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inside the vault

AN ECONOMIC EDUCATION NEWSLETTER FROM THE FEDERAL RESERVE BANK ST. LOUIS

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U.S. Income Inequality: It's Not So Bad

Each year, the U.S. Census Bureau releases data on the income levels of America's households. A comparison of the annual data over time reveals that the income of wealthier households has been growing faster than the income of poorer households—the real income of the wealthiest 5 percent of households rose by 14 percent between 1996 and 2006, while the income of the poorest 20 percent of households rose by just 6 percent.

As a result of these differences in income growth, the income of the wealthiest 5 percent of households grew from 8.1 times that of the income of the poorest 20 percent of households in 1996 to 8.7 times as great by 2006. Such figures commonly lead to the conclusion that income inequality in the United States has increased. This apparent increase in income inequality has not escaped the attention of policy makers and social activists who support public policies aimed at reducing income inequality. However, the common measures of income inequality that are derived from the census statistics exaggerate the degree of income inequality in the United States in several ways. Furthermore, although many people consider income inequality a social ill, it is important to understand that income inequality has many economic benefits and is the result of—and not a detriment to—a well-functioning economy.

An Inaccurate Picture

The Census Bureau essentially ranks all households by household income and then divides this distribution of households into quintiles. The highest-ranked household in each quintile provides the upper income limit for each quintile. Comparing changes in these upper income limits over time for different quintiles reveals that the income of wealthier households has been growing faster than the income of poorer households, thus giving the impression of an increasing "income gap" or "shrinking middle class."

One big problem with inferring income inequality from the census income statistics is that the census statistics provide only a snapshot of income distribution in the U.S., at a single point in time. The statistics do not reflect the reality that income for many households changes over time—i.e., incomes are mobile. For most people, income increases over time as they move from their first, low-paying job in high school to a better-paying job later in their lives. Also, some people lose income over time because of business-cycle contractions, demotions, career changes, retirement, etc. The implication of changing individual incomes is that individual households do not remain in the same income quintiles over time. Thus,

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comparing different income quintiles over time is like comparing apples to oranges, because it means comparing incomes of different people at different stages in their earnings profile.

The U.S. Treasury released a study in November 2007 that examined income mobility in the U.S. from 1996 to 2005. Using data from individual tax returns, the study documented the movement of households along the distribution of real income over the 10-year period. As shown in Figure 1A, the study found that nearly 58 percent of the households that were in the lowest income quintile (the lowest 20 percent) in 1996 moved to a higher income quintile by 2005. Similarly, nearly 50 percent of the households in the second-lowest quintile in 1996 moved to a higher income quintile by 2005. Even a significant number of households in the third- and fourth-lowest income quintiles in 1996 moved to a higher quintile in 2005.

The Treasury study also documented falls in household income between 1996 and 2005. This is most interesting when considering the richest households. As shown in Figure 1B, more than 57 percent of the richest 1 percent of households in 1996 fell out of that category by 2005. Similarly, more than 45 percent of the households that ranked in the top 5 percent of income in 1996 fell out of that category by 2005.

Thus it is clear that over time, a significant number of households move to higher positions along the income distribution, and a significant number move to lower positions along the income distribution. Common reference to "classes" of people (e.g., the lowest 20 percent or the richest 10 percent) is quite misleading because income classes do not contain the same households and people over time.

Another problem with drawing inferences from the census statistics is that the statistics do not include the noncash resources received by lower-income households—resources transferred to the households—and the tax payments made by wealthier households to fund these transfers. Lower-income households annually receive tens of billions of dollars in subsidies for housing, food and medical care. None of these are considered income by the Census Bureau. Thus the resources available to lower-income households are actually greater than is suggested by the income of those households as reported in the census data.

At the same time, these noncash payments to lower-income households are funded with taxpayer dollars—mostly from wealthier households, since they pay a majority of overall taxes. One research report estimates that the share of total income earned by the lowest income quintile increases roughly 50 percent—whereas the share of total income earned by the highest income quintile drops roughly 7 percent—when transfer payments and taxes are considered.

The census statistics also do not account for the fact that the households in each quintile contain different numbers of people; it is differences in income across people, rather than differences in income by household, that provide a clearer measure of inequality. Lower-income households tend to consist of single people with low earnings, whereas higher-income households tend to include married couples with multiple earners. The fact that lower-income households have fewer people than higher-income households skews the income distribution by person. When considering household size along with transfers received and taxes paid, the income share of the lowest quintile nearly triples and the income share of the highest quintile falls by 25 percent.

Is Policy Needed?

Income inequality will still exist even if the income inequality statistics are adjusted to account for the aforementioned factors. Given the negative attention income inequality receives in the media, it is important to ask whether reducing income inequality is a worthy goal of public policy. It is important to understand that income inequality is a byproduct of a well-functioning capitalist economy. Individuals' earnings are directly related to their productivity. Wealthy people are not wealthy because they have more money; it is because they have greater productivity. Different incomes reflect different productivity levels.

The unconstrained opportunity for individuals to create value for society—and the fact that their income reflects the value they create—encourages innovation and entrepreneurship. Economic research has documented a positive correlation between entrepreneurship/innovation and overall economic growth. A wary eye should be cast on policies that aim to shrink the income distribution by redistributing income from the more productive to the less productive simply for the sake of "fairness." Redistribution of wealth increases the costs of entrepreneurship and innovation, with the result being lower overall economic growth for everyone.

Poverty and income inequality are related, but only the former deserves a policy-based response. Sound economic policy to reduce poverty would lift people out of poverty (increase their productivity) while not reducing the well-being of wealthier individuals.

Tools to implement such a policy include investments in education and job training.

Income inequality should not be vilified, and public policy should encourage people to move up the income distribution and not penalize them for having already done so.

Thomas Garrett is an assistant vice president and economist at the Federal Reserve Bank of St. Louis.

Figure 1A. Movement to Higher Income Quintiles 1996-2005

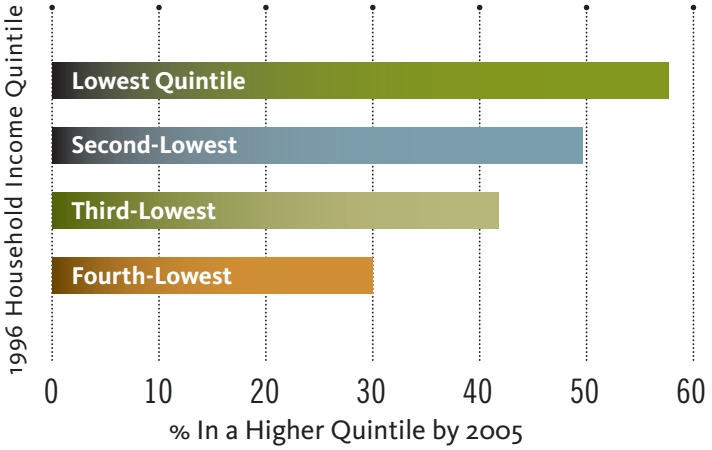
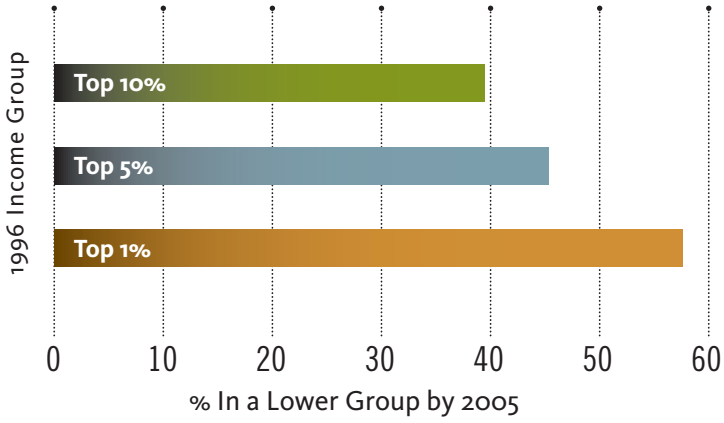


Figure 1B. Movement to Lower Income Group 1996-2005



Source: Treasury Department

One problem with popular portrayals of the income gap is that they show income distribution at a single point in time. But for many households, income changes over time. The low-paying jobs from high school days usually give way to better-paying jobs later in life. Figure 1A shows the percentage of households that moved to a higher income quintile from 1996 to 2005. For example, nearly 58 percent of the households in the lowest income quintile in 1996 moved to a higher category by 2005. The reverse also happens, as shown in Figure 1B. Of those households that were in the top 1 percent in income in 1996, for example, more than 57 percent dropped to a lower income group by 2005.

Glossary

Adjusted gross income — Total income less statutory adjustments.

Business cycle — The periodic but irregular up-and-down movements in economic activity, measured by fluctuations in real GDP and other macroeconomic variables.

Capitalism — Economic system characterized by the following: ownership of private property; individuals and companies that are allowed to compete for their own economic gain; and free-market forces that determine the prices of goods and services.

Income — Earnings received as wages, rent, profit or interest; payments received for providing natural, human capital and entrepreneurial resources in the market.

Inflation — A sustained increase in the average price level.

Poverty — A condition that occurs when people do not enjoy a certain minimum level of living standards, as determined by a government.

Productivity — A ratio of output to input during a specified period of time. For example, output per worker is a measure of the productivity of labor during an hour, week, month or year. The productivity of workers can be increased through division of labor, investment in human capital and investment in capital resources.

Purchasing power — A measurement of the relative value of money in terms of the quality and quantity of goods and services it can buy.

Quintile — One of five equal parts of a range of data, each being 1/5th (20 percent) of the range.

Real income — Income expressed in terms of the goods and services it can purchase.

Standard of living — A measure of the goods and services available to a person in a country; the dollar value is calculated as per capita GDP.

Subsidies — Financial assistance given by the government to individuals or groups.

Taxes — Mandatory government fees on business and individual income, activities or products.

Taxable income — Adjusted gross income less standardized or itemized deductions.

Transfer payments — Payments by governments—such as social security, veterans' benefits and welfare—to people who do not supply goods, services or labor in exchange for the payments.

Wealth — Accumulated assets such as money and/or possessions, often accumulated as a result of saving and investment.

Income, Education, Employment and Poverty

Q. What is the overall education level of the population in the United States?

A. The educational attainment in the United States is as follows:

Subject	Total
Population 25 years and over	
Less than 9th grade	6.4%
9th to 12th grade, no diploma	9.1%
High school graduate (*includes equivalency*)	29.6%
Some college, no degree	20.1%
Associate's degree	7.4%
Bachelor's degree	17.3%
Graduate or professional degree	10.1%
Percent high school graduate or higher	84.5%
Percent bachelor's degree or higher	27.4%

Source: U.S. Census Bureau, 2006-2008 American Community Survey

Q. How does the level of education correlate with the poverty rate in the United States?

A. There is an indirect correlation between poverty and levels of education, as the chart reflects:

Poverty Rate for the Population 25 Years and Over for Whom Poverty Status is Determined by Educational Attainment Level	
Less than high school graduate	23.6%
High school graduate *(includes equivalency)*	11.5%
Some college or associate's degree	7.8%
Bachelor's degree	4.1%
Graduate or professional degree	3.0%

Source: U.S. Census Bureau, 2006-2008 American Community Survey

Q. How does income vary with level of education?

A. There is a direct correlation between income and level of education.

Median Earnings in the Past 12 Months (in 2009 Inflation-Adjusted Dollars)	
Subject	**Total**
Less than high school graduate	19,989
High school graduate *(includes equivalency)*	27,448
Some college or associate's degree	33,838
Bachelor's degree	47,853
Graduate or professional degree	63,174

Source: U.S. Census Bureau, 2006-2008 American Community Survey

Q. How does the U.S. Census Bureau determine poverty levels?

A. The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using the Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid and food stamps).

ask.census.gov

Q. What do the data related to taxation over time tell us regarding tax inequality?

A. From 1986 until 2006, the total income tax share for the top 1 percent of income earners has consistently risen, from 25.75 percent in 1986 to 39.89 percent in 2006.

www.irs.gov/taxstats/indtaxstats/article/0,,id=133521,00.html#_grp1

Q. What is the average income tax rate?

A. According to the Internal Revenue Service's latest statistics for 2006 individual tax returns, the average tax rate for all taxpayers was 12.60 percent. The average tax rate for the bottom 50 percent income group was 3.01 percent, and the average tax rate for the bottom 99 percent income group was 9.72 percent.

www.irs.gov/taxstats/indtaxstats/article/0,,id=133521,00.html#_grp1

Education Pays

1. What is the unemployment rate?

The unemployment rate represents the number of unemployed as a percent of the labor force. People are classified as unemployed if they are 16 years or older, do not have a job, have actively looked for work in the previous four weeks and are currently available for work. People who were not working and were waiting to be recalled to a job from which they had been temporarily laid off are also included as unemployed.

Source: www.bls.gov/cps/lfcharacteristics.html#unemp

2. What is the relationship between the unemployment rate and the level of education people have?

The relationship is negative or indirect. The less education people have, the more likely they are to be unemployed.

3. In 2008, what percent of high school dropouts were unemployed?

9 percent

4. In 2008, what percent of those with bachelor's degrees were unemployed?

2.8 percent

Fourth Quarter 2009

	Q1-'09	Q2-'09	Q3-'09	Q4-'09
Growth Rate Real Gross Domestic Product	–6.4%	–0.7%	2.2%	5.9%*
Inflation Rate Consumer Price Index	–2.2%	1.9%	3.7%	2.6%
Civilian Unemployment Rate	8.2%	9.3%	9.6%	10.0%

**Second estimate*

5. What is the relationship between level of education and median income?

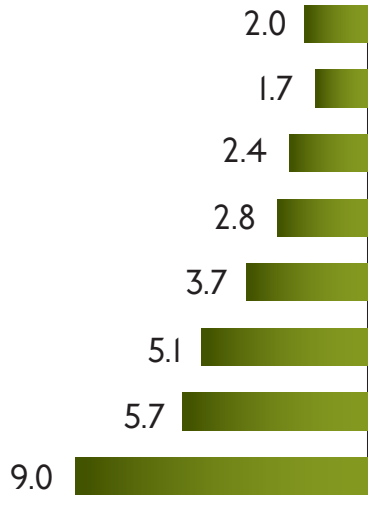
The relationship is positive or direct. The more education people have, the higher their median income.

6. Who makes up the labor force?

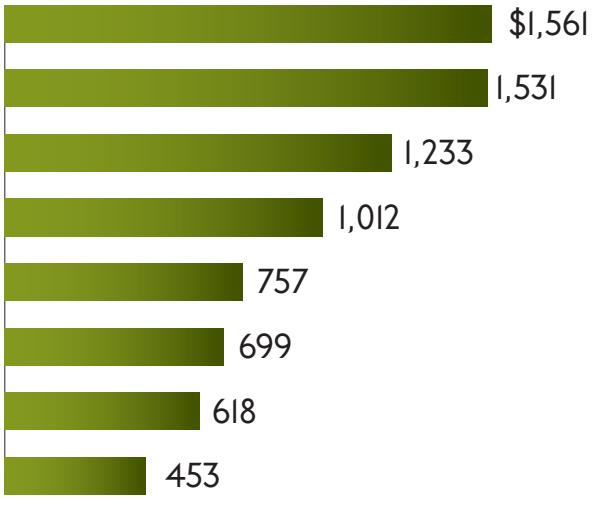
The labor force includes the employed and unemployed who are 16 years of age or older and who are not confined to institutions such as nursing homes and prisons, and who are not on active duty in the Armed Forces. The remainder—those who have no job and are not looking for one—are counted as "not in the labor force."

Source: www.bls.gov/cps/cps_htgm.hlm#nilf

Unemployment rate in 2008



Median weekly earning in 2008



Source: Bureau of Labor Statistics, Current Population Survey

Note: Data are 2008 annual averages for persons age 25 and over. Earnings are for full-time wage and salary workers. Last modified date: Dec. 22, 2009

ST. LOUIS

For more information about these programs, contact Barbara Flowers at 314-444-8421 or barbara.flowers@stls.frb.org.

Summer School at the Fed: In the News

June 7-9, 2010: Data and Primary Source Documents

June 10-11 and 15, 2010: Banks: The Rescue, the Recovery, the Regulation

June 16-18, 2010: Where Have All the Jobs Gone?

Audience: Fifth-grade through high school educators
Credit or non-credit
Credit will be granted through SIUE.
To register: http://stlouisfed.org/event/00BE

Economics and Children's Literature

July 12, 2010 | 8:00 a.m. – 3:00 p.m.

Audience: K through fifth-grade educators
To register: http://stlouisfed.org/event/00EE

Economics and Personal Finance

July 13, 2010 | 8:00 a.m. – 3:00 p.m.

Audience: Middle and high school educators
To register: http://stlouisfed.org/event/00DE

Insights from the Inside

July 15, 2010 | 8:00 a.m. – 3:00 p.m.

Audience: Middle and high school educators
To register: http://stlouisfed.org/event/00CE

LITTLE ROCK

For more information about these programs, contact Billy Britt at 501-324-8368 or billy.j.britt@stls.frb.org.

Economics and Children's Literature

June 15, 2010 | 8:30 a.m. – 3:30 p.m. | Grades K-5
Wilbur Mills Educational Cooperative, Beebe, Ark.

To register: http://stlouisfed.org/event/015E

June 28, 2010 | 8:30 a.m. – 3:30 p.m. | Grades K-5
Southeast Arkansas Educational Cooperative
Monticello, Ark.

To register: http://stlouisfed.org/event/01AE

Cards, Cars and Currency

June 22,2010 | 8:30 a.m. – 3:30 p.m. | Grades 8-12
University of Arkansas | Reynolds Center
Fayetteville, Ark

To register: http://www.stlouisfed.org/event/01FE

July 13, 2010 | 8:30 a.m. – 3:30 p.m. | Grades 8-12
Arch Ford Educational Cooperative
Plummerville, Ark.

To register: http://www.stlouisfed.org/event/020E

July 21, 2010 | 9:00 a.m. – 4:00 p.m. | Grades 8-12
Federal Reserve Bank of St. Louis—Little Rock Branch
Little Rock, Ark.

To register: http://www.stlouisfed.org/event/021E

Insights from the Inside

July 22, 2010 | 9:00 a.m. – 4:00 p.m. | Grades 8-12
Federal Reserve Bank of St. Louis—Little Rock Branch
Little Rock, Ark.

To register: http://stlouisfed.org/event/01BE

LOUISVILLE

For more information about these programs, contact Caryn Rossiter at 502-568-9257 or caryn.j.rossiter@stls.frb.org.

The Great Depression Workshop

March 30, 2010 | 4:30 p.m. – 6:30 p.m.
Bellarmine Center for Economic Education
2120 Newburg Rd., Louisville, Ky.

Audience: High school educators
To register: http://stlouisfed.org/event/010E

Cards, Cars and Currency

April 22, 2010 | 4:30 p.m. – 6:30 p.m.
Bellarmine Center for Economic Education
2120 Newburg Rd., Louisville, Ky.

Audience: High school educators
To register: http://www.stlouisfed.org/event/022E

Insights from the Inside

June 29, 2010 | 9:00 a.m. – 4:00 p.m. | Grades 8-12
Federal Reserve Bank of St. Louis—Louisville Branch
Louisville, Ky.

Audience: Middle and high school educators
To register: http://stlouisfed.org/event/012E

MEMPHIS

For more information about these programs, contact Jeannette Bennett at 901-579-4104 or jeannette.n.bennett@stls.frb.org.

Economics and Children's Literature

July 8, 2010 | 8:30 a.m. – 3:30 p.m.
Crowley's Ridge Educational Cooperative
Harrisburg, Ark.

Audience: K through fifth-grade educators
To register: http://stlouisfed.org/event/014E

July 23, 2010 | 8:30 a.m. – 3:30 p.m.
Northeast Arkansas Educational Cooperative
Walnut Ridge, Ark.

Audience: K through fifth-grade educators
To register: http://stlouisfed.org/event/01CE

July 21, 2010 | 8:30 a.m. – 3:30 p.m.
Great Rivers Educational Cooperative, West Helena, Ark.

Audience: K through fifth-grade educators
To register: http://stlouisfed.org/event/01DE

Economics and Personal Finance

June 23-24, 2010 | 8:30 a.m. – 3:30 p.m.
East Arkansas Community College, Forrest City, Ark.

Audience: High school educators
To register: http://stlouisfed.org/event/016E

June 23, 2010 | 8:30 a.m. – 3:30 p.m.
Northeast Arkansas Educational Cooperative
Walnut Ridge, Ark.

Audience: High school educators
To register: http://stlouisfed.org/event/019E

August 2, 2010 | 8:30 a.m. – 3:30 p.m.
Crowley's Ridge Educational Cooperative
Harrisburg, Ark.

Audience: High school educators
To register: http://stlouisfed.org/event/018E

Insights from the Inside

Sept. 17, 2010 | 8:30 a.m. – 3:30 p.m
Federal Reserve Bank of St. Louis—Memphis Branch
200 North Main St., Memphis, Tenn. 38103

Audience: Middle and high school educators
To register: http://stlouisfed.org/event/017E

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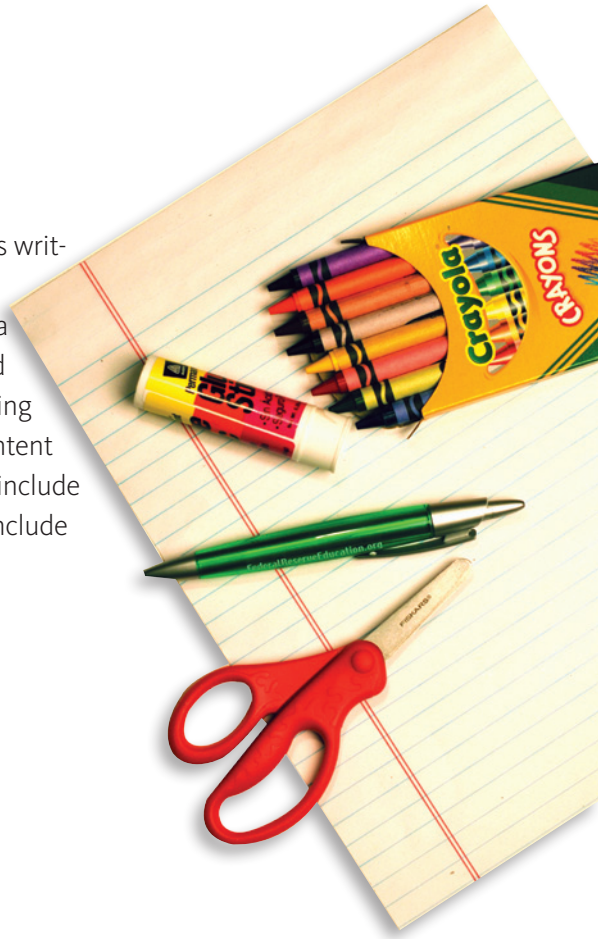
https://misweb.cbi.msstate.edu/pgrimes/InsideTheVault

FEATURED **RESOURCES**

Economics and Children's Literature Lessons

Economics for the elementary grades



The Federal Reserve Bank of St. Louis offers new online children's literature lessons written by members of the Federal Reserve economic education staff. Each lesson is written in an easy-to-follow format that includes a brief description of the lesson, a listing of the economic concepts to be taught, the appropriate age level, estimated time required, materials needed, objectives and step-by-step procedures for teaching the lesson. Additionally, each lesson is correlated with the National Voluntary Content Standards in Economics and National Standards in Personal Finance. The lessons include active-learning exercises and are downloadable from the web site. Most lessons include SMART Board™ applications, which can also be downloaded from the web site.

The lessons can be downloaded at:

www.stlouisfed.org/education_resources/lesson_plans_k-5.cfm

Economic educators at the Federal Reserve Bank of St. Louis offer workshops on Economics and Children's Literature. For information contact:

Little Rock: Billy Britt, billy.j.britt@stls.frb.org
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Memphis: Jeannette Bennett, jeannette.n.bennett@stls.frb.org
St. Louis: Barbara Flowers, barbara.flowers@stls.frb.org