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Issues by the Numbers

Income inequality in the United States: What do we know and what does it mean?

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CONTENTS

Introduction

IT'S widely said that the United States has been experiencing growing income inequality.[1] But how do we know that? And what do we mean by income inequality? This edition of *Issues by the Numbers* explores the data underpinning the claim of growing US income inequality, and describes the possible causes of this trend.

Measuring the distribution of income and wealth

IT may sound simple to talk about the distribution of income, but trying to measure it can quickly become confusing. The idea that some people earn more income than others is easy to think about—especially if we are comparing ourselves to wealthier people. But it's harder to effectively measure the level of income inequality in a way that lets us compare different times and places. There is no one measure that summarizes income inequality for a society.

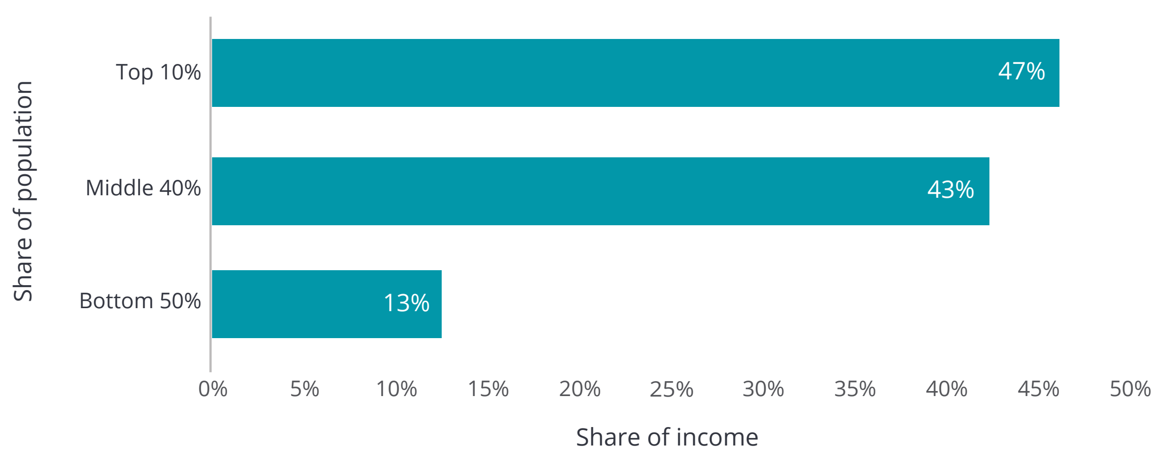
Analysts who study the topic often look at the share of total income going to groups at different levels of the income distribution. If income is distributed equally, any 10 percent of the income-earner population will earn 10 percent of the total available income. However, if 10 percent of the income-earner population receives 20 percent of the total available income, these people will have higher incomes than other people.

Figure 1 shows income shares in the United States in 2014. The top 10 percent of workers in the United States earned about half of the year's total income. The next 40 percent earned slightly more than 40 percent of total income, and the bottom half of all earners took home just 13 percent of all income earned that year.

Now, nobody should expect income to be distributed equally, and that has never been the case in any event. Some people earn more because they've invested in their careers, some because they take advantage of unforeseen market forces, and some because they are lucky, or even just born lucky. And some people earn less because they have less experience, have not invested in their careers, suffer from changes in market forces, are simply unlucky, or face hurdles such as racial discrimination. The real question is whether the trend is toward equality or inequality.

Figure 2 shows that the trend is indeed toward greater income inequality. The share of total income earned by the top 10 percent has risen from around 31 percent in the 1970s to about 50 percent today. Some of the loss was borne by the middle 40 percent, but

Figure 1. US income shares by share of population, 2014



Source: World Wealth and Income Database.

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much of this increase among the top 10 percent has come at the expense of workers in the lower half of the distribution. Their share of total income fell from 20 percent in the 1970s to just over 10 percent today.

But it's not just the top 10 percent that is taking a larger share of total income home. The effect is even more pronounced if we look at the top 1 percent. Figure 3 shows that the share of total income earned by the top 1 percent has been slowly rising since the early 1970s, and currently stands at around 20 percent. That's the same level associated with the period before World War I, the "gilded age" of the United States that saw vast inequity in income and wealth.

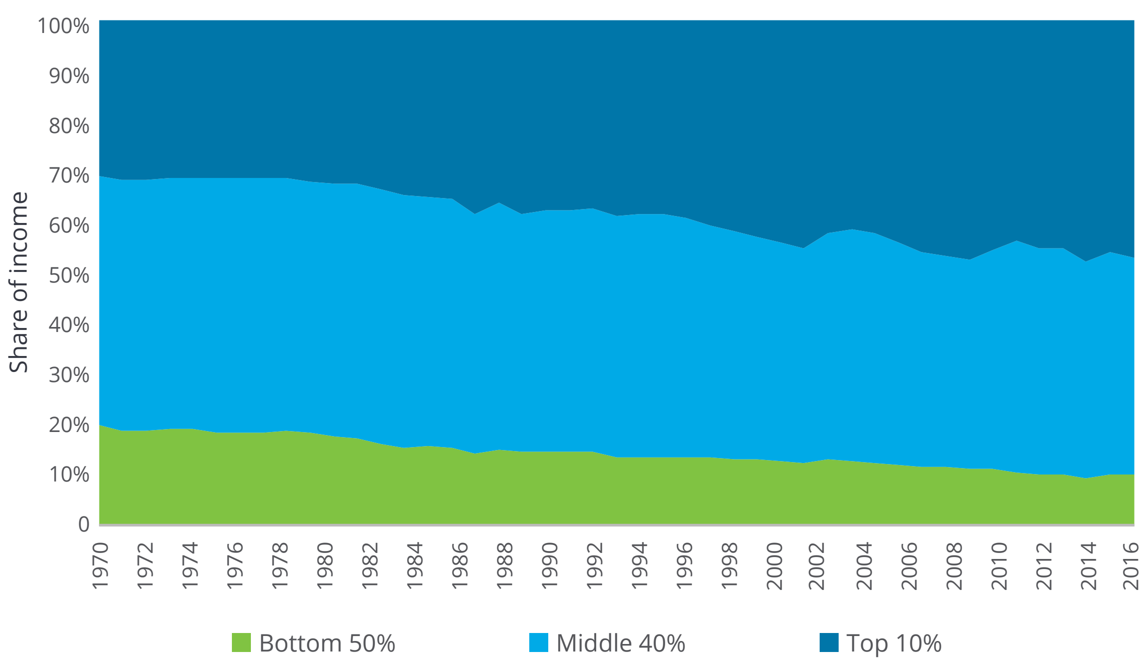
These data suggest that there are two different features of the United States' rise in income inequality in recent years. Both of the following statements are true:

1. People in the lower part of the income distribution have been receiving a smaller share of total income over time.
2. People at the very top of the income distribution have been receiving a greater share of total income over time.

If income is distributed unevenly, wealth is distributed even more unevenly. Figure 4 shows median household net worth—wealth—by income class. The distribution in wealth is starkly uneven. The median household at the bottom 20 percent of the income distribution has virtually no wealth. The median household in the middle of the income distribution isn't much wealthier. Almost all wealth is held by households at the top of the income distribution.

The median level of wealth for households at the top of the distribution is more volatile than wealth for poorer households. In part, this is because richer households can afford to hold riskier assets. Only 4 percent of households at the bottom 20 percent of the income distribution own stocks, while fully 45 percent of households in the top 10 percent do. This contributes to the greater volatility in wealth shown in figure 4—but also likely contributes to higher returns in the long run for wealthier households.

Figure 2. US income shares over time



Source: World Wealth and Income Database.

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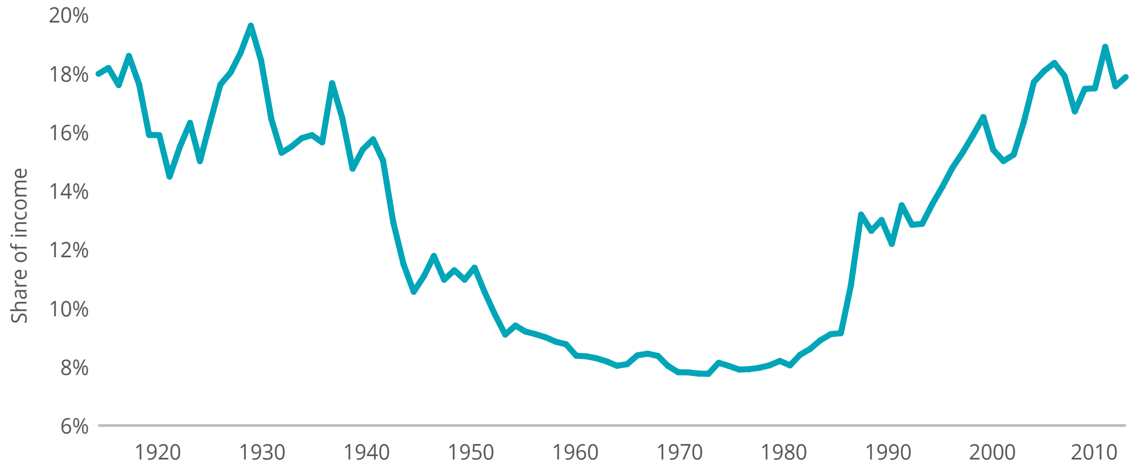
Figure 3. Share of total income earned by people in the top 1 percent of the income distribution



Source: World Wealth and Income Database.

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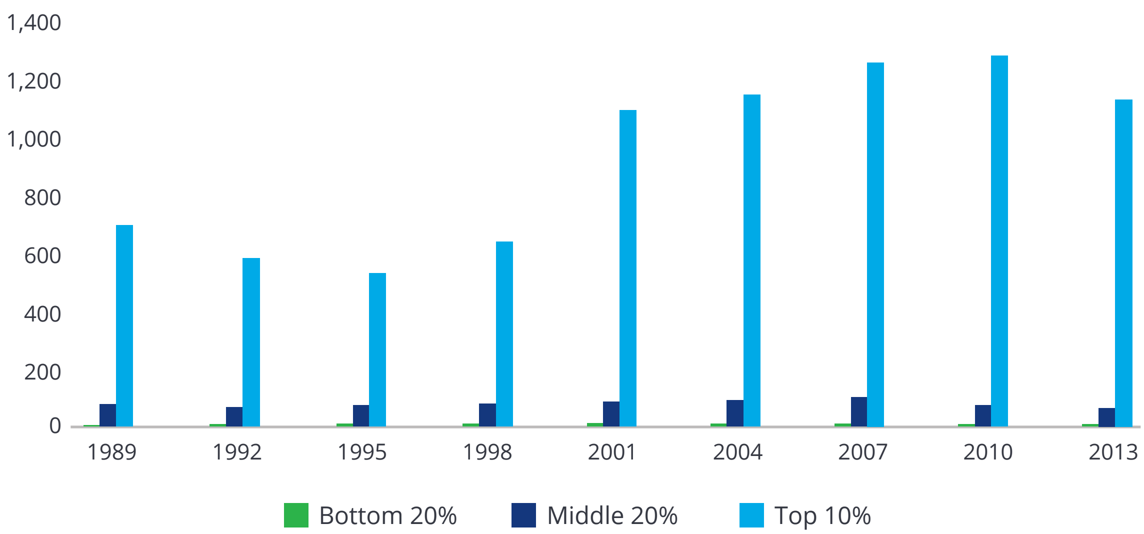
Figure 4. Median household net worth by income class (selected income classes, thousands of dollars)



Source: Federal Reserve Survey of Consumer Finances; Haver Analytics.

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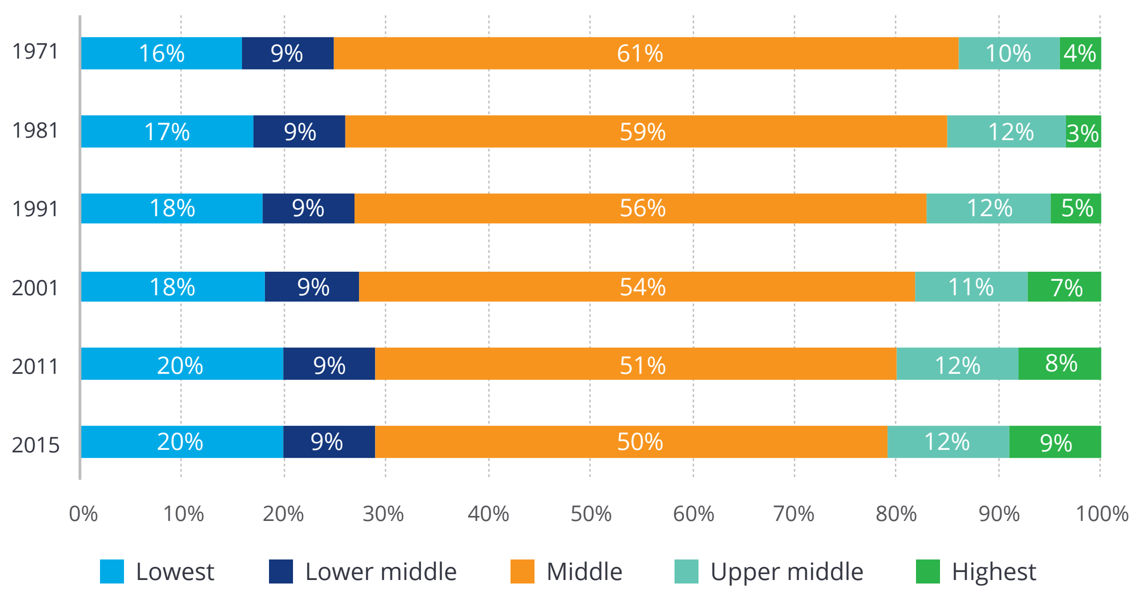
The decline of the middle class and the "economics of envy"

THESE shifts in income distribution underlie the much-discussed shrinking of the American middle class.[2] Fewer Americans live in middle-class households today than in the past (figure 5). And the share of aggregate income going to middle-income households has fallen from 62 percent in 1970 to 43 percent in 2014.[3]

These measures are relative, which means that they do not take into account the fact that absolute incomes may be rising even at lower levels of the income distribution. However, James Duesenberry's "relative income hypothesis" suggests that people's happiness is related to their income relative to others as much as to their absolute level of income.[4] If this is the case, rising income inequality could reduce happiness even if lower-income workers are better off in absolute terms, because these lower-income workers see themselves falling farther behind their wealthier contemporaries. And, in fact, that is what appears to be happening—but not just to the poorest households.

Figure 6a shows the ratio of income of households at the 95th percentile of income (that is, the top 5 percent of households, so very wealthy) to income among households at the 40th percentile (that is, somewhat below the country's median income).

Figure 5. Percentage of adults in the United States at each income level



Source: Pew Research Center, "The American middle class is losing ground: No longer the majority and falling behind financially," December 8, 2015, http://www.pewsocialtrends.org/2015/12/09/the-american-middle-class-is-losing-ground/.

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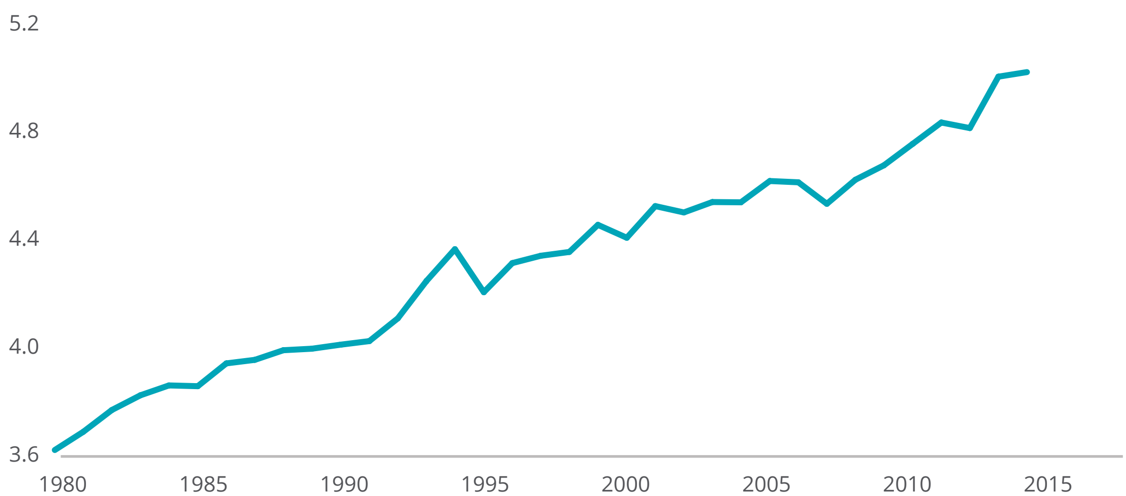
Figure 6b shows the ratio of income of 95th-percentile households to that among households in the 80th percentile (fairly affluent, but not at the top). In both cases, the relative income of the less-well-off households has fallen substantially.

This trend translates into an understanding that wealthier households are doing better than "us." Even relatively affluent households may experience this, since even households in the top 80th percentile see their incomes and lifestyles declining, or at least improving more slowly, relative to people at the very top of the income scale.

It's not just relative incomes that are falling, either. Real wages have been stagnant for a long time. In 1973, real average hourly earnings for nonsupervisory workers peaked at $9.37 (in 1982–84 dollars). In 2015, real average hourly earnings were lower—just

Figure 6a. Ratio of income at 95th percentile to income at 40th percentile



Source: World Wealth and Income Database.

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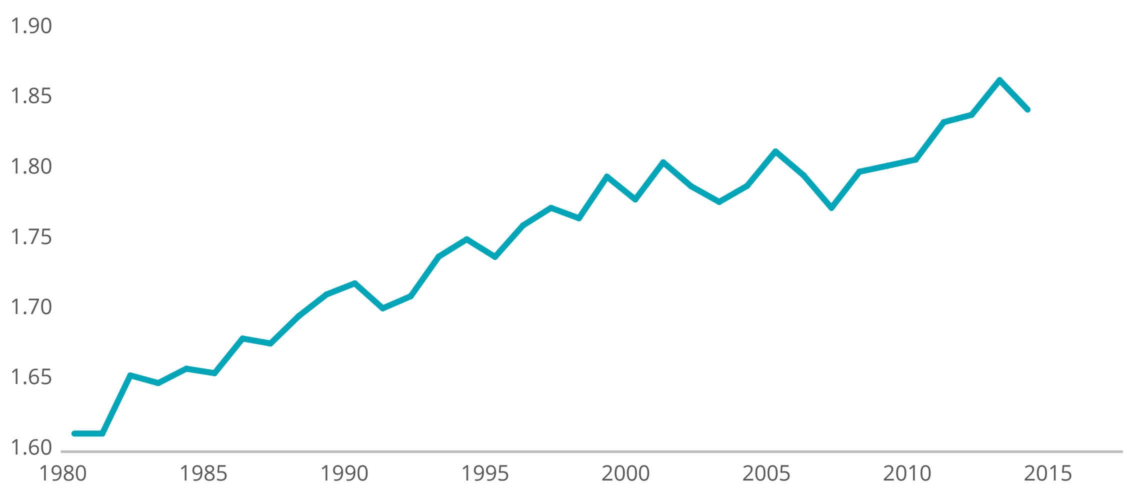
Figure 6b. Ratio of income at 95th percentile to income at 80th percentile



Source: World Wealth and Income Database.

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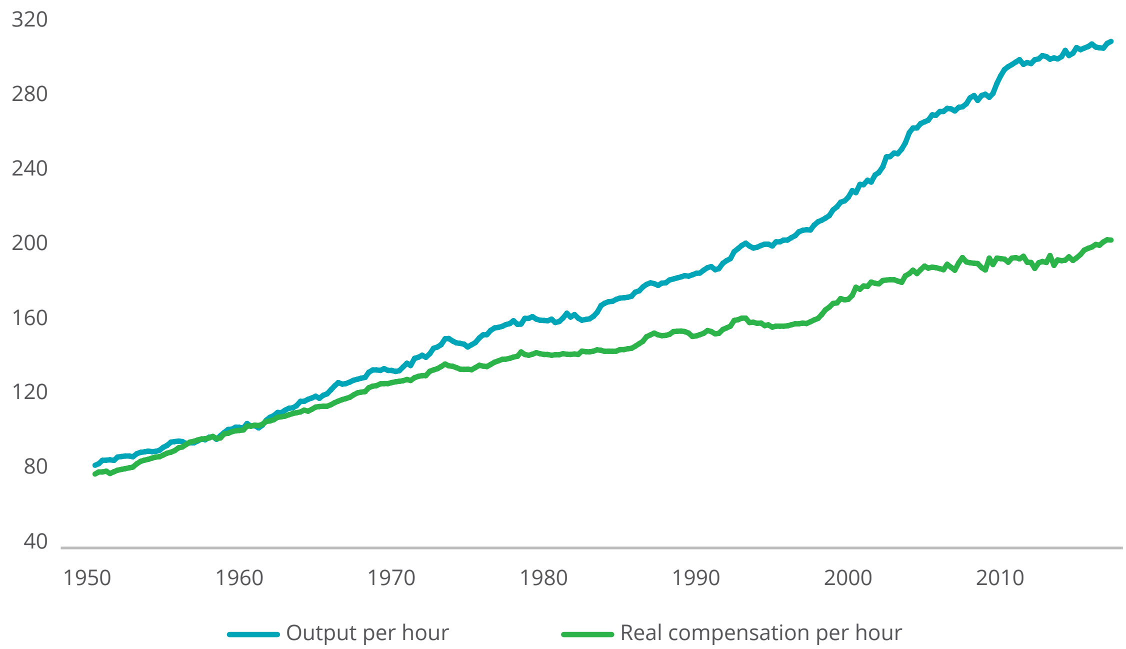
Figure 7. Productivity and compensation (1960=100)



Source: Bureau of Labor Statistics; Macrobond.

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$9.07.[5] To emphasize—for the median US worker, real wages have fallen since 1973.

Figure 7 shows another surprising trend in workers' earnings. Real compensation—including wages and benefits—has grown substantially more slowly than productivity since about 1970.

That's a surprising development, since, in economics theory, real wages and productivity should be closely aligned. If wages grow faster than productivity, it's expected that labor will become too expensive, firms will lay off workers, and wage growth will slow. And if wages grow more slowly than productivity, hiring additional workers is profitable. Firms will hire more workers, driving up wages, until the wage (cost) of an hour of work is just equal to the value (productivity) of that worker.

That's how textbooks tell us things work. And that's what happened between 1950 and 1970. Output per hour and real labor compensation both grew 2.7 percent per year, just like the textbooks predicted. But since then, real labor compensation has grown significantly more slowly than productivity: Average productivity growth has been up 1.8 percent per year since 1970, while real compensation has grown at just 1.0 percent per year.

Most workers probably don't know these figures. What many do know is this: Productivity is going up, and management is asking them to do "more with less" all the time. *And*, at the same time, they know that their wages are stagnant. It doesn't add up for economists, and it doesn't add up for workers either.

Why has income inequality been rising?

ECONOMISTS have spent the last 30 years arguing about whether income inequality is really rising. That may seem surprising, but it's hard to see changes in trends at first. But fixing this problem—if indeed it should be fixed—involves understanding why income inequality might have started rising around 1970.

As this is a highly charged political issue, much of the discussion generates more heat than light. But the debate is even more confusing because it actually encompasses two separate phenomena. As noted above (figure 2), the lower half of the income distribution has been losing ground to higher-income people. And at the same time, people at the very top of the income distribution—the famous or infamous "one-percenters"—are taking home an ever-increasing share of total income (figure 3), leaving even moderately affluent families feeling that they are losing ground.

Of course, economists are willing to spin plenty of theories about the causes of growing inequality. Some of these theories explain the declining share of the lower half of the income distribution, and others explain why people at the very top of the distribution are receiving an ever-larger share of the total. It's worth considering the theories about each of these phenomena separately.

Why is the lower half of the income distribution losing ground?

The declining fortunes of America's working class have been a major topic for political punditry. Three main theories have been proposed to explain why workers at the lower end of the income distribution have fared relatively poorly in the past few decades. The proposed explanations are technological change, international trade, and politics.

TECHNOLOGICAL CHANGE

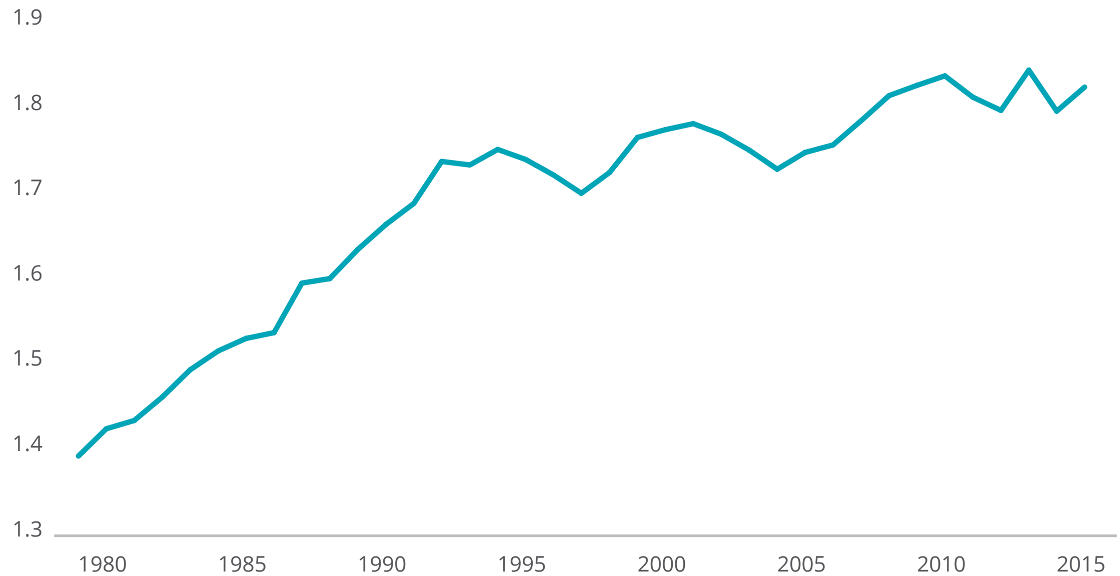
Information processing is the wonder of this age. But while we all focus on the miracle of being able to watch cat videos on mobile phones, the key economic impact may be a bit more problematic.

Technology doesn't just create new demand, whether for cat videos or for other things. It also changes existing processes and jobs—in fact, that's the point. And information technology is, it seems, a technology that replaces relatively unskilled workers while rewarding workers with more skills. In the context of the United States, this means that we should not be surprised to see college graduates (commonly in the upper half of the income distribution) gaining at the expense of less-well-trained workers (commonly in the lower half).[6]

The returns to more-skilled workers have indeed increased substantially compared to those to less-skilled workers. Figure 8 shows the ratio of the median wage for workers with at least a bachelor's degree to workers with only a high school degree. As the hypothesis suggests, this ratio has grown substantially over this period.

However, a closer look shows that the growth in this same ratio slowed in the mid-1990s—precisely when the tech boom took hold. Furthermore, the relative wages of bachelor's degree-holders to high school diploma-holders has not grown much at all since the 2008 financial downturn. Given these facts, although there is no question that skills associated with a bachelor's degree have become relatively

Figure 8. Ratio of median wage for workers with a bachelor's degree to workers with only a high school diploma



Source: Bureau of Labor Statistics.

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more valuable over time, that may not be the whole story to the rise in income inequality.

GLOBALIZATION

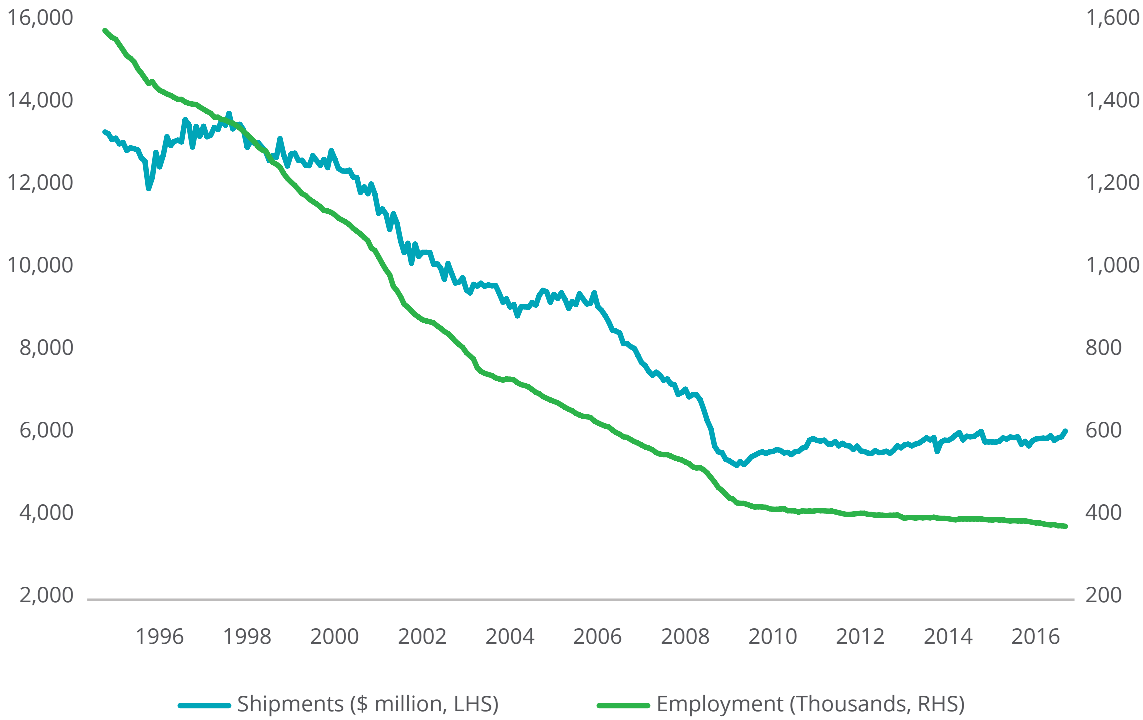
The entry of China into the global trading system meant that lower-skilled (by US standards) workers faced intense competition from abroad. Of course, this trend was not entirely new, as US workers faced low-cost competition from Europe in the 1960s, Japan in the 1970s, and South Korea, Taiwan, and other "Asian Tigers" in the 1980s. China's globalization in the 1990s, however, was on a much larger scale. The Chinese labor force is over four times bigger than the US labor force,[7] and most Chinese workers have much lower skill levels than most US workers.[8] This meant that the competition from China was concentrated on lower-skilled manufacturing work. US jobs in apparel and textiles, for instance, virtually disappeared. As figure 9 shows, this was not just because productivity improved. American production in these industries (and other lower-tech industries such as shoe manufacturing) simply collapsed in the face of competition from abroad. In apparel and textiles alone, over a million US jobs were lost.

Economists have turned up some evidence that China's entry was responsible for some of the decline in manufacturing jobs.[9] Lower demand for low-skilled manufacturing workers likely had an impact on wages on the few lower-skilled jobs remaining in the United States in these areas.

THE DECLINE OF WORKING-CLASS POLITICAL POWER

A smaller number of analysts turn to changes in the labor market landscape that they believe have disadvantaged lower-skilled workers in negotiating for jobs and pay. Proponents of this view often point to the fall in unionization in the United States as a proxy for the rising political power of the well off. (This assumes that the decline in unionization is the result of changing government labor market policy, which is a very debatable proposition.) Figure 10 shows that union membership fell from one-quarter of all employees in 1970 to just over one-tenth in 2015.[10]

Figure 9. US employment and shipments of textiles and apparel



Source: US Census Bureau; Bureau of Labor Statistics; Haver Analytics.

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There is some research relating the rise in inequality to the decline of working-class political power.[11] However, head-to-head tests of the political hypothesis against the technological and trade hypotheses are rare, perhaps partly because economists tend to favor the technological and trade hypotheses, while the political power hypothesis tends to attract political scientists.

Although all three proposed causes may have had some impact on income inequality, the real question is the relative size of each. Economists tend to point to technological change as being responsible for the bulk of the rise in inequality, with globalization having a somewhat smaller impact. For example, the University of Chicago's IGM Forum of Economic Experts asked its panel to state its level of agreement with the following viewpoint: "One of the leading reasons for rising US income inequality over the past three decades is that technological change has affected workers with some skill sets differently than others." 81 percent agreed or strongly agreed with the statement.[12]

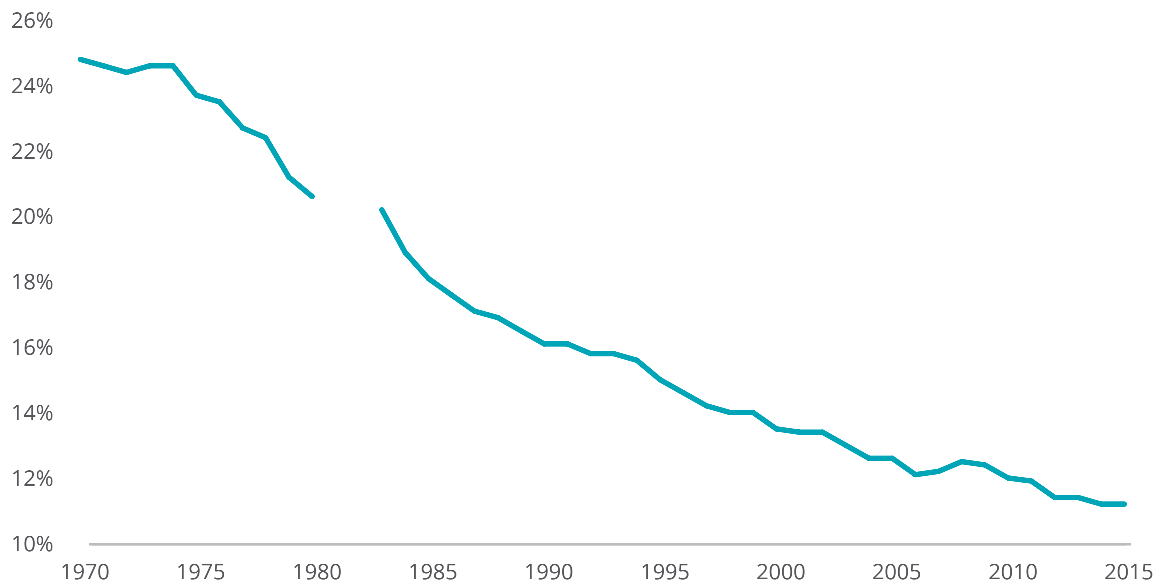
What's up with the 1 percent? Or, why is their relative income growing so fast?

The second distinctive characteristic of America's changing income distribution is the rise in the share of income earned by those at the very top of the income scale. There are two main explanations proposed for this: political power and economic rents, and the "superstar" hypothesis.

POLITICAL POWER AND ECONOMIC RENTS

Economic rent is a term used to indicate an actor's extraction of value in a marketplace without returning equal value to somebody else. Monopolies, for

Figure 10. Unionized share of total US employment



Note: Break in series in 1980; no data in 1981 and 1982.

Source: Bureau of Labor Statistics, Haver Analytics.

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example, charge above marginal cost, and therefore earn more than the cost of producing the product.

Some analysts believe that the increasing share of income going to the very top earners reflects this segment's increasing economic rent, and that this increase in economic rent results from a combination of changing market circumstances and manipulation of market rules and norms.[13] This argument rests on the view that people in the financial sector and in corporate leadership positions have taken advantage of altered social and economic relationships for their own benefit. For example, CEO pay has risen substantially over this period relative to average pay. Before the 1970s, according to this view, C-suite officers kept pay within limits imposed by social norms. After about 1980, the hypothesis continues, those norms were shattered, and the slogan "greed is good"[14] epitomized an increasing willingness of powerful executives to use their power for their own enrichment. (It is only fair to note that some believe that the relatively low executive pay before the 1980s was inefficient, and the higher salaries later better reflected the contribution of top executives.) Other observers point to the decline in marginal tax rates and deregulation, which may have increased the incentives for executives to award themselves (according to this argument) higher pay.[15]

A related hypothesis is that the "financialization" of the economy has allowed the financial sector to extract higher economic rent from other parts of the economy. This possibility could partially account, for example, for the rise of finance's contribution to gross domestic product (GDP), up from 4.3 percent in 1975 to 7.3 percent in 2016.[16] The question here is whether the finance sector is really adding value or whether it is simply extracting value from other sectors without providing services in return. The latter would adhere to the definition of "economic rent."[17]

Figure 11 illustrates an important feature of the top 1 percent that may appear to support both views. The most common occupation among people with top 1 percent incomes is executive or manager, and the second most common is medical, with financial close behind. Among the very top earners (the top 0.1 percent of income earners), more than half are executives or in financial professions. Notice that sports stars and rock musicians—the typical image of high earners—make up less than 5 percent of the top income earners.

SUPERSTARS

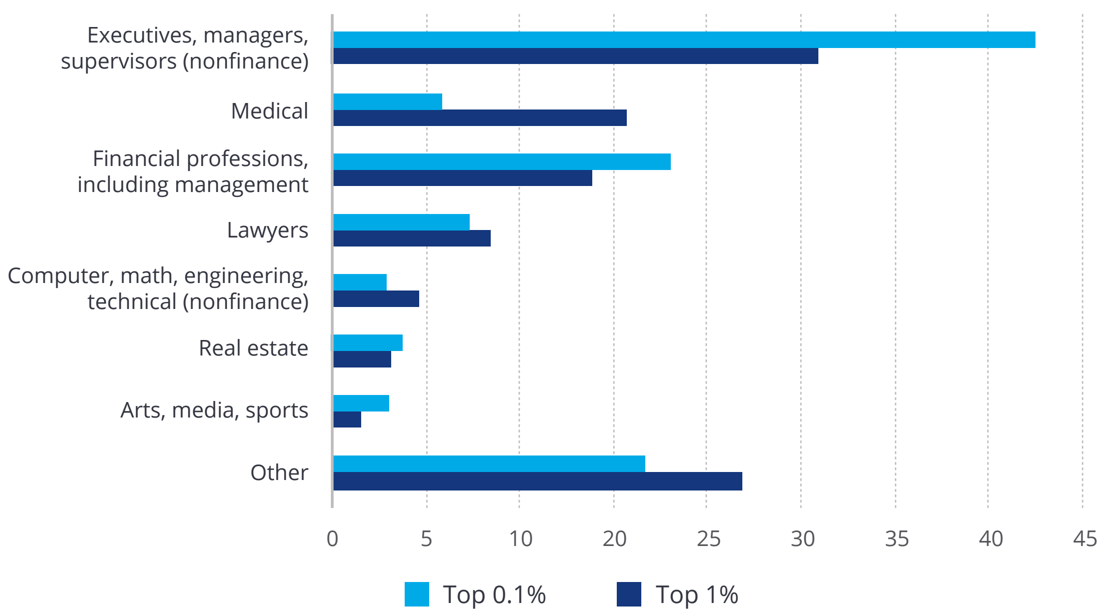
Other analysts argue that technology is also driving the trend of the top 1 percent getting richer faster than the rest of us. This argument is based not on skills, however, but on the greater ease of communication in the modern world. This ease of communication allows the most talented individuals to "sweep the table" by capturing a larger share of the market (or commanding higher prices for their share) than they could when communication was more fragmented and transportation more expensive.[18]

Consider the example of a wealthy person who is sick and wants the "best" medical care. In 1900, that would likely have meant finding the "best" physician in the city. Each city could support a "best" physician, and pay would be relatively equal among them. By 1960, the wealthy patient might seek out the "best" physician in the country. That "best" physician would then be able to command higher prices than his or her counterparts in other cities, as patients traveled to see him or her. Today, the equivalent patient will want the "best" in the world, and will be willing (and able) to correspond and travel over intercontinental distances to get that care. Thus, most or all global demand may flow up to a single physician. As a result, he or she can command much higher prices than his or her counterparts in other countries.

One small piece of evidence in favor of this hypothesis is that income inequality within occupations is increasing.[19] This is consistent with the view that superstars in finance and corporate management are capturing more earnings because they are able to deliver more value by operating at a larger scale, rather than simply by capturing rents from firm owners and/or workers.

There is no consensus among economists about which hypothesis is more important at this point.

Figure 11. Occupations of top income earners, percentage of total in that income class



Source: Jon Bakija and Bradley T. Heim, "Jobs and Income growth of top earners and the causes of changing income inequality: Evidence from US tax return data," working paper, 2009.

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Potential policy implications

TACKLING the problem of growing income inequality—if it is indeed a problem—will not be easy. And much depends on a correct diagnosis of the causes. Reversing globalization might reduce inequality, but only by reducing international trade and thereby making the entire economy smaller. Technology is harder to manage. Some people have suggested providing a guaranteed minimum income to every individual, thus slowing or stopping the impact of technology on the household incomes of lower-skilled workers.[20] This, however, might have a substantial impact on incentives and the entire way in which the American economy is built—and it would likely require significant taxation of high-productivity, high-skilled workers. If the problem is political, then a solution would involve significant political reform—an area where economics can provide little guidance.

It took 30 years for economists to come to a consensus that income inequality is growing. Perhaps we should not be surprised that it will likely take more time to find a consensus on a solution to the problem.

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ENDNOTES

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ABOUT THE AUTHOR

DANIEL BACHMAN

Daniel Bachman is a senior manager with Deloitte Services LP, in charge of US economic forecasting for Deloitte's Eminence and Strategy functions. He is an experienced US and international macroeconomic forecaster and modeler. Bachman came to Deloitte from IHS economics, where he was in charge of IHS's Center for Forecasting and Modeling. Prior to that, he worked as a forecaster and economic analyst at the US Commerce Department.

CONTACTS

Daniel Bachman
Senior manager
Deloitte Services LP
Tel: +1 202 220 2053
E-mail: dbachman@deloitte.com

Patricia Buckley
Managing director
Deloitte Services LP
Tel: +1 571 814 6508
E-mail: pabuckley@deloitte.com

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