



# The U.S. Income Distribution and Mobility: Trends and International Comparisons

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## Summary

The historically slow rebound in the labor market from the 2007-2009 recession appears to be partly responsible for the current focus of some within the public policy community on the unequal distribution of the benefits of economic growth (e.g., higher national income) across U.S. households. This report examines changes over time and across countries in the shape of the income distribution to afford Members of Congress a broader perspective when deliberating such policy issues as the progressivity of income tax rates, the generosity of social insurance programs, and the level of the minimum wage.

If income were equally divided across households, each quintile (fifth) of households would account for 20% of total income. Inequality is the term commonly used to describe an income distribution in which one or more quintiles account for less (more) than 20% of aggregate income. The Congressional Budget Office and others have documented that the bottom fifth has long accounted for much less than its proportionate share (20%) of total income. The bottom quintile's share of income has remained little changed for the past few decades at less than 4%, according to U.S. Census Bureau data. The middle class, defined as the middle 60% of households, received a disproportionately smaller share of the total economic pie in 2011 (45.7%) than in 1968 (53.2%). Over the same period, the disproportionately large income shares of the top 20% and the top 5% of households have trended upward. The top fifth's share of total household income rose from 42.6% in 1968 to 51.1% in 2011; the top 5%'s share rose from 16.3% to 22.3%. Estimates derived from federal income tax data, which allow researchers to look within the top 5% of the U.S. income distribution, suggest that those at the very top have reaped disproportionately larger gains from economic growth. These, among other measures of income dispersion, have led analysts to conclude that inequality has increased in the United States as a result of high-income households pulling further away from those lower in the distribution.

Based on the limited data that are comparable across nations, the U.S. income distribution appears to be among the most unequal of all major industrialized countries and the United States appears to be among the nations experiencing the greatest increases in measures of income dispersion. Three leading explanations are put forth for these cross-country differences: (1) other advanced economies devote a larger share of national output to transfers, which tends to equalize income across households; (2) the progressivity of tax rates varies by country and thus has different effects on the distribution of after-tax income; and (3) equality in the distribution of earnings, which account for most household income, varies substantially across countries.

The extent to which countries undertake policies that affect their income distributions may reflect national differences in perceptions about the degree of income mobility. In the United States, a longstanding argument against redistributionary policies has been that each person has an equal opportunity to move up the income ladder. Research raises questions about whether Americans' perceptions of their likelihood of upward mobility are exaggerated. Empirical analyses estimate that the United States is a comparatively immobile society, that is, where one starts in the income distribution influences where one ends up to a greater degree than in several advanced economies. Children raised in families at the bottom of the U.S. income distribution are estimated to be especially less likely to ascend the income ladder as adults.

## **Contents**

Introduction.....	1
Measures of Income.....	2
Measures of the Distribution of Income .....	3
Explaining Recent Trends in the Distribution of U.S. Household Income .....	7
International Comparisons of Income Distributions.....	9
Explaining Cross-Country Differences in the Distribution of Income .....	12
Income Mobility in the United States .....	14
Intergenerational Mobility.....	14
The Trend in Intergenerational Mobility in the United States.....	14
Cross-Country Comparisons of Intergenerational Mobility.....	16
Intragenerational Mobility.....	17
Concluding Remarks .....	18

## **Figures**

Figure 1. Gini Coefficients for U.S. Households, 1968-2011.....	5
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## **Tables**

Table 1. Distribution of U.S. Household Income by Quintile, Selected Years .....	4
Table 2. Summary Measures of Disposable Household Income Distributions for Selected Countries in the Mid-2000s .....	10
Table 3. Summary Measure of Disposable Household Income Distributions for Selected Countries in the Late 2000s and Change from Mid-1980s to Late 2000s .....	11

## **Contacts**

Author Contact Information.....	19
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## Introduction

The historically slow pace of recovery in the labor market from the 2007-2009 recession appears to be partly responsible for the renewed interest among some members of the public policy community in the long-term trend of growing inequality in the distribution of income.<sup>1</sup> In other words, the benefits of economic growth (e.g., higher national income) began accruing unequally across U.S. households long before the late 2000s. Inequality is the label commonly applied to income distributions in which a group's share of total income is larger (smaller) than its share of the population (e.g., the top 20% of U.S. households accounted for slightly more than 50% of aggregate household income in 2011, as shown in **Table 1**.)

Economic theory provides little basis for preferring any particular degree of equality in the distribution of income. In theory, what matters with respect to labor income is that the distribution results from markets that operate efficiently; that is, markets in which the final demand for goods and services and the relative productivity of the firms producing those goods and services determine the demand for labor and the earnings of jobs in each sector of the economy. Theoretical arguments for a more equal distribution of income than that which results from market forces are based on a number of propositions, including the diminishing marginal utility of income. This refers to the idea that each additional dollar of income yields less and less satisfaction (utility) than the first. For example, one additional dollar of income adds less to the utility of someone earning \$100,000 than to the satisfaction of someone earning \$20,000. If this proposition is correct, it should be possible to increase the overall economic well-being of society by transferring money from those with high incomes to those with low incomes because the loss in utility will be less for high-income individuals than the gain for low-income individuals. However, the costs commonly associated with income redistribution (e.g., slower economic growth) may offset some and possibly all of any net gain in well-being.<sup>2</sup>

With varying perceptions about a trade-off between economic growth and income equality, members of the U.S. public policy community have long debated how best to improve the economic well-being of the population. This disagreement appears to underlie longstanding congressional deliberations about several policy issues, such as the progressivity of income tax rates, tax treatment of capital gains and inheritance, provision of social insurance (e.g., Social Security) as well as social welfare benefits (e.g., food stamps), and raising the federal minimum wage. It also has extended to consideration of initiatives (e.g., grants for early childhood education and college tuition tax expenditures) that arguably promote equality in the opportunity to move up the income ladder, which an increasingly unequal distribution of income may suggest a lack of and which may itself curb the potential productive capacity of the economy.<sup>3</sup>

This report presents recent analysis of the distribution of income and the extent of income mobility in the United States over time and in comparison with other advanced economies. It

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<sup>1</sup> D.B. Grusky and C. Wimer, "Is There Too Much Inequality?," in *The Inequality Puzzle: European and US Leaders Discuss Rising Income Inequality*, ed. Roland Berger, David Grusky, Tobias Raffel, Geoffrey Samuels, and Christopher Wimer (Germany: Springer, 2010), pp. 4-5.

<sup>2</sup> For additional information, see "Reducing Income Inequality While Boosting Economic Growth: Can It Be Done?" (part II, chapter 5 of *Economic Policy Reforms, Going for Growth 2012*, February 2012, 200 pp.), in which the OECD identifies the impact of various policies on both growth and inequality.

<sup>3</sup> See, for example, Florence Jaumotte, Subir Lall, and Chris Papageorgiou, *Rising Income Inequality: Technology, or Trade and Financial Globalization*, International Monetary Fund, Working Paper 08/185, July 1, 2008.

begins with a discussion of data issues related to measuring income and its distribution. The empirical literature on the development of and explanations for income inequality in the United States are next addressed. The report then compares the U.S. income distribution with the distributions of other industrialized countries and presents explanations for cross-country differences in measures of income dispersion. To the degree that a more equal distribution of income arises from policy decisions rather than market forces, the willingness of a country to incur any economic costs related to attaining greater equality may reflect varying national beliefs about the opportunity to ascend the income ladder. For that reason, the report closes with an examination of income mobility in the United States and other developed nations.

## Measures of Income

Two common sources of income data are the Annual Social and Economic supplement to the Current Population Survey (CPS) and federal income tax returns submitted to the Internal Revenue Service (IRS). The U.S. Census Bureau, which conducts the CPS, calculates “money income.” It is the nation’s official measure of income. Money income includes wages and salaries, interest, dividends, rent, payments from pensions and retirement savings accounts, and nonmeans-tested cash income (e.g., Social Security, unemployment compensation, and veterans’ payments). Calculated on a pre-tax basis, money income does not include the value of noncash government benefits (e.g., food stamps and housing subsidies) and capital gains.<sup>4</sup>

“Market income” is the measure of income derived from federal tax data made available by the IRS. Perhaps most prominent among the researchers who use tax data to study the distribution of income are Saez and Piketty. They define pre-tax market income to include all income reported on individual tax returns including wages and salaries, business and farm income, and capital income (e.g., dividends, interest, and rents).<sup>5</sup> The primary differences between money and market income thus defined is that market income excludes cash government benefits and includes realized capital gains.

With respect to the distribution of overall economic well-being, measures based on the concepts of money and market income fall short and may be misleading. Consider the case of two families who in every way are equal in terms of wealth and income. Neither owns their home, and they both have substantial savings in interest-earning assets. Suppose one family uses a portion of its savings to buy a home. No one would argue that the family is now worse off, but income measures indicate that to be the case because the family’s interest income would have fallen. In fact, the family that buys its home is earning an implicit income in the use of the house just as it would earn rental income if the house were leased to others.

Another weakness in existing income measures as a reflection of overall economic well-being is that they do not account for the implicit income of homemakers. Consider two married-couple households with the same income and both spouses receive wages from their employers. If in one

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<sup>4</sup> The Census Bureau also periodically calculates alternative measures of income that include such income sources as government noncash benefits and capital gains. The latest alternative measures of income are available at [http://www.census.gov/hhes/www/cpstables/032009/rdcall/1\\_001.htm](http://www.census.gov/hhes/www/cpstables/032009/rdcall/1_001.htm).

<sup>5</sup> Thomas Piketty and Emmanuel Saez, “Income Inequality in the United States, 1913-1998,” *Quarterly Journal of Economics*, vol. 118, no. 1 (2003), pp. 1-39. (Hereinafter referred to as Piketty and Saez, *Income Inequality in the United States, 1913-1998*.)

of the households a spouse quits to stay at home and care for their children that household will experience a drop in measured income. Because the unpaid work done at home is not without value, the measured difference in the incomes of the two households will overstate the difference in their living standards.

The time period in which income is measured may also affect comparisons in well-being across households. Over the course of the business cycle unemployment rises and falls, affecting labor income. Some households tend to be more adversely affected than others by recessions, so the stage of the business cycle has an influence on relative income. Similarly, income generally varies substantially over the course of an individual's lifetime. New entrants to the labor force typically have lower incomes than those who have been working for some time, and income tends to decrease upon retirement. Because of these life-cycle changes in income, the age mix of the population also influences the relative incomes of households.

Another difficulty in comparing income across households is deciding on the relevant population. In the case of labor income, the distribution of income among working-age individuals (e.g., 25-64-year olds) may be of most interest. When it comes to overall well-being, it may be more appropriate to consider the distribution of income across households. Because most households can be presumed to pool resources and because some costs of living are fixed, a four-person household may not need twice as much income as a married-couple household for each person to enjoy roughly the same living standard.<sup>6</sup> The ability to achieve economies of scale thus further complicates using the distribution of income across households or tax filing units as a basis for judging economic well-being.<sup>7</sup>

## Measures of the Distribution of Income

The Census Bureau annually publishes a variety of measures that describe the distribution of money income. One measure divides total money income into quintiles (fifths), with households ordered from lowest to highest income and then divided into five groups of equal size. The income within each group is summed, and its share (percentage) of total household income is calculated. If aggregate income was equally divided across households with income, each quintile would account for 20% of total money income. To the extent that each quintile falls short of or exceeds its proportionate (20%) share, it indicates the degree of inequality in the income distribution.

As shown in the last row of **Table 1**, the bottom fifth of households in 2011 accounted for much less than the one-fifth of total income it would have gotten if the distribution were perfectly equal. The top 20%, in contrast, accounted for more than twice what it would have gotten in an equal distribution. The top 5%, which is within the top fifth, accounted for more than four times the share it would have had in a perfectly equal distribution. The data thus indicate that income was quite unequally distributed across U.S. households in 2011, and that this has been the case for quite some time.

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<sup>6</sup> In the Current Population Survey (CPS), a household is defined as all of the individuals who occupy a housing unit as their usual place of residence. A family is defined as a group of two or more individuals who reside together and who are related by birth, marriage, or adoption. A household may be composed of one or more families or no families at all; that is, a person living alone in a housing unit is counted as a household in the CPS.

<sup>7</sup> A tax unit is anyone who files a federal income tax return.

**Table 1. Distribution of U.S. Household Income by Quintile, Selected Years**  
(1968-2011)

Year	Percentage of Total Household Income					
	Bottom	Second	Third	Fourth	Fifth	Top 5%
1968	4.2	11.1	17.6	24.5	42.6	16.3
1980	4.2	10.2	16.8	24.7	44.1	16.5
1990	3.8	9.6	15.9	24.0	46.6	18.5
2000	3.6	8.9	14.8	23.0	49.8	22.1
2001	3.5	8.7	14.6	23.0	50.1	22.4
2002	3.5	8.8	14.8	23.3	49.7	21.7
2003	3.4	8.7	14.8	23.4	49.8	21.4
2004	3.4	8.7	14.7	23.2	50.1	21.8
2005	3.4	8.6	14.6	23.0	50.4	22.2
2006	3.4	8.6	14.5	22.9	50.5	22.3
2007	3.4	8.7	14.8	23.4	49.7	21.2
2008	3.4	8.6	14.7	23.3	50.0	21.5
2009	3.4	8.6	14.6	23.2	50.3	21.7
2010	3.3	8.5	14.6	23.4	50.3	21.3
2011	3.2	8.4	14.3	23.0	51.1	22.3

**Source:** U.S. Census Bureau, Table A-2 of *Income, Poverty, and Health Insurance Coverage in the United States: 2011*.

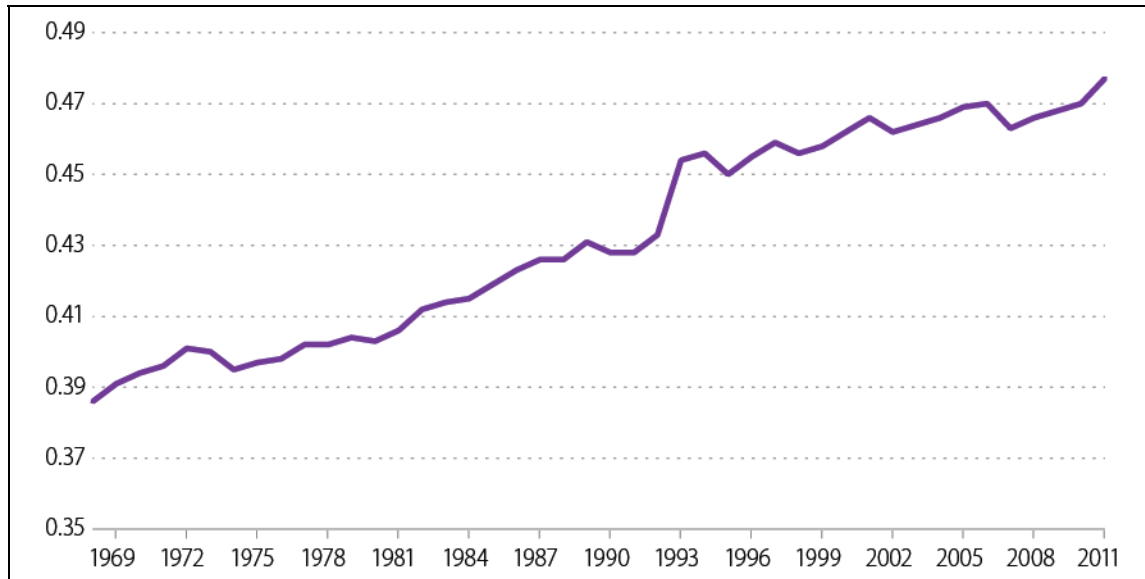
Households at various points in the distribution also have fared differently from each other over the past few decades. Between 1968 and 2011, the income share of the three middle quintiles fell from 53.2% to 45.7% (see **Table 1**). Although there is no official definition of the middle class, the middle 60% of households is sometimes regarded as such.<sup>8</sup> As for the bottom 20% of households, its income share has stagnated at less than 4.0% since about 1990. In contrast, the income shares of the top fifth and the top 5% of households generally have risen from year to year. The top 20%'s share grew from 42.6% in 1968 to 51.1% in 2011, and the top 5%'s share grew from 16.3% to 22.3%.

Another indicator of the degree of inequality is the Gini coefficient. It is a single number that can range between zero (a perfectly equal distribution) and one (a perfectly unequal distribution).<sup>9</sup> The historical trend in the United States is one of almost steadily increasing income inequality (from 0.386 in 1968 to 0.477 in 2011), as depicted in **Figure 1**. During the 2007-2009 recession, the Gini coefficient fell slightly from its previous peak in 2006 of 0.470. Its level since then indicates an income distribution that is much more unequal than in most years since 1968.

<sup>8</sup> CRS Report RS20811, *The Distribution of Household Income and the Middle Class*, by Linda Levine.

<sup>9</sup> For additional information on the Gini coefficient see Malte Luebker, *Inequality, Income Shares and Poverty: the Practical Meaning of Gini Coefficients*, International Labour Office, Travail Policy Brief No. 3, Geneva, Switzerland, June 2010, 8 pp.

**Figure I. Gini Coefficients for U.S. Households, 1968-2011**



**Source:** Created by CRS from data in Table A-2 of the U.S. Census Bureau's *Income, Poverty, and Health Insurance Coverage: 2011*.

**Notes:** The sharp increase in the Gini coefficient in the early 1990s was due to the redesign of the CPS.

Researchers who work with the CPS data often calculate an alternative measure of overall inequality (the ratio of income at the 90<sup>th</sup> percentile in the distribution to income at the 10<sup>th</sup> percentile) because the Gini coefficient does not allow them to ascertain which parts of the income distribution are driving changes in inequality. An increase in the ratio of the median income level (50<sup>th</sup> percentile) to the 10<sup>th</sup> percentile income level (the 50-10 ratio) suggests that growth in overall inequality (the 90-10 ratio) is due to those near the bottom of the distribution falling further behind the typical household. An increase in the ratio of the 90<sup>th</sup> percentile to the median income level (the 90-50 ratio) suggests that growth in overall inequality is due to those near the top of the distribution pulling further ahead of the typical household. Based on these measures, increased inequality in the upper half of the distribution may have accounted for most of the overall increase in inequality between 1961 and 2002.<sup>10</sup> Looking at just the 1990-2002 period, almost all of the increase in overall inequality appears to be due to an increase in top-half inequality. This pattern of the benefits of economic growth accruing largely to those near the top of the income distribution was estimated to have continued through 2007.<sup>11</sup>

The 90-10 ratio may be a poor substitute for estimating overall inequality at a point in time and over time because it is affected by top-coding in the CPS. Top-coding refers to the Census Bureau's long-standing practice of replacing the income reported above a specific level with that income level to ensure confidentiality. For example, if the total money income of a household was \$780,000 in 2011, the household's income would have been coded as \$250,000 because

<sup>10</sup> Kevin A. Bryan and Leonardo Martinez, "On the Evolution of Income Inequality in the United States," *Economic Quarterly*, Federal Reserve Bank of Richmond, spring 2008.

<sup>11</sup> Javier Diaz-Gimenez, Jose-Victor Rios-Rull, and Andy Glover, "Facts on the Distributions of Earnings, Income, and Wealth in the United States: 2007 Update," *Federal Reserve Bank of Minneapolis Quarterly Review*, vol. 34, no. 1 (February 2011), pp. 2-31. (Hereinafter referred to as Diaz-Gimenez et al., *Facts on the Distribution of Earnings, Income, and Wealth*.)



\$250,000 was the threshold income level in that year. Top-coding therefore presents a problem when estimating the extent of inequality in a given year because it constrains the actual distribution of income. The practice also creates a problem when estimating changes in inequality over time because the top-code thresholds were raised at various times over the years and as a result, the share of households with suppressed incomes has differed over time.<sup>12</sup>

These drawbacks to using CPS data, in combination with anecdotal evidence that since the 1990s those in the top 10% have pulled further away from other households, prompted economists to turn to other data sources that better capture those with high incomes. Piketty and Saez developed a time series from the early years of the 20<sup>th</sup> century forward based primarily on federal income tax returns to study changes in market income among tax units at the very top of the income distribution.<sup>13</sup> They estimated that between 40% and 45% of total income accrued to the top 10% of the distribution between the two World Wars before falling to about 30% during World War II. The top decile's share remained at 31%-32% until the 1970s when it began trending upward. The top decile's share again exceeded 40% by the mid-1990s and has been at all-time highs in recent years. In 2010, the latest year for which an estimate is available, the top 10% accounted for over 46% of aggregate market income.<sup>14</sup>

Piketty and Saez attribute most of the changes in the top decile's share over time to fluctuations in the top 1% of the distribution. They estimated that before World War I the top 1% accounted for about 18% of total market income. Its share peaked at almost 24% in the late 1920s, fell to about 8% from the late 1950s to the 1970s, and then turned upward.<sup>15</sup> The top 1% was estimated to have accounted for over 17% of total market income in 2010, about equal to its pre-World War I share.<sup>16</sup>

Like the CPS, tax returns have limitations for analyzing income inequality (e.g., time-shifting income through use of deferred compensation, such as stock options, and reporting income as earnings or business profits depending on their tax treatment in a given year). Burkhauser, Feng, Jenkins et al. attempted to reconcile the smaller increases in money income inequality starting in the 1990s that are estimated by studies based on public-use CPS data with the larger increases in market income inequality of studies based on tax data. Using internal Census Bureau data (which is less subject to top-coding than is public-use data) to estimate income shares of those in the 90<sup>th</sup>-95<sup>th</sup> percentile, the 95<sup>th</sup>-99<sup>th</sup> percentile, and the top 1%, they found that inequality trends during most of the 1967-2006 period were quite similar to those of studies that used tax data once comparable definitions of income and income-receiving units were employed.<sup>17</sup>

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<sup>12</sup> Richard V. Burkhauser, Shuaizhang Feng, and Stephen P. Jenkins, "Using the P90/P10 Ratio to Measure US Inequality Trends with Current Population Survey Data: A View from Inside the Census Bureau Vaults," *Review of Income and Wealth*, vol. 55, no. 1 (2009), pp. 166-185.

<sup>13</sup> They define tax units to be married-couples living together or single adults with or without dependents in Piketty and Saez, *Income Inequality in the United States, 1913-1998*.

<sup>14</sup> Facundo Alvaredo, Anthony B. Atkinson, Thomas Piketty, and Emmanuel Saez, The World Top Income Database, <http://g-mond.parisschoolofeconomics.eu/topincomes/>. (Hereinafter referred to as Alvaredo, Atkinson, Piketty, and Saez, <http://g-mond.parisschoolofeconomics.eu/topincomes/>.)

<sup>15</sup> Piketty and Saez, *Income Inequality in the United States, 1913-1998*.

<sup>16</sup> Alvaredo, Atkinson, Piketty, and Saez, <http://g-mond.parisschoolofeconomics.eu/topincomes/>.

<sup>17</sup> Richard V. Burkhauser, Shuaizhang Feng, and Stephen P. Jenkins et al., *Recent Trends in Top Income Shares in the USA: Reconciling Estimates from the March CPS and IRS Tax Return Data*, National Bureau of Economic Research (NBER), Working Paper 15320, Cambridge, MA, September 2009.

Burkhauser, Larrimore, and Simon more recently estimated that if after-tax, after-transfer income adjusted for household size is analyzed rather than before-tax, before-transfer income of tax units

income inequality in the United States increased [between 1979 and 2007] not because the rich got richer, the poor got poorer and the middle class stagnated, but because the rich got richer at a faster rate than the middle and poorer quintiles and this mainly occurred in the 1980s. [Absolute as opposed to relative income] growth was substantial in all quintiles once the influence of government tax and transfer policy as well as the shift in compensation from wages to health insurance provided by employers and the shift to increased in-kind health insurance by government is more fully recognized.<sup>18</sup>

A Congressional Budget Office report also examined after-tax, after-transfer size-adjusted household income over the 1979-2007 period. It too estimated that absolute levels of inflation-adjusted average household income increased across the distribution, but because the rate of increase was much greater among the highest income households, inequality increased after 1979. For example, the top 1% of households saw their average real income rise by 275% from 1979 to 2007; the middle three quintiles experienced a 37% increase; and the bottom fifth recorded an 18% gain. Consequently, in 2007, the share of income after taxes and transfers of the top 20% of size-adjusted households was greater than the combined share of the other 80% of households (58% and 47%, respectively).<sup>19</sup>

## **Explaining Recent Trends in the Distribution of U.S. Household Income**

Two explanations are most commonly offered for the trend toward greater inequality in the distribution of labor income in the United States.<sup>20</sup> One has to do with globalization, that is, the increased integration of countries' economies. The second relates to the nature of recent technological advances.

Reduced trade restrictions and increased worldwide flows of goods and services have arguably made less skilled U.S. workers in particular more vulnerable to direct competition from less skilled workers abroad. In theory, the shift overseas in production of goods and services that predominantly use less-skilled workers has reduced demand in the United States for these workers, thereby putting downward pressure on their wages and further widening the existing wage gap between lower and higher skilled U.S. workers.

Economists generally have not agreed about globalization being a major contributor to increasing income inequality because little compelling empirical evidence supports the theory. Analyses of globalization's employment effect to date have tended to find it too small to explain the magnitude of the earnings gap. Other studies have estimated that many jobs possess characteristics which make them susceptible to being offshored and that they are not limited to

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<sup>18</sup> Richard V. Burkhauser, Jeff Larrimore, and Kosali I. Simon, *A "Second Opinion" on the Economic Health of the American Middle Class*, NBER, Working Paper 17164, Cambridge, MA, June 2011, p. 21.

<sup>19</sup> Congressional Budget Office, *Trends in the Distribution of Household Income between 1979 and 2007*, Washington, DC, October 2011.

<sup>20</sup> Labor income is the leading contributor to household income, according to the Survey of Consumer Finances sponsored by the Federal Reserve Board.

low-skilled jobs.<sup>21</sup> As it is technological advances (e.g., high-speed telecommunication) that have made these jobs (e.g., call center workers) vulnerable to offshore outsourcing, some have suggested that globalization cannot be separated from the technological change argument (discussed below).<sup>22</sup>

Economists generally have found technological change to be the most persuasive explanation for increased inequality at the top of the earnings distribution.<sup>23</sup> Frequently cited evidence underlying this explanation is the comparatively rapid growth in the wage premium paid to more highly skilled (productive) workers since 1979. The increase in the “skill premium” coincided with substantial growth in the percentage of the labor force with a college education. This suggests that the growth in their supply did not keep pace with the increase in employer demand for highly skilled workers.<sup>24</sup>

The increased premium paid to high-skilled workers is commonly ascribed to the nature of technological change in recent decades. Put another way, the kinds of technological advances that have occurred since the late 1970s have been biased in favor of those jobs that require higher levels of education and training. Technological progress seemingly has affected the earnings distribution in two ways. First, information technology (IT) serves as a substitute for low-skilled workers, which has reduced demand for and the relative wages of these workers. Second, IT serves as a complement to high-skilled workers, which has raised demand for and the relative wages of these workers.<sup>25</sup> Autor, Katz, and Kearney have refined this explanation. They hypothesize that computerization of tasks has polarized the labor market by

- increasing employer demand for those high-skilled workers who perform non-routine cognitive tasks (e.g., engineers and lawyers);
- keeping demand stable for those low-skilled workers who perform non-routine manual tasks (e.g., truck drivers and home health care aides); and
- decreasing demand for the many medium-skilled workers who perform routine tasks (e.g., administrative support and factory workers).

They estimated that this pattern of job growth has produced substantial earnings gains among workers in the top quartile (25%) of the distribution. Workers in the bottom quartile were found to have experienced slower gains than workers in the top quartile. Nonetheless, wage growth of the bottom quartile appears to have exceeded that of workers in the middle of the earnings distribution.<sup>26</sup>

Two less often mentioned explanations for the increase in U.S. income inequality are the declining role of labor unions and labor standards in wage-setting and the changing demographics

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<sup>21</sup> CRS Report RL32292, *Offshoring (or Offshore Outsourcing) and Job Loss Among U.S. Workers*, by Linda Levine.

<sup>22</sup> Richard B. Freeman, “Globalization and Inequality,” in *The Oxford Handbook of Economic Inequality*, ed. Wiemer Salverda, Brian Nolan, and Timothy M. Smeeding (NY: Oxford University Press, 2009), pp. 575-598.

<sup>23</sup> See for example Ben S. Bernanke, Speech at Harvard University, June 4, 2008.

<sup>24</sup> Claudia Goldin and Lawrence F. Katz, *The Race Between Education and Technology: the Evolution of U.S. Educational Wage Differentials, 1890 to 2005*, NBER, Working Paper 12984, Cambridge, MA, March 2007.

<sup>25</sup> David Autor, Frank Levy, and Richard Murnane, “The Skill Content of Recent Technological Change: An Empirical Exploration,” *Quarterly Journal of Economics*, vol. 118, no. 5, November 2003, pp. 1279-1333.

<sup>26</sup> David H. Autor, Lawrence F. Katz, and Melissa S. Kearney, “Trends in Wage Inequality: Revising the Revisionists,” *Review of Economics and Statistics*, vol. 90, no. 2 (May 2008), pp. 300-323.

of the population. Some analysts have offered evidence of inconsistencies in the data that do not support the skill-biased technological change (SBTC) explanation<sup>27</sup> and have argued that changes over time in economic institutions and social norms have played a part as well (e.g., the value of the federal minimum wage and the bargaining power of labor unions).<sup>28</sup> Others have examined changes over time in the U.S. age structure, racial and ethnic composition, and household living arrangements (e.g., away from married-couple families and toward single adult households).<sup>29</sup>

## International Comparisons of Income Distributions

Cross-country comparisons of income distributions provide another perspective on the extent of inequality in the United States. Measures of income differ from one country to the next. For this reason, researchers typically use data made more comparable by the Luxembourg Income Study (LIS) project or by the Organisation for Economic Cooperation and Development (OECD).<sup>30</sup>

Researchers who analyzed LIS data from the mid-1970s to 2000 agree that the comparatively high level of inequality in the United States has been in place for quite some time and that the United States was among those countries that experienced the largest increases in inequality over the 25-year period.<sup>31</sup> They found the most equal distributions of disposable household income over the lengthy period were in Scandinavia, Central Europe and Southern Europe, while most English-speaking countries consistently had the highest levels of inequality. Between the mid-1970s and 2000, Sweden, Finland, and Norway appear to have experienced the smallest increases in inequality, whereas the United States, the United Kingdom, and Italy seemingly experienced the largest increases. The United States also was estimated to have had the most persistent increase in inequality from the mid-1970s to 2000, whereas the rate at which inequality increased in other industrialized nations generally slowed in the later years of the period.

LIS income distribution measures for the mid-2000s for several industrialized nations are presented in **Table 2**. The countries are listed in order from lowest Gini coefficient (most equal distribution) to highest (most unequal distribution). According to this measure, the United States

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<sup>27</sup> David Card and John E. DiNardo, "Skill-Biased Technological Change and Rising Wage Inequality: Some Problems and Puzzles," *Journal of Labor Economics*, vol. 20 (October 2002), pp. 733-783.

<sup>28</sup> Frank Levy and Peter Temin, *Inequality and Institutions in 20<sup>th</sup> Century America*, NBER, Working Paper 13106, Cambridge, MA, May 2007.

<sup>29</sup> Gary Burtless, "Demographic Transformation and Economic Inequality," in *The Oxford Handbook of Economic Inequality*, ed. Wiemer Salverda, Brian Nolan, and Timothy M. Smeeding (NY: Oxford University Press, 2009), pp. 435-454.

<sup>30</sup> The LIS and OECD use as their common measure disposable household money income. Disposable household income starts with market income, which includes earned income from wages, salaries, and self-employment as well as other cash income from private sources (e.g., property, private pensions, and child support). Public transfer payments (e.g., for old-age, sickness and disability, maternity and family support, unemployment, housing, and food) are added to market income. From this estimate of gross income, personal income tax and workers' social security contributions are subtracted to arrive at disposable cash income. This after-tax after-transfer income is then adjusted for household size.

<sup>31</sup> Anthony B. Atkinson, Lee Rainwater, and Timothy M. Smeeding, *Income Distribution in OECD Countries: Evidence From the Luxembourg Income Study*, OECD, 1995; Timothy Smeeding, *Changing Income Inequality in OECD Countries: Updated Results from the Luxembourg Income Study*, LIS, Working Paper 252, March 2000; Timothy M. Smeeding, *Public Policy and Economic Inequality: The United States in Comparative Perspective*, LIS, Working Paper 367, February 2004; and Andrea Brandolini and Timothy M. Smeeding, "Patterns of Economic Inequality in Western Democracies: Some Facts on Levels and Trends," *Political Science and Politics*, vol. 39, no. 1 (2006), pp. 21-26.

ranked among the industrialized countries with the most unequal distributions of disposable (after-tax after cash transfers) household income in the mid-2000s. The comparatively high degree of income inequality in the United States is evident from the 90-10 and 90-50 ratios as well. As indicated by the 90-10 ratio, those at the top of the U.S. income distribution had more than five times the income of those near the bottom. Those at the top of the U.S. distribution also had about twice the income of the typical household, as indicated by the 90-50 ratio.

**Table 2. Summary Measures of Disposable Household Income Distributions for Selected Countries in the Mid-2000s**

Country	Year	Gini Coefficient	P <sub>90</sub> /P <sub>10</sub>	P <sub>90</sub> /P <sub>50</sub>
Denmark	2004	0.228	2.778	1.562
Slovenia	2004	0.231	2.920	1.650
Sweden	2005	0.237	2.821	1.625
Finland	2004	0.256	3.071	1.708
Norway	2004	0.256	2.865	1.604
Netherlands	2004	0.266	3.018	1.737
Austria	2004	0.269	3.232	1.787
Germany	2004	0.278	3.445	1.823
France	2005	0.280	3.528	1.842
Australia	2003	0.312	4.241	1.983
Poland	2004	0.315	4.022	1.959
Canada	2004	0.318	4.379	1.957
Greece	2004	0.327	4.374	2.027
Italy	2004	0.340	4.440	2.029
United Kingdom	2004	0.344	4.411	2.137
United States	2004	0.370	5.506	2.126
Mexico	2004	0.457	8.468	2.945
Colombia	2004	0.506	11.254	3.334

**Source:** LIS, Inequality Key Figures, <http://www.lisdatacenter.org>.

**Note:** Disposable household income is market income (e.g., earnings, self-employment income, pensions, rent, and dividends) plus public transfer payments (e.g., old-age and unemployment insurance, maternity and family support) less personal income tax payments and workers' social security contributions, adjusted for size of household.

With virtually no change between the mid and late 2000s in the ranking of countries by extent of inequality in disposable household income, the United States was again among the nations with the most unequal distributions (see Gini coefficients in **Table 2** and **Table 3**).<sup>32</sup> U.S. income inequality in the late 2000s surpassed the average for the 20 founding member countries of the OECD (see **Table 3**).

<sup>32</sup> As much as data availability allow, the countries presented in **Table 3** are the same as those in **Table 2**. Differences tend to be very small between Gini coefficients by country for comparable time periods estimated from either the OECD or LIS databases.

Disposable household income inequality in the developed countries of the OECD, including those listed in **Table 3**, has generally trended upward since the mid-1980s.<sup>33</sup> While inequality in the United States increased by slightly more than the OECD20 average during the mid-1980s to mid-1990s period, the increase in U.S. inequality was considerably greater relative to the OECD average from the mid-1990s to late 2000s (see the last columns of **Table 3**).

**Table 3. Summary Measure of Disposable Household Income Distributions for Selected Countries in the Late 2000s and Change from Mid-1980s to Late 2000s**

Country	Gini Coefficient <sup>a</sup>	Percentile Point Change	
		Mid-1980s to Mid-1990s	Mid-1990s to Late 2000s
Slovenia	0.236	n.a.	n.a.
Denmark	0.248	-0.6	3.3
Norway	0.25	2.1	0.7
Finland	0.259	2.1	3.2
Sweden	0.259	1.4	4.8
Austria	0.261	n.a.	2.7
France	0.293	-2.3	1.6
Netherlands	0.294	2.5	-0.3
Germany	0.295	1.5	3.0
Poland	0.305	n.a.	n.a.
Greece	0.307	0.0	-2.8
Canada	0.324	-0.4	3.5
Australia	0.336	n.a.	2.7
Italy	0.337	3.9	-1.1
United Kingdom	0.345	2.7	0.9
United States	0.378	2.3	1.8
Mexico	0.476	6.6	-4.3
Chile	0.494	n.a.	-3.3
OECD20 <sup>b</sup>	0.316	2.1	0.5

**Source:** OECD, *Divided We Stand: Why Inequality Keeps Rising*, December 5, 2011, p. 45.

**Notes:** Disposable household income is market income (e.g., earnings, self-employment income, pensions, rent, and dividends) plus public transfer payments (e.g., old-age and unemployment insurance, maternity and family support) less personal income tax payments and workers' social security contributions, adjusted for size of household. n.a. = not available.

- a. The Gini coefficients are for 2008, except for Chile (2009) and Denmark (2007).
- b. The OECD20 are the founding countries: Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

<sup>33</sup> OECD, *Divided We Stand: Why Inequality Keeps Rising*, December 2011, 388 pp.

## Explaining Cross-Country Differences in the Distribution of Income

Reasons commonly offered for international differences in income inequality fall into three categories. First, many other countries devote a much larger share of their national output (gross domestic product, GDP) to income transfers, which have an equalizing effect on the distribution of income. Second, taxes in these countries vary with respect to progressivity, and thus have different effects on the distribution of after-tax income. Third, equality in the distribution of earnings, which make up the majority of household income, varies substantially from one country to another.

Smeeding estimated a strong correlation between the income share of those at the low end of the distribution and the share of GDP accounted for by transfer payments. His analysis suggests that given the amount of money transferred to households in the United States and the United Kingdom, those at the low end of their respective income distributions do not benefit as much from transfers as low-income households in other countries. From this Smeeding concluded that transfer payments are not as well targeted at low-income households in the United States as they are in many other nations.<sup>34</sup>

The OECD estimated that public cash transfers and household taxes (i.e., income tax payments and social security contributions) substantially reduce inequality between market income and disposable income. These government policies were found to have lowered income inequality by one-fourth on average in the mid-2000s. The redistributive effect of public cash transfers and household taxes was smaller than average in the United States. While transfer payments were found to have reduced inequality by twice as much as taxes on average in OECD countries, the opposite was true in the United States; that is, income tax payments and social security contributions were more responsible than government cash transfers for reducing inequality in the United States.<sup>35</sup>

This pattern was confirmed in a study of 36 developed and developing countries that are in the LIS database. Wang and Caminada estimated that “taxes are important in equalizing incomes” in only four countries: the United States, Canada, Israel, and Guatemala.<sup>36</sup> Whereas they found that, compared with the other countries analyzed, social transfers make up a low percentage of the U.S. budget and are not as well targeted at those at the bottom of the income distribution; the researchers suggest that the refundable Earned Income Tax Credit (EITC) “makes the US tax system rather progressive.”<sup>37</sup>

Others note that in the United States the relative contributions of transfers and taxes to reducing income inequality changed over time, with cash assistance to those at the bottom of the distribution reduced after passage of the Personal Responsibility and Work Opportunity

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<sup>34</sup> Timothy M. Smeeding, “U.S. Income Inequality in a Cross-National Perspective: Why Are We So Different?” in James A. Auerbach and Richard S. Belous (ed), *The Inequality Paradox: Growth of Income Disparity*, National Policy Association, Washington, D.C., 2008.

<sup>35</sup> OECD, *Growing Unequal? Income Distribution and Poverty in OECD Countries*, October 2008.

<sup>36</sup> Chen Wang and Koen Caminada, *Disentangling Income Inequality and the Redistributive Effect of Social Transfers and Taxes in 36 LIS Countries*, LIS, Working Paper 567, July 2011, p. 14.

<sup>37</sup> *Ibid.*, p. 27.

Reconciliation Act of 1996 (popularly known as welfare reform), while the value of the EITC increased greatly.<sup>38</sup> It nonetheless appears that changes in the federal tax system through 2006 (including the EITC and the refundable child tax credit) little affected the rising trend in U.S. household income inequality.<sup>39</sup>

When in-kind benefits (e.g., health insurance, education, child and elder care) and indirect taxes (e.g., sales, value-added and property) are taken into account, cross-country differences in inequality at the low end of the distribution are reduced. This again points to the importance of the definition of income when estimating inequality. Garfinkel, Rainwater, and Smeeding estimated that in the United States cash transfers to those at the bottom of the income distribution are comparatively small while in-kind benefits are substantial.<sup>40</sup>

Differences between countries' labor market institutions and policies appear to affect the shape of the earnings distribution, particularly for those in the bottom half. It has been suggested that the more centralized or coordinated process of wage-setting in several countries (e.g., Germany) helps to explain the wage compression toward the bottom of their earnings distributions compared with that of the United States.<sup>41</sup> This may be due, in part, to higher private sector unionization rates in some other industrialized countries and a larger share of their workers being affected by union agreements whether or not they are union members. The decrease in union density in the United States and United Kingdom between 1973 and 1998 may have accounted for 3% of the increase in male wage inequality in the United States and 5% in the United Kingdom, for example.<sup>42</sup> Comparatively greater union bargaining power (or higher minimum wages) also may have caused firms in other countries to pay low skilled workers wage rates above their contribution to output.<sup>43</sup> This, in turn, may have prompted these foreign companies to adopt technologies that raised the productivity of their less skilled employees rather than adopt technologies biased in favor of high skilled workers as has occurred in the United States.

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<sup>38</sup> Jonathan Heathcote, Fabrizio Perri, and Giovanni L. Violante, *Unequal We Stand: An Empirical Analysis of Economic Inequality in the United States, 1967-2006*, Federal Reserve Bank of Minneapolis, Research Department Staff Report 436, October 2009.

<sup>39</sup> Jason DeBacker, Bradley Heim, and Vasia Panousi, et al., *Rising Inequality: Transitory or Permanent? New Evidence from a U.S. Panel of Household Income 1987-2006*, Federal Reserve Board, Finance and Economics Discussion Series, Working Paper 2011-60, December 15, 2011. The authors note (pp. 26-27) that the finding may appear surprising because of "reductions in marginal tax rates, especially at the high end of the income distribution, in 2001 and 2003. However, such changes in top marginal tax rates were accompanied by (smaller) reductions in marginal tax rates for other income groups as well as significant expansions of the earned income tax credit and the child tax credit."

<sup>40</sup> Irwin Garfinkel, Lee Rainwater, and Timothy Smeeding, "A Re-examination of Welfare States and Inequality in Rich Nations: How In-kind Transfers and Indirect Taxes Change the Story," *Journal of Policy Analysis and Management*, vol. 25, no. 4 (2006), pp. 897-919.

<sup>41</sup> Gottschalk and Smeeding, "Cross-National Comparisons of Earnings and Income Inequality," *Journal of Economic Literature*, vol. 31, no. 2 (June 1997), pp. 633-687.

<sup>42</sup> Winfried Koeniger, Marco Leonardi, and Luca Nunziata, "Labor Market Institutions and Wage Inequality," *Industrial and Labor Relations Review*, vol. 60, no. 3 (April 2007), pp. 340-356.

<sup>43</sup> Daron Acemoglu, "Cross-Country Inequality Trends," *The Economic Journal*, vol. 113, no. 485 (February 2003), pp. F121-F149.



## **Income Mobility in the United States**

To the extent that greater equality in the distribution of income results from policy decisions about taxes and transfers, for example, and not from market forces, that equality may have been achieved at some cost (e.g., slower economic growth). Assuming the costs are recognized, the willingness to incur them may reflect varying degrees of concern across countries about income inequality. The results of a study that compared the relationship between individuals' perceptions of their well-being and the extent of inequality in the United States and Europe suggest that inequality in the distribution of income is less important to people in the United States due to Americans believing that they live in a comparatively mobile society.<sup>44</sup> That is to say, Americans may be less concerned about inequality in the distribution of income at any given point in time partly because of a belief that everyone has an equal opportunity to move up the income ladder. A review of the literature suggests that Americans' perceptions about their likelihood of changing position in the income distribution may be exaggerated.

### **Intergenerational Mobility**

Intergenerational elasticity (IGE) measures how persistent position in the income distribution is from one generation to the next. IGE is a single number that indicates the extent to which parents' position in the income distribution explains their adult children's relative income. The lower the elasticity, the less likely inequality is to be perpetuated from one generation to the next; that is, the more mobile the society.

Empirical analyses have estimated a strong positive relationship—about 0.5—between parent and adult child income in the United States.<sup>45</sup> An IGE of 0.5 suggests that if the income of a child's parents was 30% higher than the average income of families in the parents' generation, then the child's income will be 15% above the average for his/her generation. In other words, in the United States, about 50% of the (dis)advantage of growing up in a (low) high income family may be inherited.

### **The Trend in Intergenerational Mobility in the United States**

It is difficult to precisely answer the question of whether the importance of parents' relative income to adult children's relative income changed over the period that inequality has been increasing in the United States. This is partly the case because few sources cover multiple generations of adults for which data are available on family income at the time they were children. As described more fully below, empirical analyses suggest that children born into low-income families have not become more likely and may have become less likely to surpass their parents' position at the bottom of the income distribution. Put differently, mobility in the United States does not appear to have offset the increase in cross-sectional inequality in recent decades.

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<sup>44</sup> Alberto Alesina, Rafael Di Tella, and Robert MacCulloch, "Inequality and Happiness: Are Europeans and Americans Different?," *Journal of Public Economics*, vol. 88 (2004), pp. 2009-2042.

<sup>45</sup> Isabel V. Sawhill, "Trends in Intergenerational Mobility," in *Getting Ahead or Losing Ground: Economic Mobility in America*, ed. Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins (Washington, DC: The Brookings Institution, 2008), 112 pp.

Lee and Solon used data from the Panel Study of Income Dynamics (PSID) for children born between 1952 and 1975 who reached age 25 between 1977 and 2000 to estimate IGEs. They found no major change during the two decades in the influence of parent income on adult sons' incomes. The IGE in each year was estimated to be within 0.1 percentage point of the 0.44 average over the 1980s and 1990s.<sup>46</sup> Hertz, who also relied on the PSID but used a variety of estimation methods, similarly found no substantial change in mobility among cohorts of male and female children born between 1952 and 1975 when observed as adults starting in the late 1970s.<sup>47</sup>

Levine and Mazumder used an entirely different methodology than the aforementioned economists whose research also was based on longitudinal data. Levine and Mazumder examined the incomes of brothers from two cohorts in the National Longitudinal Surveys (NLS). The older group was composed of brothers who entered the labor market during the 1970s; the younger group, brothers who entered the labor market between the early 1980s and mid-1990s. They estimated that family background, as represented by correlations between sibling incomes, was more important to the economic outcomes of the younger cohort (which entered the workforce after 1980).<sup>48</sup> Specifically, the correlation between brothers' incomes doubled from 0.21 for the older group to 0.42 for the younger group. From this marked increase in the correlation, Levine and Mazumder infer that intergenerational mobility decreased substantially at some point between 1983 and 1995.<sup>49</sup>

Aaronson and Mazumder took yet another approach because they used decennial census data which, although it allowed them to cover a longer period, does not follow the same individuals over time as do the PSID and NLS.<sup>50</sup> They estimated that movement between generations from one part of the income distribution to another increased over the 1940-1980 period. Intergenerational mobility then decreased substantially during the 1980s and appears to have remained unchanged during the 1990s. This pattern suggests that the opportunity for children in the United States to attain incomes that exceed their parents' relative incomes was lower after 1980 compared to the preceding four decades.<sup>51</sup> In a more recent article, Mazumder concluded that his research with Aaronson "and the studies using the PSID are in broad agreement that intergenerational mobility has been roughly flat since 1990."<sup>52</sup>

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<sup>46</sup> Chul-In Lee and Gary Solon, "Trends in Intergenerational Income Mobility," *Review of Economics and Statistics*, vol. 91 (2009), pp. 766-772.

<sup>47</sup> Tom Hertz, "Trends in the Intergenerational Elasticity of Family Income in the United States," *Industrial Relations*, vol. 46, no. 1 (January 2007), pp. 22-50.

<sup>48</sup> Levine and Mazumder acknowledge that the correlation captures more than family background (e.g., neighborhood influence), but estimate that a large majority of the correlation may result from parent income.

<sup>49</sup> David I. Levine and Bhashkar Mazumder, "The Growing Importance of Family: Evidence from Brothers' Earnings," *Industrial Relations*, vol. 46, no. 1 (January 2007), p. 7-21.

<sup>50</sup> They created "synthetic families" by linking children's birth year and residence to the average income of parents in the same state in an earlier decennial census.

<sup>51</sup> Daniel Aaronson and Bhashkar Mazumder, "Intergenerational Economic Mobility in the United States, 1940 to 2000," *Journal of Human Resources*, vol. 43, no. 1 (2008), pp. 139-172.

<sup>52</sup> Bhashkar Mazumder, *Is Intergenerational Economic Mobility Lower Now than in the Past?*, The Federal Reserve Bank of Chicago, *Essays on Issues*, Number 297, April 2012, p. 3.

## **Cross-Country Comparisons of Intergenerational Mobility**

Analysts have developed estimates of intergenerational mobility that use differing statistical approaches and are based on the longitudinal surveys and administrative records available in each country. The cross-country estimates usually are derived from earnings of fathers and their adult sons because data on daughters and other sources of income are more limited in countries other than the United States. Although the rank of the United States differs somewhat from one study to the next, as discussed below, the United States typically is found to be among the least mobile of the advanced economies.

Corak reviewed numerous studies that offered differing estimates of intergenerational earnings persistence for each of several advanced economies. Based on his assessment of the preferred IGE for the nations in the meta-analysis, Corak concluded that the United Kingdom, the United States, and France are the least mobile. In these countries, about 41% (France) to 50% (United Kingdom) of the economic advantage high-earning young men have over lower earners may be due to their coming from more affluent families. In the cases of Canada, Finland, Norway, and Denmark, the effect of fathers' on adult sons' relative earnings was found to be lower (about 20% or less). With IGEs of about 30%, mobility in Germany and Sweden falls between these two groups.<sup>53</sup>

Studies of intergenerational economic mobility in southern European countries have less often been undertaken due partly to a paucity of long panels that enable comparison of the income of fathers and their adult children. In a recent study that was designed to overcome data limitations, Cervini-Pia estimated an income elasticity of 0.40 for sons and about the same for daughters in Spain—making it less mobile than many of the advanced economies discussed above but more mobile than the United States (which in Corak's review had a preferred IGE of 0.47).<sup>54</sup> Piraino estimated an intergenerational earnings elasticity of 0.435 and an income elasticity of 0.554 for Italy, "which indicates that about one-half of the economic advantage of Italian fathers is passed on to their sons."<sup>55</sup> Mocetti developed higher elasticities for Italy than Piraino, at about 0.50 for earnings and 0.61 for income. Both sets of estimates for Italy suggest that it is less economically mobile than the United States.

Jantti et al. developed intergenerational samples for six countries from which they derived estimates of intergenerational mobility at different points in the joint distribution of father and son earnings. The estimation of transition matrices allowed them to compare mobility rates from one quintile to another in the distribution. The researchers found that the United States has less upward mobility from the bottom quintile and more low-income persistence than the United Kingdom and Nordic countries (Denmark, Finland, Norway, and Sweden) included in their analysis. More specifically, between 20% and 30% of children whose fathers were in the bottom fifth of the earnings distributions remained at the bottom as adults, but for the United States, about 40% of children stayed in the bottom fifth. The authors suggest that, despite these results, Americans have been able to maintain the perception of living in a mobile society because

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<sup>53</sup> Miles Corak, *Do Poor Children Become Poor Adults? Lessons from a Cross Country Comparison of Generational Earnings Mobility*, Institute for the Study of Labor (IZA), IZA Discussion Paper 1993, Bonn, Germany, March 2006.

<sup>54</sup> Maria Cervini-Pia, *Intergenerational Earnings and Income Mobility in Spain*, Munich Personal RePEc Archive, MPRA Paper No. 34942, November 2011, p. 21, <http://mpra.ub.uni-muenchen.de/34942>.

<sup>55</sup> Patrizio Piraino, "Comparable Estimates of Intergenerational Income Mobility in Italy," *The B.E. Journal of Economic Analysis & Policy*, vol. 7, no. 2 (2007), p. 11.

transition rates of the middle three quintiles are similar in the United States and other advanced economies. “In the U.S., such middle class moves are associated with fairly substantial changes in real living standards (i.e., measured in actual dollars earned) ... [that] are experienced or witnessed by a substantial fraction of the U.S. population.”<sup>56</sup>

A recent study by the Pew Economic Mobility Project (EMP) lends support to Jantti et al.’s estimate of low upward mobility from the bottom fifth of the U.S. income distribution. The analysis found that 43% of children whose parents were in the bottom quintile remained in the bottom as adults. The EMP also estimated that children raised by parents in the top quintile tended to be in the top quintile as adults (40%). In contrast, children raised by parents in the three middle quintiles (the middle class) experienced much higher rates of mobility: only 25% of children born to parents in the second fifth were in the same place as adults; only 14% of children whose parents were in the middle fifth stayed in the middle fifth as adults; and only 9% of children raised by parents in the fourth quintile were in the same relative position as adults.<sup>57</sup>

## **Intragenerational Mobility**

Much the same results are evident when it comes to intragenerational mobility in the United States. The likelihood of adults moving from their initial positions in the income distribution has decreased or been unchanged in recent decades, according to available empirical analyses.

Bradbury used data from the PSID to analyze family income mobility for working-age married couples over the 1969-2006 period. The various measures of mobility she developed indicate that family income mobility declined between 1969 and 2006, and particularly since the 1980s. Families, whether they started at the bottom or top of the income distribution, became increasingly less likely to move up or down the income ladder during their working lives. Bradbury concluded that “family income mobility has been insufficient to stem increases in inequality of long-term income.”<sup>58</sup>

Acs and Zimmerman used PSID data to determine the trend in income mobility among 25-44-year olds between 1989 and 2004. They estimated that intragenerational mobility among young adults has been stable since the 1980s. For example, slightly over one-half of 25-44-year olds were in the lowest quintile of the income distribution in both the 1984-1994 and 1994-2004 periods. About one-fourth of those in the bottom quintile moved up to the second quintile in the 1984-1994 period, the same share also moved up in the following 10-year period. Similarly, in both 1984-1994 and 1994-2004, about 10% of those in the bottom quintile were able to move into the middle quintile of the income distribution; 7%, to the fourth quintile; and 4%, to the top quintile. Mobility rates from the higher quintiles into the bottom quintile also were little changed over time: 20%-22% of those in the second quintile were downwardly mobile in the 1984-1994 and 1994-2004 periods, whereas 11%-15% of those in the middle quintile fell to the bottom quintile; 6%-7% from the fourth quintile dropped to the bottom as did 3%-4% from the top

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<sup>56</sup> Markus Jantti, Knut Roed, and Robin Naylor et al., *American Exceptionalism in a New Light: A Comparison of Intergenerational Earnings Mobility in the Nordic Countries, the United Kingdom and the United States*, Institute for the Study of Labor (IZA), IZA Discussion Paper 1938, Bonn, Germany, January 2006, p. 28.

<sup>57</sup> Economic Mobility Project, *Pursuing the American Dream: Economic Mobility Across Generations*, The Pew Charitable Trusts, July 2012.

<sup>58</sup> Katharine Bradbury, *Trends in U.S. Family Income Mobility, 1969-2006*, Federal Reserve Bank of Boston, Working Paper 11-10, October 20, 2011, p. 27.

quintile. These patterns led Acs and Zimmerman to conclude that “in the context of rising income inequality, stable mobility rates suggest that the distribution of lifetime income must be growing unequal. That is, lifetime or long-term economic inequality is rising.”<sup>59</sup>

Auten and Gee used panel data from income tax returns to examine mobility over the past two decades among tax units aged 25 and older. They similarly found that mobility was about the same in most income quintiles between the 1987-1996 and 1996-2005 periods. Auten and Gee also estimated a slight decrease in overall mobility, with 58.3% of individuals changing quintiles in 1987-1996 compared with 57.5% in 1996-2005. They found that the entire difference resulted from less downward mobility out of the top 20%.<sup>60</sup>

Diaz-Gimenez et al. used PSID data to analyze household income mobility between the 1989-1994 (five-year) and 2001-2007 (six-year) periods. They estimated that income mobility was little changed, but the six-year span of the more recent period suggested a decrease in mobility.<sup>61</sup> Diaz-Gimenez et al. also found less income mobility among households at the bottom and top of the income distribution compared with households in the middle three quintiles. As suggested above by Jantti with regard to cross-country intergenerational mobility, the comparatively high intragenerational mobility of a majority of U.S. households (the middle 60%) may partly account for the seeming misperception among Americans that the United States is a very mobile society.

Burkhauser and Couch reviewed the limited literature on intragenerational mobility in the United States and several other countries (e.g., the United Kingdom, Germany, France, Denmark, and Sweden). Their meta-analysis led them to conclude that there does not appear to be a clear relationship between the extent of income inequality and intragenerational income mobility. In addition, most of the studies found that the majority of cross-sectional (short-term) inequality appears to persist over time.<sup>62</sup>

## Concluding Remarks

Measures of income dispersion show a distribution of income across U.S. households that has become comparatively more unequal over time as high-income U.S. households have benefitted disproportionately from economic growth and that is less equal compared with distributions in many other developed countries. It also appears that going from rags to riches is relatively rare; that is, where one starts in the U.S. income distribution greatly influences where one ends up.

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<sup>59</sup> Gregory Acs and Seth Zimmerman, *U.S. Intragenerational Economic Mobility from 1984 to 2004: Trends and Implications*, The Pew Charitable Trusts, Economic Mobility Project, October 2008, p. 12.

<sup>60</sup> Gerald Auten and Geoffrey Gee, “Income Mobility in the United States: New Evidence from Income Tax Data,” *National Tax Journal*, vol. LXII, no. 2 (June 2009), p. 313.

<sup>61</sup> Diaz-Gimenez et al., *Distributions of Earnings, Income, and Wealth*.

<sup>62</sup> Richard V. Burkhauser and Kenneth A. Couch, “Intragenerational Inequality and Intertemporal Mobility,” in *The Oxford Handbook of Economic Inequality*, ed. Wiemer Salverda, Brian Nolan and Timothy M. Smeeding (New York: Oxford University Press, 2009), pp. 522-545.

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