *Inequality: A persisting challenge and its implications*, McKinsey Global Institute, June 2019.

Exhibit 10

Average real wages stagnated while relative poverty increased.



[1] N=22. Compound annual growth rate (CAGR) for average wages represents 5 years ending with date listed (e.g., 1995–2000 for 2000). Average wages are in 2018 dollars, which have been converted using average exchange rate for 2018 and CPI for 2018.

[2] Poverty rate after taxes and transfers is measured as share of working age population whose income falls below 50 percent of median household income of total population. Definition of poverty rate changes in 2012. To create a long time series, income definition prior to 2011 was used until 2011 and new income definition was used after 2012. Exceptions are Austria, Canada, and Finland, for which new income definition is available earlier than 2012. Data availability by country varies. Figures for most countries cover 2000–16. Exceptions are: Austria, 2007–16; Belgium, Portugal, Greece, 2004–16 ; Denmark, 2000–15; Finland, Norway, Sweden, 2000–17; Ireland, 2004–15; Japan, 2000–15; South Korea, 2006–17; New Zealand, 2000–14.

[3] 2000 or earliest year available.

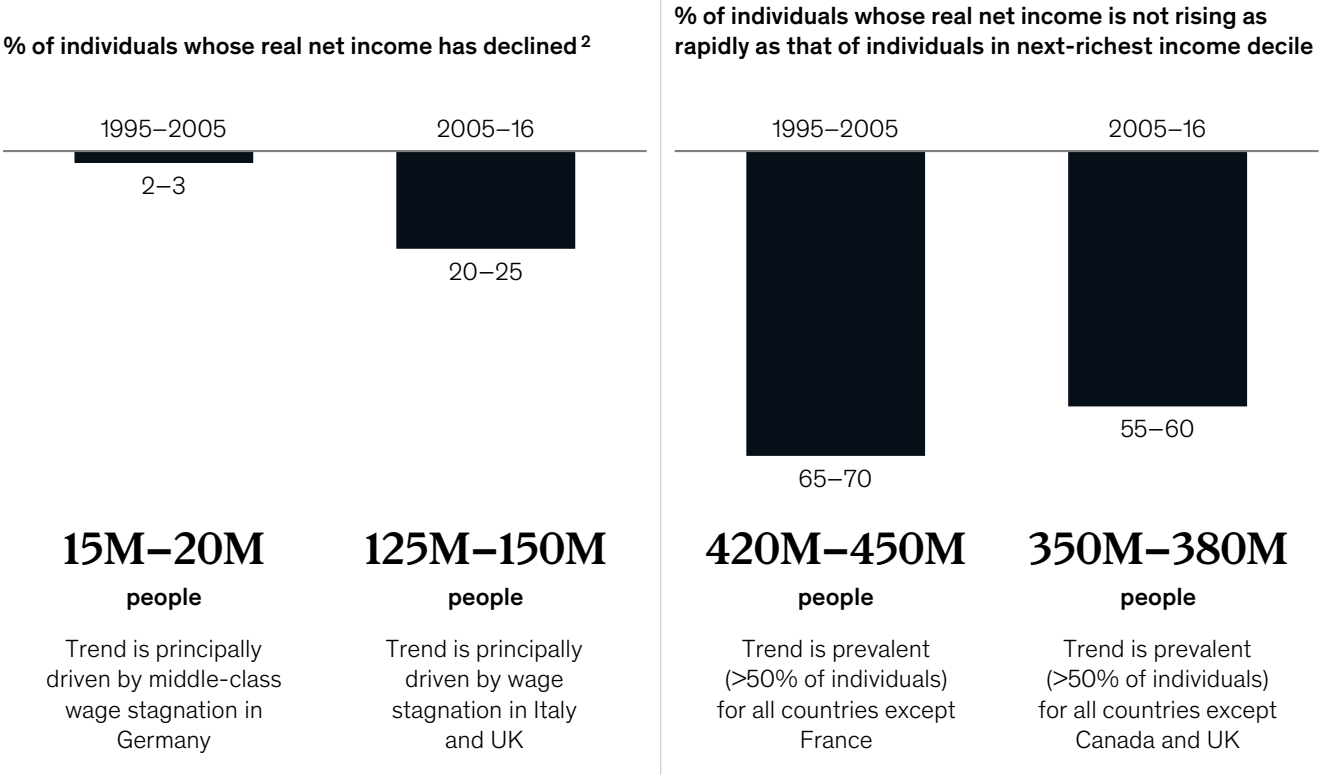
[4] Weighted average is average of full set of countries weighted by their share of total population aged 15 and over.

Source: OECD; McKinsey Global Institute analysis

Exhibit 11

Real net income fell for 20–25 percent of individuals in six countries, while wage growth concentrated at the top.

Canada, France, Germany, Italy, United Kingdom, and United States, 1995–2016[1]



[1] Sample includes Canada, France, Germany, Italy, UK, and US; outcomes shown are an average of sample countries, weighted by 2016 population. Calculated as percentage of deciles that saw average income rise slower than income of next-richest decile (i.e., 1 decile = 10%), between first and last year in specified time period, summed for all 6 G-7 countries included, and weighted by 2016 population.

[2] Real net income is defined as net income adjusted for inflation using OECD CPI rates where 2017=100; net income is defined in UNU-WIDER database as income concept recommended by the Canberra Group including employee income, income from self-employment, income less expenses from rentals except rental of land, property income, and current transfers received (e.g., social insurance benefits from employers' schemes).

Source: UNU-Wider Income Inequality database; OECD; Eurostat; World Bank; McKinsey Global Institute analysis

Similarly, median income grew by just 0.4 percent annually between 2000 and 2016. Annual growth rates dropped from 1.4 percentage points in 1995—2000 to 0.2 point in 2011—16, and in 16 out of 22 countries (except Austria, Belgium, Sweden, and Japan). Severe drops occurred in countries hit hardest by the global financial crisis: Greece, Spain, Ireland, and Italy. We do not have data on median wages for the sample countries over this period. Instead, we have used median equivalized net income as a proxy for changes in market incomes (both wages and income from capital) at the household level since the early 2000s. In addition to labor and capital income, median equivalized net income includes taxes paid to the government and transfers such as pensions, social security payments, disability or workers' compensation, and unemployment benefits paid by the government. Recent MGI research found that although real market incomes were flat or fell for 65 to 70 percent of households in 25 advanced economies between 2005 and 2014, government transfers and tax policies helped to alleviate some of the burden on households' disposable income. After taxes and transfers, 20 to 25 percent of households had flat or falling disposable income between 2005 and 2014, compared with 2 percent between 1993 and 2005.[160]

[160] *Poorer than their parents? Flat and falling incomes in advanced economies*, McKinsey Global Institute, July 2016.

In the context of challenging labor market conditions in the aftermath of the global financial crisis, public-sector spending for workers increased temporarily. Spending on public-sector wages, unemployment, incapacity, training, and active labor market programs increased from 14.0 percent of GDP in 2000 to 15.0 percent in 2012, before falling back to 14.1 percent in 2018, on average, in our 22-country sample. Between 2000 and 2018, spending on public-sector wages increased slightly, while spending on training as well as unemployment, incapacity, and active labor market programs decreased slightly.[161] However, spending on unemployment, incapacity, and active labor market programs increased 0.4 percentage point between 2000 and 2012. These relatively small increases in public-sector spending do not appear to have been sufficient in counteracting declining outcomes for individuals.

Changing employment arrangements have led to an increasingly flexible labor market

The disruptive trends outlined above have been accompanied by a shift in institutional arrangements that made labor markets more flexible and have increased the responsibility of individual workers for their own labor outcomes.[162]

Employment protection for both permanent and temporary workers decreased over the past two decades. In theory, reducing employment protections for workers can help make the labor market more flexible and dynamic, since it enables businesses to respond quickly to changes in the business environment, while also enabling workers to find the jobs that best match their skills. At the same time, lower employment protections are likely to increase the economic risks for workers, who are more vulnerable to job displacement during difficult economic times.[163]

Greater labor flexibility carries a human cost, including worse long-term economic outcomes, increased health problems, and lower trust among laid-off workers compared with their peers who were not laid off. A study by Columbia University found that employees who were laid off during the 1982 recession in Germany earned 10 to 15 percent less 15 years later than their counterparts who had not been laid off. In the United States, the magnitude was 15 to 20 percent. A study by the State University of New York found that laid-off employees have an 83 percent higher chance of developing a new health condition in the year after their termination than workers who were not laid off, while other studies have found that life expectancy declines among those who have lost their jobs. University of Manchester research found that workers in Britain who had been laid off were 4.5 percent less likely to trust other people than those who had not been laid off, an effect that persisted ten years later.[164]

Businesses face negative repercussions for laying off workers, including negative (and long-term) reputational costs, lower stock prices, and reductions in performance by employees who survive the layoffs. A study by the University of Wisconsin-Madison and the University of South Carolina found that layoffs affecting 1 percent of employees resulted in a 31 percent increase in voluntary turnover on average after the initial downsizing. Stockholm University and University of Canterbury researchers found that layoff survivors experienced a 41 percent decline in job satisfaction, a 36 percent decline in job commitment, and a 20 percent decline

[161] For further discussion of declining public-sector spending on training, see *Jobs lost, jobs gained: Workforce transition in a time of automation*, McKinsey Global Institute, December 2017.

[162] See Daron Acemoglu, *It's good jobs, stupid*, Economics for Inclusive Prosperity, policy brief number 13, June 2019.

[163] "Protecting jobs, enhancing flexibility: A new look at employment protection legislation," in *OECD employment outlook 2013*, OECD, 2013.

[164] Johannes F. Schmieder, Till von Wachter, and Stefan Bender, *The long-term impact of job displacement in Germany during the 1982 recession on earnings, income, and employment*, Columbia University Department of Economics discussion paper number 0910-07; Kate W. Strully, "Job loss and health in the US labor market," *Demography*, May 2009, Volume 46, Number 2, pp. 221–46; James Lawrence, "(Dis)placing trust: The long-term effects of job displacement on generalized trust over the adult life course," *Social Science Research*, March 2015, Volume 50, pp. 46–59; Jena McGregor, "Getting laid off can make people less trusting for years," *Washington Post*, March 19, 2015. See also Charlie O. Trevor and Anthony J. Nyberg, "Keeping your headcount when all about you are losing theirs: Downsizing, voluntary turnover rates, and the moderating role of HR practices," *The Academy of Management Journal*, April 2008, Volume 51, Number 2, pp. 259–76; Sandra J. Sucher and Shalene Gupta, "Layoffs that don't break your company," *Harvard Business Review*, May–June 2018.

in performance.[165] Other studies showed that layoffs adversely affect innovation (24 percent decline in new inventions after a layoff of 15 percent of staff at a Fortune 500 tech company) and increase defection of existing customers.[166]

The empirical evidence on reducing employment protection legislation suggests a mixed picture. A few notable studies indicate that strict employment legislation reduces employment, while others find no evidence of an increase in unemployment as a result of these policies.[167]

The OECD's Index of Employment Protection attempts to quantify the extent to which employment legislation protects against individual and collective dismissals. It covers 25 quantitative and qualitative indicators such as notification procedures, severance pay, and equal treatment of permanent and temporary workers, creating a composite metric ranging between 0 and 6, where 0 represents the lowest regulations and 6 represents the highest.

According to this metric, in the 22 countries in our sample, employment protection for permanent workers fell from 2.1 to 2.0 on average between 2000 and 2013. For temporary workers, it declined from 1.7 to 1.5 over the same period. This drop (or no change) was consistent except in Australia, Belgium, Denmark, France, and New Zealand for permanent workers, and in Ireland, New Zealand, and the United Kingdom for temporary workers.[168] This suggests that employment protection in the 22 countries is low and decreasing, which may have enabled companies to shed jobs during the global financial crisis. Lower employment protection after the financial crisis may have enabled companies to rehire workers at higher rates than pre-crisis peaks in most countries.

Employment protection for permanent workers declined in many countries between 2000 and 2013.

Another measure of the role of institutions is the proportion of workers covered by collective agreements. According to the OECD, collective agreements primarily cover wage levels and increases as well as nonworking conditions such as vacation arrangements, training, and employment protections, among other things.[169] These agreements can be negotiated at the firm, sector, or national level.

165 Magnus Sverke, Johnny Hellgren, and Katharina Näswall. "No security: A meta-analysis and review of job insecurity and its consequences," *Journal of Occupational Health Psychology*, 2002.

166 Sandra J. Sucher and Shalene Gupta, "Layoffs that don't break your company," *Harvard Business Review*, May–June 2018.

167 According to research by Bruno Amable and Ken Mayhew, employment protection is a double-edged sword. It enables companies to respond to fluctuations in demand, but it can cause companies to be reluctant to hire workers when economic conditions improve. See Bruno Amable and Ken Mayhew, "Unemployment in the OECD," *Oxford Review of Economic Policy*, Summer 2011, Volume 27, Issue 2, pp. 207–20; Edward P. Lazear, "Job security provisions and employment," *The Quarterly Journal of Economics*, August 1990, Volume 105, Number 3, pp. 699–726; "Protecting jobs, enhancing flexibility: A new look at employment protection legislation," in *OECD employment outlook 2013*, OECD, 2013.

168 OECD Employment protection, 2019.

169 *OECD employment outlook 2018*, OECD, 2018.

On average for the 22 countries, the share of workers covered by collective agreements declined from 44 percent in 2000 to 38 percent in 2017. This was true in 14 out of 22 countries, the exceptions being Denmark, Finland, France, and Switzerland, while Australia, Austria, Belgium, and Italy saw no change. Greece experienced the most substantial decline: the share of workers covered by collective agreements there fell from 100 percent to 25 percent. Austria had the highest share of workers at 98 percent in 2017. In the United States, where just 14 percent of workers were covered by collective agreements in 2000, that share fell to 12 percent by 2017.

Given that collective agreements primarily aim to increase wages and other forms of compensation for workers, numerous academics suggest that this decline may have contributed to wage stagnation and polarization in the labor market.[170] Moreover, the decoupling of wages from productivity is a continuation of a longer-term trend that started in the 1980s. It implies that wage development is more closely linked to individual productivity and the scarcity of skills rather than to a broader sharing of gains.[171]

Developments in the labor markets in OECD economies over the past two decades exemplify some of the paradoxes of the evolving social contract. On the one hand, employment is up, benefits have improved, and new opportunities beckon in the digital age. On the other hand, a growing number of workers, especially those in middle-skill occupations, are having a harder time keeping up. As we explore in the next chapter, the pressure on households that have not experienced much income advancement also comes from the rising prices of basic consumer goods, especially housing.

[170] See Ryan Nunn, Jimmy O'Donnell, and Jay Shambaugh, *The shift in private sector union participation: Explanation and effects*, The Hamilton Project, August 2019; "If wages are to rise, workers need more bargaining power," *Economist*, May 31, 2018.

[171] See Cyrille Schwellnus, Andreas Kappeler, and Pierre-Alain Pionnier, *Decoupling of wages from productivity*, OECD Economics Department working paper number 1373, January 31, 2017.

3 Individuals as consumers

Consumption ranks alongside labor as a core element of the social contract. The foremost issue is whether people can afford the basic necessities of everyday life, including housing, healthcare, and education, as well as food. Beyond that, within the constraints of income and savings, individuals expect to be able to sustain a certain level of discretionary consumption to achieve a decent standard of living. And they expect value for their money—that the quality of what they buy meets expectations. Economic progress for individuals thus manifests not only in the much-discussed employment opportunities and wage developments, but also in lower prices and in better access to and quality of goods and services.

In this chapter, we examine how individuals in advanced economies have fared as consumers over the past two decades by looking at these three aspects: prices and affordability, access, and quality. Our study covers nine goods and services categories, which together account for three-quarters of total consumption in 20 out of 22 countries in our sample for which comparable data are available.[172] The nine are communications, clothing, recreation, and furnishings, consumption of which is primarily discretionary in nature; transportation and food, which are mixed between discretionary and basic; and housing, healthcare, and education, which are primarily basic in nature.[173]

We find that several global trends, notably technological progress and globalization, have substantially reduced prices for discretionary goods and services. Technology-enabled ease of market entry and deregulation of some consumer product markets have also played a role in pushing down the cost of some goods and services, such as communications, by spurring competition. However, this decline in prices does not apply to key basic goods and services. Indeed, the cost of housing, healthcare, and education has risen faster than general consumer prices over the past two decades, and in many countries these price rises are absorbing a large share—and in some countries, all—of the income gains that average households have earned. Outside the United States (where healthcare also plays a big role), this is mostly attributable to housing, which accounts for almost one-fourth of household consumption. In part, this is because of housing supply constraints in the face of higher demand. For example, zoning laws continue to restrict housing supply in fast-growing cities, while social housing offerings are mostly decreasing.[174] This trend holds generally true in our sample countries, with some variations (Exhibits 12, 13, and 14). Changes in 15 European countries and the United States were fairly consistent, with the exception of transportation and healthcare. In Australia, consumer prices varied significantly, but the variation was modest in Canada and Japan. A look at France, Italy, and the United Kingdom shows how costs of discretionary goods and services declined relative to overall inflation, while housing was the primary driver of consumer price growth. Unlike discretionary goods and services, basics are primarily non-traded and operate in less competitive markets, in some cases with significant supply constraints despite growing demand.

[172] Other category not analyzed includes restaurant and hotels, alcohol and tobacco, and miscellaneous goods and services. Consumer price data for New Zealand and Switzerland not included.

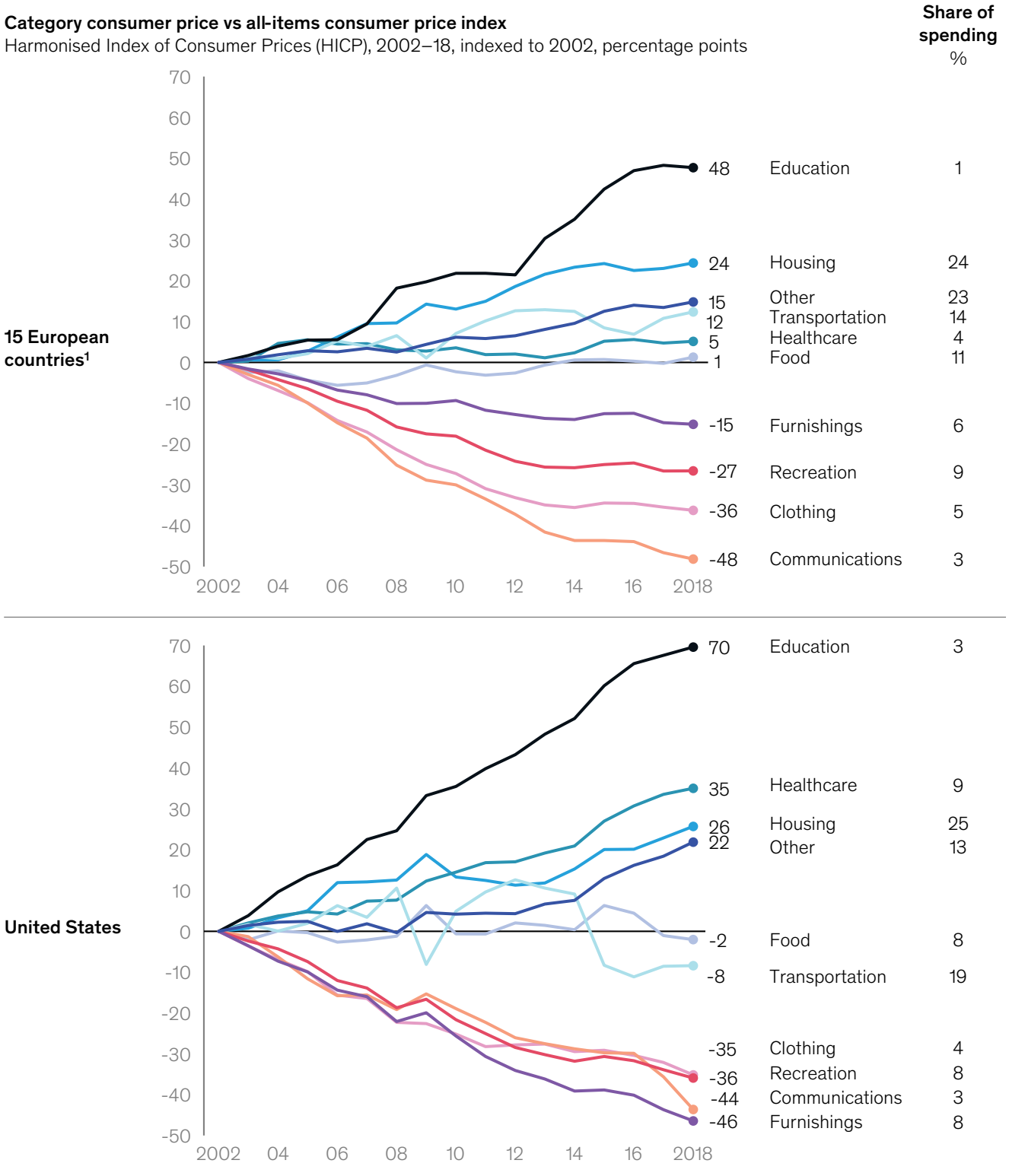
[173] Food and clothing are arguably basic goods, but in advanced economies, the share of spending that is basic in nature is quite small.

[174] Consumer prices of housing include actual rentals, maintenance, and utilities but exclude housing purchases or imputed rents (although house prices, rents, and mortgage interest costs could move differently over short periods, the relationship is strong in the long run). Healthcare consumer prices include medical products, outpatient services, and hospital services but exclude health insurance (which is part of miscellaneous goods and services). Education consumer prices include pre-primary and primary, secondary, post-secondary non-tertiary, and tertiary education as well as education not definable by level.

Exhibit 12

Consumer prices of discretionary goods and services such as communications fell significantly, while basics such as housing outpaced general consumer prices: changes in Europe and the United States were fairly consistent, except in healthcare and transportation.

Category consumer price vs all-items consumer price index
Harmonised Index of Consumer Prices (HICP), 2002–18, indexed to 2002, percentage points



[1] Consumption-weighted average of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, and United Kingdom (data not included for Switzerland).

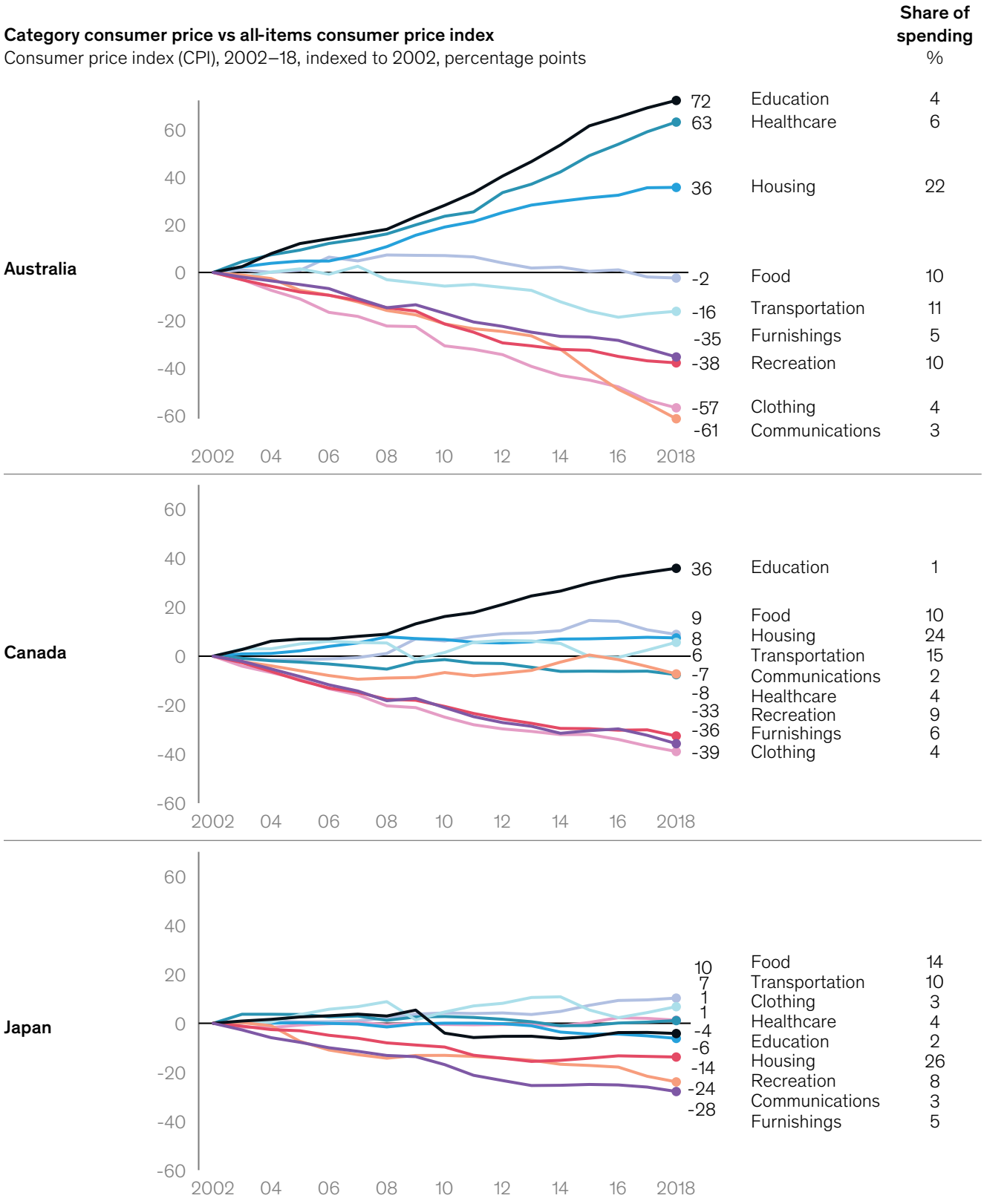
Note: Value of 0 can be interpreted as "consumer prices in this category match all-items consumer price index." Others category includes alcohol and tobacco, restaurants and hotels, and miscellaneous goods and services; omitted for Japan due to missing data, representing 25% of consumption. Housing includes actual rentals, maintenance, and utilities but excludes housing purchases or imputed rents. Healthcare includes medical products, outpatient services, and hospital services but excludes health insurance (which is part of miscellaneous goods and services). Education includes pre-primary and primary, secondary, post-secondary non-tertiary, and tertiary education, and education not definable by level.

Source: Eurostat; Harmonised Index of Consumer Prices; McKinsey Global Institute analysis

Exhibit 13

Consumer prices in Canada and Japan witnessed relatively moderate variations, compared with Australia.

Category consumer price vs all-items consumer price index
Consumer price index (CPI), 2002–18, indexed to 2002, percentage points



Note: Value of 0 can be interpreted as "consumer prices in this category match all-items consumer price index." Others category omitted due to missing data, representing 25% of consumption. Housing includes actual rentals, maintenance, and utilities but excludes housing purchases or imputed rents. Healthcare includes medical products, outpatient services, and hospital services but excludes health insurance (which is part of miscellaneous goods and services). Education includes pre-primary and primary, secondary, post-secondary non-tertiary, and tertiary education, and education not definable by level.

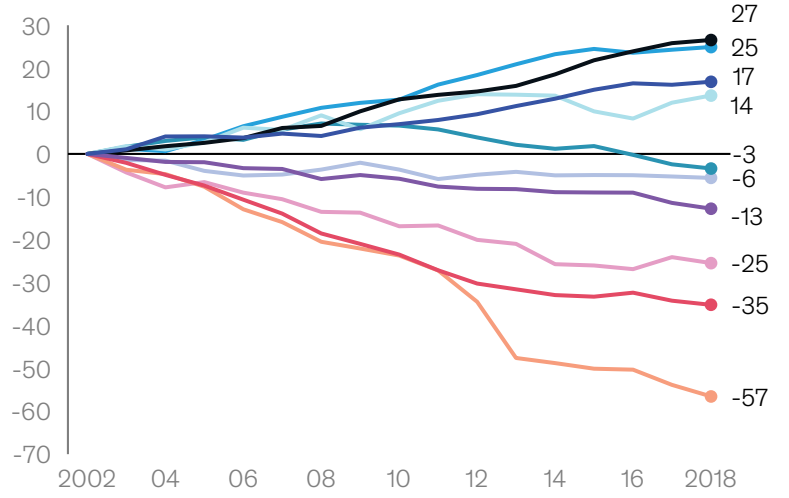
Source: Australian Bureau of Statistics; Statistics Canada; Japan Statistics Bureau; McKinsey Global Institute analysis

Exhibit 14

Consumer prices in 3 European countries: France and Italy witnessed relatively moderate variations between categories, while prices of education in the United Kingdom soared.

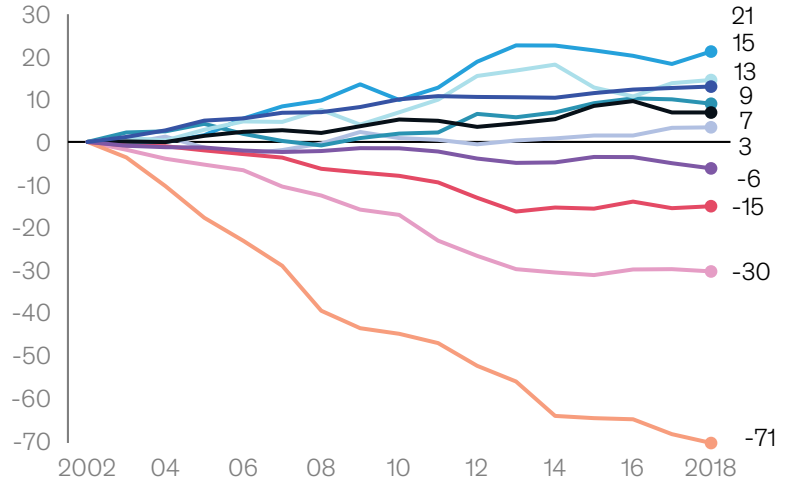
Category consumer price vs all-items consumer price index
Harmonised Index of Consumer Prices (HICP), 2002–18, indexed to 2002, percentage points

France



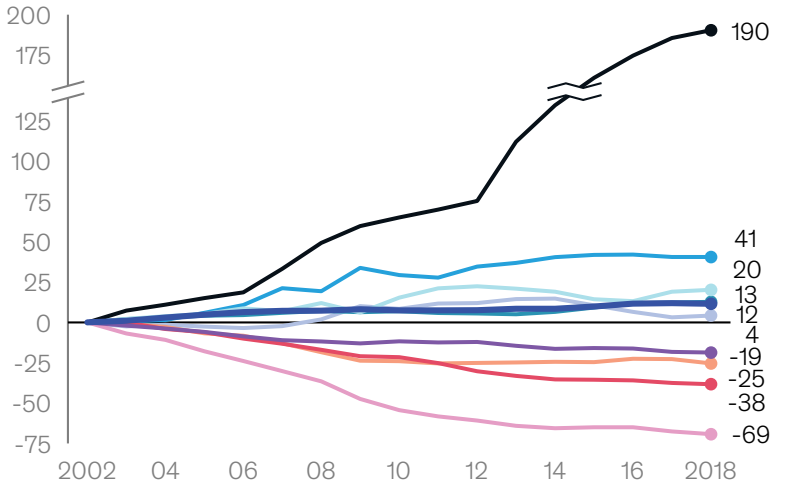
	Share of spending, %
Education	1
Housing	26
Other	22
Transportation	14
Healthcare	4
Food	13
Furnishings	5
Clothing	4
Recreation	8
Communications	3

Italy



Housing	22
Transportation	13
Other	23
Healthcare	3
Education	1
Food	15
Furnishings	7
Recreation	7
Clothing	7
Communications	2

United Kingdom



Education	1
Housing	27
Transportation	14
Healthcare	1
Other	26
Food	9
Furnishings	5
Communications	2
Recreation	10
Clothing	5

Note: Value of 0 can be interpreted as "consumer prices in this category match all-items consumer price index." Others category includes alcohol and tobacco, restaurants and hotels, and miscellaneous goods and services. Housing includes actual rentals, maintenance, and utilities but excludes housing purchases or imputed rents. Healthcare includes medical products, outpatient services, and hospital services but excludes health insurance (which is part of miscellaneous goods and services). Education includes pre-primary and primary, secondary, post-secondary non-tertiary, and tertiary education, and education not definable by level.

Source: Eurostat; Harmonised Index of Consumer Prices; McKinsey Global Institute analysis

3%

Decline in prices of discretionary goods and services in absolute terms between 2002 and 2018, a time when overall consumer prices increased by 33 percent on average, according to the ECB

Prices of discretionary goods and services have fallen due to technological innovation, globalization, and deregulation

Between 2002 and 2018, overall consumer prices increased by 33 percent on average in 20 countries, as measured by the European Central Bank's Harmonised Index of Consumer Prices and national consumer price indexes. The prices of discretionary goods and services (including communications, clothing, recreation, and furnishings), which constitute a 22 percent share of spending, declined in absolute terms by 3 percent.

Compared with the general price level, communications prices have fallen by 43 percentage points, furnishings by 33 percentage points, clothing by 31 percentage points, and recreation by 30 percentage points on average in the 20 countries. Prices decreased in absolute terms for communications, where clothing, furnishings, and recreation tracked general consumer prices.

Holding all else constant, the average person can work six fewer weeks a year (about 15 percent of total working time) and still consume the same amount in these categories in ten sample countries.[175] This has drastically improved affordability of and access to these goods; for instance, between 2012 and 2017, data usage surged tenfold in nine countries.[176]

These price changes were driven by productivity gains across the supply chain due to advances in technology and globalization.[177] With the rise of digital and mobile technology, in particular, the nature of consumption in discretionary goods and services is evolving rapidly, and innovative products and delivery methods including the sharing economy are bolstering access and quality in many categories.

A key driver has been the internet. The price of an internet connection has fallen—between 2012 and 2017, the cost of one gigabyte of data dropped by 89 percent in nine countries. This has unlocked a wealth of new consumption, often at low or no monetary cost to consumers, of products such as social media and information services, and has made it simpler to access goods. E-commerce has cut distribution and storage costs.[178] In other sectors, such as recreation, savings from automation are being passed on to consumers, leading to significant price decreases.

The sharing economy enabled by the spread of digital platforms has also introduced flexible methods of consumption in many categories of goods. For example, car sharing has allowed people to use a vehicle only when they need to, while e-commerce sites have given people access to a wider array of goods and services with quick delivery.

The combination of falling prices, better access, and improving quality has led to an increase in consumer surplus, the wedge between what consumers are willing to pay and what they do pay. One example is Skype, the cost-free international phone service, which saved consumers around the world $150 billion in international phone charges from 2005 to 2013, and about $37 billion in 2013 alone.[179] An OECD paper estimated that from 2006 to 2010, quality and price changes in the broadband market led to a $1,035 increase in consumer surplus per subscriber on average for 22 countries, or a growth of 52 percent annually.[180] Another study shows that median users would require compensation of $17,530 to forgo search engines for a year; similarly, users say they would need $8,414 to lose access to email and $3,648 to go without digital maps for that same period.[181]

[175] Holding constant volume of goods and services consumed, prices of other goods and services, and wages in real terms.
[176] Strategic Analytics data, 2018.
[177] For further details, see Susan N. Houseman and Michael J. Mandel, *Measuring globalization: Better trade statistics for better policy*, Volume 1, W.E. Upjohn Institute for Employment Research, 2015.
[178] Jean-Paul Rodrigue, "Comparison between retail and e-commerce cost structures for a $150 apparel piece," in *The Geography of Transport Systems*, fourth edition, New York, NY: Routledge, 2017.
[179] *Playing to win: The new global competition for corporate profits*, McKinsey Global Institute, September 2015.
[180] Shane Greenstein and Ryan McDevitt, *Measuring the broadband bonus in thirty OECD countries*, OECD, 2012. Refers to average increase in consumer surplus for Australia, Canada, France, Germany, Italy, Japan, Spain, Sweden, the United Kingdom, and the United States.
[181] Erik Brynjolfsson, Avinash Collis, and Felix Eggers, "Using massive online choice experiments to measure changes in well-being," *Proceedings of the National Academy of Sciences*, March 2019, Volume 116, Number 15.

Transportation is another area in which innovation has played a major role in improving quality and providing greater choice. Prices were relatively volatile within a limited band between 2002 and 2018 due to energy price changes related to the global financial crisis and to the rise and fall of oil prices during the commodity supercycle. Digital platforms have spurred a flurry of new transportation services including taxi sharing and smart electric scooters, among others. Other urban mobility tools have improved transportation services in major cities. For example, in New York, London and Tokyo, commute times could fall by up to 15 percent by 2025 thanks to real-time public transit information, predictive maintenance, intelligent traffic signals, and other innovations.[182]

Apart from innovation, globalization has increased competition in traded goods such as clothing and furnishings, which led to significant price improvements. China, Vietnam, and other emerging economies have become key lower-cost manufacturing centers, and this has both driven down prices and increased offerings to consumers. Imports in OECD economies grew from 22 percent of GDP in 1999 to 29 percent in 2018.[183]

Tech-enabled entry and deregulation in telecommunications, retail, and transportation markets created new competition

Alongside global forces such as technology innovation and globalization, institutional moves to deregulate markets for some discretionary goods and the reduction of trade barriers to allow competition to thrive have played a role in improving outcomes for consumers.

Between 2000 and 2013, the OECD index for product-market regulation fell for telecommunications, transportation (road and rail), and utilities (gas and electricity) by 33 percent on average for 22 OECD economies.[184] Retail price controls also fell by 26 percent during the same period, with the average score for 22 countries declining from 2.1 to 1.5 out of a maximum of 6.0.[185]

This deregulation occurred on several fronts but was concentrated on opening public monopolies to competition. One estimate finds almost 290 instances of major market access, market structure, or public sector reform in our 22 sample countries between 1980 and 2013.[186] For example, Germany alone underwent more than one major product-market reform every two years. This included privatizing national airline Lufthansa in 1998 and postal service Deutsche Post in 2001. Other reforms included liberalization of road and utility sectors, for example, by enforcing the opening up of local electricity grids to competitors in 1998. This deregulation increased competition and productivity and has driven down prices.[187]

Consumers have been among the biggest beneficiaries of industry disruption. In automobiles, for example, global consumer surplus for midsize cars increased by $30 billion between 2000 and 2014, equivalent to 23 percent of annual sales in the segment.[188] Between 2000 and 2010, the market price of a Toyota Camry in the United States fell by 1 percent a year, while $1,400 of content was added, with fuel efficiency improving.[189]

182 *Smart cities: Digital solutions for a more livable future*, McKinsey Global Institute, June 2018.
183 Imports of goods and services, World Bank, 2019.
184 The index measures product-market regulation on a scale of 0 to 6); the average of sector indexes fell from 3.1 to 2.1. Methodology for 2018 data has been changed and is not comparable to earlier periods.
185 Retail price control on goods such as milk, bread, tobacco, alcohol, and gasoline.
186 Romain A. Duval et al., *A narrative database of major labor and product market reforms in advanced economies*, IMF working paper number 18/19, 2018. The paper defines a reform as major if it meets one of three conditions: (1) the OECD Economic Survey uses strong normative language to define the action taken; (2) the policy action is mentioned repeatedly across different editions of the OECD Economic Survey; or (3) when available, the existing OECD indicator of the regulatory stance in the area considered displays a very large change.
187 Estimates show that productivity in product markets is 13 percent higher and prices 14 percent lower over the five-year period after a major reform. See Romain Bouis, Romain A. Duval, and Johannes Eugster, *Product market deregulation and growth: New country-industry-level evidence*, IMF working paper number 16/114, 2016.
188 *Playing to win: The new global competition for corporate profits*, McKinsey Global Institute, September 2015.
189 *Solving the productivity puzzle: The role of demand and the promise of digitization*, McKinsey Global Institute, February 2018.

Global competition and trade also bring disproportionate gains to lower-income groups. One estimate shows that on average, real income loss from closing off trade is 63 percent for the lowest income decile, compared with 28 percent for the highest income decile.[190] In the United States, the payoff from trade expansion, stemming from policy liberalization and improved transportation and communications technology, is estimated to have been $2.1 trillion between 1950 and 2016; this is equivalent to a GDP per household increase from $7,014 to $18,131.[191] Other research estimates that the United States received $260 billion in value from the increasing variety of goods arising from globalization between 1972 and 2001.[192]

Overall, price decreases are steepest in markets that are most exposed to technology, globalization, and deregulation, such as communications, while sectors less exposed to these trends have improved less significantly.[193]

The rising cost of housing absorbs a growing share of household income for many

Unlike discretionary goods and services, the cost of basics has been a major driver of the increase in consumer prices across countries in our sample. Of the 33 percent increase in general prices between 2002 and 2018 in 20 countries on average, housing alone explains 37 percent of the total increase (Exhibits 15 and 16). Given that housing represents by far the largest single category of spending—at 24 percent on average, with the proportion varying by country from 17 to 28—price changes have significant effects on consumers.

In the United States, more than in Europe, healthcare was an important driver of general consumer prices, representing 17 percent of the total change between 2002 and 2018. Education prices have increased notably in some countries, too. However, because education represents just a 2 percent share of spending on average, its effect on general consumer prices is relatively limited.

Looking at the three categories, relative to general consumer prices and unweighted by share of consumption, the costs of education, housing, and healthcare rose 52 percentage points, 21 percentage points, and 19 percentage points faster, respectively, from 2002 to 2018. Holding all else constant, consumers in ten sample countries would now have to work an additional four weeks a year to be able to afford the same amount of housing, healthcare, and education that they did two decades ago.[194]

These price increases for housing, healthcare, and education have offset increases in real income in many countries—increases that were already slowing, as discussed in the previous chapter. As shown in Exhibit 17, increased spending on basic goods and services eroded between 26 and 107 percent of incremental incomes in seven countries where real incomes rose in the period 2000 to 2017.[195] The United Kingdom saw the largest erosion at 107 percent of income gains, followed by France with 87 percent of incremental income. In six out of seven countries, housing was the largest driver of spending change; only in the United States was healthcare most significant.[196] Moreover, this erosion in incremental income was primarily driven by price changes; volume and other changes were relatively limited in most countries.

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190 Pablo Fajgelbaum and Amit Khandelwal, "*Measuring the unequal gains from trade*," *The Quarterly Journal of Economics*, August 2016, Volume 131, Number 3.

191 Gary Clyde Hufbauer and Zhiyao Lucy Lu, *The payoff to America from globalization: A fresh look with a focus on costs to workers*, Peterson Institute for International Economics policy brief number 17-16, 2017.

192 Christian Broda and David Weinstein, "Are we underestimating the gains from globalization for the United States?," *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, April 2005, Volume 11, Number 4.

193 For further discussion of competition, see *Globalization in transition: The future of trade and value chains*, McKinsey Global Institute, January 2019.

194 Holding constant volume of goods and services consumed, prices of other goods and services, and wages in real terms.

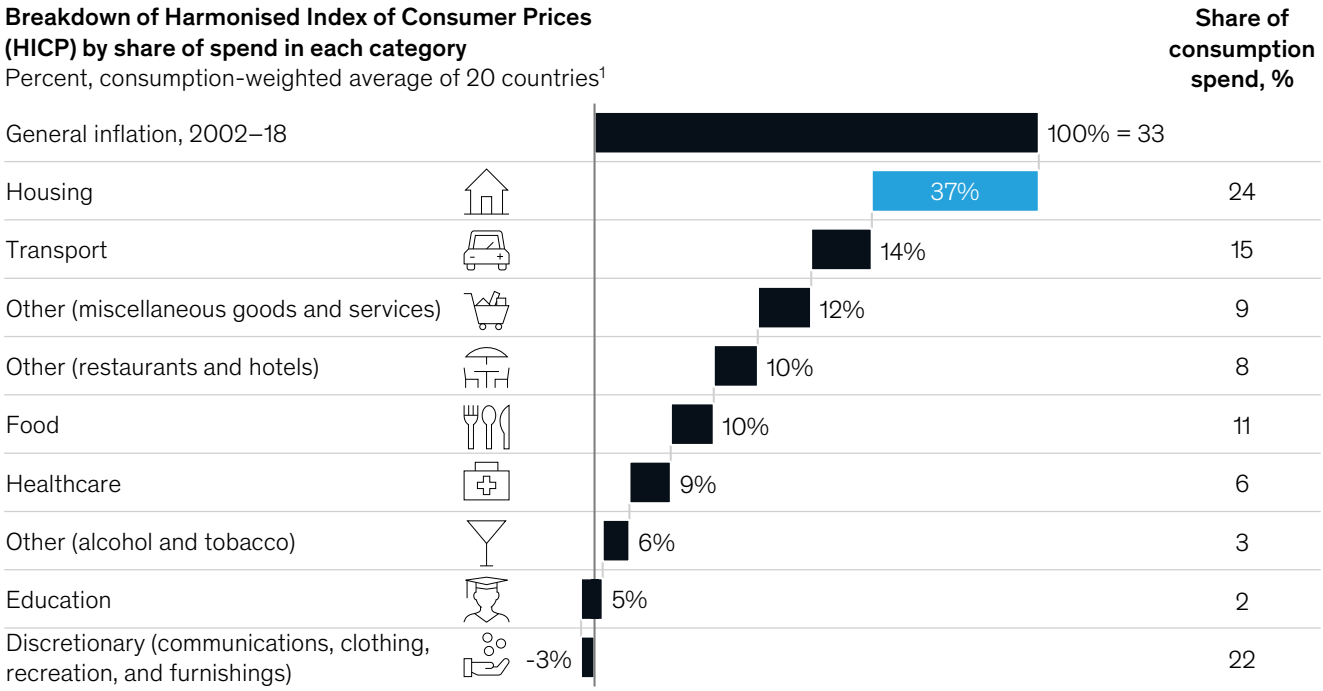
195 For income, we consider the OECD data on household net adjusted disposable income, which includes wages and salaries, property income, social benefits in cash, and social transfers in kind (which also include healthcare-related transfers). The breakdown of household consumption is based on OECD national accounts data, which includes only household spending (excludes government spending) on various categories, including healthcare. See the technical appendix for details.

196 If we include total household income and household healthcare spending, we find that average income in the United States increased by 29 percent (from $92,000 to $119,000), while healthcare spending increased by 63 percent (from $14,000 to $23,000), for example.

Exhibit 15

Changes in housing prices explain 37 percent of general inflation in 20 countries between 2002 and 2018.

Breakdown of Harmonised Index of Consumer Prices (HICP) by share of spend in each category
Percent, consumption-weighted average of 20 countries[1]



[1] Adjusted for difference between actual overall inflation growth and estimated consumption based on category breakdown. Data for Australia, Canada, Japan, and South Korea reflects national consumer price index (CPI).

Source: Eurostat; Harmonised Index of Consumer Prices; Japan Statistics Bureau; Australia Bureau of Statistics; Statistics Canada; OECD; McKinsey Global Institute analysis

In Italy, Japan, and Spain, incomes fell and were further eroded by 6 to 29 percent, primarily through increased spending on housing. Both price and volume changes drove this change in Spain and Japan. In Italy, consumers cut down on volume of housing, healthcare, and education, but price increases meant that overall expenditure on basics still increased.

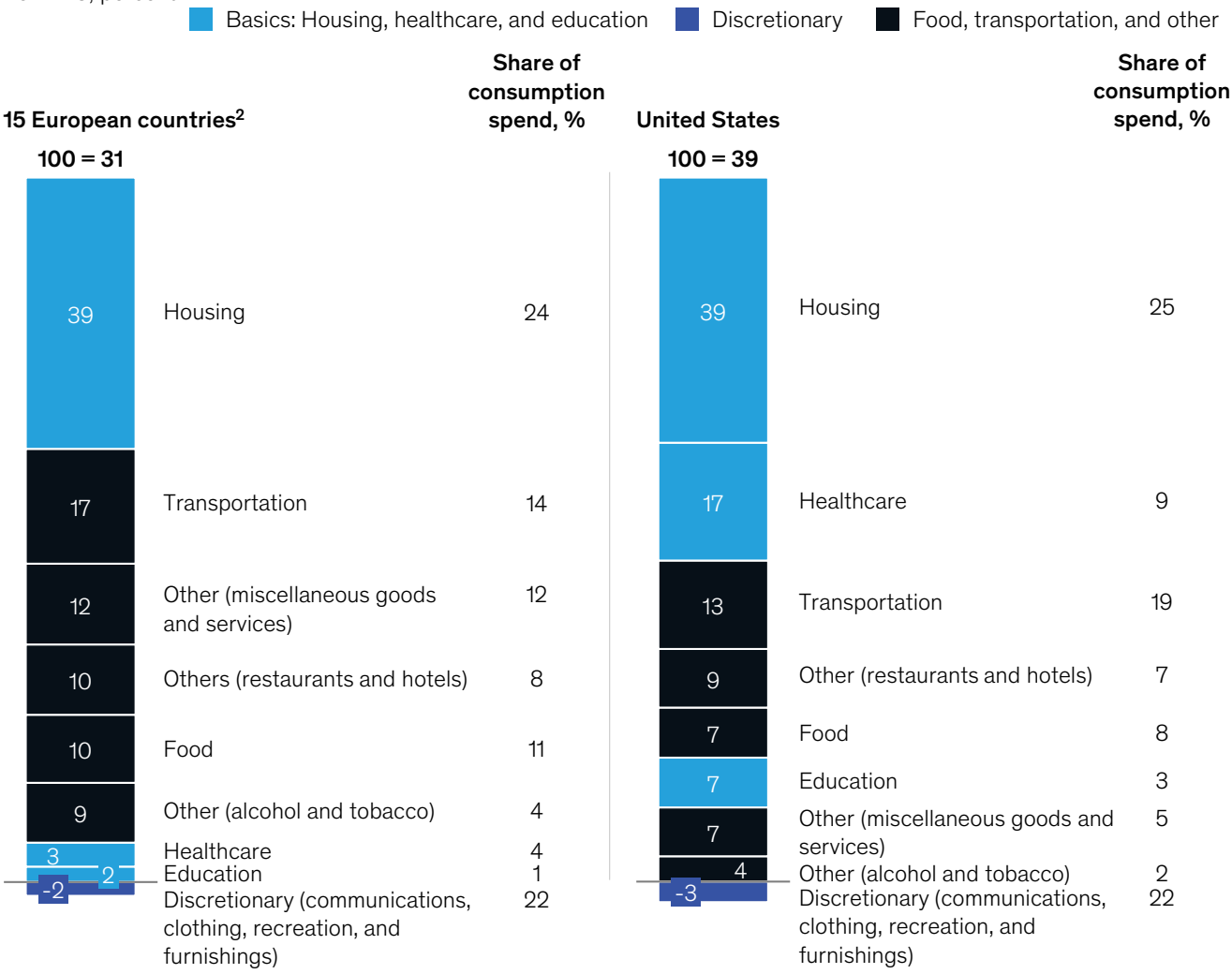
The rising cost of housing, as well as education and healthcare, has pushed up the share of basics in total consumption for households across the income distribution, and especially for low-income households.[197] Between 2000 and 2017, average households in Germany, Spain, and the United States saw the proportion of housing, healthcare, and education rise by six percentage points of household consumption expenditure (from 37 to 43 percent). The effect has been most severe in the lowest income groups; for them, basics as a proportion of household consumption expenditure rose by nine percentage points (from 40 to 49 percent). That compares with a rise of three percentage points (from 36 to 39 percent) for the highest income group.

[197] Whether there is an optimal level of share of basics in household consumption is a subject of debate. The OECD and Eurostat consider 40 percent the threshold for housing cost overburden rate. The US Census Bureau refers to those spending 30 percent or more of their income on housing costs as cost burdened, while those spending 50 percent or more are severely cost burdened. For further details, see Mary Schwartz and Ellen Wilson, *Who can afford to live in a home? A look at data from the 2006 American Community Survey*, US Census Bureau, 2008.

Exhibit 16

In Europe and the United States, changes in housing prices explain 39 percent of general consumer prices, while transportation and healthcare account for 17 percent each.

Breakdown of increase in Harmonised Index of Consumer Prices (HICP) by share of spend in each category
2012–18, percent[1]



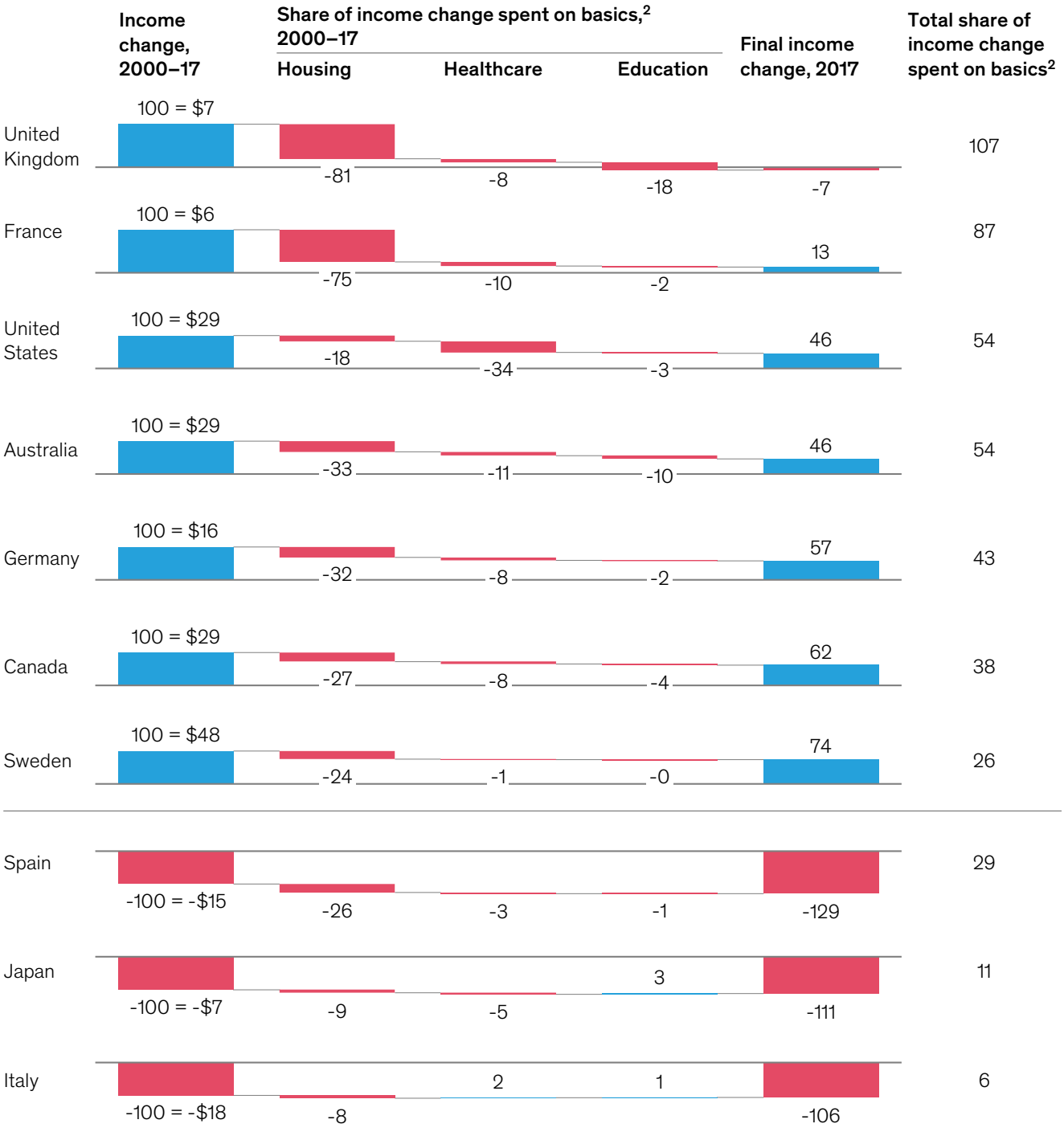
[1] Adjusted for difference between actual overall consumer price growth and estimated consumption based on category breakdown.
[2] Consumption-weighted average.

Source: Eurostat; Harmonised Index of Consumer Prices; McKinsey Global Institute analysis

Exhibit 17

A significant amount of income gains was spent on basic goods and services, primarily housing.

Income and spending changes for average households, 2000–17[1]
Indexed to income in starting year, %



[1] Values expressed in real terms (i.e., adjusted for general consumer price increase). Starting date for Australia and Spain is 2001. Germany, Japan, Sweden, and UK databased on an average of results from OECD national accounts and household budget surveys (UK income change is based only on household budget survey due to data inconsistencies); figures for remaining countries are based on OECD national accounts due to data availability.

[2] We defined basic goods and services as housing, healthcare, and education.

Note: Household incomes rose between 2000 and 2017 in some countries. Household income can be affected by changes in tax rates or government transfers and incorporates other forms of income such as capital income. All of these factors can contribute to a rise in household income (incremental income) while growth in wages and salaries is low or negative. Not to scale. Figures may not sum to 100% because of rounding.

Source: OECD national accounts data; Eurostat household budget surveys; McKinsey Global Institute analysis

A closer look at housing, healthcare, and education costs highlights some improvements in quality outcomes

Housing takes up the largest proportion of household expenditure and is where consumers have felt the largest impact of the rising cost of basics.[198] The supply of housing has been constrained in major cities by strict zoning, building and density regulations, and opposition to new home construction from existing home owners.[199] This is further exacerbated by stagnation of social housing stock, which fell slightly from 10.9 percent to 10.4 percent of total stock on average for our 22 countries. Government social spending on housing has remained flat at 0.4 percent of GDP while overall infrastructure spending has declined slightly from 3.5 percent to 3.1 percent on average.[200] At the same time, regulations have not been able to curtail rent increases or stem housing price increases fueled by financial speculation.

43%

Share of disposable income that low-income households spend on minimal acceptable housing, compared with 7% for wealthiest households

Meanwhile, housing demand in major cities has continued to increase, especially in superstar cities.[201] Lower income groups and the young are the hardest hit in the housing market. The cost of a minimally acceptable house is 43 percent of disposable income for households in the poorest income quintiles, compared with 7 percent of income for households in the richest households; for young people (between 15 and 30 years old), that cost represents 23 percent of income versus 14 percent for people 65 and over.[202]

One example is San Francisco, which is facing an acute shortage of homes. There, 68 percent of households find rent for a minimum acceptable home unaffordable—defined as more than 30 percent of household income.[203] In Melbourne, 49 percent of households find rent unaffordable, while the ratio ranges between 28 and 36 percent in London, Munich, Paris, and Tokyo. In Denver and Madrid, by contrast, only 4 and 8 percent of households find rent unaffordable.

Previous MGI research highlights the phenomenon of affordable housing issues exacerbating gaps in economic infrastructure. As urban populations expand, current trends suggest that there could be seven million additional low-income urban households by 2025 in developed economies. Replacing today's inadequate housing and building the additional units needed would require up to $1 trillion in spending, including the costs of land and construction.[204]

While prices increased, the basic quality of housing improved: overcrowding fell from 9.1 percent to 8.0 percent on average in our sample countries between 2005 and 2017.[205] However, for the lowest income quintile, the average rate of overcrowding increased from 20 percent in 2005 to 21 percent in 2017 in six European countries for which data are available.[206]

One result of higher housing prices is that young people are more likely to stay with their parents than previous generations, partly also due to higher youth unemployment rates. In the United Kingdom, 46 percent of 25-year-old individuals born from 1986 to 1990 live with their

198 A hypothesis put forward by Yale economist Robert Shiller states that inflation-adjusted housing prices are relatively stable across time but volatile due to bubbles. Tracking housing prices in the United States between 1890 and 2006 anticipated the housing crisis that triggered the global financial crisis. Similarly, the Herengracht Index developed by Piet Eichholtz for the Netherlands between 1628 and 1973 shows significant variations against a stable mean.

199 For further details, see *Housing affordability: A supply-side tool kit for cities*, McKinsey Global Institute, October 2017.

200 OECD social expenditure database, simple average of 22 focus countries; OECD statistics on general government gross capital formation.

201 *Superstars: The dynamics of firms, sectors, and cities leading the global economy*, McKinsey Global Institute, October 2018.

202 See *Tackling the world's affordable housing challenge*, McKinsey Global Institute, October 2014. What constitutes minimum socially acceptable housing varies from country to country but includes factors such as distance to work, access to a working toilet, and minimum space requirements.

203 Varies by country. See *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.

204 *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.

205 A person is considered to be living in an overcrowded household if the household does not have at its disposal a minimum number of rooms equal to: one room for the household; one room per couple in the household; one room for each single person aged 18 or over; one room per pair of single people of the same gender between 12 and 17 years of age; one room for each single person between 12 and 17 years of age not included in the previous category; and one room per pair of children under 12 years of age.

206 Eurostat, 2019.

parents, compared with 27 percent of those born between 1946 and 1950 when they were 25 years old.[207]

In **healthcare**, prices are climbing while institutional involvement is falling, as people increasingly rely on private healthcare in the face of strained public systems. As populations age and new (better but costlier) treatments are offered, governments are having to spend more on healthcare; social healthcare spending increased in 19 of our 22 sample countries, from 5.3 percent of GDP in 2000 to 6.4 percent in 2016 on average.

Healthcare prices increased sharply in Australia and the United States, by 63 and 35 percentage points above the all-items consumer price index from 2002 to 2018. They notably climbed in Ireland, the Netherlands, Norway, and the United Kingdom, but rose more moderately elsewhere in Europe and in Canada, Japan, and South Korea. People in the United States are most exposed to the increases due to the relatively large proportion of household consumption healthcare represents. Ten percent of household spending is allocated to healthcare in the United States, compared with a healthcare spending range of between 2 and 6 percent in other countries that rely more on public funding.

$34,063

Average price of a knee replacement in the United States in 2016, compared with $19,595 in 2003

Increased availability of new medical technology and consolidation in the drug and medical industries have also contributed to the rise in costs.[208] In the United States, for example, the average price of laparoscopic appendectomy procedures more than doubled from $8,570 in 2003 to $20,192 in 2016; similarly, the average price of knee replacement increased from $19,595 to $34,063 in the same period.[209]

Rising costs have accompanied rising quality of healthcare in some respects. Life expectancy at 65 has increased from 18 to 20 years on average over the past two decades in the 22 countries in our sample, and the mortality from cancer decreased by an average of 15 percent between 2000 and 2016. Diabetes mortality also declined, by 20 percent between 2000 and 2015.[210] Technology promises to drive further improvements with innovations such as predictive diagnosis algorithms, health monitor implants, and synthetic biology.

Even as the financial strains on public healthcare systems increase, individual spending on healthcare is rising. In 18 of our 22 focus countries, out-of-pocket healthcare spending increased as a percentage of GDP between 2000 and 2017; the exceptions were France, Germany, the Netherlands, and the United States.

Many public health systems are facing pressures, including longer waiting times for treatment, prompting the move toward voluntary healthcare programs. In the United Kingdom, median waiting times for admitted treatment increased 30 percent from 7.6 weeks in 2008 to 10.1 weeks in 2019, for example.[211] In Sweden, the waits for treatment grew so long that the country in 2005 introduced a law guaranteeing a maximum waiting time for treatment of 90 days. However, in 2017, more than 20 percent of patients still had to wait more than 90 days.[212] Sweden is also witnessing among the fastest growth rates in private health insurance coverage; an estimated 6 percent of the population now has private health insurance.[213] Spending on voluntary healthcare programs rose from 1.1 percent of GDP in 2000 to 1.8 percent in 2017.

[207] Adam Corlett and Lindsay Judge, *Home affront: Housing across the generations*, Resolution Foundation, September 2017; Office of National Statistics Expenditure survey 1961–1983; Labor Force Survey 1984–2017.
[208] For further details, see *Fiscal sustainability of health systems: Bridging health and finance perspectives*, OECD, 2015; Irene Papanicolas, Liana R. Woskie, and Ashish K. Jha, "Health care spending in the United States and other high-income countries," *JAMA*, March 2018, Volume 319, Number 10.
[209] Kaiser Family Foundation analysis of Truven MarketScan data, 2016.
[210] Global Burden of Disease Collaborative Network, 2016; OECD Health statistics, 2019.
[211] Referral to treatment (RTT) waiting times statistics for consultant-led elective care, NHS England, 2018/19 and 2007/08 annual reports.
[212] Government of Sweden, Sweden.se.
[213] Anna H. Glenngard, *The Swedish Health Care System,* The Commonwealth Fund, 2019.

Average spending on voluntary healthcare programs increased by 0.2 percentage point of GDP, but this masks large differences between countries. The United States, which saw the introduction of the Affordable Care Act in 2010, had the largest drop in spending, which fell by more than half from 7.0 percent of GDP in 2000 to 3.1 percent of GDP in 2017.[214] South Korea saw the largest increase, 1.3 percentage points, from 1.8 percent in 2000 to 3.2 percent in 2017.

Finally, **education**. Education prices have jumped in all countries except Japan; they nearly doubled relative to general consumer prices in the United Kingdom due to increases in university fees that started in 2010. Education prices increased by more than 70 percentage points in Australia, Denmark, Ireland, and the United States. However, given the low share of education in household consumption, 2 percent on average (reflecting a range of 0 to 4 percent), the absolute effect is limited.

Government institutions in this field are also playing a smaller role. Government spending on education as a whole remained flat at 4.5 percent of GDP from 2000 to 2015, on average for our 22 countries, but private spending on education rose. The share of public funding in education fell in 18 out of the 21 countries for which data are available, by an average of six percentage points between 2000 and 2015, while the private share rose by six percentage points.[215] New Zealand saw the largest increase in public funding share, while the United Kingdom saw the largest increase in private funding share.

In some instances, decreased institutional involvement resulted from active policy decisions. For instance, the United Kingdom increased maximum university tuition fees from £3,000 to £9,000 in 2010 and allowed the cap to rise with inflation in 2017.[216] Other countries have faced public budget constraints that froze education spending, with private and household sources increasing spending to make up some of the difference. For example, Spain passed measures to control public education spending in 2012 in response to the economic crisis and the pursuit of European Union fiscal targets, and it has seen one of the largest growths in share of private funding, at ten percentage points from 2010 to 2015.[217]

Access to education has improved.

Tertiary education attainment rates rose to 42 percent in 2017 from 28 percent in 2000 on average in the 22 countries.

214 For further details on the US healthcare market, see Liran Einav, Amy Finkelstein, and Atul Gupta, "Is American pet health care (also) uniquely inefficient?," *American Economic Review*, May 2017, Volume 107, Number 5.

215 OECD Education database, 2019.

216 The increase in tuition fees in the United Kingdom varies across the constituent countries. For example, Scottish students can attend university free in Scotland but pay fees in England, Wales, and Northern Ireland. Most students pay for university through student loans, which they are required to start repaying only if they earn £25,000 per year. After 30 years, the debt is forgiven. An estimated 83 percent of students will not repay their loan in full within 30 years, according to the Institute for Fiscal Studies. See Chris Belfield, Jack Britton, and Laura van der Erve, *Higher education finance reform: Raising the repayment threshold to £25,000 and freezing the cap at £9,250*, Institute for Fiscal Studies, October 2017, and Heidi Blake, "Grants, loans and tuition fees: A timeline of how university funding has evolved," *Telegraph*, November 10, 2010.

217 OECD Education database, 2019.

While education prices do not heavily affect the average consumer—education accounts for 2 percent of household expenditure on average—they disproportionately affect certain households, such as families with multiple children in college.

Access to education has improved; tertiary attainment rates for the population aged 25 to 64 increased from 28 percent in 2000 to 42 percent in 2017, on average in our 22 countries, equivalent to more than 155 million people.[218] The rate varies from Canada at 57 percent to Italy at 19 percent in 2017; the change was greatest in Ireland and South Korea at 24 percentage points. PISA scores for reading, mathematics, and science declined by 2 percent on average between 2000 and 2018, however. Access to knowledge has been democratized with innovations such as Wikipedia, massive open online courses by top universities such as the Massachusetts Institute of Technology, and sites such as Khan Academy providing free education courses. Education, training, and reskilling will become even more critical as the future of work changes the demand for various jobs significantly.

Reaping the fruits of your labor and being able to afford a comfortable life commensurate with your aspirations is an essential component of the social contract. Technology and globalization have helped push down costs for many discretionary goods and services and have improved the convenience of shopping. Yet three basics of everyday life—housing, healthcare, and education—have become much more expensive over the past two decades and are consuming a larger proportion of household budgets, especially for lower-income families. While increasingly deregulated markets for discretionary goods and markets seem to have benefited consumers on the whole, the institutional response in markets for basics, especially housing, has not reduced the rising burden and may even have increased the responsibility of many individuals in OECD economies for their own economic outcomes.

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[218] Ibid.

© Getty images

4 Individuals as savers

The third arena we examined in relation to our focus on the evolving social contract is the role of individuals as savers. Saving is closely connected to the other two arenas covered in the chapters on individuals as workers and as consumers, since it represents what is left of income after consumption.

Saving is both individual, or at a household level, and institutional. The return on savings is the main determinant of wealth growth, along with the saving rate, and for our analysis we measure both. In this chapter, we look at individual expectations and outcomes for savers at a time of demographic shifts, which are especially affecting saving for retirement, and of relatively low overall returns.

Our key findings are that institutional savings on behalf of individuals have declined in 16 of the 22 sample countries. This is happening in particular with the shift from defined-benefit pensions to defined-contribution pensions and other changes in public-sector pension plans in many countries to make them sustainable. Pressure on pensions has grown. This is partly because people are living longer, itself a hallmark of progress, which means that they spend more years in retirement. The pressure also has grown because the ratio of working-age population to the population aged 65 and up has been increasing due to lower birth rates compared with the baby boomer generation.

In our 22 sample countries, expected years of retirement increased from 16 years in 1980 to 20 years in 2018.[219] However, net replacement rates from mandatory pensions—that is, the percentage of an individual's annual employment income that is replaced by retirement income—have been declining in most countries due to changes in public and corporate pension entitlements. This puts the onus on households to build wealth for retirement. However, many households are saving little or not at all. And while technology is creating new opportunities for savers to improve yields, returns on investment for most households are down.

Saving is thus a highly challenging arena for the social contract. Many individuals are not yet meeting—or are unable to meet—the challenge of taking greater responsibility for their own retirement savings, even as institutional saving on their behalf is declining.

Aging societies pose a growing challenge for institutional saving

People are living longer and birthrates have declined in many of the 22 advanced economies we examine, as a result of scientific and technological progress. While longevity is a sign of progress, the combination with declining birthrates has a substantial effect on the age structure of OECD countries—and, consequently, on pensions and the savings required for retirement.

Life expectancy at age 65 in the OECD, which was 14.1 years in 1970, is expected to rise to 22.6 years by 2050. In 2000, there were 23 individuals aged 65 and over for every 100 persons of working age (ages 15 to 64) on average in all OECD countries. The ratio is projected to reach 35 by 2025, and 53 by 2050.[220] Low birth rates also mean that the working-age population in some countries has declined.

[219] Expected number of years in retirement, OECD Employment database, 2019.
[220] *Pensions at a glance*, OECD, 2017.

These demographic trends pose a considerable challenge for institutional as well as individual savers. Institutional pension systems will need to deal with higher pension payouts and lower receipts. Individual savers will need to save more for themselves, to compensate for the shortfall in institutional saving. However, the low-growth, low-interest-rate environment that characterized most of the decade after the 2008 financial crisis has made it difficult for both individuals and institutional savers to earn the returns necessary to ensure a steady, adequate stream of pension payments in retirement.[221]

Changing demographics are affecting the fiscal sustainability of governments and other pension providers

Demographic shifts have had a major impact on the fiscal sustainability of governments and other institutions that provide pensions. General government gross financial liabilities, which were about 40 percent of GDP in 1970, rose to 69 percent in 2000 and 110 percent in 2018.[222]

At the highest level, institutions have two options: increase pension contributions or decrease pension liabilities. Many countries have increased contributions at the margins. For example, Canada announced in 2016 that the contribution rates for employers and employees will gradually increase from 4.95 percent to 5.95 percent between 2019 and 2023[223]. However, few countries are using increased pension contributions to plug the funding gap.

By contrast, decreasing future pension liabilities has been the most common way to increase pension sustainability. The mechanism by which pension liabilities have fallen varies by country, but the most common are increases in the statutory retirement age, changes in indexation rules, and adjusting pension benefits for new retirees.

>1/2

Share of OECD countries that have raised their statutory retirement age

More than half of OECD countries have raised the statutory retirement age, and some, including Denmark, Finland, Italy, and Sweden, now explicitly link the retirement age to life expectancy.[224] By 2060 the normal retirement age will approach 66, which represents an increase of 1.5 years for men and 2.1 years for women since 2015.[225] Life expectancy has been increasing at a faster rate, however, which means that the proportion of an average life spent in retirement continues to rise.

Some countries froze benefit indexation as a temporary measure following the 2008 crisis, and many are now moving to make less generous indexation options, such as indexing to prices (as opposed to indexing to wage growth, for example), permanent. Some countries, such as Finland, have chosen to put an explicit limit on index-related increases, while others, such as Canada, directly link benefit indexation and the financial standing of the pension system.[226]

Few countries adjust the level of pension benefits provided to retirees over the course of their retirement. However, Australia tightened the targeting of its Age Pension asset test starting in 2017, and Spain has begun adjusting the initial benefit paid to new retirees, based on life expectancy gains, every five years beginning in 2019.[227]

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221 Economists have debated the cause of the low-growth, low-interest-rate environment after the financial crisis. Larry Summers advanced the theory of "secular stagnation," coined by American economist Alvin Hansen in the 1930s. Hansen argued that demographic factors were driving fundamentally slower economic growth. Summers updated the theory after the financial crisis to explain the slow post-crisis recovery in advanced economies. Economists such as Ben Bernanke dispute Summers's theory, contending that a global savings glut is the driving force behind the slow recovery. See Duncan Weldon, "Why 'secular stagnation' matters," BBC News, April 2, 2015; Lawrence H. Summers, "The age of secular stagnation: What it is and what to do about it," *Foreign Affairs*, March/April 2016; Ben S. Bernanke, *Why interest rates are so low, part 3: The global savings glut*, Brookings Institution, April 1, 2015.

222 Average for 1970 includes nine countries only. OECD Economic Outlook, number 105, OECD, 2019.

223 Canada Pension Plan enhancement, Government of Canada, 2019.

224 In Italy, linking retirement ages to life expectancy has been suspended until 2026 for certain occupations. *Pensions at a glance*, OECD, 2017.

225 *Pensions at a glance*, OECD, 2017.

226 Ibid.

227 Ibid.

Pension system sustainability remains a concern despite recent reforms. The World Economic Forum estimates that the retirement savings gap for government pensions was $40 trillion in five countries (Australia, Canada, Japan, the United Kingdom, and the United States) in 2015, and that without further reforms the shortfall could increase at 4 percent per year, reaching $175 trillion by 2050.[228] The United States makes up almost 60 percent of this total, with unfunded liabilities estimated to rise 5 percent per year.[229]

As a result, the net pension replacement rate that an average worker can expect from their mandatory pensions has decreased by 11 percentage points in our 22-country sample (Exhibit 18).[230] Canada, Greece, and the United Kingdom saw their net replacement rates fall by more than 40 percentage points, while Italy, Belgium, and New Zealand registered small increases. Denmark and Portugal saw double-digit increases. Net replacement rates now range from 92 percent in Italy to just 28 percent in the United Kingdom, which generates a net pension wealth equivalent to a British worker's receiving their salary equivalent in pension for the first six years of retirement and then no assistance for the remaining 15 years of their expected lifespan.[231] Net replacement rates may fall even further. This means that individuals need to increase individual savings.

Alternative forms of work, including self-employment, temporary employment, and part-time employment, carry additional pension-related concerns for workers. According to research by the OECD, these workers typically have less coverage from existing pension systems, which were largely developed to serve full-time workers in continuous employment. In addition, workers in alternative arrangements often earn less than standard workers, face higher risks of unemployment, and may have interrupted pension contributions. Collectively, these factors may contribute to low pensions and a higher likelihood of relative poverty in old age, which is an area of concern because alternative workers represent a large and growing share of the employed population.[232]

Many pension systems are shifting from defined-benefit to defined-contribution plans

The proportion of pension assets under management that are defined contribution, for which market risk is borne by the individual, rather than defined benefit, for which institutions bear the market risk, increased between 2007 and 2018.[233] In 16 countries, the average increase was two percentage points. On a weighted-average basis, the increase was six percentage points, primarily due to the size of pension assets under management in the United States.[234]

Countries that faced the largest decreases in defined-benefit assets include Italy, with a decline of 13 percentage points, and the United States, with 11 percentage points. This shift away from defined-benefit pensions is part of a longer-term trend.[235] Sweden, the Netherlands, and the United Kingdom were the only countries to increase their share of defined-benefit plans by two to four percentage points. Five countries have only defined-benefit pension assets under management: Austria, Germany, Finland, South Korea, and Switzerland. Spain has only defined-contribution pension assets under management.

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228 *Investing in (and for) our future*, World Economic Forum, 2019.

229 Another estimate for 21 countries (representing 90 percent of GDP and 60 percent of population) puts the pension gap at $15.8 trillion by 2050. See *Fixing the pensions crisis: Ensuring lifetime financial security*, Group of 30, November 2019.

230 Due to data availability, we have focused on the net pension replacement rate for an average male worker. Based on data for 2010 to 2018, the net pension replacement rates for male and female workers are the same in almost all countries except Australia (where the gap in net pension replacement rates grew between 2010 and 2018) and Switzerland (where a gap emerged in 2018). Austria closed the net pension replacement rate gap for male and female workers between 2004 and 2018. We have focused on mandatory pensions in OECD countries due to limited comparable data on private pension wealth in the 22 OECD countries in our sample.

231 OECD Pensions Statistics database, 2017.

232 *Pensions at a glance*, OECD, 2019.

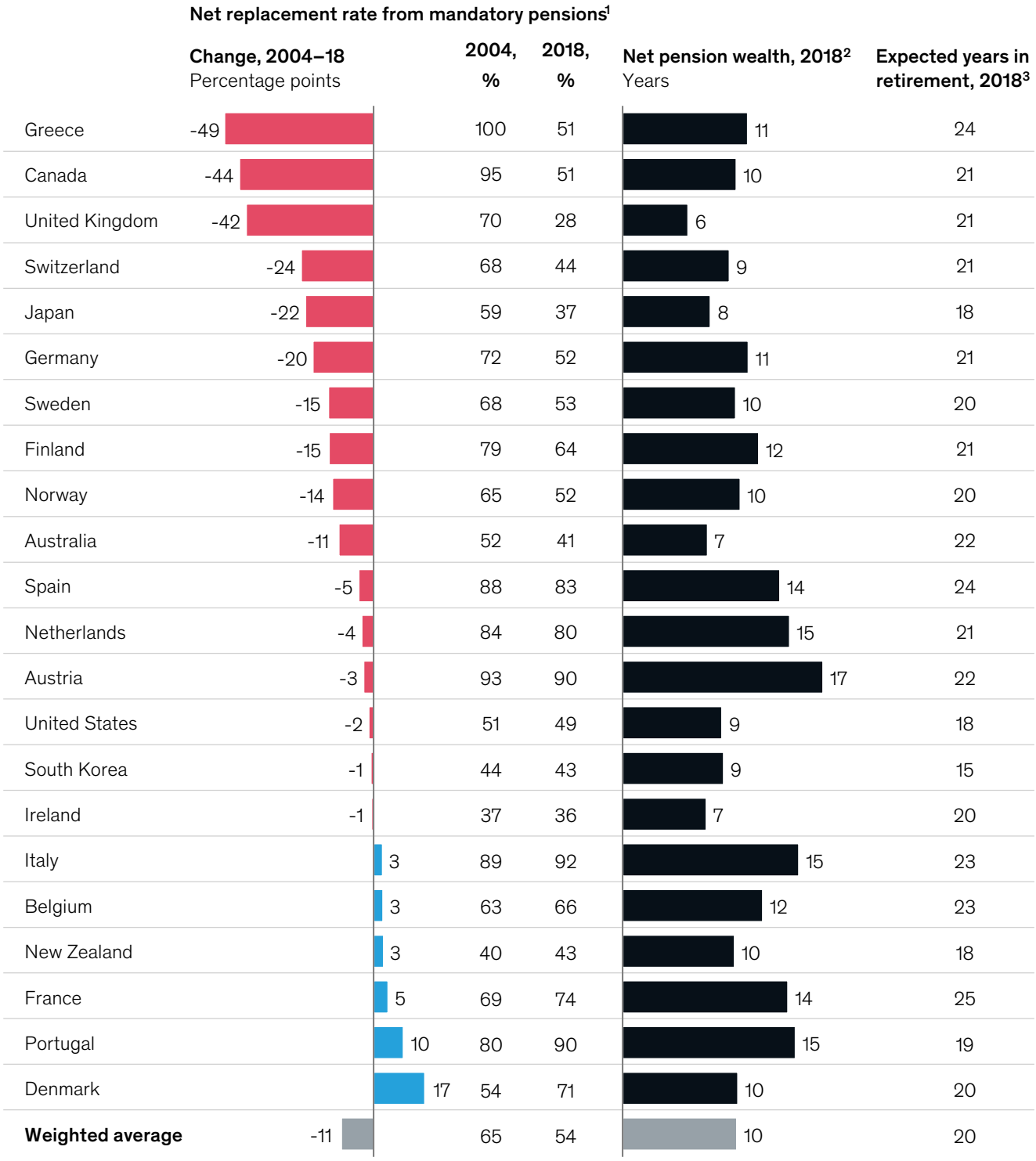
233 Defined-benefit pensions are pensions that provide a specific financial amount in retirement, typically based on an employee's salary and the length of time they worked for their employer. Defined-contribution pensions are pension schemes that depend on the amount of money paid into the scheme by an employee or employer. Jacob S. Hacker, *The Great Risk Shift: The New Economic Insecurity and the Decline of the American Dream*, second edition, New York, NY: Oxford University Press, 2019; Types of private pensions, GOV.UK, December 2019.

234 McKinsey & Company, Performance Lens database.

235 *Pensions at a glance*, OECD, 2009.

Exhibit 18

Net replacement rates from mandatory pensions have declined in 16 out of 22 countries by an average of 11 percentage points, and net pension wealth covers just ten years on average.



[1] Net replacement rate for mandatory pensions for male workers; data missing for female workers prior to 2010. Net pension replacement rate is identical for men and women in Australia (2010–18), Switzerland (2018), and Austria (2004).

[2] Net pension wealth is present value of flow of pension benefits, taking account of taxes and social security contributions that retirees have to pay on their pensions. It is affected by life expectancy and by age at which people take their pensions, as well by as indexation rules. This indicator is measured as a simple average of multiple of annual net earnings for men and women. Assumes individuals consume their average net earnings each year in retirement.

[3] Expected years in retirement for both men and women taken as a simple average of male and female expected years in retirement.

Source: OECD; McKinsey Global Institute analysis

Individual savings are falling, and some households are not saving at all

A decline in institutional savings implies increased individual responsibility to save. Yet household saving rates have fallen in our 22 sample countries on average, with considerable variations by country (Exhibit 19).

In all of our sample countries, the household saving rate has fallen by 1.4 percentage points since 2000.[236] Denmark, Ireland, and Sweden have seen an increase of more than ten percentage points, while Japan, Spain, the United Kingdom, and others have seen decreases of more than six percentage points.

Data on saving rates by wealth group is sparse, but data for France and the United States indicates that lower wealth groups (at least the bottom 50 percent of the wealth distribution) have struggled to enter the realm of positive savings since 2000.

Across a broad range of our sample countries, surveys show that more than half of individuals did not save for old age in 2017, and a quarter did not save any money at all (Exhibit 20).[237] Residents of countries with traditionally generous social welfare systems tend to save less. In France, Italy, and Spain, for example, over two-thirds of adults did not save for old age in 2017.

Reasons for low saving rates vary by country and by socioeconomic group. In addition to differing levels of guaranteed pensions, factors including low ability to save, low rates of access to appropriate saving vehicles, and low levels of financial literacy all play a role. In the United States, for example, many people miss out on opportunities to save for retirement (see Box 3, "Low levels of participation and saving in pension retirement plans in the United States").

More than half of individuals did not save for old age in 2017. One-quarter did not save at all.

While households have new opportunities to invest, returns have been low for many

Technology is providing new opportunities to save and earn higher returns. However, many households, especially those at the bottom end of the income distribution, are seeing low returns on investment.

Technology has opened new opportunities for savers

Technology is transforming the way individuals invest in the capital market. The internet has made saving, tracking, and investing wealth easier. Digital banking, digital savings platforms, and new products such as robo-advisers mean that comparatively low-risk, high-return investments are increasingly available with more accessible deposit thresholds. However, individuals' capacity to take advantage of these new financial products depends on their level of financial literacy, especially as new products become increasingly complex. Lower levels of financial literacy are more prevalent among those with less than a college education and lower levels of financial wealth, and among women, which affects financial decision making and long-term returns.[238]

Behavioral economics is also playing a role. For example, well-timed "nudges" have the potential to alter saving behavior; a carefully framed email encouraging enrollment in a saving program that was sent to nearly 800,000 military service members almost doubled the program enrollment rate. Even better results may be possible with more personalized interventions.[239]

[236] National accounts at a glance, OECD, 2019.
[237] Global financial inclusion database, World Bank, 2017.
[238] Annamaria Lusardi and Olivia S. Mitchell, *The economic importance of financial literacy: Theory and evidence*, National Bureau of Economic Research working paper number 18952, April 2013.
[239] Shlomo Benartzi et al., "Should governments invest more in nudging?," *Psychological Science*, August 2017, Volume 28, Issue 8.

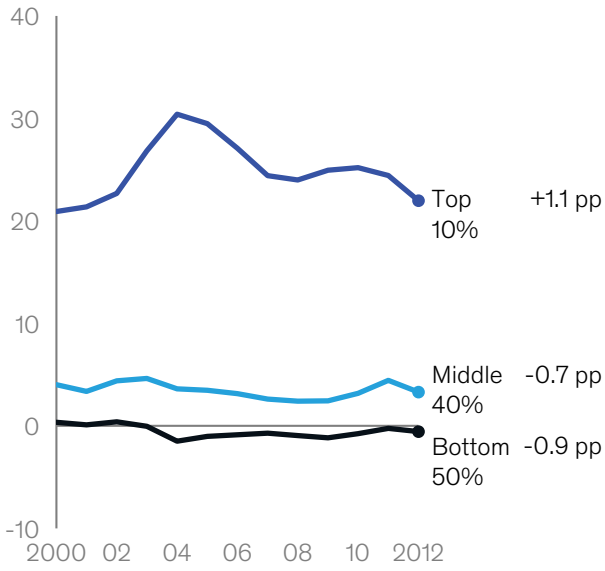
Exhibit 19

Household saving rates fell in 11 out of 22 countries by 1.4 percentage points on average, which appears to be driven primarily by low saving rates among lower wealth groups.

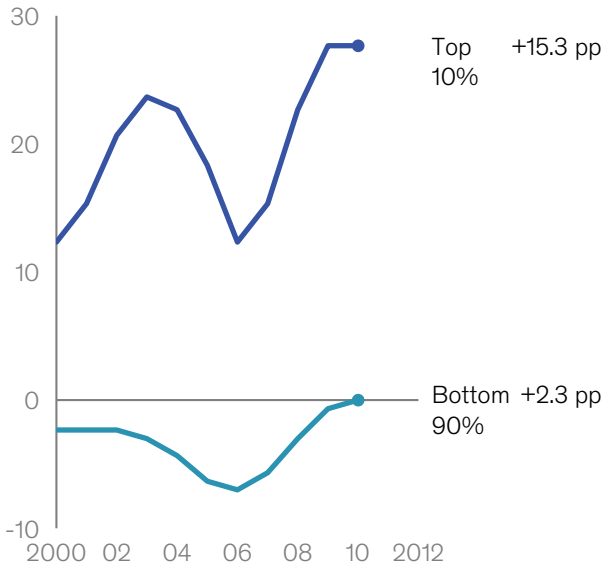
Net household saving rate as a share of disposable income[1]

	Change, 2000–18 Percentage points	2000, %	2018, %
Greece	-15.5	-1	-17
Portugal	-7.6	3	-4
Spain	-6.6	6	-1
United Kingdom	-6.6	6	-1
Belgium	-6.4	10	4
Japan	-6.1	9	3
Italy	-5.1	7	2
Finland	-4.0	3	-1
Austria	-3.8	11	7
Canada	-3.5	5	2
France	-0.2	9	8
South Korea	0.5	7	7
Germany	0.9	9	10
New Zealand	1.1	-3	-1
Australia	1.5	2	4
United States	1.9	5	7
Norway	2.4	4	7
Netherlands	4.8	4	9
Switzerland	4.8	14	19
Ireland	10.5	-4	7
Sweden	10.7	4	15
Denmark	11.9	-6	6
Weighted average	-1.4	6	5

Net individual saving rate by wealth class in France, percent



Net household saving rate by wealth class in the United States[2], percent

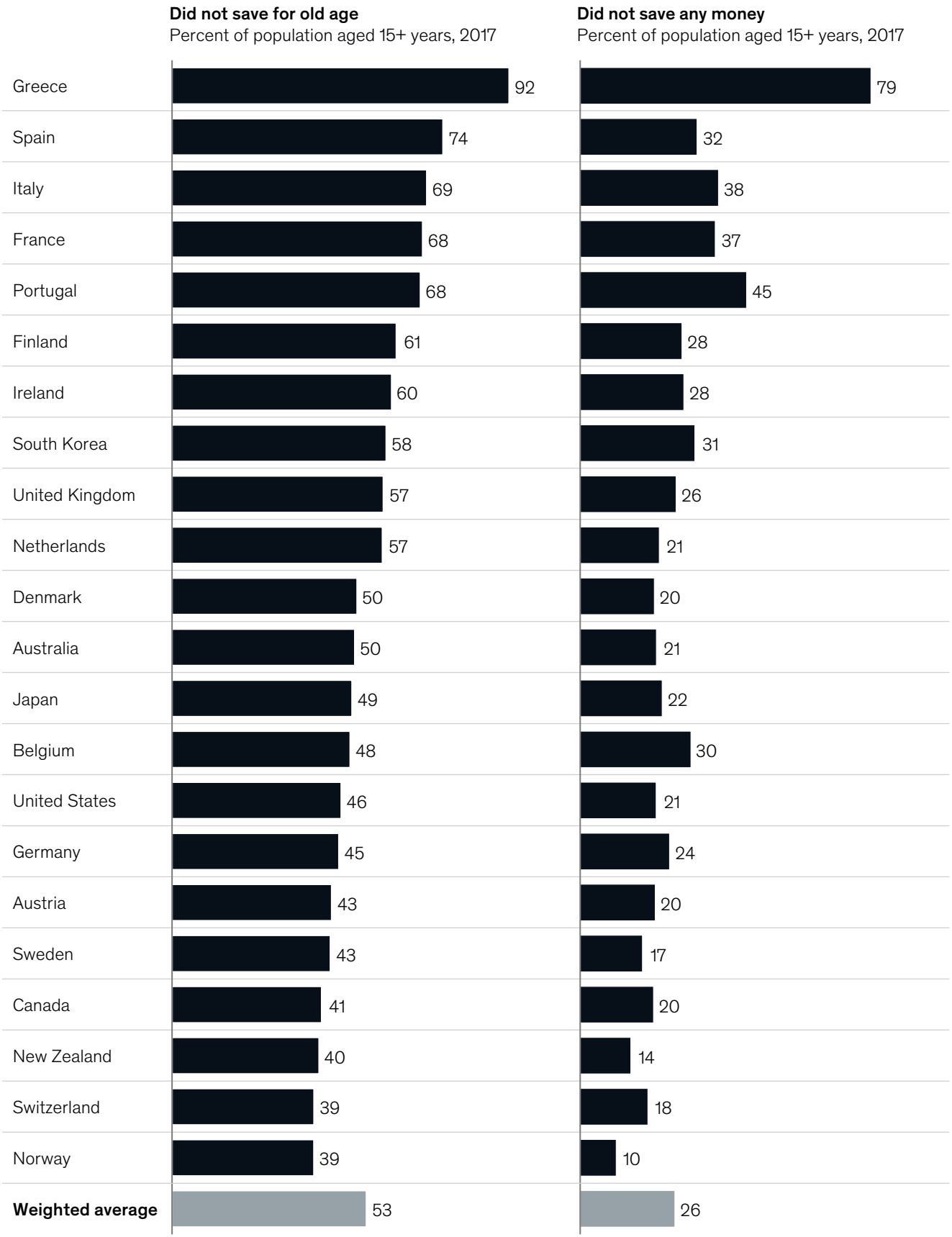


[1] Data for 2017 where 2018 value is missing; South Korea data from 2005–14.
[2] Three-year smoothed saving rates using Appendix table B33, Saez and Zucman (2014).

Source: OECD; Garbinti, Goupille-Lebret, and Piketty (2016); Saez and Zucman (2014); McKinsey Global Institute analysis

Exhibit 20

Over half of individuals did not save for old age, and a quarter did not save any money.



Source: World Bank Financial Inclusion Indicators; OECD; McKinsey Global Institute analysis

Box 3

Low levels of participation and saving in pension retirement plans in the United States

The US public pension system, Social Security, is designed to provide a minimum retirement income to all citizens; individuals are expected to smooth their income independently so that they can sustain living standards though retirement. This can be done via personal savings that supplement income from the government. For many Americans, a 401(k) retirement savings account is the primary means of saving for retirement, due in part to tax incentives.

However, access to retirement accounts such as the 401(k) generally comes through large employers, and it is estimated that only about 51 percent of Americans can pay into defined-contribution plans of this sort.[1] This means that almost half the population is missing out on the higher returns and tax incentives that typically come with accounts of this type. Moreover, tax incentives mostly benefit upper-income households.[2]

In addition, among those who do qualify, only 74 percent are enrolled in a defined-contribution retirement plan, according to the investment management group Vanguard.[3] Enrollment is particularly low for those with low net worth. Enrollment rates for those with a net worth less than $15,000 and of $15,000 to $30,000 are just 31 percent and 51 percent, respectively. Among young people, only 43 percent of eligible individuals under the age of 25 are enrolled in retirement plans.

Even among the Americans enrolled in defined-contribution retirement plans, there are doubts about the adequacy of retirement savings. Less than 2 percent of those earning less than $75,000 annually are contributing the maximum to their pensions, and average balances are modest for many. Vanguard reports that the mean balance in its accounts in 2018 was $92,148, but the median was just $22,217.

Even among savers aged 65 and up, median wealth is just $58,035. Assuming annuity rates from a pension pot for a 65-year-old are generally about 5 percent, the median retiree would likely receive only about $3,000 per year.[4] The Employee Benefit Research Institute estimates that 40.6 percent of all US households with a head of household aged between 35 and 64 is likely to run short of money in retirement.[5]

1 "51 percent of private industry workers had access to only defined contribution retirement plans," Economics Daily, US Bureau of Labor Statistics, October 2, 2018.
2 In the United States, the primary individual savings vehicles are the 401(k) for private-sector employees, 403(b) for public-sector employees, and individual retirement accounts for all individuals. Tax incentives to use these vehicles implies the lost revenue may be considered a significant government expense. Similarly, 529 accounts promote saving for college, and health savings accounts encourage saving for healthcare. These tax incentives are not captured in our analysis of government spending and market intervention in chapter 5.
3 *How America saves 2019: The retirement savings behavior of 5 million participants*, Vanguard, June 2019.
4 Bob Pisani, "America's retirement accounts are growing, but not fast enough," CNBC, June 12, 2019.
5 *Retirement savings shortfalls: Evidence from EBRI's 2019 Retirement Security Projection Model*, Employee Benefit Research Institute, 2019.

Digital apps that offer "little and often" automatic saving opportunities can make a difference, too; 30 percent of users of the investment app Acorns who were asked if they would like to save $5 every day opted in, compared with just 7 percent of those who were asked if they wanted to save the monthly equivalent of $150.[240]

Big data are now able to assess whether people make financial decisions using their instincts or based on careful reflection—and can adjust the level of digital nudging based on their decision-making style. Assessment tools are being developed that map personality traits such as loss aversion and present bias to create personalized financial recommendations.[241]

Institutional changes have also had an effect, especially deposit protection, which has increased substantially in the aftermath of the global financial crisis in 18 out of 22 countries. In our sample, guaranteed deposits have increased from 0.9 to 1.9 percent of mean wealth on average.[242]

Returns on investment are lower for many low-wealth households

Rates of return have varied considerably by country and by region. At the national level, Greece, Italy, and Spain experienced negative total real returns on the stock market from 2000 to 2018, while Denmark and Norway saw a real rate of return of over 5 percent annually.[243]

Rates of return have been historically high over the past few decades. Average annual rates of return on equities were 5.7 percent from 1965 to 2014, compared with 7.9 percent between 1985 and 2014, in Western Europe and the United States.[244] However, current returns are lower than 20-year averages for US stocks (S&P 500) and 10-year treasury bonds, 10-year German bonds, and high-yield and emerging market debt.[245]

For lower wealth groups, low saving rates have been exacerbated by low rates of return on assets. The bottom wealth decile in France earned a return on assets and portfolios of negative 0.2 percent between 1970 and 2014, compared with positive 6.4 percent for the top wealth decile. Similarly, the bottom five deciles in the United States earned returns of between negative 1.9 and positive 0.8 percent, compared with positive returns of 2.0 to 6.0 percent for the top five deciles (Exhibit 21).

The difference lies in the makeup of the asset portfolios; the less affluent need to keep a significant portion of their wealth in low-return or liquid assets such as deposits and may also face barriers to accessing high-return assets such as equities. One barrier is that there has been a decline in net equity issuances over the past 20 years, meaning that individuals have less access to high-return equity investments.[246] In countries such as the United States, ownership of equities is increasingly concentrated among the wealthy: the top decile has 87 percent of public equity ownership in the United States.[247] Meanwhile, low returns for less affluent savers have been particularly severe in the post-crisis period, when monetary policies such as quantitative easing have pushed the real rate of return on deposits close to or below zero.

One asset that has bucked the trend is housing. House prices have increased fastest in large urban areas; the average real rate of return in the most important urban centers in our sample

[240] Adam Shell, "Acorns savings app: Why saving $5 a day is easier than committing to $150 a month," *USA Today*, September 20, 2018.
[241] Shlomo Benartzi et al., "Should governments invest more in nudging?," *Psychological Science*, August 2017, Volume 28, Issue 8.
[242] Data from central banks and other government sources.
[243] Monthly monetary and financial statistics, OECD, 2019.
[244] *Diminishing returns: Why investors may need to lower their expectations*, McKinsey Global Institute, May 2016.
[245] Josephine Cumbo and Robin Wigglesworth, " 'Their house is on fire': The pension crisis sweeping the world," *Financial Times*, November 17, 2019.
[246] *Superstars: The dynamics of firms, sectors, and cities leading the global economy,* McKinsey Global Institute, October 2018.
[247] Public equity ownership by household income percentile, US Bureau of Economic Analysis, 2019.

countries has been 3.3 percent annually. House prices in Paris, London, Stockholm, and Vancouver have increased by at least 5 percent annually, representing a total return of over 140 percent since 2000.[248] However, a significant share of the population experiences these increases as increasing housing costs rather than as increasing wealth.

170M

Number of individuals for whom personal wealth growth has been low or negative since 2000, about 21% of population over 15

While mean wealth has recovered, the real wealth of median individuals is still 23 percent below pre-crisis levels, and household debt is rising in many countries

This combination of low saving rates and low rates of return means that personal wealth growth has been low or even negative since 2000 for about 170 million people (or 21 percent of the population over age 15) in our 22 sample countries.[249] As shown in Exhibit 22, real median net wealth has not recovered in 13 countries since the financial crisis; it declined from $104,371 to $80,659 in our 22 countries between 2007 and 2018 and has only just started to rise again.[250] In fact, the 2013–18 compound annual growth rate for median wealth was negative 0.6 percent, and it declined in 10 out of 22 countries, including Norway (negative 11.9), Italy (negative 3.8 percent), Japan (negative 2.4 percent), and the United Kingdom (negative 2.3 percent).

Growth in real mean net wealth has also been sluggish since the crisis: annual inflation-adjusted growth has been less than 1 percent for most of the post-crisis period. In the 22 countries in our sample, between 2015 and 2017, the real growth rate for mean net wealth was just 1 percent per year; it was negative in seven countries: Belgium, Canada, Finland, Japan, the Netherlands, Norway, and the United Kingdom.

16%

Share of individuals who do not have sufficient wealth to cover three months of basic living expenses

Wealth growth has been particularly low at the bottom of the wealth pyramid, and the proportion of individuals with zero or negative net worth has risen significantly in recent decades. In the United States, for example, 23 percent of households had zero or negative net worth in 2017 compared with just 16 percent in 2001.[251] In our 22 sample countries, 16 percent of individuals have insufficient wealth to cover three months of basic living expenses, and 20 percent do not have enough for six months (Exhibit 23).[252] Low net worth appears to be most problematic in Denmark and the Netherlands, where 39 and 43 percent of individuals, respectively, have a net worth of less than 50 percent of the national relative poverty line.

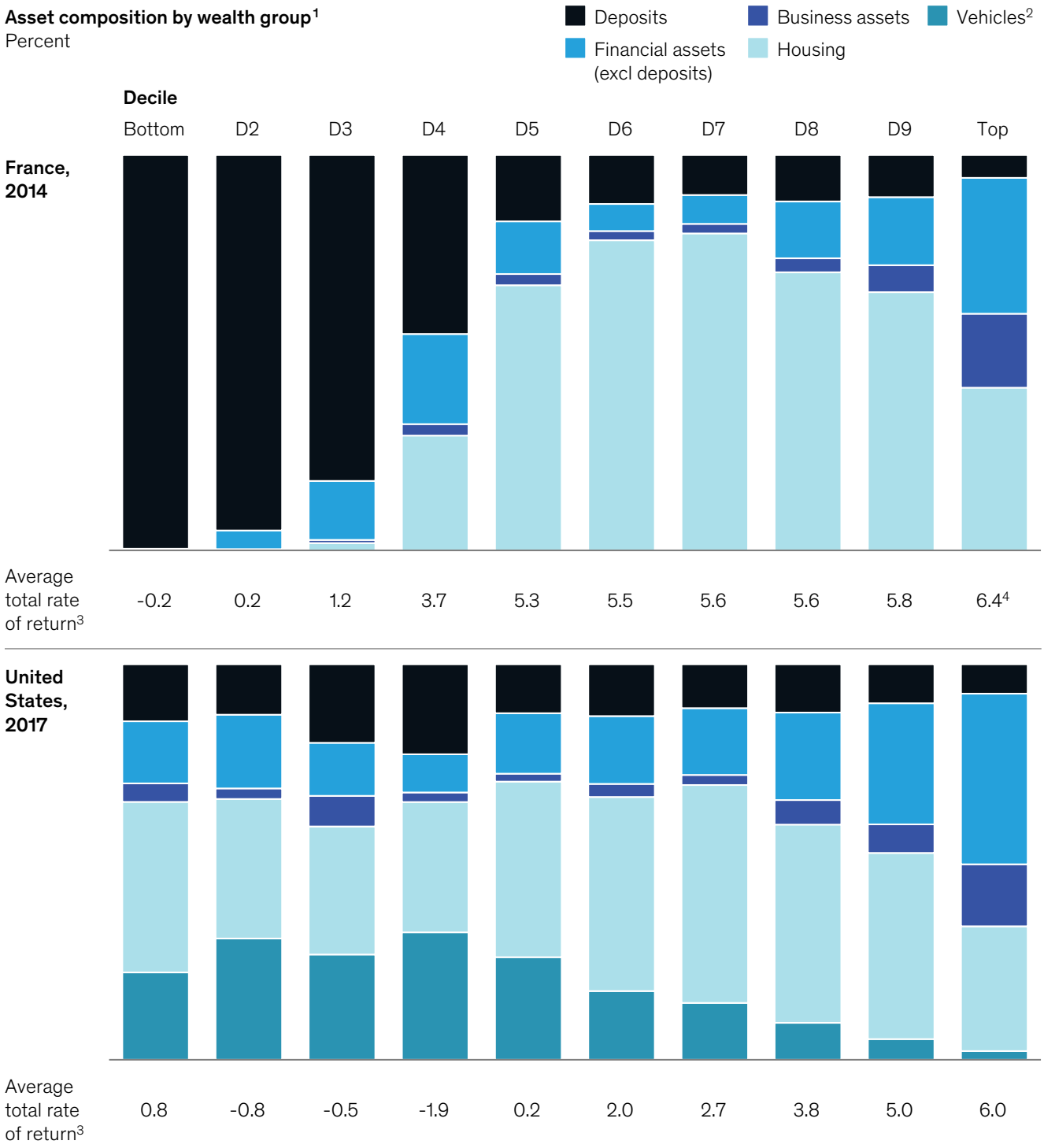
In some countries, debt has also become a more significant issue. Time-series data on debt is difficult to find at an aggregate level, but high and growing levels of household debt continue to provoke concern in many countries. Many households deleveraged in Ireland, Portugal, Spain, the United Kingdom, and the United States between 2007 and 2017, for example. However, household debt continued to grow in other OECD economies, such as Australia (up 14 percentage points), Canada (22), Norway (28), and South Korea (23).[253] In our 22 sample countries, 13 percent of households had a debt-to-asset ratio over 75 percent in 2014, ranging from 3 percent in Italy to 33 percent in Denmark and the Netherlands.[254]

Data from the United States also indicates that debt levels have increased for the indebted; panel data reveals that the real net wealth of the bottom decile of households fell from approximately negative $23,240 to negative $69,408 between 1999 and 2017. These extremely indebted households differ in a number of ways from households in the next decile. The heads of heavily indebted households tend to be younger (38 versus 41), better educated (16 versus 14 years of education), and to have higher incomes ($59,000 versus $34,000 per year).

248 "Global cities house-price index," *Economist*, March 2019.
249 Assumes that 47 percent of the population over 15 years saved for old age, on average in 22 countries, based on World Bank Financial Inclusion indicators data. Of these, 50 percent have low or negative wealth growth in countries in which median wealth growth has been less than 1 percent since 2000, and 20 percent in countries with median wealth growth greater than 1 percent; calculated using wealth data from Credit Suisse, *Global Wealth Databook 2018*.
250 All wealth data are taken from Credit Suisse nominal wealth data (*Global Wealth Databook 2018*) deflated using the OECD CPI deflator.
251 Panel Study of Income Dynamics, public use data set. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI 2019.
252 Wealth database, OECD, 2019.
253 *How secure is the global financial system a decade after the crisis?,* McKinsey Global Institute, September 2018.
254 Household debt, OECD, 2019.

Exhibit 21

Lower wealth groups have lower rates of return on their assets.



[1] Estimates for France are conducted with government macro data while US asset estimates are self-reported survey data. Housing includes homes and other real estate. Financial assets includes stocks, annuities, and other assets. Methodology for France followed to estimate US values, and outliers have been excluded.

[2] Vehicles are included for US because they represent a major share of wealth in PSID data, and are included in net wealth calculations. Data for vehicles in France missing.

[3] Calculated for both countries using average annual rates of return by asset categories in France, 1970–2014; total returns are sum of flow returns and of real rates of capital gains from national accounts. They are gross of all taxes but net of capital depreciation. State pensions not included.

[4] For France, the average total returns for top decile are proxied by average total return for the 95th percentile.

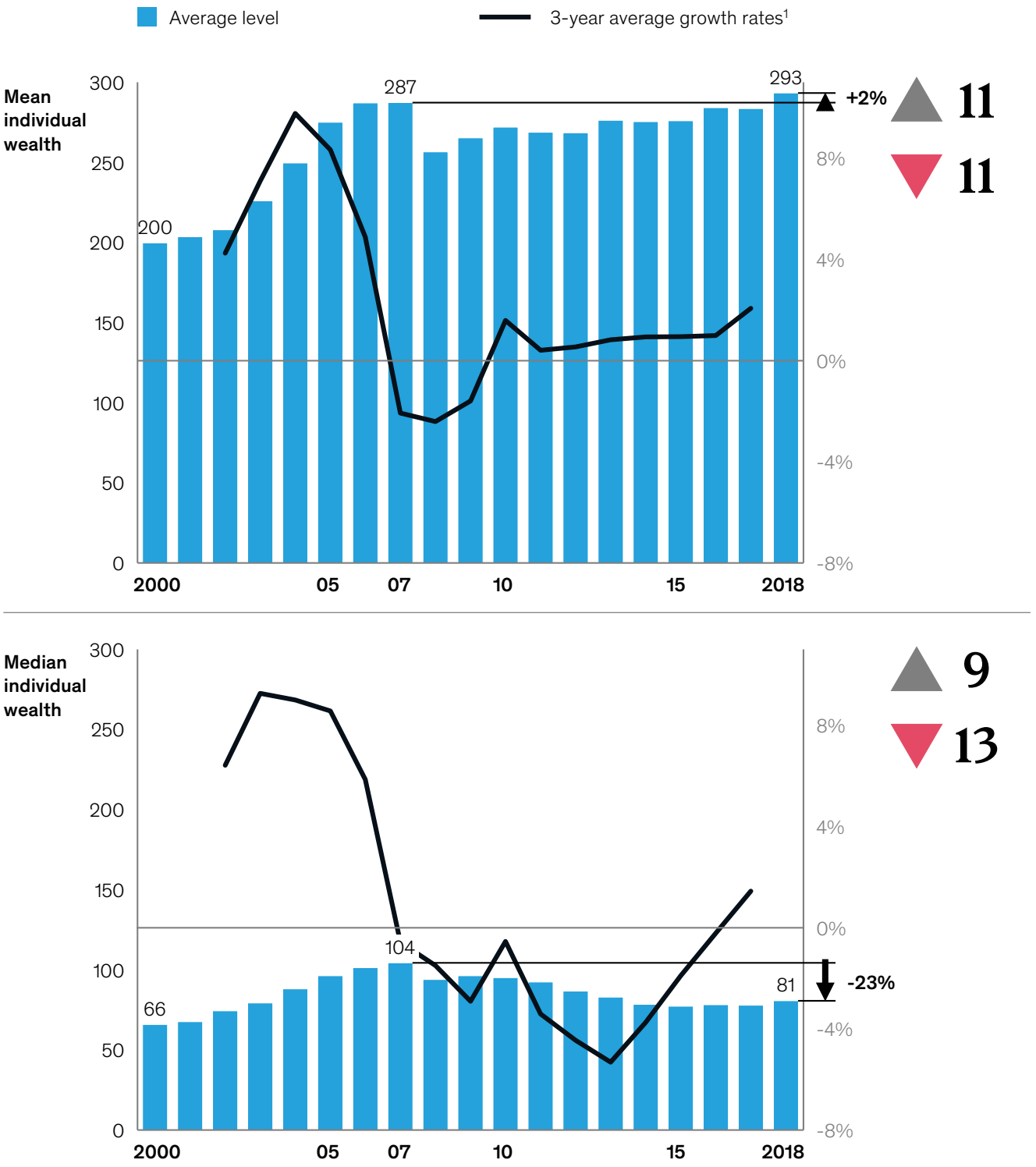
Source: Panel Study of Income Dynamics, public use data set. Produced and distributed by the Institute for Social Research, University of Michigan, Ann Arbor, MI, 2019; Garbinti, Goupille-Lebret, and Piketty (2016); McKinsey Global Institute analysis

Exhibit 22

Mean individual wealth has returned to pre-crisis levels but median wealth has not, and growth rates of both are fairly flat.

22-country weighted average (real $, thousand) **and smoothed 3-year average growth rates** (percent)

Number of countries with higher/lower wealth levels
2018 vs 2007



[1] An average of year-on-year growth rate for 3 years around the named year (e.g., 2004 figure is average of year-on-year growth rates for 2003, 2004, and 2005).
Note: Includes private pensions but not public pensions.

Source: Credit Suisse Global Wealth Databook; McKinsey Global Institute Analysis

In addition, the correlation between wealth and income appears to have fallen: high earnings provide less of a pathway to building wealth now than in previous decades. In the United States, for example, the proportion of the bottom wealth decile that is also in the bottom income quintile fell from 28 percent to 18 percent between 1999 and 2017. The 2017 bottom wealth decile was fairly evenly split across the income quintiles. This is seen in several economies; in Australia, Japan, and Spain, less than a third of those in the bottom wealth quintile are in the bottom income quintile.[255]

Young people in particular appear to be experiencing difficulties in building wealth. In France, the average 30-year-old had 61 percent of average adult wealth in 1970 compared with just 32 percent in 2010.[256] In the United States, the equivalent figures for the average 30- to 34-year-old were 69 percent in 1984 compared with 31 percent in 2017.[257] In fact, in both France and the United States, the wealth-age profile has shifted substantially since the 1970s and 1980s, with successive generations building wealth later and later. Low levels of wealth among young people are also a concern in the United Kingdom, where just 53 percent of 22- to 29-year-olds have any savings, and among those who do, about 40 percent have less than £1,000 in the bank.[258]

Wealth inequality has increased and old-age relative poverty has declined—but could begin rising again

The wealth of the top 10 percent rose by 1.6 percentage points between 2010 and 2014 in 14 countries for which comparable data are available.[259] This high wealth growth at the top of the pyramid and stagnant or negative growth at the bottom have led to a considerable increase in inequality; the wealth Gini coefficient has risen for 15 out of the 21 sample countries with available data.[260] The United States remains the country with the highest wealth inequality, with a Gini coefficient of 0.81. It also has one of the highest increases in inequality since 2000. Countries that were severely hit by the financial crisis, including Greece, Ireland, Portugal, and Spain, have also seen inequality grow quickly. Austria, Sweden, and the United Kingdom have high levels of inequality, too, but are among the six countries that have seen their levels of inequality fall.

Old-age relative poverty has fallen in most countries since 2000, but the combination of low wealth growth and lower, riskier institutional pensions could increase the proportion of pensioners who struggle to make ends meet. Estimates from Canada and Ireland indicate that the share of households that will have to downgrade their lifestyle on retirement is between 17 and 29 percent, representing roughly 140 million to 240 million working-age individuals in our sample. Without major reform, this proportion could increase to 50 percent.[261]

$104,000

Median savings for US households headed by a person 55 to 64, for the 70% of such households that have savings

In the United States, recent estimates show that the average couple retiring today at age 64 will need $280,000 just to cover healthcare and medical costs in retirement.[262] However, 29 percent of households with a head aged 55 to 64 have no retirement savings or defined-benefit plan. Among those with savings, the median is just $104,000—or $310 a month in income.[263]

255 Panel Study of Income Dynamics, public use data set. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI 2019; *Inequalities in household wealth across OECD countries: Evidence from the OECD Wealth Distribution Database*, OECD working paper number 88, June 2018.

256 Bertrand Garbinti, Jonathan Goupille-Lebret, and Thomas Piketty, *Accounting for wealth inequality dynamics: Methods, estimates and simulations for France (1800–2014)*, WID.world working paper series number 2016/5, World Inequality Database, 2016.

257 Panel Study of Income Dynamics, public use data set. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI 2019.

258 *How well are you doing compared with other young people?*, UK Office of National Statistics, October 2019.

259 Wealth database, OECD, 2019.

260 *Allianz Global Wealth Report*, 2018.

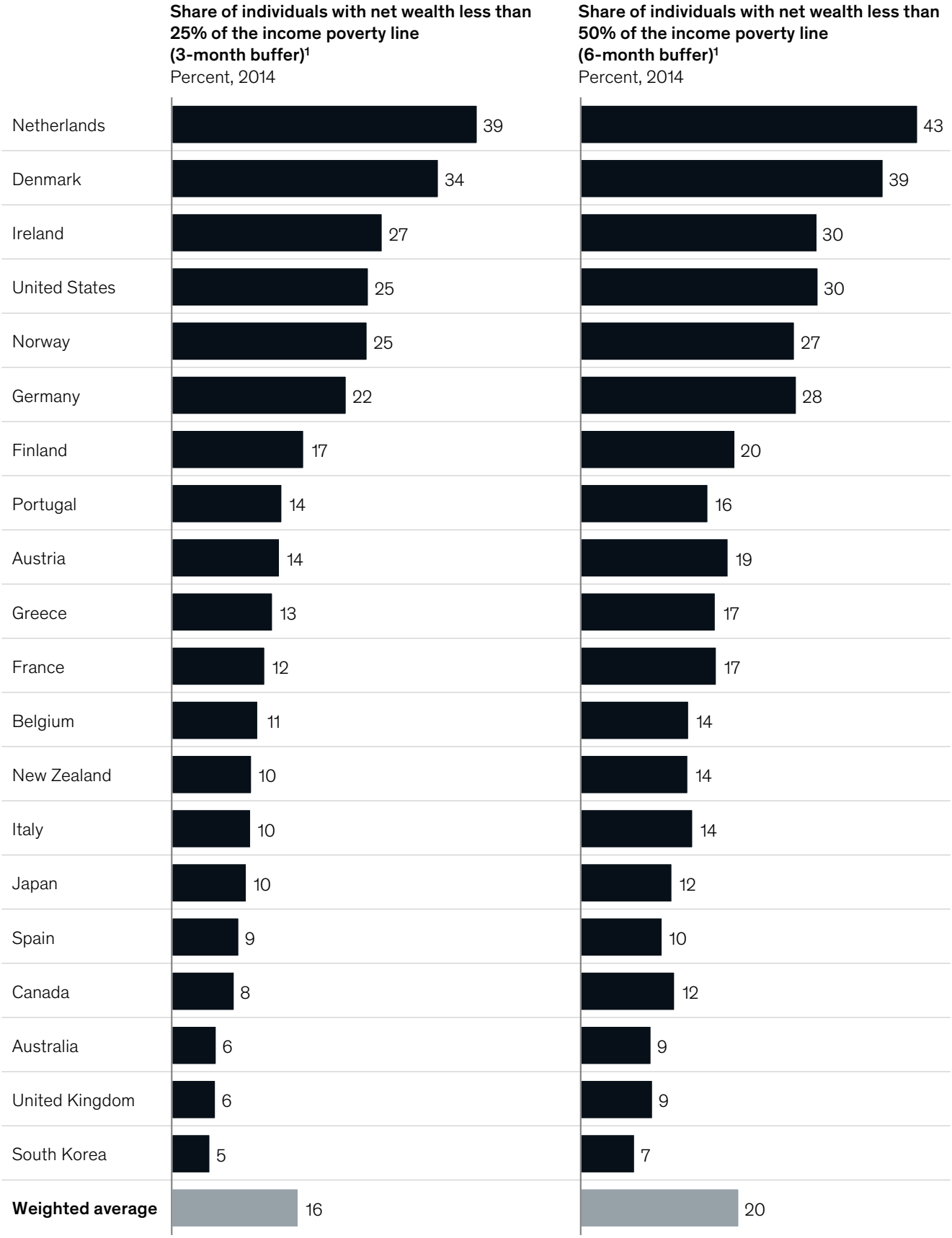
261 Building on Canada's strong retirement readiness, McKinsey & Company, 2015; *Is Ireland's population ready for retirement?*, McKinsey & Company, 2015.

262 "A couple retiring in 2018 would need an estimated $280,000 to cover health care costs in retirement," Fidelity, April 19, 2018.

263 *Most households approaching retirement have low savings*, US Government Accountability Office, May 2015.

Exhibit 23

Twenty percent of individuals do not have enough wealth to cover six months of basic costs.



[1] Net wealth excludes pension schemes related to employment.

Source: World Bank Financial Inclusion Indicators; OECD; McKinsey Global Institute analysis

Elderly bankruptcy is already rising in the United States, where one in seven people who file for bankruptcy are now 65 years and up. This represents an almost fivefold increase over 25 years. In 1991, people over 65 made up 2 percent of bankruptcy filers; by 2016, this figure had risen to more than 12 percent, or 133,000 individuals.

Overall debt levels in old age are also rising: in 1989, only one in five Americans aged 75 or older were in debt; by 2016, almost half were.[264] In Japan, the incidence of crime among the elderly is soaring; 35 percent of all arrests for shoplifting involved retirees, up from 20 percent in 2001, and the proportion of the prison population that is of retirement age has doubled over the same period.[265]

At the same time, retirees in many countries are taking the initiative to compensate for low levels of retirement income by taking on work, often part-time and alternative employment arrangements; the so-called grey participation rate has risen substantially, from 10.5 to 14.8 percent, in our 22 countries.

Viewed from the perspective of the social contract, individuals as savers have more opportunity to build wealth but also are having to take on considerably more risk to secure their retirement pensions. As governments and private pension providers mostly reduce guaranteed net replacement rates and change from defined-benefit to defined-contribution plans, individuals' need to ensure that they have enough wealth for their retirement has grown. At the same time, data from our 22 sample countries suggests that many people are not saving enough, or indeed at all, and that investment returns for most households are low.

[264] "The boomers going bust: Why elderly bankruptcy is rising in America," *Financial Times*, August 2019.
[265] *Crime in Japan: Economics of elderly crime*, Mike Newman, February 2016.

5 The shifting role of institutions

What has caused these changes in economic outcomes? In chapter 1, we sketched out the disruptive trends such as technology and globalization that have affected individuals in our three arenas in a range of ways. In this chapter, we look at the changing role of institutions themselves, in both the private and public sectors. Institutional involvement in the marketplace, most importantly through regulation, helps govern the individual or institutional responsibility for economic outcomes. To examine this latter shift, we draw on research, including work by Peter Hall, David Soskice, and Gøsta Esping-Andersen, that distinguishes between degrees of market intervention in a market-based system and levels of government spending.[266]

Based on the analysis of the three arenas of work, consumption, and saving, we find that market intervention has decreased over the past two decades on average in all three arenas and for most countries. This created opportunities in employment growth as well as consumer surplus in discretionary goods and services, but also presented challenges in wage stagnation and increasing costs of basics. This is true independent of the starting point of a country's institutional setup, which ranges from those with lower market intervention setups and lower public expenditure to those with more "coordinated" markets—in other words, higher market intervention—and higher public expenditure.

Overall, the development means that individuals are increasingly responsible for their own economic outcomes. This "individualization" of responsibility partially explains why outcomes differ significantly for individuals within the same economic system.

Institutional roles are shifting

Institutions play important roles in shaping how risks and gains are shared. For example, working in a corporation that provides employee training may buffer an individual from the risk of skill obsolescence. The economic gains would be shared by companies resetting wages or paying dividends, and by governments through transfers, public pensions, or the provision of tax-funded services.

We attempt to separate out three broad determinants of risk sharing between individuals and institutions. First is the risk sharing that takes place via markets. Second is that which occurs via tax-funded public expenditure. The third is determined by individual choice and action.

In the case of markets, the role of institutions—shaped by market intervention mechanisms, such as regulation and policy—affects how much risk individuals bear for their outcomes. For example, employment protection sets standards for working contracts and price controls, product-market regulations, and the level of competition affect the quality and cost of goods

[266] Academic research suggests that the sharing of risks as well as of gains typically takes two forms: via markets or via tax-funded public expenditure. In "liberal" market economies—to use the terminology in the literature—firms and market mechanisms primarily drive exchanges between individuals and institutions, including in such areas as industrial relations, vocational training and education, corporate governance, interfirm relations, and relations with employees. In more "coordinated" market economies, nonmarket forms of interaction are relied on more heavily. These can include factors such as employee protection and coordinated provision of vocational training. For details, see Peter Hall and David Soskice, eds., *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Oxford, UK: Oxford University Press, 2001; Gøsta Esping-Andersen, *The Three Worlds of Welfare Capitalism*, Princeton, NJ: Princeton University Press, 1990. Also see Arend Lijphart, *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*, New Haven, CT: Yale University Press, 2012; André Sapir, "Globalization and the reform of European social models," *Journal of Common Market Studies*, June 2006, Volume 44, Issue 2.

and services available to consumers. Other policies mandate the level of institutional savings on behalf of individuals to ensure that they have sufficient wealth for their pensions.

In the case of public expenditure, the level of direct spending by government institutions determines the level of risk borne by individuals versus that absorbed by public resources. For example, government spending on public-sector wages helps insulate workers from labor market volatility, while spending on housing, healthcare, and education helps consumers cope with the rising cost of basic goods and services.[267]

While public- and private-sector institutions play important roles, individual action mostly determines the distribution of risks and gains. For example, individuals choose the extent to which they invest time in education, offer their labor, limit consumption within their means, and manage their savings.

Exhibit 24 summarizes these drivers of individual outcomes, highlighting major disruptive trends shaping the economic environment, institutional sharing of gains and risks via markets, and public expenditure, as well as the role of individuals themselves. A higher degree of market intervention and public spending entails lower responsibility for individuals and vice versa.

While individual responsibility is difficult to quantify, we developed two composite indexes to analyze the role of institutions in the social contract and how this role has shifted over the past two decades. Our results suggest that the sharing of risk and gains through markets has declined, exposing individuals to both opportunities and challenges, even as governments have stepped up spending on individuals.

Our research suggests that individuals are increasingly responsible for their own economic outcomes.

Institutional intervention has declined, partially explaining both positive and challenging developments of economic outcomes

Institutions can intervene in markets through different forms between enforced market intervention via regulation and a more "liberal" setup allowing market forces and choices by individual firms to influence outcomes to a larger extent, as discussed by Hall and Soskice.[268] Over the past two decades, almost all economies have trended toward a less interventionist setup, which can be linked to positive developments in economic outcomes, such as lower

[267] The debate over how to classify "welfare" spending by the government, especially in the United States, is substantial. According to the US Congressional Budget Office, the federal government spent $982 billion on Social Security for all retired workers and their spouses and children in 2018. The government spent $1 trillion on major healthcare programs, primarily Medicare ($705 billion) for workers over the age of 65 and those with disabilities, and $389 billion on Medicaid for those with low incomes. The government provided $285 billion for "income security," which includes unemployment compensation, Supplemental Security Income (SSI), the refundable portion of the earned income and child tax credits, the Supplemental Nutrition Assistance Program (SNAP, or food stamps), family support, child nutrition, and foster care. Many of these programs benefit low-income individuals, who are not the only beneficiaries. According to the Congressional Budget Office's analysis of the distribution of household income in 2016, households in the lowest quintile are the primary beneficiaries—receiving 52 percent—of means-tested transfers, including Medicaid, the Children's Health Insurance Program (CHIP), SNAP, and SSI. The highest income quintile receives 4 percent of all means-tested transfers, while the second through to the fourth quintiles account for the remaining 44 percent. Households in the highest quintile also receive support from Medicaid and CHIP (5 percent of total means-tested transfers in this category), SNAP (2 percent), SSI (4 percent), and other transfers (3 percent). See *The distribution of household income 2016*, Congressional Budget Office, July 2019, and *Updated budget projections: 2019 to 2029*, Congressional Budget Office, May 2019.

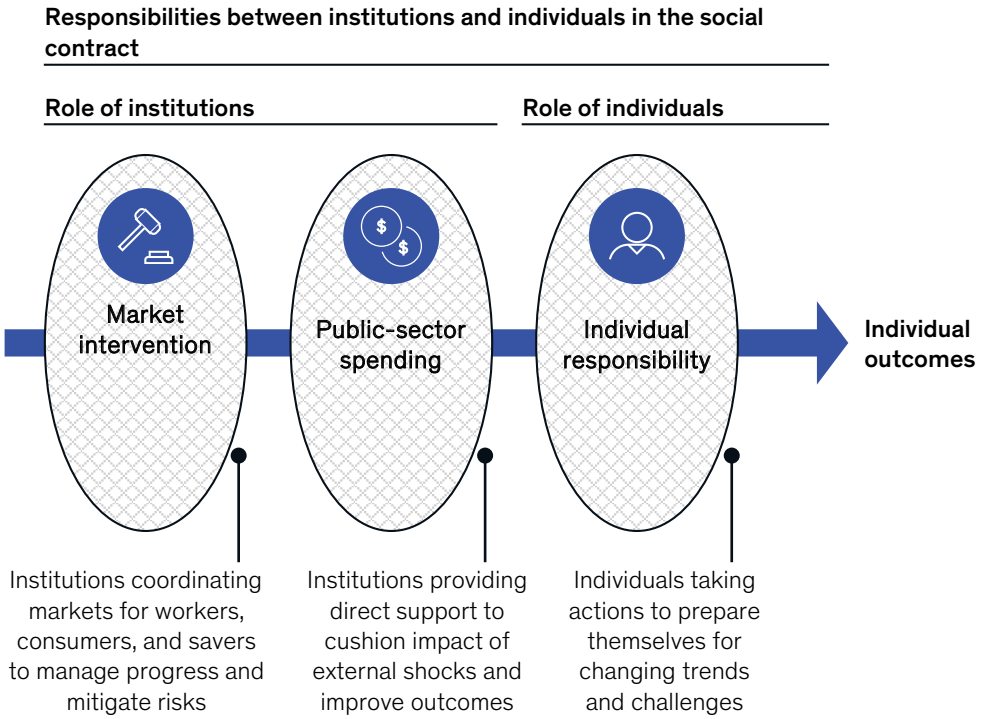
[268] The authors define "liberal" as less regulated and "coordinated" as more regulated.

Exhibit 24

Outcomes for individuals are driven by changes in major trends and changes within the social contract.

Major trends shaping the economic environment

1. **Economic growth** (structural, e.g., low productivity growth, and cyclical, e.g., global financial crisis)
2. **Technology** (AI, automation, digitization)
3. **Globalization** (flows of people, capital, and goods and services)
4. **Demographics** (low birth rates and aging)
5. **Gender roles**
6. **Structural changes**
7. **"Superstar" effects**



Source: McKinsey Global Institute analysis

prices of discretionary goods and services benefiting consumers, as well as challenging developments that include lower guaranteed pension levels.

Our composite index tracking the role of institutions in coordinating outcomes consists of indicators in each of the three arenas. For each indicator, we took the simple average of 22 countries where data was available. To simplify the illustration of the changes, we then compiled the simple average of the indicators in each arena.[269] Finally, we created an aggregate market intervention index by taking the simple average of the three arenas. Our results show that the institutional role in market intervention declined in each arena, while the aggregate index fell by 13 points, from 100 to 87, between 2000 and 2018 (Exhibit 25).

For workers, the shift in institutional roles toward less market intervention is marked by more relaxed employment protection legislation (in 12 of 22 countries) and a continued decrease in collective agreements coverage (in 14 of 22 countries).[270] These changes have been linked to increasing employment rates, by decreasing the risk of hiring, as well as an increasing polarization of wage development, as less collective agreements coverage translates into wages linked more closely to individual negotiations rather than pooling and sharing of risks

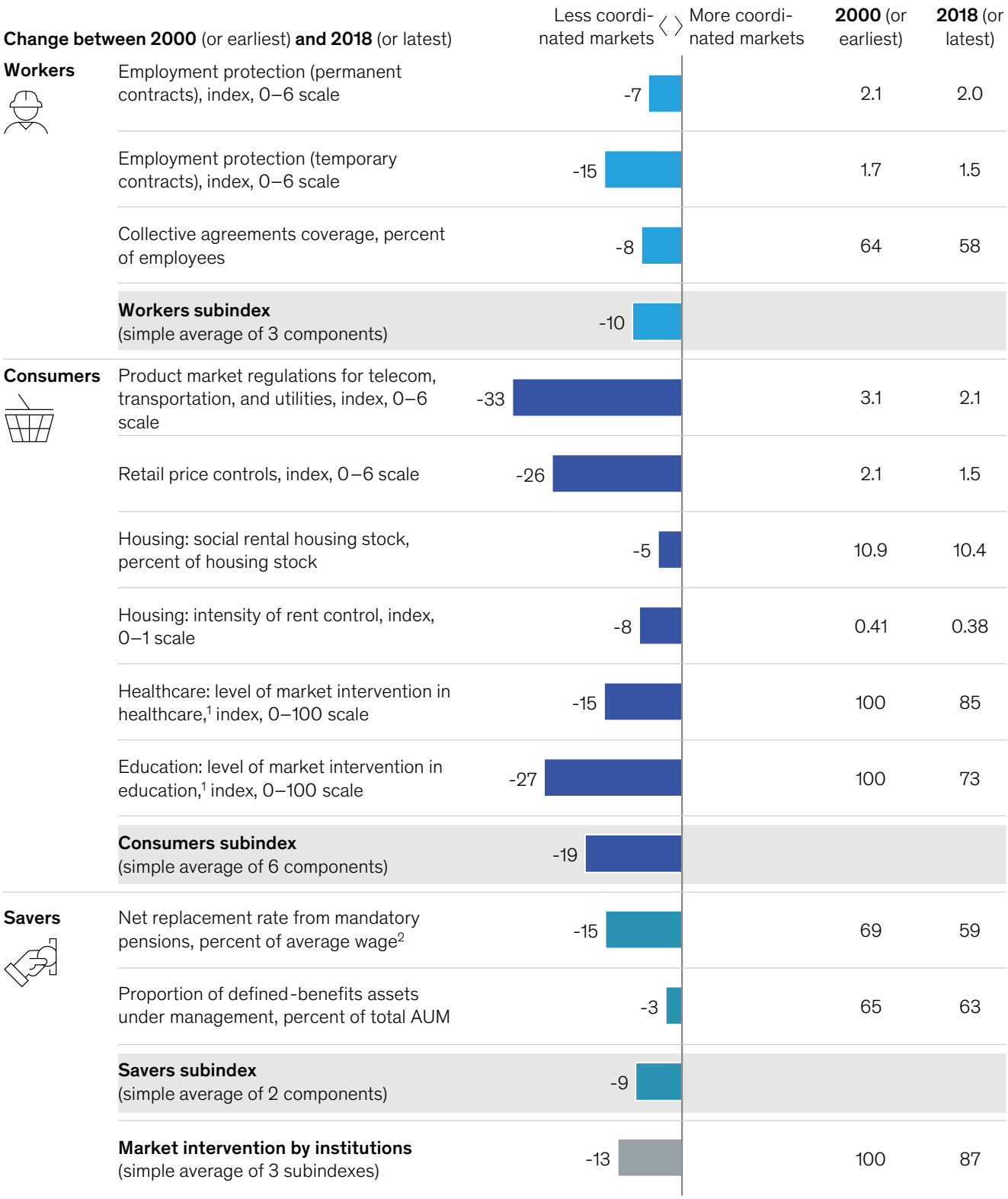
[269] We acknowledge that some components of the index might be more important than others, but we do not attempt to adjust for this; rather, we take simple averages in each arena and at the overall level.

[270] To assess worker protection levels, we used the OECD's employment protection index, which covers 25 metrics including notification procedures for individual or collective redundancies, notice periods before dismissal, severance pay linked to tenure, and procedures to protect against unfair dismissals. For temporary workers, the indexes cover the legality of using fixed-term contracts or temporary work agencies, limitations on the number of cumulative fixed-term contracts offered to workers, and equal treatment of regular and agency workers within a company, among others. We also measure the proportion of employees covered by collective agreements. Collective agreements are legal agreements negotiated at the firm, sector, or national level that cover mutually agreed-upon wage levels and wage increases in addition to nonworking conditions such as vacation arrangements, training, and employment protections, among other things. See *OECD employment outlook 2018*, OECD, 2018.

Exhibit 25

Market intervention by institutions declined by 13 points.

Market intervention by institutions for workers, consumers, and savers; composite index (2000 = 100), simple average of 22 countries



[1] Index to proxy role of institutions: inverse of out-of-pocket voluntary spending in healthcare, and private spending.
[2] For male workers, only Australia (+1.7%) and Switzerland (+1.3%) have differences with female workers.
Note: Simple averages are used to highlight the roles of institutions in 22 different countries and systems.

Source: OECD; Eurostat; ILO; World Bank; national accounts data, national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

and gains.[271] In Germany, for example, the government relaxed legislation for hiring temporary workers, which has contributed to a rapid increase in their employment but also to a growing share of lower-wage jobs.[272]

For consumers, the shift in institutional roles toward less market intervention was seen in the substantial reduction in product-market regulations for telecommunications, transportation, and utilities, and retail price controls.[273] This stimulated market competition and helped push down prices for many goods and services, especially for data and other communications costs. For instance, between 2012 and 2017, the cost of data fell by 89 percent and usage surged tenfold in nine countries, as discussed in chapter 3.

At the same time, reductions in the level of market intervention in housing—seen in the decline in social housing stock as a percent of total housing stock and in declining intensity of rent control—went hand in hand with rising housing costs.[274] Increasing private-sector investment in real estate is not leading to a sufficient increase in supply that might lower prices. This is partly because of strict zoning and limited public-sector infrastructure investment, and partly because of speculative investment in current housing stock driving up prices. Similarly, the increase in out-of-pocket spending on healthcare and private spending on education suggests a shift to a lower institutional role in coordinating these markets for consumers.

For savers, the access to greater opportunities provided by technology and deregulation amounts to one shift toward a less interventionist market setup. However, the signs of less institutional market intervention on behalf of individuals are seen in the decline of net replacement rate from mandatory pensions.[275] The ratio of defined-benefit pension plans as a proportion of total pension assets under management declined by two percentage points on average. These changes, prompted by demographic shifts and pressures on government finances, have transferred the responsibility for saving onto individuals at a time when expected years in retirement are increasing, market returns on savings are low, and a significant share of the population is not saving for retirement.

The overall decline in institutions playing a coordinating role was evident in 19 out of 22 countries in our sample. New Zealand, South Korea, and the United States are the three exceptions, although they started at relatively low levels. In New Zealand, the rise in market intervention was largely due to increased employment protection, particularly for temporary workers, while in South Korea it rose due to higher retail price controls, lower private spending on education, and an increase in social housing stock. In the United States, institutional roles in risk sharing rose due to changes for consumers: retail price controls increased and out-of-pocket spending on healthcare declined primarily due to the introduction of the Affordable Care Act in 2010.

Increased government spending did not compensate for the effects of global trends and the changing role of market institutions

Public-sector spending on workers, consumers, and savers refers to direct spending by governments to cushion individuals from poor outcomes and reduce the risk they face. Our index consists of nine indicators to measure public spending in the three arenas. Rather than using aggregate government spending, we have focused on public spending in these markets because it is directly provided to individuals or households.

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[271] See "Protecting jobs, enhancing flexibility: A new look at employment protection legislation," in *OECD employment outlook 2013*, OECD, 2013; Bruno Amable and Ken Mayhew, "Unemployment in the OECD," *Oxford Review of Economic Policy*, Spring 2011, Volume 27, Number 2, pp. 207–20; Cyrille Schwellnus, Andreas Kappeler, and Pierre-Alain Pionnier, *Decoupling of wages from productivity*, OECD Economics Department working paper number 1373, January 2017.

[272] Jack Ewing, "The trade-off that created Germany's job miracle," *New York Times*, September 24, 2012.

[273] We created a composite measure of product-market regulations in the telecommunications, transportation, and utilities industries by averaging the OECD's Product Market Regulation scores for five markets: telecommunications, electricity and gas (utilities), and road and rail (transportation).

[274] Konstantin Kholodilin, Housing rental market regulation indices database, 2019.

[275] Net replacement rates from mandatory pensions captures how effectively a pension system provides retirement income to replace earnings.

For workers, the three measures are: government spending on public-sector wages; spending on unemployment, incapacity, and active labor market programs; and spending on training.[276] We included these three measures to capture how governments can mitigate labor market risks for individuals through direct support including, for example, by employing workers in public-sector roles that are typically more stable than private-sector positions. The public-sector spending indicators we included measure the financial support governments provide for those who have lost their jobs, are unable to work, or need retraining and reskilling for new roles. For consumers, the five measures are: social spending on housing, social spending on healthcare, government spending on education, spending on general government gross fixed capital formation to proxy for infrastructure investment, and social spending on family and other social policy areas, which includes spending on food stamps and other similar benefits.[277] For savers, we included one indicator: social spending on old-age and survivors' pensions.

Just as we did for institutional risk sharing, we created an aggregate public-spending index for the three markets as well as subindexes for each market. Our initial results suggest that governments increased direct support to individuals amid demographic change and continued fallout from the 2008 financial crisis. Spending across these indicators between 2000 and 2018 increased by three percentage points, 66 percent of which we estimate is due to demographic changes (Exhibit 26).[278] The most significant increases occurred in Finland and Norway, at nine percentage points, followed by Belgium, Denmark, and South Korea, where the increase was seven percentage points.

The biggest change in public spending was driven by pensions for savers, followed by increased healthcare spending for consumers. In 2000, 7.6 percent of GDP was spent on pensions, rising to 9.5 percent in 2018 on average for our 22 countries. We estimate that almost the entire increase was driven by demographic changes because life expectancy has increased, raising the number of years individuals spend in retirement. Social spending on healthcare rose from 5.3 to 6.4 percent over the same period, with approximately 30 percent of this spending due to aging. The rest was partially due to price factors, including availability of new products and technologies. Apart from pensions and healthcare, spending on family and other social policy was the only other metric that increased notably over this period.

Over the 18-year period, public-sector spending declined in only four out of the 22 countries—Germany, Ireland, the Netherlands, and Portugal. In the labor market, spending declined in all three indicators we measured in Germany and the Netherlands, while spending on unemployment and training increased in Ireland and Portugal. Germany was one of two countries in which spending on public pensions declined (the other was Australia), while spending on consumers declined in the other three countries (most notably public healthcare in Netherlands and gross fixed capital formation in Ireland and Portugal).

At an aggregate level, infrastructure spending—as proxied by government gross fixed capital formation—was one area in which spending declined between 2000 and 2018. This may have been motivated by governments' budgetary concerns in the aftermath of the 2008 global financial crisis. Cutting infrastructure spending was arguably a less controversial way to reduce budgetary constraints at a time when citizens needed additional support.

[276] The OECD's Social Expenditure statistics include training as a subcomponent of active labor market programs. We chose to separate training from active labor market programs to understand whether reskilling and retraining workers has become an area of increasing spend for the 22 countries in our sample.

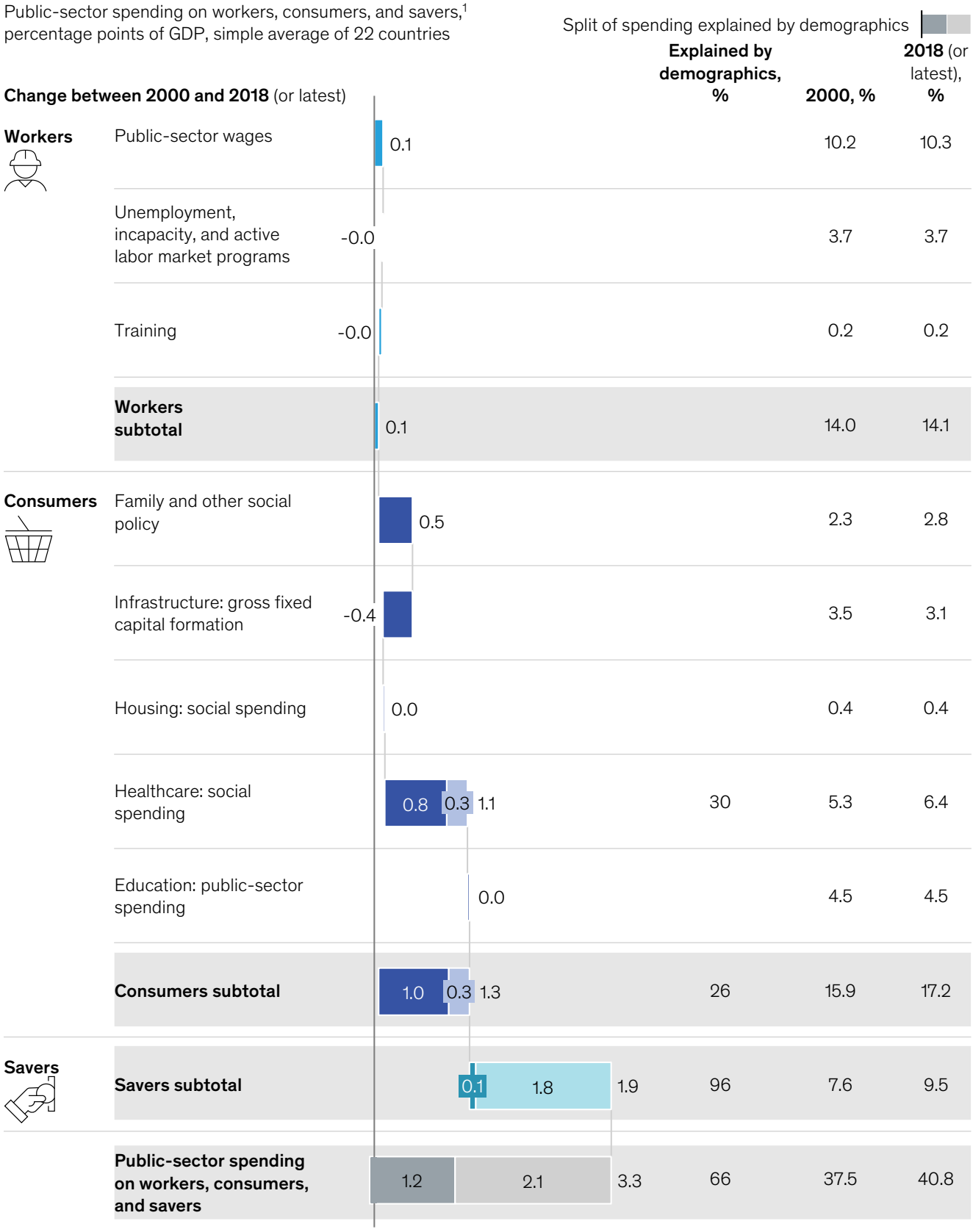
[277] In healthcare, social spending does not include R&D and other administrative expenses, included in total government healthcare expenditure. We included social spending as it covers direct support to individuals rather than system-wide spending. Notable differences occur in the Netherlands, Switzerland, and the United States, where government spending is five to six percentage points of GDP higher than social spending.

[278] We used two approaches to estimate the effect of demographics on spending by the government. For savers, we normalized spending on pensions by holding the proportion of elderly citizens (those aged 65 years and over) in 2000 constant for 2018 and subtracted actual spending from normalized spending. For healthcare, to estimate the impact of aging, we benchmarked the average price change for different age groups between 2000 and 2018.

Exhibit 26

Public-sector spending increased by three percentage points, primarily due to demographics.

Public-sector spending on workers, consumers, and savers,[1] percentage points of GDP, simple average of 22 countries



[1] Includes public-sector wages and social spending, defined as cash benefits or direct in-kind provision of goods and services, and tax breaks with social purposes; exceptions are education and infrastructure, which reflect total public spending.

Source: OECD; national accounts data; McKinsey Global Institute analysis

40.8%

Public spending share of GDP in 2018 on workers, consumers, and savers in our 22 countries, up from 37.5% in 2000

Overall, public spending increased from 37.5 percent of GDP in 2000 to 38.0 percent in 2006, peaking around 2012 at 42.4 percent on average for the 22 countries, before falling to 40.8 percent of GDP by 2018. The rise around 2012 was primarily driven by increased government responsiveness after the 2008 global financial crisis.

The implication of these changes for economic outcomes is that the sharing of risks and gains by the public sector has been unable to compensate for adverse market outcomes. Increases in public-sector wages and declines in active labor market programs and training could not improve stagnating wages nor polarization of outcomes. This is particularly challenging because the future of work is increasing the need for reskilling. Declines in social housing and rent control could not curtail soaring housing prices. Increased pension spending was largely driven by aging and did not support individuals in saving or in addressing lower interest rates on their returns.

A less interventionist market setup and higher public spending were consistent across three archetypes of countries

In Exhibit 27, we combine the indexes for the role of institutions in market intervention and the level of public spending to demonstrate how the social contract changed in our 22 countries between 2000 and 2018.

Using the two indexes, we created archetypes of the social contract across countries. Based on the index for the role of institutions in market intervention, we classified high market intervention economies as countries whose index in 2000 was above 100, while those below were classified as low market intervention economies. Based on public-sector spending, we classified countries with spending greater than 42 percent of GDP as high spending, those with spending from 35 to 41 percent of GDP as medium spending, and those with spending less than 35 percent of GDP as low spending.

Using these classifications, our 22 countries fall into three archetypes:

— Countries in which market intervention and government spending are both low

— Countries in which market intervention is high and government spending is relatively low

— Countries in which market intervention and government spending are high

Our archetypes are not intended to determine which type of social contract is better or worse. We recognize that different countries prioritize certain values that shape their social contracts. The academic research highlights the vital role that cultural, political, and historical phenomena play in shaping the values central to each country's social contract.[279]

For example, countries such as the United States value individualism and limited government regulation as core values, which shape government policies. By contrast, countries such as Sweden and Denmark prioritize equality of outcomes for individuals in society.

Our results suggest that, independent of the starting point in the three archetypes, institutions are intervening less to provide protections for workers, consumers, and savers, while public expenditure to individuals is increasing. This trend was reflected in 15 out of 22 countries in our sample.

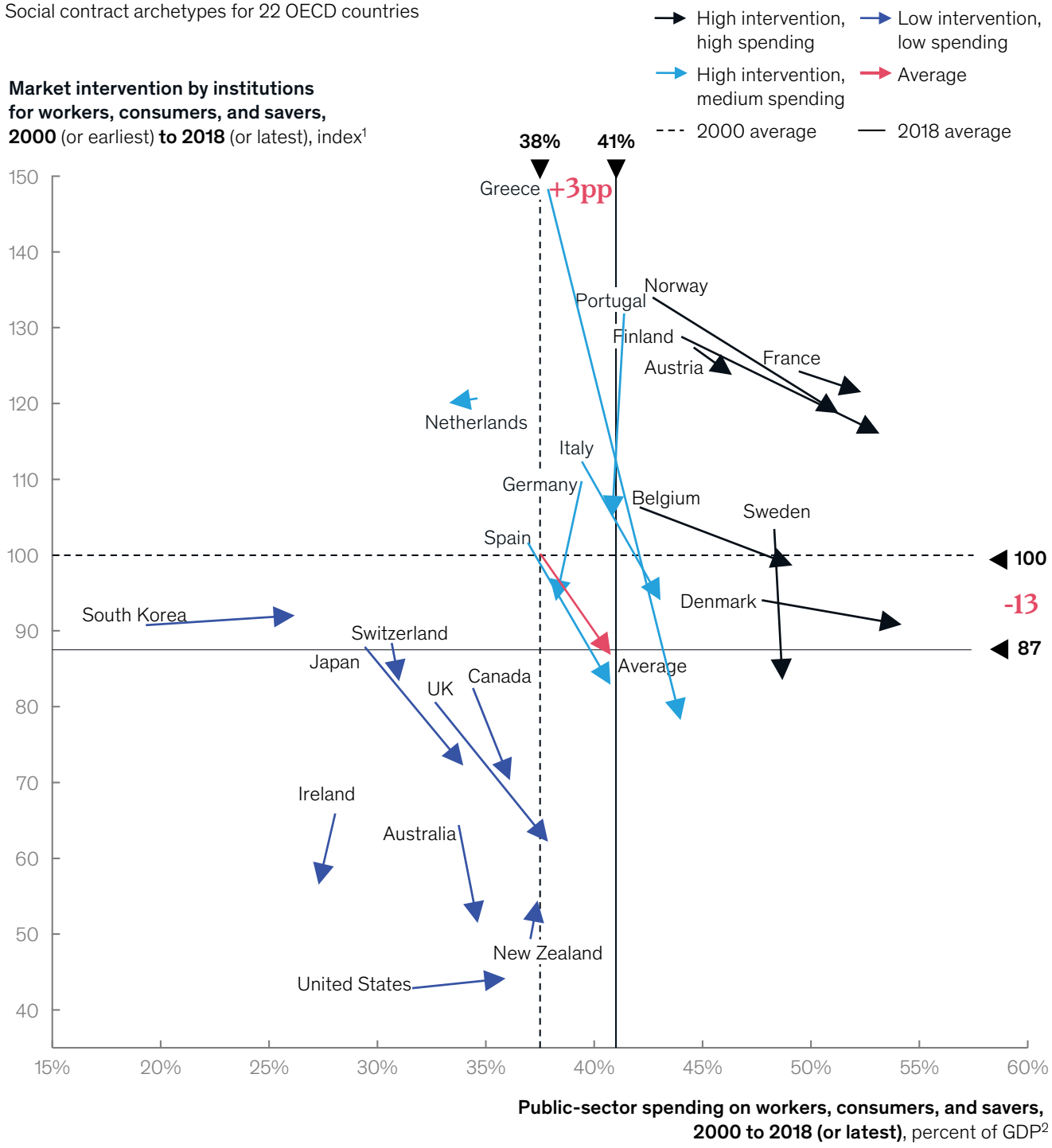
Austria, Belgium, France, and the Scandinavian countries constitute the archetype with a high degree of regulatory market intervention and high government spending. In this archetype, market intervention declined in our index by ten points, while public-sector spending

[279] Peter Hall and David Soskice, eds., *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Oxford University Press, 2001; Gøsta Esping-Andersen, *The Three Worlds of Welfare Capitalism*, Princeton, NJ: Princeton University Press, 1990.

Exhibit 27

Market intervention for workers, consumers, and savers declined by 13 points, although public-sector spending increased by three percentage points on average.

Social contract archetypes for 22 OECD countries



[1] Composite index for workers, consumers, and savers weighted equally. Components include workers: employment protection (permanent contracts), employment protection (temporary contracts), and collective agreement coverage; consumers: product market regulations, retail price controls, social rental housing stock, intensity of rent control, inverse of voluntary out-of-pocket spending on healthcare, inverse of private spending on education; savers: net replacement rate from mandatory pensions, defined benefits assets under management.

[2] Includes public-sector wages, total social spending (directed at individuals and households) for unemployment, active labor market programs, training, family and other social policies, healthcare, housing, pensions, public spending on education, and government gross fixed capital formation for infrastructure.

Note: Our social contract archetypes are not intended to judge which type of social contract is better or worse. Different countries prioritize certain values that shape their social contract.

Source: Hall and Soskice (2001); OECD; Eurostat; ILO; World Bank; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

increased by five percentage points of GDP. This archetype includes the "Scandinavian model" countries, which are characterized by high levels of government involvement in both regulation and public spending. In 2000, Norway and Finland scored 134 and 128, respectively, on our market intervention index, the highest among countries in their archetype, while public-sector spending represented 43 and 44 percent of GDP, respectively. Sweden and Denmark were at 103 and 94 on the market intervention index in 2000, and their public-sector spending was among the highest in their archetype at 48 and 47 percent of GDP, respectively.[280]

Countries with high degrees of market intervention and medium government spending include Germany and the Netherlands as well as Southern European countries significantly affected by the global financial crisis. In this archetype, market intervention declined 25 points, while public-sector spending increased by two percentage points on average. However, the countries in this archetype diverged over the two decades. Germany, the Netherlands, and Portugal decreased their spending by 0.6 to 1.3 percentage points. Greece's institutional risk sharing decreased sharply, by 71 points, driven by reforms required as part of the EU-IMF bailout agreed after the Eurozone crisis, while spending increased by six percentage points of GDP. Similarly, Italy and Spain witnessed notable declines in market intervention and increases in government spending.

Countries with comparatively low regulatory market intervention and low government spending include English-speaking countries as well as Japan, South Korea, and Switzerland. Market intervention among these countries declined by eight points between 2000 and 2018. Although this is the lowest rate of change among the archetypes, these countries started from relatively lower levels of institutional intervention, so the change is still significant. Public-sector spending increased by three percentage points of GDP over the same period. Again, these countries started from lower levels of spending than other countries. There were exceptions to these trends: New Zealand, South Korea, and the United States bucked the trend of declining market intervention, while Ireland did not increase public-sector spending.

Among the three archetypes and 22 countries, New Zealand and Denmark are outliers in our sample. New Zealand's spending is 37 percent of GDP, yet its market intervention is among the lowest in our sample countries. Denmark's market intervention was 94 in 2000, yet its social-sector spending was 47 percent of GDP, on a par with other high-spending countries.

Although 15 out of 22 countries reflected the aggregate trend of declining market intervention and increasing public-sector spending, the magnitude of the change varied by country. Declines in market intervention ranged from 0.1 point in the Netherlands to 71.1 points in Greece (increases ranged between 0.9 and 4.3 points in South Korea and New Zealand), while increases in spending ranged between 0.2 in New Zealand and nine percentage points of GDP in Finland (decreases ranged from 0.6 in Portugal to 1.3 in Germany).

Changing institutional roles have coincided with mixed outcomes for workers, consumers, and savers

Our research into the arenas of work, consumption, and saving provides evidence of a shift in the social contract, with increasing individual responsibility for economic outcomes and mixed outcomes for workers, consumers, and savers.

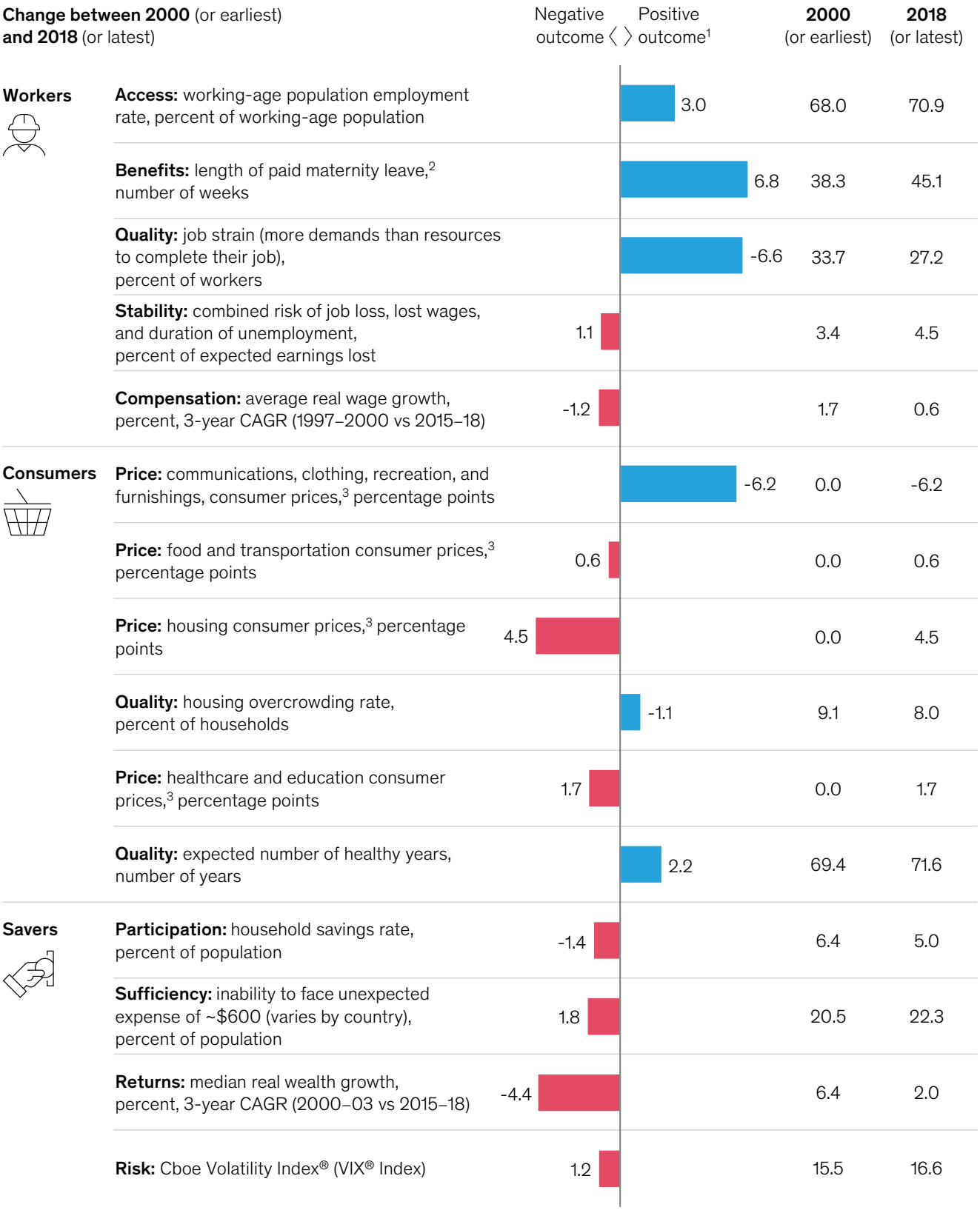
For workers, lower employment protection and less coverage through collective agreements at a time when public-sector spending remains flat implies that individuals are increasingly responsible for labor market outcomes. They need to seek employment in an increasingly flexible market, negotiate individually for their compensation and benefits, and adapt to increasing fragility stemming from changing forms of employment and increasing labor market risks.

[280] For further details on Sweden's economic performance and change in role of institutions, see *Growth and renewal in the Swedish economy*, McKinsey Global Institute, January 2013.

Exhibit 28

Summary of outcomes: Workers and consumers have seen positive and negative changes, while savers face negative outcomes.

Weighted average of 22 countries



[1] Signs of various indicators flipped to show positive and negative outcomes. Figures may not sum due to rounding.
[2] Due to data limitations, we proxy benefits using paid maternity leave as an example.
[3] Indexed to general consumer prices; weighted by consumption.

Source: OECD; Eurostat; World Bank; World Health Organization; US Annual Household Survey; Credit Suisse Global Wealth Databook; Cboe Global Markets; McKinsey Global Institute analysis

Consumers are increasingly responsible for covering the cost of basic goods and services such as housing, while public provision, intervention, and spending decline. Similarly, in healthcare and education, individuals are increasing their private spend in most countries.

As institutions are less able to provide generous retirement benefits, both in net mandatory pension rates and defined-benefit contributions, it is increasingly important for individuals to prepare for retirement and manage their own assets. This leaves many at risk of relative poverty and dependence on social safety nets in old age.

Exhibit 28 pulls in the highlights of our measurement of individual outcomes in all three arenas, as discussed in the previous three chapters. As we have seen, individuals have benefited in some areas, including higher labor force participation, more accessible and cheaper discretionary goods, and new saving opportunities. At the same time, we highlighted the increasing fragility of working arrangements, labor market risks, the stagnation of wages for a significant part of the population, a sharp increase in the cost of basic goods—most importantly, housing—and a growing risk of relative poverty in old age based on lower institutional and individual savings and lower return rates for the majority of households. Summarized in this way, our findings suggest some deterioration for savers and mixed results for workers and consumers, propelled at least in part by the shifts in institutional roles across the arenas.

Our analysis suggests that almost all of the 22 countries in our sample, independent of their starting point, have trended toward a less interventionist market setup and increased public expenditure. The analysis confirms that, despite significantly improved economic outcomes in some areas, the current pathway has not been able to prevent polarization of wages, increasing costs of basics, and lower wealth levels for the majority of households.

6 Outcomes for different social and economic groups

In the previous chapter, we examined the changing roles of institutions in the social contract over the past two decades and the overall change in economic outcomes for individuals coinciding with these shifts. The effect has not been the same for different groups of individuals: a more individualized social contract has meant more polarized outcomes for individuals.

Some groups have benefited more. Many individuals, for instance, are seeking to take on responsibility for their economic outcomes out of choice, not necessity. Independent workers are often more satisfied because they can work flexibly; full-time workers are increasingly working from home and taking sabbaticals due to lifestyle preferences. Similarly, some consumers and savers are making decisions depending on their preferences. With lower discretionary prices, they can choose to spend more on these goods and services, shift that spending to basics, or save for future consumption.

Moreover, the shift to individualized responsibility has taken place even as technology is offering some inclusive solutions to managing individual risks. For example, the gig economy offers avenues for additional income and platforms for job matching. Online education is creating alternatives to high-cost university degrees, while online medical consultations are supplanting in-person visits. Yet, these technological innovations and forces that create opportunity for many have not been sufficient to overcome the profound changes to the social contract for others. Some groups have experienced the negative shifts in economic outcomes particularly starkly. For example, many mid-skill and mid-wage workers have been squeezed out of the job market, while lower-skill workers have faced pressure to stretch their incomes to cover the rising cost of basics, and suffered from inadequate savings and rising indebtedness.

In this chapter we investigate perhaps the most profound implication of a more individualized social contract—the polarization between those able to take advantage of new opportunities and those who have not been able to do so. We highlight the considerable variation among social and economic groups, and call out the groups most affected by the changes, for better and for worse.

The changes created opportunities for high-income groups and women, but challenges for middle- and low-income groups and the young

Changes over the past two decades affected different groups based on their income and wealth levels, age, and gender. Our research was limited by a lack of consistent and comparable data for all social groups and all countries, including for ethnic minorities (see Box 4, “Outcomes for minority groups in the United States”). However, using the available data, we highlight social and economic groups that were able to take advantage of the greater opportunities in the three arenas and those who fell behind.

High-skill workers have benefited, while outcomes have deteriorated for many low- and middle-skill workers

In work, consumption, and saving, high-skill, high-income, and wealthy groups in our 22 countries have largely benefited. Exhibit 29 shows how in most of the 11 metrics we consider, the top two quintiles of the population outperformed the bottom three quintiles,

a population of approximately 500 million people.[281] These metrics include absolute levels as well as change metrics, which imply that the gap between the top and bottom quintiles is increasing. For workers, middle segments faced the most negative outcomes, while in consumption and saving, the lowest income and wealth groups appeared to have fared worst. Data limitations make a closer examination and comparison among groups challenging.

[281] Estimated as the 15+ population in the bottom three quintiles of the income distribution. OECD Population statistics, 2019.

Box 4

Outcomes for minority groups in the United States

An analysis of outcomes for individuals from different ethnicities in our 22 focus countries is not possible because of a lack of comparable data. However, pertinent data are available for the United States, including a landmark 2019 study by the Federal Reserve Bank of St. Louis.[1] It showed that families struggling the most tend to be black or Hispanic, young, and both with and without a college degree.

Between 1989 and 2016, the share of households headed by a black or Hispanic person rose from 20 to 25 percent—yet their share of household wealth barely changed. In 2016, white families owned 89 percent of the wealth in the United States, while black and Hispanic families each owned about 3 percent. The wealth of the median white family was ten times higher than the wealth of the median black family and 7.5 times higher than the median Hispanic family.[2]

Tertiary education is not helping close the wealth gap enough. Between 1989 and 1998, the median college-educated black and Hispanic household had 31 percent and 34 percent, respectively, of the wealth of the median college-educated white household. Between 2010 and 2016, the gap had widened: the median college-educated black and Hispanic household had 17 and 19 percent of the wealth of the median college-educated white family.

Prior MGI research has highlighted the fact that unemployment rates among the black population in the United States were consistently higher than for the white population between 2000 and 2017, peaking after the financial crisis.[3] Looking ahead, the impact of automation could affect some minority groups severely due to lower educational attainment. For example, Hispanic workers in the United States are overrepresented in food service roles and have the highest rate of potential displacement at 25.5 percent (or 7.4 million individuals).[4] Similarly, African Americans may have a higher rate of job displacement in 13 community archetypes analyzed compared with other groups, adding up to almost 19 million people by 2030.[5]

1 The Federal Reserve Bank of St. Louis focused on wealth inequality between households, arguing that wealth enables families to invest in their well-being while income enables them to meet their day-to-day needs. See Ana Kent, Lowell Ricketts, and Ray Boshara, *What wealth inequality in America looks like: Key facts and figures*, Federal Reserve Bank of St. Louis, August 14, 2019.
2 Ana Kent, Lowell Ricketts, and Ray Boshara, *What wealth inequality in America looks like: Key facts and figures*, Federal Reserve Bank of St. Louis, August 14, 2019.
3 *Inequality: A persisting challenge and its implications*, McKinsey Global Institute, June 2019.
4 *The future of work in America*, McKinsey Global Institute, July 2019.
5 *The future of work in black America*, McKinsey & Company, October 2019.

Exhibit 29

Outcomes by income and wealth group: High-income groups have benefited, while low- and middle-income groups face negative outcomes.

Average of primarily 8 countries: France, Germany, Japan, Italy, Spain, Sweden, United Kingdom, and United States[1]

Worse than average — Better than average — No data

	Expectation	Outcome	Average	Income/wealth quintile: Lowest	2	3	4	Highest
Workers	Access	**Change in employment share** for low-, middle-, and high-skill, -wage occupations in 16 European countries and United States, percentage points, 2000–18	-	2.7	-	-6.6	-	3.9
	Compensation	**Change in real median wage** for low-, middle-, and high-wage occupations in United States, percent, 2000–18	3.8	5.3	-	1.1	-	7.3
		Change in share of income in 17 countries,[2] percentage points, 2000–17 (or latest)	-	-0.6	-0.6	-0.2	0.1	1.2
Consumers	Prices and affordability	**Change in share of spending** on housing, healthcare, and education in Germany, Spain, and United States, percentage points, 2000–17	5.7	9.1	7.1	5.5	4.0	2.7
	Access	**Cost of minimum acceptable housing** in Japan, United Kingdom, and United States, percent of disposable income, 2014	13	43	22	15	11	7
	Quality of outcomes	**Change in rate of housing overcrowding** in France, Germany, Italy, Spain, Sweden, and United Kingdom, percentage points, 2005–17	-0.1	0.9	0.2	-0.3	-1.3	0.1
		Change in share of people who rate health as good/very good in 10 countries,[3] percentage points, 2005–17	3.4	4.0	-	3.4	-	2.8
Savers	Participation	**Median savings** as share of disposable income in Germany, Spain, Sweden, and United Kingdom, percent, 2015	20	-14	9	20	29	40
		Change in median savings as share of disposable income in Germany, Spain, Sweden, and United Kingdom, percentage points, 2010–15	1.6	-3.1	-1.7	0.5	2.1	3.5
	Sufficient wealth	**Change of share of wealth in 16 countries,[4]** percentage points, 2009–16	-	-0.1	-0.1	-0.1	-0.9	1.2
	Returns on wealth	**Rate of return on wealth assets** by quintile in France and United States, percent, 2014 and 2017	2.8	0.0	0.6	3.2	4.4	5.8

[1] We focused on 8 countries and 11 indicators due to limited data covering both socioeconomic group and country. As a result, this chart focuses on a narrower set of outcomes to illustrate differences across socioeconomic groups. Data availability for each indicator and country varies.
[2] Data missing for Australia, Japan, New Zealand, South Korea, and Sweden.
[3] Countries include Australia, Canada, Japan, Germany, France, Italy, Spain, Sweden, United Kingdom, and United States.
[4] Mapping data on change in share of wealth in bottom 60 percent to 1st, 2nd, and 3rd quintiles, average of top 5 percent and 10 percent to 4th quintile; and top 1 percent to 5th quintile.

Source: Eurostat; US Department of Labor; UNU-Wider; World Bank; national statistics agencies; McKinsey Global Institute analysis

As discussed in chapter 2, approximately 115 million high-skill, high-wage workers in 16 European countries and the United States saw their employment share rise by almost four percentage points between 2000 and 2018.[282] Their real wages and share of total income have grown faster as well.

Those in the middle have experienced some negative outcomes in the labor market, with the employment share dropping by more than six percentage points between 2000 and 2018—an indication of what some academics refer to as a "hollowing out" of roughly 120 million middle-skill, middle-wage jobs in Europe and the United States.[283]

For 95 million low-skill, low-wage workers in Europe and the United States, employment shares increased by 2.7 percentage points. This cohort includes some workers who had previously been employed in middle-wage jobs. However, the share of total income for the bottom two quintiles dropped by 1.2 percentage points between 2000 and 2017 on average in 17 economies in our sample, although wages for this group increased moderately in the United States.

In consumption, the top quintiles spend a lower share on basics, and therefore this ratio changed less markedly as prices of housing, healthcare, and education rose. The lowest income quintile saw its share of basics rise from 40 to 49 percent, compared with 37 to 43 percent for the highest quintile in Germany, Spain, and the United States on average. Compared with the lowest quintile, for which the cost of "minimum acceptable housing" is 43 percent of disposable income, the top quintile's proportion is just 7 percent and the fourth quintile's 11 percent—in other words, between one-sixth and one-quarter of the proportion that low-income people would have to spend.[284] In healthcare, higher income groups witnessed a small change in the percentage of people who perceive health as good or very good. However, this is driven by already-high levels of satisfaction among higher-income groups. At the same time, those in the low- and middle-income group are catching up with higher-income groups—in other words, their self-reported satisfaction with their health is increasing more rapidly. In absolute terms, the lowest quintile's health satisfaction rose from 59.9 percent to 63.9 percent (an increase of 4.0 percentage points), while the highest income quintile's satisfaction rose from 78.8 percent to 81.6 percent (2.8 percentage points).

Saving rates for the top quintile are high, at 40 percent of disposable income in 2015 on average in four European countries. They have risen by 3.5 percentage points since 2010. By contrast, the lowest income quintile has negative saving rates, averaging negative 14 percent of disposable income. This figure has declined by 3.1 percentage points since 2010. The share of the wealth of the top 20 percent increased by 1.2 percentage points while, for other groups, it declined by the same amount between 2009 and 2016, as wealth inequality increased. As illustrated by France and the United States, the rates of return on assets held by wealthier groups such as housing and bonds have increased, compared with deposits and vehicles held by poorer groups.[285]

Young people have fared worse than prime-age adults and the elderly

Outcomes differed considerably by age group. In general, young people between 15 and 30 years old have experienced deteriorating outcomes in all three arenas, while the elderly aged 65 and over have broadly benefited (Exhibit 30).

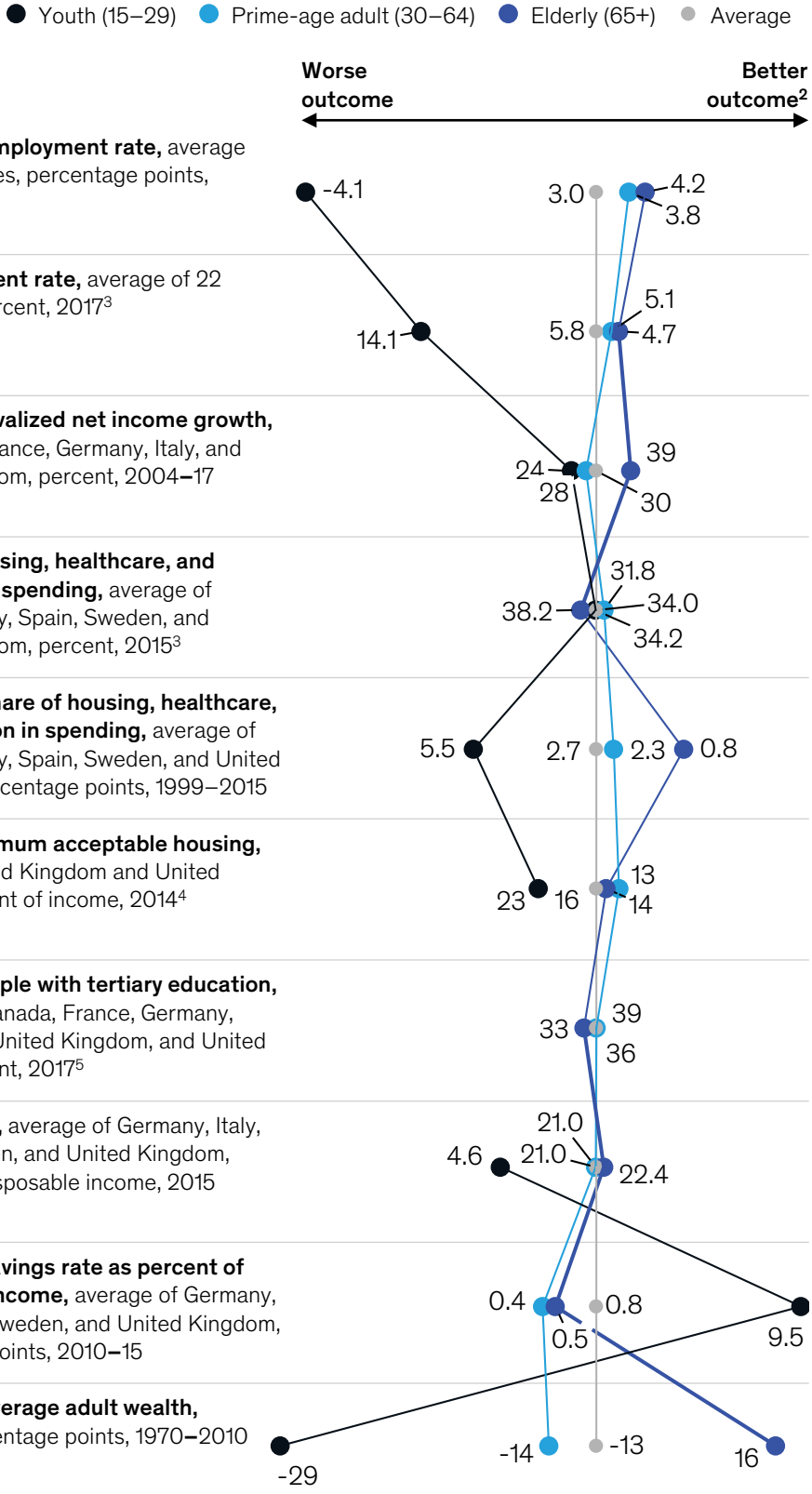
Between 2000 and 2018, the employment rate of young people declined by 4.1 percentage points while that of the elderly increased by 4.2 percentage points. For the young, this decline

[282] European Center for the Development of Vocational Training (CEDEFOP); Occupational Employment Statistics, US Bureau of Labor Statistics, 2018.
[283] See, for example, John Komlos, "Hollowing out of the middle class: Growth of income and its distribution in the US, 1979–2013," *Challenge*, 2018, Volume 61, Issue 4; Peggy Hollinger, "A hollowing middle class," *OECD Observer*, 2012.
[284] A basic socially acceptable standard housing unit is defined by a particular community's view of what is required for decent living, which varies by city and country. For further details, see *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.
[285] Data for vehicles available in the United States only.

Exhibit 30

Outcomes by age group: Younger generations are facing challenges.

Average of primarily 9 countries: Canada, France, Germany, Japan, Italy, Spain, Sweden, United Kingdom, and United States[1]



[1] Data limitations affected calculation of outcomes for workers, savers, and consumers by both age group and country. As a result, we focused on a narrower set of illustrative outcomes.

[2] Position of points are calculated as: (indicator value – average value)/average value; signs are reversed if a higher number indicates a worse outcome, e.g., sign for unemployment is reversed.

[3] Youth mapped to under 30; adult is averaged of 30–44 and 45–59; and elderly is 59 and over.

[4] Average cost of minimum acceptable housing in all cities with data availability.

[5] Youth not tracked because large proportion in/not eligible for tertiary education.

Source: Eurostat; OECD; US Department of Labor; national statistics agencies; McKinsey Global Institute analysis

is partly because more people are staying in tertiary education, often to acquire new skills but also because some struggle to find well-paid, high-quality jobs. The increase in elderly employment may reflect many individuals' choice to work longer. However, it may also be a result of higher retirement ages in some countries, as well as increasing pressure to work to earn and save more at a time when costs of basics are rising and institutional pensions are declining.

Fourteen percent of young people are unemployed in our 22-country sample, more than double the average rate in all age groups, and median net income growth is six percentage points behind the average. Countries exhibit substantial variations in youth unemployment, which ranges from 3.8 percent in Japan to 39.9 percent in Greece. The most substantial increase since 2000 occurred in Portugal and Greece, at 11.7 and 10.7 percentage points, respectively. By contrast, Japan experienced the most substantial decline, dropping 5.4 percentage points over the same period.

30%

Percentage of workers aged 15 to 24 on temporary contracts in 2018

Young workers aged 15 to 24 are more likely to be on temporary contracts than older workers. On average in 21 countries, 30 percent of workers aged 15 to 24 held temporary contracts in 2018, compared with 9.1 percent of those 25 to 54 and 7.9 percent of those 55 to 64. Once again, the country differences are substantial. In Spain in 2018, more than 71.2 percent of workers aged 15 to 24 years old were on temporary contracts, compared with 5.5 percent in Australia. Italy experienced the largest increase in the share of young workers on temporary contracts, 37.4 percentage points, between 2000 and 2018. By contrast, in South Korea, the share of young workers on temporary contracts fell by 4.1 percentage points over the same period. However, South Korea had the highest share of older workers on temporary contracts: 30.4 percent of those aged 55 to 64, and 62.2 percent of those aged 65 and older.

As the young struggle in the labor market, they spend a large share of their income on basic goods and services. Almost one-quarter of their incomes would have to go to minimum acceptable housing, compared with 13 to 14 percent for other groups in various cities in the United Kingdom and United States.

Similarly, saving rates for the young are significantly lower than for other groups, at 4.6 percent of disposable income in 2015 on average in Germany, Italy, Spain, Sweden, and the United Kingdom, compared with 21.0 percent for prime-age adults 25 to 64. Although they still lag behind, since 2010, saving rates have improved significantly for the young, growing by 9.5 percentage points compared with a rise of less than one percentage point for others.

Compared with their peers half a century ago, young people are building wealth at a much slower pace. In France, a person in 1970 had accumulated 61 percent of average adult wealth by age 30; by 2010, the share of wealth had dropped sharply to 32 percent, dropping 29 percentage points. Similarly, in the United States, 30- to 34-year-olds had 69 percent of average adult wealth in 1984 compared with 31 percent in 2017.

Women have seen improvements in employment and wages, but a gender gap still exists

Differences in outcomes also exist by gender. As workers, women have made significant strides in catching up with men in employment rates. Between 2000 and 2018, women increased their share of employment by 6.3 percentage points while men's share declined by 0.4 percentage point on average in our 22 focus countries. Unemployment rates in 2017 were almost the same, with men at 5.8 percent and women at 6.0 percent on average in 22 countries.

In compensation, the gender pay gap narrowed, with women's compensation climbing from 80 to 85 cents for every dollar a man earns between 2000 and 2017. The pay gap is smallest in Belgium, where the figure for women is 96 cents, and largest in South Korea, at 65 cents.[286]

[286] Gender pay gap statistics concern median wages and do not adjust for men's and women's different types of occupations, nor for other factors such as experience, responsibility, or performance. See Gender wage gap statistics, OECD, 2019.

This is despite women being more educated; 50 percent have a tertiary education compared with 42 percent for men in seven countries on average.

The gap between men and women as savers is even larger: average median net wealth for women in 2016 in eight European countries was just 62 percent of the average for men.[287]

Geography matters, too. Even within countries, outcomes for workers in certain geographic regions could be more challenging than in others. Urban areas have seen faster employment recovery following the global financial crisis.[288] In the United States, previous MGI research has shown that more than two-thirds of job growth since 2007 has been concentrated in 25 cities and particular counties; our ongoing research in Europe highlights similar local and regional patterns.[289]

Our analysis and measurement of individual outcomes provide context for opinion polls showing growing discontent among many people in our sample of 22 countries. Measured against their expectations, economic outcomes for individuals have often deteriorated in the labor market and for people in their role as savers. The upside for individual consumers in more accessible discretionary goods has helped offset rising costs of housing, healthcare, and education—although these latter increases are affecting low-income individuals and some social groups particularly strongly.

Geography matters.

In the United States, more than two-thirds of job growth since 2007 has been concentrated in 25 cities and counties.

[287] *Wealth and gender in Europe*, European Commission, 2017.
[288] OECD Regional Outlook: Leveraging megatrends for cities and rural areas, 2019.
[289] McKinsey Global Institute: *The future of work in America,* July 2019; *The future of work in Europe*, (forthcoming in 2020).

7 Adapting the social contract for the 21st century

The social contract has evolved throughout history. As we have noted, the opportunities that present themselves to individuals in this new era can be positive ones, ranging from the chance to work independently and benefit from falling costs of discretionary goods and services to gaining access to capital market products that were once reserved for the affluent.

At the same time, rising public discontent and the inability of many individuals to cope with their new responsibilities pose significant social challenges. What can policy makers, business leaders, and civil society actors do to adapt the social contract to today's needs, in the light of our findings about shifting responsibilities and outcomes for workers, consumers, and savers?

In this final chapter, we highlight the most pressing challenges that our research surfaced. We also showcase some of the actions being undertaken by both public- and private-sector stakeholders that aim to update the social contract by rebalancing responsibilities between individuals and institutions. These actions are illustrative of the range of measures being considered or implemented. They should not be taken as tried remedies for the range of challenges we outline. Indeed, many of the actions are pilots, untested and so far unproven. They often address only certain groups, and their effectiveness and scalability have yet to be demonstrated. The selection of examples should be taken solely as a demonstration of the breadth of solutions proposed, not as an endorsement of any particular approach.

Before focusing on the challenges, it is important to remember that a foundational imperative is to sustain and expand the gains that have led to the positive outcomes for individuals as workers, consumers, and savers. Unprecedented job growth, increased access to a variety of goods and services, and growing average wealth are hallmarks of progress. Yet, outcomes are more polarized and multiple challenges remain to be addressed.

Ten priority challenges to solve for

In the arenas of work, consumption, and saving, we identified ten priorities that are affecting large numbers of people adversely (Exhibit 31). This list is not exhaustive nor in any order of priority; it represents key challenges that emerged from our research. Five of the ten relate to the arenas of work, consumption, and saving. The other five focus on social groups and geographies that are especially affected in all three arenas. They concern not just policy makers, private-sector players, and individuals, but also social and philanthropic organizations (see Box 5, "Social-sector and nongovernmental institutions are playing a larger role").

Exhibit 31

Ten high-priority challenges in advanced countries need solutions.

		Estimated magnitude of people affected, m.
Workers 	1. **Persistent income polarization and wage stagnation.** The uneven distribution of economic gains and prolonged wage stagnation linger even at a time of positive aggregate growth.	~200[1]
	2. **Work fragility and transition supports in an evolving present and future of work.** Employment-related risks are rising and employment protection is on the wane, partly because of the increase in alternative work arrangements and growing challenges posed by automation and digitization.	~180[2]
Consumers 	3. **Challenges of affordable housing.** Rising housing costs are absorbing much of the income gains of low- and middle-income households.	~165[3]
	4. **The rising expense of and demand for healthcare and education.** Healthcare and education costs have risen above general consumer prices, and the need for more healthcare and education is likely to rise as people live longer and as the nature of work changes.	~125[4]
Savers 	5. **The growing savings and retirement problem.** In a century of longer life expectancy and aging, how can the capacity and incentives for individuals and institutions to save more, and more effectively, be expanded?	~440[5]
Challenges for social groups or countries 	6. **The multiple pressures on low-income individuals.** Low-income groups face difficulties in all three arenas of work, consumption, and saving, and their position has grown more precarious than it was in 2000.	~335[6]
	7. **A new era of challenging outcomes for the under-30 generation.** Young people between 15 and 29 years old have less access to well-paid, stable employment, affordable housing, and decent savings than previous generations.	~180[7]
	8. **The persistent gender and race gaps.** Although women have made strides in the labor market, they continue to lag behind men in employment, wages, and savings. Similarly, the racial gap in some countries is both persistent and growing.	~295[8]
	9. **The growing challenges of place.** Certain regions and local economies, mostly in Southern Europe and in declining industrial areas in the United States where more than 215 million people live, have not recovered fully from the global financial crisis, which continues to weigh on individual outcomes.	~215[9]
	10. **The risk of unsustainable government funding.** Tax collection and government revenue generation are not keeping up with government spending, which has risen to support individuals coping with global trends. Healthcare and pension systems in particular are coming under stress because of aging populations.	~270[10]

[1] Estimated as working-age population in middle-skill, middle-wage occupations (37% based on 16 European countries and US).
[2] Estimated as working-age population engaged in independent work (28% based on 6-country average).
[3] Estimated as 15 and over population who are spending more than 40 percent of disposable income on housing (mortgage repayment or rent).
[4] Estimated as population aged 15–24 and 60 years and over in Australia and United States, where healthcare and education spending as a share of disposable income is more than 10%.
[5] Estimated as 15 and over population who did not save for old age (53%).
[6] Estimated as 15 and over population in the bottom two quintiles of the income distribution.
[7] Estimated as share of people between 15 and 29 years old.
[8] Estimated as number of working-age women in employment and minorities in United States.
[9] Based on MGI's Future of Work in America and Europe analysis.
[10] Estimated as number of people who believe they could easily access public benefits if they needed them.

Source: OECD; World Bank Financial Inclusion Indicators; McKinsey Global Institute analysis

First, despite positive aggregate economic growth, the labor market has distributed economic gains unevenly. Wage stagnation has mostly affected those in middle-skill, middle-wage occupations, roughly 200 million people in the 22 focus countries.[290] The labor share of income has dropped in many advanced economies, and wage growth does not reflect the current high demand for labor.[291] This raises questions, including the following:

— How can businesses, governments, and workers collectively increase productivity growth, harness technology and other forces, and ensure the recoupling of aggregate productivity and individual income growth for workers?

— What can be done to ensure that a higher share of income goes to labor?

— How and to what extent could education, reskilling, and better credentialing assist in driving wage growth?

— What should be the role of wage assistance, subsidies, and contingent transfers in achieving living wages?

One much-discussed approach is to focus on minimum wages.[292] We note that some governments, such as in Australia, Canada, Germany, and New Zealand, are increasing minimum wages. At the same time, some private-sector companies are voluntarily increasing salaries, while others are introducing measures to cap management-to-worker pay ratios. For example, H&M is incorporating a Fair Living Wage Strategy, encouraging collective bargaining among supplier firms.[293] Other companies such as British retailers John Lewis Partnership and Richer Sounds operate employee-ownership models, enabling employees to share in the profits created by the business. The Mondragon Corporation in Spain is one example of a company that operates its businesses as workers' cooperatives, enabling employees to contribute to the governance of the business and share in the wealth they create.[294] Dell offers benefits such as paternity leave above the statutory minimum, while Glassdoor is trying to reduce information asymmetry by anonymously collecting feedback on pay, benefits, and work conditions from current and former employees so that job seekers can evaluate potential employers.

Individuals are also opting for independent work as their primary source of income or to supplement their existing income.[295] Independent workers are starting to organize in associations such as the Independent Workers of Great Britain and are leveraging technology, such as the YouTuber Union representing the interests of 16,000 members.[296]

[290] Estimated as 37 percent of the working-age population (share of middle-wage, middle-income occupations based on 16 European countries and the United States. Excludes Germany, New Zealand, and South Korea, where wage growth was positive. OECD Population statistics, 2019.

[291] In the United States, labor share of income fell by 5.4 percentage points between 1998–2002 and 2012–16. Had this decline not occurred, the average worker would be paid $3,000 more in real terms. See *A new look at the declining labor share of income in the United States*, McKinsey Global Institute, May 2019.

[292] See, for example, David Card and Alan B. Krueger, *Myth and Measurement: The New Economics of the Minimum Wage*, revised edition, Princeton, NJ: Princeton University Press, 2015; David Neumark and William Wascher, *Minimum wages and employment: A review of evidence from the new minimum wage research*, National Bureau of Economic Research working paper number 12663, January 2007.

[293] Fair Living Wage Strategy, H&M Group, 2019.

[294] Miatta Fahnbulleh, "The neoliberal collapse: Markets are not the answer," *Foreign Affairs*, January/February 2020.

[295] Prior MGI research estimated that 70 percent of independent workers prefer this form of employment, while 30 percent report higher levels of job satisfaction than those in traditional jobs. See *Independent work: Choice, necessity, and the gig economy*, McKinsey Global Institute, October 2016. However, due to the growing costs of basic goods, some individuals report being able to afford only basic consumption through additional gig economy work. See "Gig economy: 'It was the only way we could afford a house,'" BBC, June 28, 2019.

[296] Yvonne Roberts, "The tiny union beating the gig economy giants," *Guardian*, July 1, 2018; "Technology may help to revive organised labour," *Economist*, November 15, 2018.

Second, workers are facing rising employment-related risks and lower protection, partly arising from the increase in alternative work arrangements, lower levels of employment protection, and challenges posed by automation and digitization. This is critical in a world in which 28 percent of workers (or almost 180 million individuals, in 22 countries) are in alternative arrangements, and required job transitions linked to automation are expected to be in the range of 40 million to 150 million workers.[297] In this respect, the social contract of the future will need to address several questions:

— How can alternative work arrangements create high-quality jobs and provide additional nonmonetary benefits for workers?

— How can flexible, dynamic labor markets be supported while also reducing fragility for workers?

— How can workers adjust rapidly to—and be protected against—the effects of cyclical changes, such as financial crises, and of structural changes, such as automation and increased competition due to globalization and "superstar effects"?

We are beginning to see examples of governments, the private sector, and individuals taking the initiative to address some of the pain points from this changing context. For example, several national and state governments are beginning to rethink employment arrangements to account for new forms of work. Among the measures are new laws aimed at protecting those in alternative work. For example, the state of California introduced a bill in September 2019 that requires digital platform service companies such as Uber and Lyft to treat contract workers as employees, while New York State created the Black Car Fund to offer benefits to gig economy drivers.[298] Oregon, New York City, San Francisco, Seattle, and Philadelphia have passed laws requiring businesses to offer workers guaranteed hours and advance notice of schedules to provide more consistent and dependable employment.[299] The efficacy of these measures has yet to be demonstrated.

Calls for large-scale retraining of workers—either providing new skills or increasing existing ones—have grown in recent years amid the growing public debate over automation and its impact on work. Some governments are increasing spending on training and reskilling workers who have lost their jobs or have been displaced by new technologies, enabling these workers to prepare for higher-paid, in-demand positions. One leading example is the Danish "flexicurity" model, which balances the needs of businesses against the well-being of workers. Businesses have the flexibility to employ and let go of workers while the government provides unemployed workers with sufficient income and support to retrain for an equivalent or better job.[300] Other spending is coming through a range of worker-support programs. One such approach is universal basic income, which guarantees a minimum income for all individuals. Universal basic income has received attention in recent years as a potential option for addressing unemployment created by automation and digitization, but some attempts to introduce it, including by Finland, have not delivered conclusive results.[301]

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297 Average of six countries (France, Germany, Spain, Sweden, United Kingdom, United States); see *Independent work: Choice, necessity, and the gig economy*, McKinsey Global Institute, 2016; Sum of the United States, Japan, Germany, and other advanced economies; *Jobs lost, jobs gained: Workforce transitions in a time of disruption*, McKinsey Global Institute, January 2018.

298 Kate Conger and Noam Scheiber, "*California passes historic gig economy rights bill*," *Independent*, September 11, 2016; The Black Car Fund.

299 Meghan McCarty Carino, "Unpredictable schedules are part of the retail gig but new policies could change that," Marketplace, June 13, 2019. In a randomized controlled trial in retail stores, more stable work schedules provided a 7 percent increase in median sales in Gap treatment stores during the intervention period, compared with control stores. In the aggregate, stable scheduling delivered $2.9 million in increased revenues. See Joan C. Williams et al., *Stable scheduling increases productivity and sales: The stable scheduling study*, UC Hastings College of Law Center for WorkLife Law, 2018.

300 *The Danish labour market*, Denmark.dk; Catherine Stephan, *Eco-flash: Ins-and-outs of the Danish flexicurity model*, BNP Paribas, July 11, 2017.

301 *Policy brief on the future of work: Basic income as a policy option: Can it add up*?, OECD, May 2017; John Henley, "Finland to end basic income trial after two years," *Guardian*, April 23, 2018.

Private-sector companies are focusing on skills-enhancement programs for their own workers in some places. Examples of large-scale schemes include SAP's digital business services division, with about 20,000 employees, which began implementing a comprehensive workforce skills upgrade in 2017 to support shifts in its product portfolio toward more digital innovation and cloud products.[302] Walmart, the largest private employer in the United States, is exploring several plans to prepare its workforce for the future, from enrolling in online degrees for $1 a day to trainings in analytics and transferable skills.[303] Audi runs a project in Hungary to train its workers in pressing, bodywork, metal, and assembling units, but also offers courses in leadership; many of these programs are open to the public as well.[304] Individuals are taking on more responsibility to improve their skills, learn new ones, and engage in lifelong learning to stay ahead. Courses on online platforms such as Coursera and Udacity are increasingly accessible.[305] Some private-sector businesses are beginning to reconsider their policies for laying off workers, including redeploying or reskilling workers for new roles and in new business units, and providing ongoing support to workers who are being made redundant, for example through reskilling, placement support, and severance pay. These alternative policies are likely to benefit businesses by reducing costs associated with laying off and rehiring new workers in addition to avoiding the reputational and operational costs associated with mass layoffs.

Academics such as Dani Rodrik and Charles Sabel are calling for increased collaboration between public- and private-sector actors to create "good jobs," similar to collaborative partnerships that already exist for innovation, such as DARPA, and for regulation, such as the approach adopted by the Irish dairy industry to meet EU regulatory requirements. Rodrik and Sabel's "good job" strategy incorporates three strands: extending services and research programs for existing firms such as supporting small and medium-size businesses with targeted public services, investing in active labor market programs to develop new workforce skills including providing targeted funding to workers, and job creation and attraction policies.[306]

Third, rapidly rising housing costs are an acute challenge for roughly 165 million low- and middle-income households in the 22 countries, who are overburdened by mortgage repayments or rent.[307]

Between 2002 and 2018, housing costs rose in 18 of our 20 sample countries by an average of 21 percentage points above general consumer prices. Although this price appreciation has boosted the wealth of many existing home owners, those looking to buy and those who rent are spending a larger share of their income on loan repayments and rents, respectively.[308] Between 28 and 68 percent of households already find rent "unaffordable" in seven major cities around the world, and this ratio will only increase as cities continue to generate more jobs and attract increasing investor interest in real estate.[309] These shifts are not accompanied by any notable changes in the space or quality of available housing. As a result, in cities from Paris to Melbourne, teachers, nurses and emergency workers, and others on relatively low salaries, are having to cut back on other spending—or move further and further away from their workplaces, adding the pressure of long commutes to already-stressful jobs.[310]

302 "Building the workforce of tomorrow, today," *McKinsey Quarterly*, November 2018.
303 Julia Hanna, *Walmart's workforce of the future,* Harvard Business School Working Knowledge, July 9, 2019.
304 *Audi Hungaria and the society,* Audi Hungary, 2019.
305 Jonathan Shieber, "Udacity will offer 100,000 free programming classes as part of the 'Pledge to America's Workers,'" TechCrunch, October 11, 2019.
306 Rodrik and Sabel define "good jobs" as positions that offer stable, formal employment with sufficient legal protections, enable at least a middle-class existence, and offer opportunities for progression. See Dani Rodrik and Charles Sabel, *Building a good jobs economy*, working paper, November 2019.
307 Estimated as the population over 15 years spending more than 40 percent of disposable income on housing (mortgage repayments or rent). OECD Affordable Housing database, 2019.
308 On average, home ownership is 66 percent in our country sample, varying from 43 percent in Switzerland to 83 percent in Norway.
309 *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute, October 2014.
310 Judith Yates et al., *Housing affordability, occupation and location in Australian cities and regions*, Australian Housing and Urban Research Institute, May 2005.

Several questions arise to address the mismatch between demand and supply:

— How can additional private investment expand housing supply (rather than values of existing real estate)?

— How can public resources and policies address constraints and barriers in the housing market?

— How can technology and regulation create productivity gains and encourage competition in the local construction sector?

— How can current home owners' resistance to legislative reform and new developments be addressed?

Some cities are adopting measures aimed at improving the availability of modestly priced housing, although it is too early to gauge the results. Berlin recently announced one of the farthest-reaching initiatives: a five-year freeze on rents to taper rising costs.[311] It also aims to control land prices, by regulating usage more toward social housing, and will implement a "first right to purchase" for the public sector in any sale of residential real estate. Other cities are rethinking housing zoning, density, and building permit laws to encourage supply, while some are experimenting with policies to tackle local opposition to construction by taxing developers and compensating existing home owners.[312] Some countries, such as Germany, have been providing additional funding for affordable housing and other infrastructure investments. In the United Kingdom, the government created multiple schemes to help individuals with the rising cost of property and encourage property developers to build more houses. For example, the Help to Buy equity loan provides individuals with an interest-free loan for 20 percent of the value of a property (or up to 40 percent in London), which allows individuals to take out mortgages at a lower cost for the remaining value of the property.[313]

As housing costs soar in superstar cities, some companies are moving to alleviate the burden on their employees or seeking ways to help them. Amazon, Apple, Google, Facebook, and other technology companies have announced plans to build homes for their employees and invest significant amounts in affordable and social housing, for example.[314] The beneficiaries of these measures, however, are a selective and relatively small group of individuals, given the global scale of the challenge. Individuals are also opting to relocate farther away and commute longer distances, live with others, or move back in with their parents.

Fourth, rising healthcare costs are exerting substantial pressure on global healthcare systems, while increasing education costs could reduce access for many at a time when advanced skills are increasingly important. This is affecting more than 125 million individuals who currently devote more than 10 percent of their budgets to healthcare and education, and for the almost 245 million people who are primarily supported by public budgets.[315] Public spending on healthcare increased by 1.1 percentage points of GDP between 2000 and 2016, on average for 22 countries. Approximately one-quarter was due to aging, while the rest is explained by increases in volume and costs of goods and services. While consumers in Australia, Canada, Europe, and Japan spend a small share on healthcare because they have access to large public health systems, US consumers are significantly affected; healthcare accounts for 17 percent of the growth in US general consumer prices between 2002 and 2018. Important questions to ask are:

311 "Abgeordnetenhaus beschliesst Mietendeckel," *Die Zeit*, January 30, 2020.
312 Anup Malani, "To encourage new housing, tax it," *Wall Street Journal*, July 7, 2019.
313 *Affordable home ownership schemes*, GOV.UK, 2019.
314 Conor Dougherty, "Facebook pledges $1 billion to ease housing crisis inflamed by big tech," *New York Times*, October 22, 2019; Jennifer Elias, "Apple will give $2.5 billion to address the affordable housing crisis in Silicon Valley," CNBC, November 4, 2019.
315 Estimated as the population 15 to 24 years old and 60 and up for Australia and the United States, where healthcare and education spending as a share of household consumption is 10 and 12 percent, respectively, and the corresponding population of the other 20 countries in our sample where spending ranges from 3 to 7 percent. OECD Population statistics, 2019.

— How can technology and the competitive dynamics that benefited discretionary goods and services be harnessed to create consumer surplus in healthcare as well?

— How can education offerings be expanded, including through technology, especially to low- and middle-skill individuals who may be most affected by disruptive forces such as automation?

Box 5

Social-sector and nongovernmental institutions are playing a larger role

The social sector and other institutions are playing a larger role in addressing some of the key challenges facing the world today. We are seeing some examples of donations and endowments in action.

Philanthropy has recently grown significantly; one study shows that 72 percent of 260,000 foundations identified were established in the past 25 years. Foundation assets exceed $1.5 trillion, with 60 percent concentrated in the United States. They spend more than $150 billion annually, primarily focusing on education (35 percent), social welfare (21 percent), and healthcare (20 percent).[1] In recent years, digital crowdfunding platforms have grown exponentially; founded in 2000, JustGiving has helped raise over $4.5 billion for charitable causes while GoFundMe, founded in 2010, has raised over £5 billion.[2] The Money Charity in the United Kingdom provides free or low-cost financial advice.

Many philanthropists have dedicated significant amounts to supporting individuals and causes that they are passionate about, in addition to addressing areas where the public and private sectors were unable to deliver. Among the largest institutions is the Bill & Melinda Gates Foundation, which is expanding educational opportunities in the United States, among other initiatives.

During Europe's recent wave of migration, nongovernmental organizations played an instrumental role in providing food, shelter, healthcare, and even rescues in the Mediterranean.[3] As the climate changes, donations to offset carbon footprints, from flying for example, have been increasing significantly. Established institutions have been investing significant amounts to address certain causes; the World Wildlife Fund alone has invested over $1 billion since 1985.[4]

Other institutions continue to play an important role in supporting individuals. Churches and other religious institutions have been helping people find employment since the financial crisis, meet their basic consumption needs, and provide a safety net for the most vulnerable. Tafel, a German charity, collects food items from 930 pantries and distributes them to those in need.[5]

These are a few examples of the ways in which social-sector and nongovernmental institutions are supporting individuals, the public, and the private sector in the social contract. However, there are limits to this support. Compared with the public and private sectors, the social sector is relatively small and fragmented, is rarely able to drive systemwide interventions, and requires regulatory accountability.[6]

1 *The global philanthropy report: Perspectives on the global foundation sector*, Hauser Institute for Civil Society, Harvard University and UBS, 2014.
2 JustGiving.com; GoFundMe.com.
3 *Europe: Refugees & migrants' rights*, Human Rights Watch.
4 World Wildlife Fund.
5 Faeimm Tang, *The German "Tafel" feeding the needy*, Food Explorers.
6 Yoni Appelbaum, "Is big philanthropy compatible with democracy?," *Atlantic*, June 28, 2017.

In healthcare, South Korea introduced policies such as price controls on generic drugs in 2012. Many countries are taxing unhealthy food to subsidize healthy options. In the private sector, Amazon, Berkshire Hathaway, and JPMorgan Chase founded Haven to lower healthcare costs for their 1.2 million employees and families.[316] As part of the initiative, Amazon launched a virtual health clinic including prescription services. Given the growing divide in technology, some are calling for private healthcare companies to share their innovations with public- and social-sector hospitals as well.

In education, Starbucks is offering its employees scholarships for university degrees in the United States, while firms such as Penguin Books in the United Kingdom, among others, no longer require a four-year degree for jobs.[317] Intesa Sanpaolo in Italy is offering collateral-free loans to all students so that higher education can be financed. Berea College in the United States supports students through its endowment but also its student work program, which requires students to work on campus to avoid taking on massive debt.[318] Individuals are leveraging technology and access to high-quality massive open online courses that allow people to receive a free university education.[319] In addition, many families are helping their children with education until they can support themselves. In the United States, 20 percent pay for more than half of their children's college tuition fees, and 35 percent contribute.[320]

A **fifth** priority is savings, as individuals save less for themselves and institutions have less capacity to save on their behalf. The decline in the household saving rate (1.4 percentage points since 2000), the more than 50 percent of households that are not able to save for retirement (approximately 440 million people), the 23 percent decline in median wealth since 2007, and the reduction of net replacement rates from mandatory pensions (11 percentage points since 2004) all heighten financial insecurity about the future.[321] This comes at a time when working arrangements are increasingly alternative and fragile.

Despite rising average wealth, approximately 170 million low- and middle-wealth savers are experiencing stagnant wealth growth since the financial crisis, and low or negative returns on investment.[322] Indeed, the risk of relative poverty in old age and the dependence on public-sector transfers is increasing. Estimates show that roughly 140 million to 240 million individuals in our 22 countries may need to downgrade their lifestyle on retirement.[323] The difficult questions are:

— How can individuals be encouraged to take action for their own savings and enabled to make better financial decisions?

— How can new ways be found to enable and encourage savers, including young people, and what can be done to persuade the elderly to stay in the workforce?

— How can access to high-return assets be expanded to a broad base of people?

— How can safety nets be adapted to avoid the risk of relative poverty in old age for the most vulnerable?

Some governments are taking steps in this direction; pension policies in Denmark contributed to increasing the mandatory net replacement rate by 17 percentage points for the average person. This approach was mandated by the public sector to be implemented by private employers as well. In South Korea, basic pension programs were introduced in 2008 and

316 Christina Farr, "Everything we know about Haven, the Amazon joint venture to revamp health care," CNBC, March 13, 2019.
317 Sally Weale, "Penguin ditches degree requirement for job applicants," *Guardian*, January 18, 2016.
318 Holly Honderich, "Berea College: Has a US university cracked student debt?," BBC News, December 2, 2019.
319 Although not always formally accredited, they provide core skills that help individuals obtain jobs they would not be able to access otherwise.
320 "How much help do millennials get from their parents paying for college?," *Forbes*, May 18, 2017.
321 Equivalent to 53 percent of the population aged 15 and up in our 22-country sample. Financial inclusion indicators, World Bank; OECD Population statistics, 2019.
322 Estimated as the bottom 40 percent of the wealth distribution who have returns of zero to 0.6 percent, based on data for France and the United States. OECD Population statistics, 2019.
323 Estimates from Canada and Ireland indicate that the share of households that will have to downgrade their lifestyle on retirement is between 17 and 29 percent; *Building on Canada's strong retirement readiness,* McKinsey & Company, 2015; *Is Ireland's population ready for retirement?*, McKinsey & Company, 2015.

extended in 2014 to increase coverage and reduce the risk of relative poverty in old age.[324] In the United Kingdom, all employers have been required to automatically enroll their employees in a workplace pension since 2012.[325] Employers and employees are both required to contribute minimum pension payments, which were 1.0 and 0.8 percent of qualifying earnings, respectively, until April 2018 and have steadily increased to 3.0 and 4.0 percent in April 2019.[326] Companies are also directly saving on their employees' behalf, contributing more than the mandatory amount or matching employee contributions. PayPal has rolled out a financial health program for its employees targeting four areas: paying a wage that supports financial wellness, lowering the cost of employee benefits, opening opportunities for employees to be shareholders, and launching financial planning and education offerings.[327]

Many individuals are looking to new tools to help them; for instance, Monzo, the digital bank, offers to round up all spending and send the excess to a savings account.[328] People are leveraging apps such as PensionBee to combine their existing pensions into a single platform, giving individuals greater oversight on retirement readiness and more control over their investments. In the United States, citizens have long reaped the tax benefits of retirement savings by enrolling in programs such as 401(k) savings programs, which have been around since the 1970s.

Recent innovations are helping to maximize returns on savings; robo-advisers such as Nutmeg, Wealthsimple, and Betterment offer affordable, tailored investment advice to individuals, regardless of the size of their starting deposit. In addition, the proliferation of low-cost passive investment funds allows savers access to stock market returns without high fees; although they have existed for some time, they are becoming more prevalent. These new technologies and products, however, require some basic financial literacy and a minimum level of saving.

While the first five challenges focus on each of the three arenas of work, consumption, and saving, and affect a broad public, the remaining five focus on particular social groups or countries and regions that are affected by a combination of factors. Solutions will require coordinated actions to support the most vulnerable groups in society as well as regions facing particular issues.

Sixth, in all three arenas, lower-income and vulnerable groups who make up roughly 335 million individuals in the 22 countries are facing difficulties, and their position is more precarious than it was in 2000.[329] The following three questions need to be addressed:

— What can be done to support low-income households whose finances are already stretched?

— How can vulnerable groups and minorities, such as black and Hispanic households in the United States, gain access to the opportunities and support needed?

— Can social safety nets be revamped for the current era and set of challenges?

Seventh, young people between 15 and 30 years old, who currently number 180 million, are facing systematic shortfalls in access to stable, well-paid employment, affordable housing, and decent savings compared with previous generations.[330]

— What can be done to support younger generations in an era of more precarious work?

— How can young people achieve major milestones as they age?

[324] Sunju Lee, *Social Security System of South Korea,* Inter-American Development Bank, October 2015.
[325] *New timetable clarifies automatic enrolment starting date*s, UK Department for Work and Pensions, January 25, 2012.
[326] *How much do I and my employer have to pay?,* The Pensions Advisory Service, 2019.
[327] Daria Solovieva, "PayPal unveils financial health program for employees: 'Market is not working,'" Karma Impact, November 12, 2019.
[328] Monzo estimates that its 1p saving challenge will help individuals save £667 a year.
[329] Estimated as the population over 15 years in the bottom two quintiles of the income distribution. OECD Population statistics, 2019.
[330] OECD Population statistics, 2019.

Eighth, although more than 205 million working women have made strides in the labor market, they continue to lag behind men in employment, wages, and savings.[331] Similarly, the racial income and wealth gap in some countries is both persistent and growing. For example, approximately 90 million black, Hispanic, and other minorities in the United States face higher economic insecurities.[332] How can opportunities presented by the future of work be harnessed to narrow the gap?

Ninth, workers in certain regional labor markets are experiencing the continued repercussions of the global financial crisis and worsening individual outcomes. For example, regions in Southern Europe and in declining industrial areas in the United States where more than 215 million people live have been "left behind."[333] What can be done to better integrate regional labor markets and vulnerable individuals into the growing economy?[334]

Finally, the risk of unsustainable government funding. Tax collection and government revenues have flattened and even declined as a share of GDP in many countries.[335] As government spending increased to support individuals coping with global trends, gross government debt as a share of GDP has increased by more than 30 percentage points on average since 2000 in 22 OECD economies.[336] Healthcare and publicly funded pension systems are coming under stress, particularly in countries with challenging fiscal situations and aging populations. Approximately 270 million people could rely on public benefits.[337] Individuals in countries where public pensions are a high share of total retirements could also be exposed. What can be done to ensure the sustainability of these public budgets?

Rebalancing responsibilities between individuals and institutions

Over the past two decades, the trend of the social contract toward less market intervention by institutions combined with selected increases in public expenditure has partly contributed to—or at least not been able to prevent—the challenges individuals are now facing. The social contract of the future may need to rebalance responsibilities against these challenges and ensure that aggregate economic growth translates into rising prosperity for the majority of citizens, that household incomes are sufficient to cover basic needs and potentially a decent lifestyle, and that people are saving a sufficient share of working-age labor income for retirement.

The balance of responsibilities differs from country to country, depending on culture, history, ideology, and political system. Although the current market-based social contract has been driving economic growth and prosperity overall, evidence is mounting that some of the unintended consequences will not go away unaddressed.[338]

When analyzing an extensive list of recent initiatives to strengthen the social contract, we find some evident limitations in the ability of all stakeholders to effect change. Among common approaches, five stand out:

First, the public sector is increasing market interventions and promoting a stronger role for corporations. The challenge here will be to encourage coordination between public- and private-sector actors to avoid deadweight loss—that is, the cost to society generated by an economically inefficient allocation of resources within the market.

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331 Ibid.
332 United States Census, 2010.
333 For the United States, this includes the following groups: trailing cities, Americana, Distressed Americana, and rural outliers. For Europe, educated and emigrating regions, aging populations, agriculture-based regions, public sector–led regions, and trailing opportunity regions. See *The future of work in America*, McKinsey Global Institute, July 2019, and *The future of work in Europe*, McKinsey Global Institute, forthcoming.
334 One example solution is the European Union driving redistributive policies.
335 See Joseph Stiglitz, Todd Tucker, and Gabriel Zucman, "The starving state: Why capitalism's salvation depends on taxation," *Foreign Affairs*, January/February 2020.
336 National accounts at a glance, OECD, 2019.
337 Estimated as number of people who believe they could easily access public benefits if they needed them, based on data for 12 countries in our sample. OECD Population statistics and Risks That Matter survey, 2018.
338 Joseph Stiglitz, "The end of neoliberalism and the rebirth of history," Project Syndicate, November 4, 2019.

Second, the public sector is increasing spending on key benefits for workers, consumers, and savers. However, such spending increases pressure on government finances.[339]

Third, the private sector is beginning to voluntarily increase engagement to address challenging economic outcomes and rethinking its role in the social contract. One sign of this shift came from the Business Roundtable, a group of CEOs of major US companies, in August 2019. It announced that its members are redefining the purpose of a corporation as caring and delivering value for employees, customers, suppliers, and communities, in addition to shareholders.[340] Many of the changes we see and examples outlined above, however, are limited to high-skill, high-wage service jobs at large corporations. Individuals with more traditional manufacturing jobs or smaller employers will not be able to offer such support to the broader population.

Fourth, the social sector and other forms of institutions have started gaining importance in recent years. Philanthropy in education, healthcare, and social welfare grew significantly over the past 25 years.[341] Charities that rely on donations and unpaid volunteering have also seen significant activity. Families play an instrumental role in supporting their children in housing and education, and their elderly relatives in healthcare.[342] However, these examples are relatively small in scale and rarely able to drive systemwide change.

Finally, individuals are further increasing management of the social contract independently and taking on more responsibility in the three arenas. This is resulting in better management of a more individualized social contract rather than reversing the trend. There are also limits on individual action. Individual finances are increasingly stretched, and elderly people may have difficulty using certain technologies, for example. Workers in specialized fields with declining demand may struggle to transfer their experience to areas that are potentially related but require different skill sets. Above all, individual action in the face of global trends can feel as futile as tilting at windmills, at a time when collective approaches appear to be waning.

Two priorities stand out from our examination of the evolving social contract and the changing outcomes for workers, consumers, and savers in the first two decades of the 21st century. First is the need to sustain and scale the gains that have been achieved so far and be ready to realize the potential for further opportunities. Second is to make sure that the outcomes for individuals in the next two decades and beyond are broader and more inclusive than they have been in this century so far.

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339 The sustainability of public debt has been debated widely in the academic research. Using traditional approaches, public debt is sustainable if the outstanding public debt and its projected path are consistent with those of the government's revenues and expenditures. On that metric, many countries are facing unsustainable public debt levels; however, we also have situations like Japan where debt to GDP is significant, yet they are unlikely to default. The IMF advocates taking a broader approach than debt versus revenues and expenditures, incorporating the entirety of public sector balance sheets. According to this approach, the net worth of most of the G-7 public-sector balance sheets are negative, even before taking into account the state's ability to tax in the future. In the 17 advanced economies most affected by the crisis for which data are available, net financial worth remains $11 trillion (28 percentage points of GDP) lower than it was before the crisis. For further discussion, see Pablo D'Erasmo, Enrique G. Mendoza, and Jing Zhang, "What is a sustainable public debt?," National Bureau of Economic Research Working Paper 21574, September 2015. International Monetary Fund, *Fiscal Monitor October 2018*, October 2018. Xavier Debrun, Jonathan D. Ostry, Tim Willems, and Charles Wyplosz, "Chapter 4: Public Debt Sustainability," *Sovereign Debt: A Guide for Economists and Practitioners*, International Monetary Fund, May 2018.

340 "Business Roundtable redefines the purpose of a corporation to promote 'an economy that serves all Americans,'" Business Roundtable, August 19, 2019.

341 *The global philanthropy report: Perspectives on the global foundation sector*, Hauser Institute for Civil Society, Harvard University and UBS, 2014.

342 "Bank of mum and dad 'one of UK's biggest mortgage lenders,'" BBC News, August 27, 2019.

Appendix

Outcomes for individuals and changes in the role of institutions in our 22-country sample

Exhibit A1

Summary of outcomes for individuals.

Change between 2000 (or earliest) and 2018 (or latest)

Comparison to range of outcomes in 22 OECD economies

	Indicator	Average for 22 countries	Australia	Canada	France	Germany	Italy	Japan	Spain	Sweden	United Kingdom	United States
Workers	Access: working-age population employment rate, percentage points	3.0	4.7	2.9	4.7	10.3	4.7	8.0	6.0	3.2	2.7	-3.4
	Benefits: length of paid maternity leave, weeks	7	18	25	26	0	0	0	0	-3	21	0
	Quality: share of workers facing job strain (more demands than resources), percentage points	-6.6	-1.7	NA	-8.3	-16.3	-6.0	-6.7	-14.2	2.3	-7.7	-2.3
	Stability: combined risk of job loss, lost wages, and duration of unemployment, percentage points	1.1	0.8	0.6	0.4	-0.9	3.7	-0.7	11.6	0.7	-0.5	0.5
	Compensation: 3-year CAGR of average wage, percentage points	-1.2	-1.7	-2.1	-0.8	0.2	-0.5	0.8	-0.5	-1.9	-3.9	-2.8
	Compensation: relative poverty rate after taxes and transfers, percent	1.7	-0.3	0.2	1.5	3.5	3.2	0.0	NA	3.4	0.5	1.8
Consumers	Price: discretionary (communications, clothing, recreation, and furnishings) consumer prices,[1] index	-6.2	-9.5	-6.9	-6.4	-4.6	-4.8	-3.6	-7.3	-6.4	-8.0	-8.7
	Price: food and transportation consumer prices,[1] index	0.6	-2.7	1.8	1.5	1.6	2.6	2.1	2.6	2.0	3.5	-1.5
	Price: housing, healthcare, and education consumer prices,[1] index	6.2	14.0	2.1	6.4	3.3	5.4	-1.5	4.7	6.0	14.4	9.8
	Quality: housing overcrowding rate, percentage points of households	-1.1	NA	NA	-2.6	0.9	1.5	NA	-8.9	3.4	-2.3	-1.7
	Quality: expected number of healthy years, number of years	2.2	2.7	2.8	3.1	2.4	2.6	2.3	3.2	2.0	2.9	1.1
Savers	Expected number of years in retirement	0.0	-0.9	-0.4	0.6	-0.4	-0.3	0.4	2.6	-0.5	0.3	-0.3
	Access: net household savings rate as share of disposable income, percentage points	-1.4	1.5	-3.6	-0.2	0.9	-4.8	-6.1	-6.6	12.0	-6.6	1.9
	Sufficiency: inability to face unexpected expense of ~$600, percentage points	1.8	NA	NA	-2.8	4.7	7.7	NA	-3.9	6.1	3.2	2.0
	Returns: 3-year CAGR of median wealth, percentage points	-4.4	-22.4	-3.5	-12.5	-3.9	-12.3	0.2	-18.0	-14.6	-9.9	2.0

[1] Indexed to general consumer prices, weighted by share of consumption.

Note: This chart is intended to be illustrative and demonstrate how outcomes have changed for workers, consumers, and savers, as well as aggregate changes in the social contract.

Source: OECD; Eurostat; World Bank; World Health Organization; US Annual Household Survey; Credit Suisse Global Wealth Databook; ILO; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

Exhibit A2

Changes in the role of institutions.

Change between 2000 (or earliest) and 2018 (or latest)

Dark colors reflect negative values,
light colors reflect positive values

	Indicator	Average for 22 countries	Australia	Canada	France	Germany	Italy	Japan	Spain	Sweden	United Kingdom	United States
Workers	Employment protection (permanent contracts), index	-7	12	0	2	0	-4	-16	-15	-2	-8	0
	Employment protection (temporary contracts), index	-15	0	0	0	-51	-72	0	-40	-36	7	0
	Collective agreements coverage, index	-7	-1	-3	4	-19	0	-7	-16	-6	-16	-5
	Market intervention, average for workers,[1] index	-10	4	-1	2	-23	-25	-8	-22	-15	-6	-1
	Public-sector spending on wages, active labor programs, and training, percent of GDP	0.1	0.0	0.1	-0.2	-1.7	0.4	-0.9	0.8	-1.8	-0.5	0.1
Consumers	Product market regulations for telecom, transportation and utilities, index	-33	-19	-1	-45	-29	-64	-20	-46	-28	-20	-20
	Retail price controls, index	-26	-56	0	-28	-42	0	-58	-104	0	-7	83
	Social housing stock, index	-5	-8	-10	-4	-30	-12	-1	5	-18	-32	-5
	Intensity of rent control, index	-8	-61	-7	20	20	0	NA	0	-61	0	0
	Inverse of out-of-pocket voluntary spending on healthcare (proxy for market intervention), index	-15	-13	-15	3	23	-9	-24	-24	-71	-61	34
	Inverse of private spending on education (proxy for market intervention), index	-27	-6	-7	-6	2	-52	0	-21	-56	-16	-4
	Market intervention, average for consumers,[1] index	-19	-27	-7	-10	-9	-23	-21	-32	-39	-23	15
	Public-sector spending on infra., housing, health-care, education, and social policy, percent of GDP	1.3	1.5	1.3	0.8	1.1	0.9	2.3	0.1	1.8	4.7	2.3
Savers	Net replacement rate from mandatory pensions, index	-15	-17	-64	7	-29	4	-32	-7	-21	-60	-2
	Proportion of defined benefits AUM, index	-3	-11	-3	-10	0	-20	-6	0	3	6	-16
	Market intervention, average for savers,[1] index	-9	-14	-33	-2	-14	-8	-19	-4	-9	-27	-9
	Public-sector spending on pensions, percent of GDP	1.9	-0.7	0.5	2.7	-0.7	2.7	3.1	2.9	0.2	1.1	1.5

[1] Market intervention indicators are indexed to 100 as average score in 2000; average of each arena is simple average of the composite indicators.

Note: This chart is intended to be illustrative and demonstrate how outcomes have changed for workers, consumers, and savers, as well as aggregate changes in the social contract.

Source: OECD; Eurostat; World Bank; World Health Organization; US Annual Household Survey; Credit Suisse Global Wealth Databook; ILO; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

Exhibit A3

Summary of outcomes for individuals.

Change between 2000 (or earliest) and 2018 (or latest)

Comparison to range of outcomes in 22 OECD economies

	Indicator	Austria	Belgium	Denmark	Finland	Greece	Ireland	Netherlands	New Zealand	Norway	Portugal	South Korea	Switzerland
Workers	Access: working-age population employment rate, percentage points	4.7	3.9	-0.8	4.7	-1.5	0.6	5.1	7.1	-3.0	1.4	5.1	1.8
	Benefits: length of paid maternity leave, weeks	-26	4	-4	0	26	12	0	18	1	13	56	14
	Quality: share of workers facing job strain (more demands than resources), percentage points	-2.5	-4.3	-5.0	-4.0	-1.8	-3.7	-4.4	-3.1	-8.0	-13.5	NA	NA
	Stability: combined risk of job loss, lost wages, and duration of unemployment, percentage points	0.8	-0.5	2.6	0.0	15.0	0.6	0.6	1.2	1.3	1.5	0.2	0.9
	Compensation: 3-year CAGR of average wage, percentage points	-1.6	-1.5	-0.3	-1.8	-2.1	-2.8	-0.7	2.5	-2.6	-1.8	3.0	-0.8
	Compensation: relative poverty rate after taxes and transfers, percent	0.8	2.3	2.6	1.7	5.1	-0.9	2.5	0.4	3.5	1.5	1.6	NA
Consumers	Price: discretionary (communications, clothing, recreation, furnishings) consumer prices,[1] index	-4.8	-5.3	-5.6	-5.5	-6.6	-8.5	-5.6	NA	-6.3	-6.3	-5.9	NA
	Price: food and transportation consumer prices,[1] index	-0.5	1.3	0.8	-1.7	1.8	-3.0	1.3	NA	1.6	1.4	3.7	NA
	Price: housing, healthcare, and education consumer prices,[1] index	5.6	3.9	5.4	11.6	8.2	18.5	6.4	NA	10.2	9.7	-0.1	NA
	Quality: housing overcrowding rate, percentage points of households	1.5	-2.6	2.5	0.1	-2.4	-3.2	2.3	NA	-0.2	-5.7	NA	-1.2
	Quality: expected number of healthy years, number of years	2.9	2.7	3.2	3.2	2.4	4.3	2.9	3.0	3.1	3.8	4.9	3.4
Savers	Expected number of years in retirement	-0.3	-0.4	0.6	-0.6	4.3	4.0	-0.9	-2.5	1.2	-1.4	-0.7	0.7
	Access: net household savings rate as share of disposable income, percentage points	-3.8	-6.4	12.3	-3.8	-15.5	10.5	4.4	1.1	2.2	-7.7	0.5	4.8
	Sufficiency: inability to face unexpected expense of ~$600, percentage points	-1.7	-4.2	7.0	2.5	5.6	22.4	-4.3	NA	NA	15.2	NA	NA
	Returns: 3-year CAGR of median wealth, percentage points	-9.6	-3.2	-5.0	-12.1	3.5	-12.3	-4.8	-14.9	-11.9	3.1	-7.1	-10.9

[1] Indexed to general consumer prices, weighted by share of consumption.

Note: This chart is intended to be illustrative and demonstrate how outcomes have changed for workers, consumers, and savers, as well as aggregate changes in the social contract.

Source: OECD; Eurostat; World Bank; World Health Organization; US Annual Household Survey; Credit Suisse Global Wealth Databook; ILO; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

Exhibit A4

Changes in the role of institutions.

Change between 2000 (or earliest) and 2018 (or latest)

Dark colors reflect negative values,
light colors reflect positive values

	Indicator	Austria	Belgium	Denmark	Finland	Greece	Ireland	Netherlands	New Zealand	Norway	Portugal	South Korea	Switzerland
Workers	Employment protection (permanent contracts), index	-18	2	3	-7	-32	-2	-3	7	0	-66	0	0
	Employment protection (temporary contracts), index	0	0	0	0	-144	22	0	36	0	-58	0	0
	Collective agreements coverage, index	0	0	-2	7	-67	-17	-5	-7	-6	-10	-2	15
	Market intervention, average for workers,[1] index	-6	1	3	0	-98	0	-3	12	-1	-44	-1	9
	Public-sector spending on wages, active labor programs, and training, percent of GDP	-0.8	2.3	1.1	0.9	3.0	-0.6	-1.0	-1.3	2.6	-3.0	1.0	0.8
Consumers	Product market regulations for telecom, transportation and utilities, index	-52	-41	-25	-26	-71	-40	-23	-12	-29	-59	-36	-28
	Retail price controls, index	-19	-125	0	0	-104	-97	42	0	-42	-83	92	-14
	Social housing stock, index	30	3	29	-22	NA	-3	-7	-4	8	-9	4	-13
	Intensity of rent control, index	0	0	-50	0	0	10	0	0	0	-40	NA	0
	Inverse of out-of-pocket voluntary spending on healthcare (proxy for market intervention), index	-13	-5	-21	-18	-10	-45	20	-17	-12	-13	-43	-2
	Inverse of private spending on education (proxy for market intervention), index	36	-8	-94	-99	-40	9	-7	10	-150	-91	5	-1
	Market intervention, average for consumers,[1] index	-3	-29	-27	-27	-45	-28	4	-4	-37	-50	4	-10
	Public-sector spending on infra., housing, health-care, education, and social policy, percent of GDP	0.9	2.7	4.0	3.7	-2.4	-0.8	-0.7	1.6	4.2	-3.4	3.8	-0.9
Savers	Net replacement rate from mandatory pensions, index	-5	4	24	-21	-71	-1	-6	5	-20	14	-1	-34
	Proportion of defined benefits AUM, index	0	NA	0	0	NA	NA	3	NA	-1	NA	0	0
	Market intervention, average for savers,[1] index	-2	4	12	-11	-71	-1	-1	5	-10	14	-1	-17
	Public-sector spending on pensions, percent of GDP	1.6	2.2	2.3	4.8	6.4	0.8	1.0	0.0	2.1	5.6	1.8	0.5

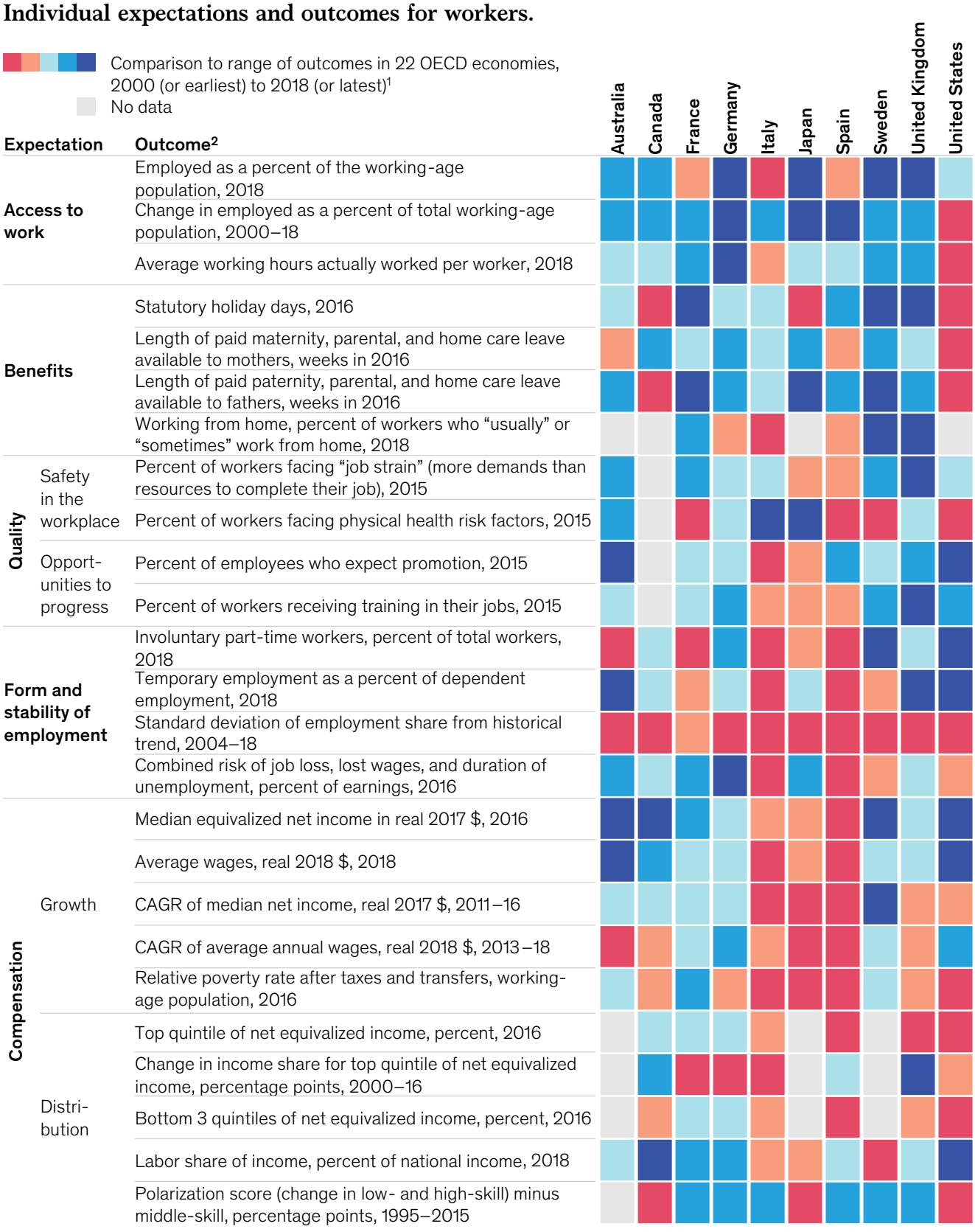
[1] Market intervention indicators are indexed to 100 as average score in 2000; average of each arena is simple average of the composite indicators.

Note: This chart is intended to be illustrative and demonstrate how outcomes have changed for workers, consumers, and savers, as well as aggregate changes in the social contract.

Source: OECD; Eurostat; World Bank; World Health Organization; US Annual Household Survey; Credit Suisse Global Wealth Databook; ILO; national accounts data; national housing authorities and institutes; Konstantin Kholodilin: intensity of rent control index; McKinsey Performance Lens' Global Growth Cube; McKinsey Global Institute analysis

Exhibit A5

Individual expectations and outcomes for workers.



[1] For indicators representing a level: color of country-specific squares reflects quintile in which value for given year sits within universe of available values for all 22 countries since 2000 (or earliest data since then). For indicators representing a change: cutoffs between color categories defined separately for each indicator, with no change representing middle of "light blue" color bracket wherever possible.

[2] For many indicators, latest available year is chosen for each country. Median income is in 2017 dollars, using the period end exchange rate, while average wages are in 2018 dollars using average exchange rate for year. Both deflated using CPI but for different years.

Note: Countries selected based on population and GDP and to provide diversity in varieties of capitalism. Due to data limitations, we have created an illustrative view of outcomes for savers across countries that is not exhaustive. For example, data was missing on private benefits, leading to focus on holiday days and parental leave.

Source: OECD; Eurostat; UNU-Wider; McKinsey Global Institute analysis

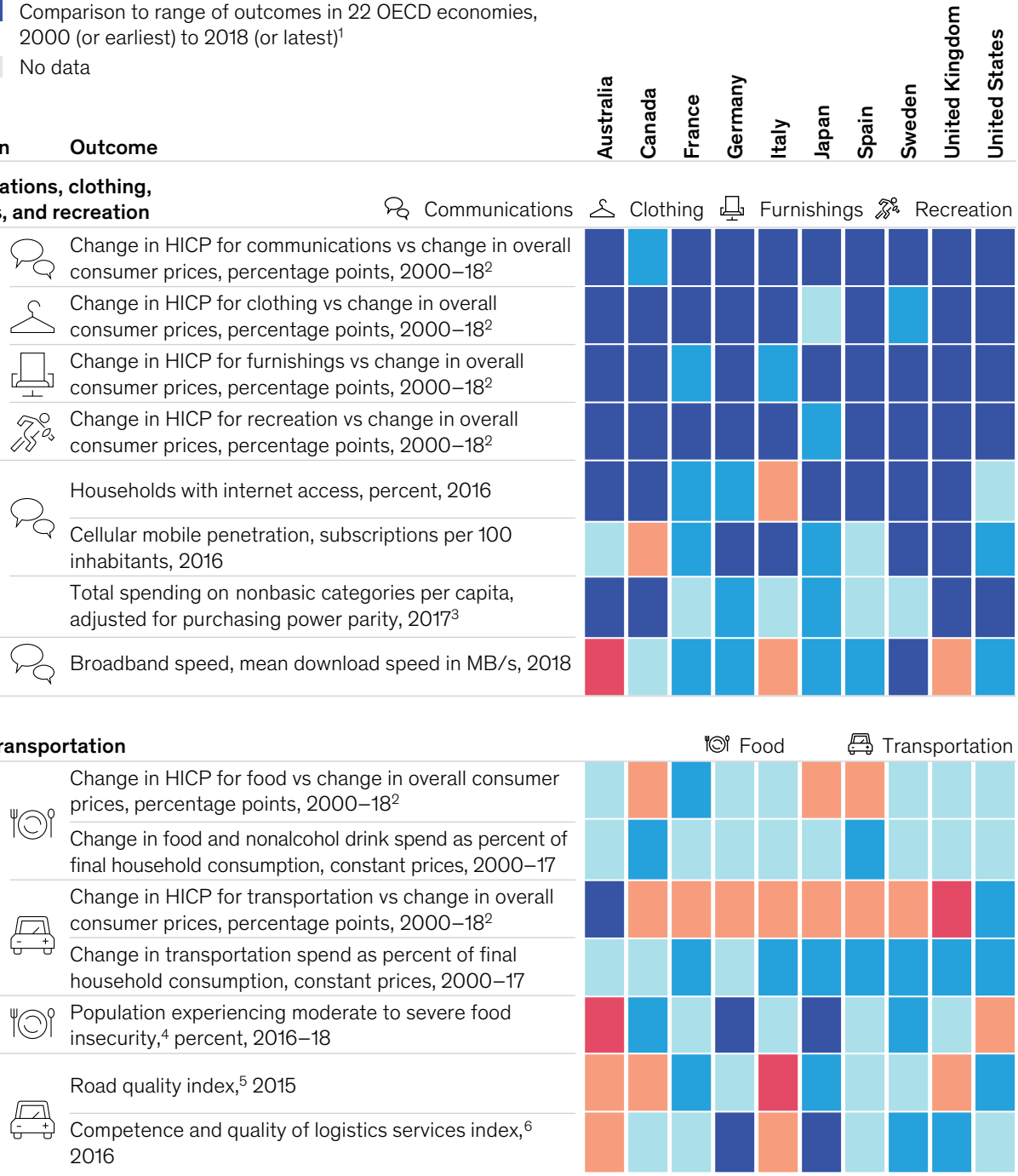
Exhibit A6

Individual expectations and outcomes for consumers.

Communications, clothing, recreation, furnishings, food, and transportation

Comparison to range of outcomes in 22 OECD economies, 2000 (or earliest) to 2018 (or latest)[1]

No data



[1] For indicators representing a level: color of country-specific squares reflects quintile in which value for given year sits within universe of available values for all 22 countries since 2000 (or earliest data since then). For indicators representing a change: cutoffs between color categories defined separately for each indicator, with no change representing middle of "light blue" color bracket wherever possible.

[2] Harmonised Index of Consumer Prices (HICP). Data for Australia, Canada, and Japan relies on each country's CPI because HICP is unavailable.

[3] All categories except healthcare, education, food, and housing.

[4] Refers to percent of the population that reports "moderate" or "severe" food insecurity. Moderate food insecurity is characterized as consuming smaller quantities of food as portion sizes are reduced or meals are skipped. Severe food insecurity is characterized as feeling hungry but not eating, or not eating for an entire day, due to lack of money or other resources.

[5] In-country survey participants were asked to answer the question, "In your country, how is the quality (extensiveness and condition) of road infrastructure?"

[6] As perceived by logistics professionals; subindex of Logistics Performance Index.

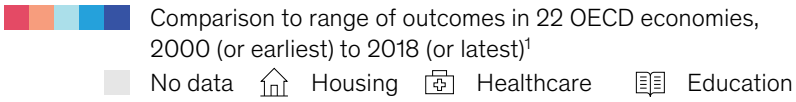
Note: Countries selected based on population and GDP and to provide diversity in varieties of capitalism. Due to data limitations, we have created an illustrative view of outcomes for savers across countries that is not exhaustive.

Source: OECD; Eurostat; WEF Global Competitiveness Index; World Bank; cable.co.uk; FAOSTAT; McKinsey Global Institute analysis

Exhibit A7

Individual expectations and outcomes for consumers.

Housing, healthcare, and education



Expectation	Outcome	Australia	Canada	France	Germany	Italy	Japan	Spain	Sweden	United Kingdom	United States
Prices and affordability	Change in HICP for housing vs change in overall consumer prices, percentage points, 2000–18[2]										
	Largest city affordability gap,[3] $										
	Change in HICP for healthcare vs change in overall consumer prices, percentage points, 2000–18[2]										
	Out-of-pocket, percent of current health expenditure, 2017										
	Change in HICP for education vs change in overall consumer prices, percentage points, 2000–18[2]										
Access	Housing construction, percent total stock, 2016										
	Total healthcare coverage, percent of population, 2017										
	Hospital beds, density per 1,000 population, 2017										
	Educational attainment, percent of population with tertiary degree, 2017										
Quality of outcomes	Rate of overcrowding by households in bottom income quintile,[4] 2014										
	Life expectancy at birth, years, 2017										
	Low-birth-weight babies, percent of total live births, 2017										
	Change in all cancer mortality rates, 2000–16										
	Number of expected healthy years, 2016										
	Change in PISA scores, reading, 2000–18										
	Change in PISA scores, mathematics, 2000–18										
	Change in PISA scores, science, 2000–18										

[1] For indicators representing a level: color of country-specific squares reflects quintile in which value for given year sits within universe of available values for all 22 countries since 2000 (or earliest data since then). For indicators representing a change: cutoffs between color categories defined separately for each indicator, with no change representing middle of "light blue" color bracket wherever possible.

[2] Data for Australia, Canada, and Japan relies on each country's CPI because HICP is unavailable.

[3] Affordability gap in dollars for households earning 80 percent of the area median income or less.

[4] Overcrowded household defined as: does not have a certain minimum number of rooms, including one room per couple, per person aged 18+, per pair of children, among others (see Eurostat for further details).

Note: Countries selected based on population and GDP and to provide diversity in varieties of capitalism. Due to data limitations, we have created an illustrative view of outcomes for savers across countries that is not exhaustive.

Source: OECD; Eurostat; WEF Global Competitiveness Index; World Bank; World Health Organization; McKinsey Global Institute analysis

Exhibit A8

Individual expectations and outcomes for savers.

[1] For indicators representing a level: color of country-specific squares reflects quintile in which value for given year sits within universe of available values for all 22 countries since 2000 (or earliest data since then). For indicators representing a change: cutoffs between color categories defined separately for each indicator, with no change representing middle of "light blue" color bracket wherever possible.

[2] Net replacement rate is for male workers; only 3 countries have a gender gap in net replacement rate between 2010 and 2018: Australia, 2010-18; Switzerland, 2018; Austria, 2004. Patchy data prior to 2010 for female workers.

[3] Or most recent available year.

[4] Simple average of net pension wealth and expected years in retirement for men and women.

Note: Countries selected based on population and GDP and to provide diversity in varieties of capitalism. Due to data limitations, we have created an illustrative view of outcomes for savers across countries that is not exhaustive. For example, data were missing on private pension funds, so we focused on public pensions.

Source: OECD; Credit Suisse Global Wealth Databook; Eurostat; government central banks and statistics websites; Sustainable Governance Indicators; S&P Global Financial Literacy Survey; US Federal Reserve; Leger; Deposit Insurance database; McKinsey Global Institute analysis

Technical appendix

This appendix outlines the methodology and data sources we used in this report. The first section on methodology is organized by chapter. The second section is a detailed table of the main indicators and data sources we used.

1. Methodology

In general, we aimed to use data for individuals where possible; elsewhere, we used household data. Data for workers (except median net equivalized income) reflects individual data. Data for consumers is primarily at the household level, while data for savers is a mix of both depending on the indicator.

Time periods. We aimed to use indicators that covered the entire time period of our report, 2000 to 2018. However, data availability varies across indicators and countries, and as a result, we used a five-year window around the start date (typically 2000–05) or end date (typically 2013–18). In some instances, we used later start dates (for instance, 2007 for the proportion of defined-benefit assets under management) or earlier end dates (such as 2012 for certain South Korea indicators) if that allowed us to include an indicator or country that would otherwise have been excluded from the analysis.

Weighting outcome indicators. For our outcome indicators, we adjusted most of the averages to reflect the population breakdown of the countries in our sample. We weighted the outcome indicators using the population aged 15 and older in our 22 sample countries.

We made a few exceptions to this rule. For consumer price data, we used consumption weighted average, which reflects which consumers are affected most by price changes. We used simple averages for outcome indicators that do not refer specifically to individuals, such as the number of weeks of maternity leave. We used simple averages when we created the social contract archetypes because we wanted to characterize the systems in which individuals work, consume, and save, rather than the outcomes for individuals.

Real values (controlling for inflation). GDP and consumer price index (CPI) deflators were used for nominal values, depending on the most relevant indicator. A GDP deflator was used if the underlying data was national accounts data. For example, data on real wealth was used throughout the report. The nominal data, from the Credit Suisse *Global Wealth Report* series, was deflated using the OECD CPI deflator.

Harmonised Index of Consumer Prices or CPI figures from national statistics agencies were used for survey-based data. For example, for average wages and median net equivalized income, we deflated nominal figures using the consumer price index. This offers the closest proxy for deflating consumption at a global level. The average exchange rate for 2018 was then applied to convert nominal local currency units into real dollars for 2018.

Population. The total population in our sample countries is 994 million, of which 834 million are aged 15 years and over, and the working-age population (15 to 64 years) is 642 million.

Chapter 2: Individuals as workers

Demographic factors affecting the labor market

In all 22 countries, the working-age population (15 to 64 years) declined as a share of the total population aged 15 years and over. In aggregate, the employment rate of the working-age population as a share of the population aged 15 years and over declined by 1.4 percentage

points between 2000 and 2018. This trend was present in 12 countries, ranging from a decline of 0.03 percentage point in the United Kingdom to a decline of 5.8 percentage points in the United States over the same period. The employment rate increased in ten countries, including Germany (4.8 percentage points), New Zealand (3.2), and Spain (3.2). However, the share of the population aged 65 years and over who are employed increased 4.2 percentage points between 2000 and 2018.

Measuring productivity in service sectors

Quantifying "output" in many service sectors, especially in healthcare and education, is a challenge, and quality improvements such as new technologies can be tough to capture. A substantial number of free customer services (such as search engines and mobile GPS) have contributed to productivity improvements that are not currently being captured. In addition, nondigital factors such as the globalization of value chains and profit shifting, as well as investment in intangibles, contribute to the difficulty of measuring productivity in the service sector. According to Alpert et al., the overall decline in job quality in the United States since the 1990s has partially been driven by the decline in manufacturing jobs, which have largely been replaced by lower-quality service jobs.[343]

The rise of the nonworking working-age population in the United States

The rise in nonworking working-age persons may be due to early retirement, family care responsibilities, illness and disability, inability to move to areas with jobs, being discouraged from finding jobs (for example, due to a lack of suitable jobs, lack of skills, or a criminal record). Nearly one in 12 American men between the ages of 25 and 54 are ex-offenders, which substantially affects their prospects for employment after incarceration. An alternative argument is that the quality of jobs (as measured by weekly wages) has declined and no longer meets the reservation wages of the working-age population, contributing to a rise in the nonworking working-age population in the United States. The reservation wage is the lowest wage at which a worker would accept a job.[344]

Alternative approaches to measuring job quality

Alternative methods of measuring the quality of jobs include the United States Private Sector Job Quality Index, which measures the number of jobs paying above the weekly average wage divided by the number of jobs paying below the weekly average wage out of all production and nonsupervisory jobs. According to this metric, the quality of jobs in the United States has declined since 1990, with the concentration of high-quality jobs falling from 94.9 in 1990 to 79.0 in July 2019. The authors also found that the gap in weekly average wages between high-quality and low-quality jobs has widened since 2004. Dani Rodrik and Charles Sabel define "good jobs" as positions that offer stable, formal employment with sufficient legal protections, enable at least a middle-class existence, and offer opportunities for progression.[345]

Occupational polarization in the United States and the European Union

Assessing polarization by occupation in Europe compared with the United States: For European countries, data used is from the European Centre for the Development of Vocational Training. Occupations were split into skill levels based on methodology from the OECD.[346] High-skill occupations include jobs classified under the ISCO-88 major groups 1, 2, and 3. Middle-skill occupations include jobs classified under the ISCO-88 major groups 4, 7, and 8. Low-skill occupations include jobs classified under the ISCO-88 major groups 5 and 9.

[343] See McKinsey Global Institute, *Solving the productivity puzzle: The role of demand and the promise of digitization*, February 2018; Daniel Alpert et al., *The US private sector Job Quality Index*, Cornell Law School, November 2019.

[344] See Daniel Alpert et al., *The US private sector Job Quality Index*, Cornell University, November 2019; Chad Bown and Caroline Freund, *The problem of US labor force participation*, Peterson Institute for International Economics, working paper number 19-1, January 2019; Edward Luce, "From financial crisis to inequality: How economists got it wrong," *Financial Times*, October 21, 2019.

[345] See Daniel Alpert et al., *The US private sector Job Quality Index*, Cornell University, November 2019; Dani Rodrik and Charles Sabel, *Building a good jobs economy*, working paper, November 2019.

[346] *OECD employment outlook 2017*, OECD, 2017.

In the United States, data used is from the Bureau of Labor Statistics. We sorted occupations based on wage level using categories from MGI's *The future of work in America: People and places, today and tomorrow*. The annual or annualized median wages thresholds were less than $30,000 for the low-wage category in 2018, $30,000 to $60,000 for the middle-wage category, and greater than $60,000 for the high-wage category. For occupations that pay hourly, the calculation assumes a 40-hour workweek. Bureau of Labor Statistics Occupational Employment Statistics data are not fully comprehensive of the US workforce (for example, it excludes farming employment and the self-employed).

The total number of workers in high-skill, high-wage jobs in 16 European countries and the United States in 2018 was 114 million, the middle-skill total number was 121 million, and the low-skill total number was 96 million.

One of the limitations of the data on occupational polarization is the lack of longitudinal data that follows workers throughout their careers and tracks their changes across occupational categories. It is possible that many middle-skill workers are transitioning into higher-skill occupational categories, which may partially account for the growth in high-skill jobs and is not necessarily a negative development in the labor market. However, research by David Autor found that in the United States between 1980 and 2016, non-college-educated workers primarily moved from middle-skill occupations into low-skill occupations (a 12.3-percentage-point change), while the change in the share of college-educated workers was evenly split between low- and high-skill workers (changes of 3.4 and 3.5 percentage points, respectively). We have focused on the change in the share of employment by skill category because we do not have data on employment rates by occupational skill category in our 22 sample countries. Based on education level, employment rates are 16 to 40 percentage points higher for workers with a tertiary degree compared with workers with less than an upper secondary education, and 7 to 28 percentage points higher for those with an upper secondary degree compared with less than an upper secondary degree in 20 OECD countries, excluding Japan and South Korea.[347]

Debates in the inequality literature

Gerald Auten and David Splinter recently published a working paper contradicting the existing literature on inequality, particularly in the United States, arguing that there has been little to no change in the after-tax income share of the top 1 percent. The paper adjusts for factors including: estimating income on an individual rather than a household basis due to declining marriage rates among low-income Americans, which may spread incomes across more households at the bottom; allocating corporations' retained earnings on a shareholder-adjusted basis to individuals before and after the 1986 tax reform; and adjusting for retirement savings accounts and tax evasion, among other methodological adjustments. The authors found that the pretax income share of the top 1 percent increased since the 1960s, although at a lower rate than other estimates.[348]

Assessing relative poverty rates in the OECD

We used OECD Income Distribution and Poverty statistics to assess relative poverty rates across countries. However, the methodology used to define relative poverty rates changed in 2011. We combined the old income definition with the new income definition to create a longer time series on relative poverty. Australia, Canada, and Finland are exceptions to this rule. All three countries have data using the "new" income definition from the early 2000s.

Assessing the impact of occupational polarization on wages

Findings on the link between declining middle-skill jobs and the effect on wages are mixed. Some academics have found that the decline of middle-skill jobs has contributed to rising

[347] See David Autor, "Work of the past, work of the future," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 1–32; *OECD employment outlook 2017*, OECD, 2017; Employment by education level, OECD, December 2019.

[348] Gerald Auten and David Splinter, "Top 1 percent income tax shares: Comparing estimates using tax data," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 307–11.

wages for low-skill jobs, thereby narrowing the gap between middle- and low-skill jobs. Other academics have found that job polarization has contributed to rising wage inequality, particularly between college-educated and non-college-educated workers. According to David Autor, as wages for college-educated workers have increased, wages for non-college-educated workers have fallen, contributing to widening wage inequality. In theory, as middle-skill jobs decline, downward pressure on low-skill wages increases as middle-skill workers compete for low-skill jobs, while higher demand for high-skill jobs contributes to rising wages.[349]

Employee wage and nonwage compensation in the United States

The Bureau of Labor Statistics provides a breakdown of wages and nonwage benefits to estimate the total cost of employment. Total benefits (including paid leave, supplemental pay, insurance, health insurance, retirement and savings, as well as legally required benefits) for the median civilian worker rose faster than the share of wages between 2009 and 2019. This is due to wages and salaries declining for the median worker in real terms over the same period. Overall, the median worker earns $0.40 per hour more in real terms in 2019 than in 2009, with wages and salaries declining from $18.80 per hour to $18.70 per hour, and benefits increasing from $8.70 per hour to $9.10 per hour. Civilian workers include those employed in private industry and by state and local governments.[350]

Real versus nominal wage growth in the United Kingdom and the United States

Recent statistics suggest that wage growth picked up in the United Kingdom and the United States, but the headline figures are typically quoted in nominal terms. In the United Kingdom, the three-month average of nominal wage growth (excluding bonuses) rose to 3.9 percent in August 2019, the highest rate of nominal wage growth since 2009. After accounting for inflation, wage growth rose 1.9 percent on a three-month average basis, the highest rate of growth for four years. However, real wages are still lower than their pre-crisis peak. In the United States, between August 2018 and August 2019, average nominal hourly earnings for all private nonfarm employees rose 3.2 percent. In real terms, average wages rose 1.5 percent over the period.[351]

Chapter 3: Individuals as consumers

Converting changes in prices into additional working hours

GDP deflators (GDPi) for housing (P31CP40), health (P31CP060), education (P31CP100), and final consumption expenditure of households on the territory (P31DC) are obtained from the OECD for each country for each year from 2000 to 2017. Where i ∈ {final consumption expenditure of households on the territory (total), housing (hg), health(hh), education(edu), other(oth) (all goods and services that are not housing, healthcare, and education)}.

Households consumption by COICOP category (ci¬) is obtained for each country for the years 2000 to 2017 from the OECD or national statistical agencies, if unavailable. Proportion of spending that is housing (P31CP40), health (P31CP060), and education (P31Cp100) is calculated (ki=ci/ctotal).

The GDP deflator (GDPoth) for goods and services that are not housing, healthcare, and education is calculated using the formula: GDPoth = (GDPtotal – khg × GDPhg – khh × GDPhh – kedu × GDPedu)/(1 – khg – khh – kedu); this assumes that the GDP deflator (P31DC) is the consumption weighted average of the GDP deflators for different categories of goods and services.

[349] See Michael Boehm, "Job polarisation and the decline of middle-class workers' wages," VoxEU, February 2014; David Autor, "Work of the past, work of the future," *AEA Papers and Proceedings*, May 2019, Volume 109, pp. 1–32.
[350] Employer costs for employee compensation: Compensation percentiles, US Bureau of Labor Statistics, June 2019.
[351] BBC News, "UK wage growth picks up to 11-year high," August 2019; UK Office for National Statistics, *Employee earnings in the UK: 2019*, October 2019; *Real average hourly earnings up 1.5 percent from August 2018 to August 2019*, US Bureau of Labor Statistics, September 2019.

The price increase (relative to overall price increase) for each category of good or service (xi) is calculated using the formula: xi = (GDPi,2017 – GDPi,2000)/(GDPi,2000) – (GDPtotal,2017 – GDPtotal,2000)/(GDP).

All other things are assumed constant, including: volume of goods and services consumed by households; quality of all goods and services consumed by households; and per hours wage (relative to overall price level); taxes and transfer rates and savings (as a percentage of disposable income) is constant; households must absorb all price rises by working more.

For a price increase xi, given the assumptions, spending on the good needs to go up by xi (because volume is constant). Consumption spending needs to increase by ki × xi. This is true for all goods and services; that is, consumption will need to go up by Σikixi.

Assuming the saving rate stays constant, disposable income will need to increase by c × Σikixi where 1-c is the saving rate. National household saving rate data are taken from the OECD and national statistics agencies.

Disposable income = wages × (number of hours worked) × (tax and transfer rate). Because all else is held constant, wages need to rise by c Σikixi ; using each term in the summation, it is possible to attribute increase or decrease in working hours to inflation in specific categories of goods.

Incremental income analysis

Data used include: nominal national accounts data on household income from 2000 to 2017 from the OECD in local currency, number of households in the years 2000 to 2017 from national statistics agencies, and nominal national accounts data on consumption broken down by COICP purpose from 2000 to 2017 in local currency.

For income, we consider the OECD data on household net adjusted disposable income, which includes wages and salaries, property income, social benefits in cash, and social transfers in kind (which also include healthcare-related transfers). The breakdown of household consumption is based on OECD national accounts data, which includes only household spending (excludes government spending) on various categories, including healthcare.

Change in real income per household in 2017 dollars from 2000 to 2017 is calculated as follows. Total household income for each country for each year is deflated by the GDP deflator for final consumption expenditure of households on the territory (P31DC). The number is then converted to dollars using the 2017 exchange rate. The result is divided by the total number of households in the country in that year to get real income per household per year in 2017 dollars. The difference between real income per household in 2017 and 2000 is taken to calculate change in real household income.

Change in spending on housing, healthcare, and education and decomposition of price effects and non-price effects is calculated as follows for good x, where x can be housing, healthcare, or education. In each country and each year, nominal expenditure of good x in local currency (from consumption by COICP purpose data) is converted into 2017 dollars and divided by the number of households to get nominal spending on good x in 2017 dollars per household; let this result be con_goodx_nom. Con_goodx_nom is deflated by the GDP deflator for final consumption expenditure of households on the territory (P31DC) to remove general price effect; let the result be con_goodx_gen. Con_goodx_nom is deflated by the GDP deflator for good x. For housing, healthcare, and education this is housing (P31CP40), healthcare (P31CP060), and education (P31CP100), respectively; label this result con_goodx_abovegen. The real change in spending on good x is calculated as con_goodx_gen in 2017 – con_goodx_gen in 2000. [Con_goodx_abovegen in 2017 – con_goodx_abovegen in 2000] is attributed to above general price inflation in good x, the rest of the change i.e., [con_goodx_gen in 2017 – con_goodx_gen in 2000] – [con_goodx_above gen in 2017 –

congoodx_abovegen in 2000], is attributed to non-price effects (for example, changes in volume). This can be negative, for instance if the volume of good x consumed was lower.

The percentage of incremental income eroded is calculated as the increase in spending on housing, healthcare, and education (con_goodx_gen in 2017 – con_goodx_gen in 2000) divided by real income change.

The weighted average of the seven countries where incremental income was partially eroded by housing, healthcare, and education is 61 percent (of which 34 percent is housing, 22 percent is healthcare, and 5 percent is education).

Chapter 4: Individuals as savers

To calculate stagnant or shrinking net wealth, we used Credit Suisse real median wealth data. Our calculation is based on the following assumptions: low or stagnant wealth growth is defined as a compound annual growth rate (CAGR) of less than 1 percent from 2000 to 2018. If median wealth is low or stagnant, then 50 percent of the population is assumed to have low or stagnant growth. If median wealth is not low or stagnant, then 10 percent of the population is assumed to have low or stagnant growth.

Panel Study of Income Dynamics (PSID) data for the United States

PSID data was used in the following analysis: rates of return by wealth group, net wealth at each age group, negative net worth, new extremely indebted group at the bottom of the wealth distribution who tend to be young and educated, correlation between wealth and income.

In all cases, the data used is household data. The main variable used for wealth was "total family wealth—including home equity," which was used to indicate asset net wealth. Where it was used in conjunction with demographic characteristics—age, education, or income—the characteristics used were those of the head of the household.

Deciles were constructed for income and wealth using percentile cutoffs, with the value that was precisely the tenth percentile being rounded up to the second decile.

The only place where the subcategories of wealth (e.g., real estate, deposits) were used rather than the total figure was when calculating the rates of return by wealth group. In this case, net asset totals were used rather than gross assets (i.e., used real estate wealth net of real estate debt) on the basis that interest rates on loans to cover debt would cancel out rates of return on that portion of an asset. In the comparatively rare cases where households had negative asset balances (i.e., had gone into negative equity on their houses) they were assumed to have a zero rate of return; negative rates of return were counted only where the assets themselves depreciated (e.g., deposits and vehicles).

Chapter 5: The shifting role of institutions

Market intervention and public-sector spending

We selected each indicator based on how well it proxied the role of institutions in coordinating markets and in public-sector spending for workers, consumers, and savers, as well as data completeness. The inclusion or exclusion of indicators was a result of consensus between the project team, project leadership, and McKinsey Global Institute challengers.

Where possible, data for each indicator is taken from OECD data; when gaps exist, national statistics agency numbers were used. For each indicator selected, for each country, period 1, 2, 3, and 4 values were chosen. Where possible, they were for 2000, 2005, 2010, and 2018, respectively. Where there were data gaps, the nearest available value was chosen.

For market intervention indicators, we indexed each indicator to 100, being the simple average starting point in 2000. Simple averages were used to aggregate the subindex and overall index.

For public-sector spending, indicators are all in percent of GDP. The index value for each market (worker, consumer, and saver) is the sum of the subcomponents, while the overall index is the sum of all components.

Summary of outcomes for workers, consumers, and savers

We selected the summary indicators based on how well they proxied the individual expectations and outcomes we wanted to represent and data completeness. The inclusion or exclusion of indicators was a result of consensus between the project team, project leadership, and McKinsey Global Institute challengers.

For each indicator selected, for each country, period 1, 2, 3 and 4 values were chosen. Where possible, they were for 2000, 2006, 2012, and 2018, respectively. Where there were data gaps, the nearest available value was chosen.

If the indicator moved in the opposite direction—for example, higher wage growth indicates lower individual outcomes—the direction on the chart was flipped.

Normalization of values for aging population

An aging population is a trend experienced by all 22 countries under study. As a population ages, public-sector spending in many areas tends to go up automatically. For example, a larger proportion gets treated for chronic illness, which automatically raises healthcare social spending, holding all else constant. We attempted to correct for this in the following indicators: healthcare social spending and pensions spending.

For healthcare, we start with the number of people who are young and prime-age (under 65 years) and elderly (65 or older) in 2000 and 2018. Using the best data available from national statistics agencies, we estimated the average social healthcare spending per person in each age group. This was expressed as a ratio to the average spending per elderly person (average spending for a given age group/average spending for an elderly person (x)). The percentage increase in social health spending due to aging is then the weighted average (weighted by social spending per age group) of the change in proportion of population for each age group, i.e., percentage increase in social health spending due to aging = (xold) × (percentage in proportion of elderly population) × (percentage change in population of young and adults).

For pensions spending, we found the proportion of the population that was retired and due a pension in the year 2000 and how much each retiree got in social pension spending by dividing total social pension spending by number of retirees. We estimated the number of retirees there would be under no aging population by multiplying the proportion of retirees in 2000 by the population in 2017, then calculated the estimated social pension spending and the change in social spending on pension costs under this scenario. We then subtracted the projected increase in spending under the no aging scenario from the actual changed and attributed the remaining increase in social pension spending to aging.

Appendix: Heat maps

For lines that illustrate a level (e.g., employment rate, net household saving rate), we took the whole universe of possible values for our 22 sample countries since 2000 (a maximum of 22 x 18 = 396 data points) and found the quintile cutoff points.

We disaggregated the indicators based on whether high values indicate a positive or a negative outcome. For example, high employment rates are categorized as positive, while high relative poverty rates are categorized as negative. As a result, we adjusted the coloring in the heat map to reflect these differences. For indicators where high values indicate positive outcomes, values below the 20th percentile are red, while for indicators where high values indicate negative outcomes, values below the 20th percentile are green.

For lines that illustrate a change (e.g., change in the employment rate as a percentage of the total working-age population, change in net mandatory pension replacement rates), we established cutoffs based on the following principle: the center of the yellow bucket is zero change, with brackets on either side at equal intervals. For example, change in the employment rate is red if less than or equal to 5.0 percentage points, shading to orange, yellow (figures within 2.5 percentage points of zero), light green, and green for greater than or equal to 5.0 percentage points.

For lines that indicate a growth rate (e.g., CAGR of average wages), we calculated the values for Period 1 (2000–05) and Period 2 (2013–18). We disaggregated the indicators based on whether high values indicate a positive or negative outcome. We then created a coding using the percentiles for the Period 1 and Period 2 values in our 22 sample countries (i.e., 44 data points).

2. Definitions of main indicators

Indicator	Definition	Source
Workers		
Working-age population	Those aged 15 to 64.	OECD Stat
Prime-age adult population	Those aged 25 to 64. The OECD defines "prime-age adult" as those aged 25 to 54.	OECD Stat
Employment rate, percent of working-age population	The proportion of the working-age population that is employed.	OECD Stat
Unemployment rate	The number of unemployed people as a percentage of the labor force, where the latter consists of the unemployed plus those in paid or self-employment. Unemployed people are those who report that they are without work, that they are available for work, and that they have taken active steps to find work in the past four weeks. Youth unemployment refers to unemployment among the population aged 15 to 24.	OECD Stat
Average working hours actually worked per worker	Average annual hours worked is defined as the total number of hours actually worked per year divided by the average number of people in employment per year. Actual hours worked include regular work hours of full-time, part-time and part-year workers, paid and unpaid overtime, and hours worked in additional jobs, excluding time not worked because of public holidays, annual paid leave, own illness, injury and temporary disability, maternity leave, parental leave, schooling or training, slack work for technical or economic reasons, strike or labor dispute, bad weather, compensation leave, and other reasons.	OECD Stat

Indicator	Definition	Source
Statutory paid holiday days	Statutory paid holiday days reflect the number of days of paid annual leave. Entitlements generally reflect those for full-time, full-year private-sector employees, working a five-day week, who have been working for their current employer for one year. In some countries (e.g., Finland, Japan, South Korea, Mexico, Poland, and Turkey) the statutory minimum annual leave entitlement varies with tenure.	OECD Stat
Length of paid maternity, parental, and home care leave available to mothers	Total duration of paid maternity and parental leave refers to the total number of weeks women can be on paid leave after the birth of a child, combining both maternity and parental leave.	OECD Stat
Length of paid paternity, parental, and home care leave available to fathers	Paid father-specific leave refers to the number of paid weeks reserved for the exclusive use of fathers, including entitlements to paid paternity leave, “father quotas” or periods of paid parental leave that can be used only by the father and cannot be transferred to the mother, and any weeks of paid sharable leave that must be taken by the father in order for the family to qualify for “bonus” weeks of parental leave.	OECD Stat
Working from home	The percentage of employed persons aged 15 to 64 in the European Union (EU) who “usually” or “sometimes” work from home.	Eurostat
Job strain index	Job strain is defined as jobs where workers face more job demands than the number of resources they have at their disposal. It is a composite index; high level of job demands include: physical health risk factors, long working hours, and inflexibility of working hours. Low level of job resources include: work autonomy and learning opportunities, training and learning, and opportunities for career advancement. Collectively, these indicators are used to assess the quality of the working environment for workers.	OECD Stat, European Working Conditions Survey, and International Social Survey Program
Workers facing physical health risk factors	This indicator is based on worker responses to survey questions about physical health risk factors in their job. Workers facing physical health risk factors refers to the degree that a job involves risk factors that could potentially impair workers' health. Such risk factors include working in extreme temperatures, high noise, exposure to chemicals, etc., as well as occurrence of workplace accidents and personal evaluations of workplace as a dangerous place.	OECD Stat; European Working Conditions Survey, and International Social Survey Program

Indicator	Definition	Source
Workers expecting promotion	This indicator refers to the percent of workers who expect career advancement in their job, based on workers' responses to a survey.	OECD Stat; European Working Conditions Survey, and International Social Survey Program
Workers receiving training	This indicator refers to the number of workers who reported receiving training in their jobs, based on workers' responses to a survey.	OECD Stat; European Working Conditions Survey, and International Social Survey Program
Full-time work	Typically defined as workers who work more than 35 hours a week or based on a self-assessment of part-time/full-time work; the precise definition varies by national statistical agency.	OECD Stat, national statistical agencies
Part-time work	Typically defined as workers who work less than 35 hours a week or based on a self-assessment of part-time/full-time work; the precise definition varies by national statistical agency. The OECD standardized definition of part-time work is people in employment who usually work less than 30 hours per week in their main job.	OECD Stat, national statistical agencies
Involuntary part-time work	Typically defined as workers who would prefer to work more hours or those who say they cannot find full-time work; the definition varies by national statistical agency and is not standardized in OECD countries.	OECD Stat, national statistical agencies
Temporary employment	Temporary employment includes wage and salary workers whose job has a predetermined termination date. National definitions broadly conform to this generic definition but may vary depending on national circumstances. It is measured as percentage of dependent employees (i.e., wage and salary workers).	OECD Stat
Permanent employment	Permanent employment includes wage and salary workers whose job does not have a predetermined termination date. National definitions broadly conform to this generic definition but may vary depending on national circumstances. It is measured as percentage of dependent employees (i.e., wage and salary workers).	OECD Stat
Standard deviation of employment share from historical trend	This is a constructed indicator that tracks the standard deviation of the real employment share as a percentage of the working-age population from the trend in employment as calculated by the CAGR between a beginning and an end year. The first period is 1990—2004 and the second is 2004—2018.	OECD Stat

Indicator	Definition	Source
Combined risk of job loss, lost wages, and duration of unemployment	The OECD defines this indicator as "labor market insecurity." It is defined in terms of the expected earnings loss associated with unemployment. This loss depends on the risk of becoming unemployed, the expected duration of unemployment, and the degree of mitigation against these losses provided by government transfers to the unemployed (effective insurance).	OECD Stat
Median net equivalized income, real 2017 dollars	Median net equivalized income is median income excluding taxes. Median income is captured at the household level and has been adjusted to account for differing household sizes and needs, meaning it has been equivalized to ensure comparability across households.	UNU-Wider World Income Inequality Database (WIID); Eurostat; Luxembourg Income Study
Average annual real wages, real 2018 dollars	Average annual wages per full-time equivalent dependent employee are obtained by dividing the national-accounts-based total wage bill by the average number of employees in the total economy, which is then multiplied by the ratio of average usual weekly hours per full-time employee to average usual weekly hours for all employees.	OECD Stat
Relative poverty rates after taxes and transfers for the working-age population	The relative poverty rate is the percentage of people (in a given age group) whose income falls below the relative poverty line after taxes and transfers; taken as half the median household income of the total population.	OECD Stat
Net national equivalized income share by quintile	The net national equivalized income share by quintile expresses the share of total national income after taxes held by each quintile of the population ordered according to the size of their incomes. Household sizes have been adjusted to take into account differing needs and ensure comparability.	UNU-Wider World Income Inequality Database (WIID); Eurostat, Luxembourg Income Study
Labor share of income	Labor income of employees is derived from national accounts (whenever available), while the labor income of the self-employed is proxied using mixed income. Mixed income from the national accounts reports the self-employed income accrued to both capital and labor. However, the definition assumes that the income earned by self-employed persons is by and large accrued to labor because these types of workers generally rely mostly on labor in the production process.	The Conference Board Total Economy Database
High-skill occupations	High-skill occupations include jobs classified under the ISCO-88 major groups 1, 2, and 3.	OECD employment outlook 2017

Indicator	Definition	Source
Middle-skill occupations	Middle-skill occupations include jobs classified under the ISCO-88 major groups 4, 7, and 8.	OECD employment outlook 2017
Low-skill occupations	Low-skill occupations include jobs classified under the ISCO-88 major groups 5 and 9.	OECD employment outlook 2017
Polarization score	The polarization score is a constructed measure calculated by summing the value of the change in employment for both high- and low-skill occupations and then subtracting the change in middle-skill occupations.	OECD employment outlook 2017
Consumers		
Harmonised Index of Consumer Prices (HICP)	The HICP measures the change over time in the prices of consumer goods and services acquired, used, or paid for by euro area households. The methodology is consistent across all countries in the EU and the United States. The HICP measures the development over time for fixed consumption segments—sets of consumer expenditures that serve a common purpose—rather than a fixed basket of goods. The consumption segments follow the COICOP Classification including: food and nonalcoholic beverages; alcoholic beverages, tobacco; clothing and footwear; housing, water, electricity, gas, and other fuels; furnishings, household equipment, and routine house maintenance; health; transportation; communications; recreation and culture; education; restaurants and hotels; and miscellaneous goods and services. It covers only actual monetary transactions directly conducted by households (i.e., excludes imputed rents for housing). We have constructed an indicator that compares the changes in product category-specific prices to overall changes in prices for all product categories.	Eurostat; National statistical agencies
Average cost of broadband	This indicator is the average cost of broadband per month in dollars.	cable.co.uk
Individuals with internet access	The percentage of households who reported that they had access to the internet. In almost all cases, access is via a personal computer either using a dial-up, ADSL, or cable broadband connection. This indicator is measured in percentage of all households.	OECD Stat
Cellular mobile penetration	This indicator measures the number of mobile phone subscriptions per 100 inhabitants in a country.	World Bank

Indicator	Definition	Source
Total spending on nonbasic goods	This is a constructed measure using the final consumption expenditure of households from national accounts data, broken into the COICOP classification of product categories. "Nonbasic" spending refers to all categories except housing, healthcare, and education as a percentage of total final consumption expenditure of households.	OECD Stat; national statistical agencies
Spending on basic goods (housing, healthcare, and education)	This is a constructed measure using the final consumption expenditure of households from national accounts data, broken into the COICOP classification of product categories. "Basic goods" spending refers to spending on housing, healthcare, and education as a percentage of total final consumption expenditure of households.	OECD Stat; national statistical agencies
Broadband speed	This indicator captures the mean download speed in megabits per second.	cable.co.uk
Road quality index	This indicator is a survey question that asks, "In your country, how is the quality (extensiveness and condition) of road infrastructure?," where 1=extremely poor, among the worst in the world and 7=extremely good, among the best in the world.	World Economic Forum, Global competitive-ness Index
Competence and quality of logistics services index	This indicator is a survey question that asks respondents to rank the competence and quality of logistics services from "very low" (1) to "very high" (5).	World Bank Logistics Performance Index
Cost of minimum acceptable housing, also known as the largest city affordability gap	The definition of "affordable housing" varies across economies, but generally it includes a financial component (the share of income devoted to housing), a standard for what constitutes minimum socially acceptable housing with a clear idea of what income groups are affected, and at what income level households should be eligible for housing assistance.	McKinsey Global Institute, *A blueprint for addressing the global affordable housing challenge* (2014)
Out-of-pocket spending on healthcare	Out-of-pocket payments are expenditures borne directly by a patient where neither public nor private insurance covers the full cost of the health good or service. It can be measured as a percentage of total current health expenditure or as a percentage of GDP.	OECD Stat
Total healthcare coverage	This indicator refers to the share of the total population covered by public and primary private health insurance.	OECD Stat
Density of hospital beds, per 1,000 persons	This indicator measures the number of hospital beds per 1,000 population.	OECD Stat

Indicator	Definition	Source
Educational attainment, percent of population with tertiary degree	This indicator refers to the share of the population aged 25–64 who have completed tertiary education, the highest level of education. This includes both theoretical programs leading to advanced research or high-skill professions such as medicine and more vocational programs leading to the labor market. In ISCED Classifications, tertiary education refers to ISCED 5-8.	OECD Stat
Rates of housing overcrowding among households in the bottom quintile	This indicator refers to the share of overcrowded households as a percentage of total households in the bottom quintile. A household is considered overcrowded if it does not have at its disposal a minimum number of rooms equal to: one room for the household, one room per adult couple, one room for each single adult, one room per pair of single persons of the same sex between 12 and 17 years of age, one room for each single person between 12 and 17 who are not included in the previous category (same sex), and one room per pair of children under 12.	OECD Affordable Housing Database
Life expectancy at birth	Life expectancy at birth and at ages 40, 60, 65, and 80 is the average number of years a person that age can be expected to live, assuming that age-specific mortality levels remain constant. Life expectancy at birth for the total population is estimated for all countries, using the unweighted average of life expectancy of men and women.	OECD Stat
Self-assessed health status	Self-assessed or "perceived" health status is the percentage of the population aged 15 years old or over who report their health to be "good/very good" (or excellent), "fair" (not good, not bad), "bad/very bad."	OECD Stat
Low birthweight babies	This indicator measures the number of live births weighing less than 2,500 grams as a percentage of the total number of live births.	OECD Stat
All cancer mortality rates	All cancer mortality rates refer to age-standardized death rates per 100,000 population for selected causes, which are calculated using the OECD total population for 2010 as the reference population. Age-standardized death rates enable comparability across countries.	OECD Stat
Healthy life expectancy at birth or number of expected healthy years	Healthy life expectancy (HALE) applies disability weights to health states to compute the equivalent number of years of good health that a newborn can expect.	World Health Organization

Indicator	Definition	Source
PISA scores in reading, mathematics, and science	These indicators are based on the average scores for 15-year-olds in participating countries on the Program for International Student Assessment test. PISA focuses on the assessment of student performance in reading, mathematics, and science for 15-year-olds. PISA draws on content that can be found in curricula across the world and looks at students' ability to apply knowledge and skills and to analyze, reason, and communicate effectively as they examine, interpret, and solve problems.	OECD
Savers		
Real median net wealth	This indicator measures the net wealth (assets minus liabilities) of the median adult, adjusted to account for inflation.	Credit Suisse
Real mean net wealth	This indicator measures the average net wealth (assets minus liabilities) of an adult in the population, which has been adjusted to account for inflation.	Credit Suisse
Net household saving rate	The net household saving rate represents the total amount of net saving as a percentage of net household disposable income. It thus shows how much households are saving out of current income and how much income they have added to their net wealth.	OECD Stat
Net pension replacement rate	The net replacement rate is defined as the individual net pension entitlement divided by net preretirement earnings, taking into account personal income taxes and social security contributions paid by workers and pensioners. It measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement. This indicator is measured in percentage of preretirement earnings by gender.	OECD Stat
Home ownership rate	The share of dwellings owned either outright or with a mortgage as a proportion of the total dwelling stock.	OECD; definitions may vary by country
Real return on national stock market	The real return on the national stock market measures the five-year growth rate of share prices on the national stock market, adjusted for inflation.	OECD Stat
Wealth accruing to the top 10 percent of the wealth distribution	This indicator refers to the share of total net wealth owned by the 10 percent wealthiest households. Net wealth excludes pension plans related to employment.	OECD Stat
Wealth accruing to the bottom 60 percent of the wealth distribution	This indicator refers to the share of total net wealth owned by the households in the three bottom quintiles of wealth. Net wealth excludes pension schemes related to employment.	OECD Stat

Indicator	Definition	Source
Share of heavily indebted households	This indicator is the percent of households in a country who are indebted and whose ratio between debt and income is greater than 3.	OECD Stat
Unable to face unexpected financial expense	For the European Union, this indicator refers to the percentage of persons in the total population who are in the state of enforced inability to face unexpected financial expenses. For the United States, this indicator refers to the share of adults who would borrow or sell something to pay for the expense or who would not be able to cover the expense at all. For Canada, this indicator refers to the share of adults who believe that their bank account could not withstand a financial emergency.	Eurostat; Board of Governors of the Federal Reserve System, Leger, Financial Planning Standards Council
Old-age relative poverty	This indicator estimates the number of persons 65 years or older with 50 percent or less of median equivalized disposable income as a percentage of all citizens 65 years or older.	Sustainable Governance Indicators
Years of net pension wealth from mandatory pensions (also known as net pension wealth)	Net pension wealth is the present value of the flow of pension benefits, taking account of the taxes and social security contributions that retirees have to pay on their pensions. It is affected by life expectancy and by the age at which people take their pensions, as well by as indexation rules. This indicator is measured as a multiple of annual net earnings by gender. Given that we have selected the net pension wealth for a male worker on the average wage, we assume they consume their full average wage each year after they retire, which gives us the number of years of net pension wealth from mandatory pensions.	OECD Stat
Wealth volatility	Wealth volatility measures the standard deviation of year-on-year changes in real average net wealth.	Credit Suisse
Proportion of median net wealth covered by deposit protection legislation	This indicator captures the level of financial deposits guaranteed by national governments in the event that the bank holding the deposits fails. It is measured as a percentage of median net wealth.	European Banking Authority; national financial regulators
Financially literate population	This indicator assesses the share of adults who display a basic knowledge of four fundamental concepts in financial decision making: knowledge of interest rates, interest compounding, inflation, and risk diversification.	S&P Global Financial Literacy Survey
Did not save for old age	This indicator captures the share of the population aged 15 years and over who did not save for old age.	World Bank
Did not save any money	This indicator captures the share of the population aged 15 years and over who did not save any money in the previous year.	World Bank

Indicator	Definition	Source
Share of individuals with net wealth less than 25 percent of the income poverty line	This indicator refers to the share of individuals who have equivalized net wealth below 25 percent of the income poverty line (three-month buffer). Net wealth excludes pension schemes related to employment.	OECD Stat
Share of individuals with net wealth less than 50 percent of the income poverty line	This indicator refers to the share of individuals who have equivalized net wealth below 50 percent of the income poverty line (six-month buffer). Net wealth excludes pension schemes related to employment.	OECD Stat
Share of indebted households with debt-to-asset ratio above 75 percent	This indicator is the percent of households in a country who are indebted and whose ratio between debt and assets is greater than 0.75.	OECD Stat
Cboe Volatility Index® (VIX® Index)	This indicator forecasts volatility in the stock market based on real-time price options for the S&P 500 Index. It is used as a measure of market risk and uncertainty.	Cboe Global Markets
Market intervention and public-sector spending		
Employment protection for regular workers	This metric captures the strictness of employment protection regulations for individual or collective dismissals for workers on regular contracts. Covers indicators such as notification procedures, length of notification period, severance pay, definitions for justified or unfair dismissal, compensation following unfair dismissal, definitions of collective dismissals, etc. The measures range from 0 (least strict) to 6 (most strict).	OECD
Employment protection for temporary workers	This metric captures the strictness of employment protection regulations for temporary workers. Covers indicators such as valid uses of fixed-term contracts, limits on using fixed-term contracts successively, legal use of temporary work agencies, equal treatment of regular and agency workers, etc. The measure ranges from 0 (least strict) to 6 (most strict).	OECD
Collective agreements	This indicator captures the share of employees with the right to bargain collectively as a percentage of total employees.	OECD Stat

Indicator	Definition	Source
Product-market regulation for tele-communica-tions, transportation, and utilities	These metrics capture the regulatory barriers to firm entry and competition at the level of individual sectors, broken down into state involvement and regulation in specific sectors (e.g., government equity stakes in companies, regulations restricting number of firms allowed to compete, etc.). The measure ranges from 0 (least regulated) to 6 (most regulated).	OECD
Retail price controls	This metric captures whether retail prices of certain products are subject to price controls, including: staple goods (e.g., bread, milk, etc.), gasoline, books, CDs, liquefied petroleum gas, and other products, in addition to regulations on nonprescription medicines and restrictions on advertising prices and/or discounts on prices of nonprescription medicines. The measure ranges from 0 (least regulated) to 6 (most regulated).	OECD
Social housing stock	This indicator captures the stock of residential rental accommodation provided at submarket prices and allocated according to specific rules rather than according to market mechanisms. It is measured as a percentage of the total dwelling stock.	OECD Stat
Intensity of rent controls	These indexes measure 18 rental market regulations across countries in three key areas: rent controls, tenant protection security, and house rationing. Each indicator is translated into a binary variable where 1 corresponds to whether a regulation applies in the respective period and 0 if not. The higher the index, the more limited the landlord's actions, which typically means stronger tenant protection.	Dr. Konstantin Kholodilin, DIW Berlin
Level of market intervention by institutions in the healthcare market	This indicator is constructed by taking 1 divided by out-of-pocket payments, which are expenditures borne directly by a patient where neither public nor private insurance covers the full cost of the health good or service. It can be measured as a percentage of total current health expenditure or as a percentage of GDP. In principle, higher out-of-pocket spending likely suggests lower involvement by institutions in the healthcare market.	OECD Stat
Level of market intervention by institutions in the education market	This indicator is constructed by taking 1 divided by private spending on education. Private spending on education refers to expenditure funded by private sources which are households and other private entities.	OECD Stat

Indicator	Definition	Source
Net pension replacement rates	The net replacement rate is defined as the individual net pension entitlement divided by net preretirement earnings, taking into account personal income taxes and social security contributions paid by workers and pensioners. It measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement. This indicator is measured in percentage of preretirement earnings by gender.	OECD Stat
Proportion of defined-benefit assets-under-management	The proportion of defined-benefit assets-under-management refers to the share of total pension assets-under-management that provide a guaranteed pension payment in retirement. This indicator is measured in percent.	McKinsey Growth Cube
Social spending on unemployment, incapacity, and active labor market programs (excluding training)	There are two criteria for classifying an expenditure item as social expenditure: (1) the benefits have to be intended to address one or more social purposes; (2) programs regulating the provision of benefits have to involve either (a) inter-personal redistribution or (b) compulsory participation. We have aggregated three categories of social spending: unemployment (unemployment compensation, severance pay, early retirement for labor market reasons); incapacity-related benefits (care services, disability benefits, benefits accruing from occupational injury and accident legislation including pensions, employee sickness payments), and active labor market policies excluding training spending (employment service and administration, youth measures, subsidized employment, employment measures for the disabled). It is measured as a percentage of GDP.	OECD Stat
Public-sector wages	This indicator is constructed by multiplying average annual wages in nominal national currency units for all employees by the number of public-sector employees divided by the country's GDP in nominal national currency units. The indicator is expressed in percent.	OECD; ILO; national statistical agencies
Social spending on training	This indicator captures social spending on training, which is typically aggregated into active labor market programs. We decided to separate it out to assess how spending patterns have changed since the early 2000s. It is measured as a percentage of GDP.	OECD Stat
Social spending on housing	Social spending includes spending on housing allowances and rent subsidies. It is measured as a percentage of GDP.	OECD Stat
Social spending on healthcare	Social spending includes spending on in- and outpatient care, medical goods, and prevention. It is measured as a percentage of GDP.	OECD Stat

Indicator	Definition	Source
Public-sector spending on education	Public spending on education includes direct expenditure on educational institutions as well as educational-related public subsidies given to households and administered by educational institutions. It is measured as a percentage of GDP.	OECD Stat
Public-sector spending on infrastructure	This indicator refers to government gross fixed capital formation, which we have used to proxy for government infrastructure investment. It is measured as a percentage of GDP.	OECD Stat
Social spending on family and other social policy areas	This indicator includes noncategorical cash benefits to low-income households and other social services (income maintenance, social assistance, and programs such as food subsidies). It is measured as a percentage of GDP.	OECD Stat
Social spending on old-age and survivors' pensions	This indicator includes spending on pensions, early retirement pensions, home-help, and residential care subsidies for the elderly as well as pensions for survivors' and funeral expenses. It is measured as a percentage of GDP.	OECD Stat

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