
Presentation to the NBER Conference on Research in Income and Wealth

Ed Harris, Principal Analyst
Frank Sammartino, Assistant Director for Tax Analysis


Uneven Growth in After-Tax Income

- Households in the top 1 percent experienced very rapid growth in after-tax income over the 1979–2009 period
  - Peak to peak (1979-2007), their after-tax income grew by over 300 percent
  - Recent recession disproportionately affected highest income households in 2008 and 2009, causing their income to fall by over one-third
    - Capital gains fell by 75 percent between 2007 and 2009
    - Other capital income also fell substantially
  - Some evidence exists of a rebound in 2010 for high-income households

- Rest of the top quintile has also fared better than the lower four quintiles

- After-tax income for the middle three quintiles grew by almost 40 percent over the 31 years, a little over 1 percent per year

- Lowest income quintile tracked the middle three
  - Their income didn’t fall as much in 2008–2009
Cumulative Growth in Average Income After Transfers and Federal Taxes, by Income Group

Percentage Change in Income Since 1979, Adjusted for Inflation

- Top 1 Percent
- 81st to 99th Percentiles
- Lowest Quintile
- Middle Three Quintiles
Increasing Market Income Inequality Caused the Increases in After-Tax Income Inequality

- Market income inequality rose almost continually over the period
  - Some pauses around three most recent recessions
  - In the early years, change in inequality was driven by increased inequality within income sources, especially labor income
  - By the later years, a shift among sources of income had become a more important factor

- Taxes and transfers did not offset increasing market income inequality
  - Peak to peak (1979–2007), the gap between market income inequality and after-tax income inequality changed little
  - In 2008 and 2009 the equalizing effect of the tax and transfer system grew, driven by cyclical and policy factors
    - Legislated increases in UI and SNAP benefits
    - 2008 stimulus payments, 2009 ARRA tax reductions
Summary Measures of Income Inequality, With and Without Transfers and Federal Taxes
Income Concentration, by Source

- **Capital Income**
- **Business Income**
- **Capital Gains**
- **Labor Income**
Shares of Market Income, by Source

Percent


Labor Income

Capital Gains

Business Income

Capital Income
Changing Progressivity of Transfers and Federal Taxes

■ Taxes and transfers both equalize the income distribution
  – Transfers provide bigger boosts to income at the bottom of the distribution, taxes claim a larger portion of household income as income rises
  – Amount of equalization depends on:
    • The size of the tax/transfer system relative to market income
    • The distribution of transfers and taxes across the income distribution

■ Transfers
  – Have fluctuated from 10 percent to 13 percent of market income in the 1979–2007 period, generally rising in recessions but falling in expansions
  – Jumped to 18 percent in 2009, as transfers rose and market income fell
  – Have steadily become less concentrated in the bottom of the income distribution

■ Taxes
  – As shares of before-tax income earned by the top income groups have grown, shares of taxes those households pay have grown even more rapidly
  – Overall average tax rates fell from 22.0 percent in 1979 to 19.9 percent in 2007 and to 17.4 percent in 2009
  – Differences between before- and after-tax income inequality are little changed since the mid-1990s
Share of Total Transfers, by Market Income Group

- **Lowest Quintile**
- **Second Quintile**
- **Middle Quintile**
- **Highest Quintile**

**Percent**

**Years:** 1980 to 2005

**Graph Details:**
- X-axis: Years (1980 to 2005)
- Y-axis: Percent

---

**Notes:**
- The graph illustrates the share of total transfers for different market income groups over a period of 25 years.

---

**Legend:**
- Green line: Lowest Quintile
- Blue line: Second Quintile
- Light blue line: Middle Quintile
- Gray line: Highest Quintile

---

**Source:** Congressional Budget Office
Federal Taxes as a Percentage of Household Income, by Income Group

Percent

Top 1 Percent
81st to 99th Percentiles
Middle Three Quintiles
Lowest Quintile

Progressivity Measures: All Federal Taxes

- **Difference Between Tax Concentration Index and Before-Tax Gini**
- **Average Tax Rate**
- **Difference Between Before-and After-Tax Gini**

Graph showing trends from 1979 to 2009:
- Percent
- Differences in tax concentration and before-tax Gini
- Average tax rate
- Difference between before-and after-tax Gini
Methodology Overview

- Statistically combined data from a sample of income tax returns and household survey data
  - Statistics of Income (SOI) individual income tax file
    • Provides core income data used in the estimates
    • Provides transfers and other nontaxable income, income for people who do not file a tax return

- Used a broader measure of income than AGI or money income, though not as broad as personal income

- Adjusted income for household size by dividing by the square root of household size

- Incidence of federal taxes
  - Individual income taxes borne by households that pay the tax
  - Employer’s and employee’s shares of payroll tax borne by employees
  - Corporate income tax allocated in proportion to income from capital (75%) and labor (25%)
  - Excise tax in proportion to consumption of goods subject to tax
Statistical Match Procedure

- Construct tax filing units from CPS families and subfamilies

- Create demographic “partitions”
  - Based on marital status, age, number of dependents
  - Records are generally only matched within a partition

- Estimate the variable to match on
  - In the SOI, regression of total income on all income items common to both files
  - Coefficients then applied to both files to create a predicted income score

- Match the records
  - Records in each cell sorted in descending order by the predicted income values
  - Corresponding records from the SOI and the CPS are then matched
  - The record with the higher weight is “split” and matched with the next record in the other file
  - For each matched record, income from taxable sources comes from the SOI; transfer and other nontaxable income from the CPS
  - Once all SOI records are used, residual CPS records are considered to be nonfilers, and their income comes directly from the CPS

- Reconstruct households from tax-filing units
Income Definition Used for the CBO Study

**Market Income**

- **Labor Income**
  - Cash wages
  - Employer’s contributions for health insurance
  - Employer’s payroll taxes
  - Share of the corporate income tax borne by workers

- **Business Income**
  - Sole proprietorship, farm, partnership, S corporation
  - Realized capital gains

- **Capital income**
  - Taxable and tax-exempt interest
  - Dividends
  - Positive rental income
  - Share of corporate income tax borne by owners of capital

- **Other Income**
  - Pension distributions

**Transfers**

- Social Security
- Medicare, Medicaid, CHIP
- SNAP/Food Stamps
- Unemployment insurance
- TANF/AFDC
- Everything else in CPS (SSI, housing, LIHEAP, etc.)

**Federal Taxes**

- Individual income (including refundable credits)
- Social insurance (payroll)
- Corporate income
- Excise
Corresponding Income Measures in the National Income and Product Accounts

**Market Income**
- Personal income minus personal transfer receipts plus contributions for government social insurance

**Transfers**
- Government social benefits minus refundable tax credits

**Federal Taxes**
- Federal government current tax receipts plus contributions for government social insurance minus refundable tax credits
Income Measures Used in the Study as a Share of Corresponding NIPA Income Measures