



## Income and Wealth Inequality

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### GLOSSARY

**Asset:** A resource with economic value that an individual, corporation, or country owns with the expectation that it will provide future benefits.

**Gini index:** A statistical measure of income inequality in a population that ranges from 0 (indicating absolute income equality) to 100 (indicating a perfectly unequal income distribution).

**Household:** A group of people living in the same home, regardless of their relationship to one another.

**Income:** The payment people receive for providing resources in the marketplace. When people work, they provide human resources (labor) and in exchange they receive income in the form of wages or salaries. People also earn income in the forms of rent, profit, and interest.

**Liability:** A legal responsibility to pay back money from a loan or other type of debt.

**Net worth:** The value of a person's assets minus the value of his or her liabilities.

**Quintile:** Any of five equal groups into which a population can be divided according to the distribution of values of a particular variable.

**Wealth:** The value of a person's assets accumulated over time.

"For we, the people, understand that our country cannot succeed when a shrinking few do very well and a growing many barely make it. We believe that America's prosperity must rest upon the broad shoulders of a rising middle class."

—President Barack Obama<sup>1</sup>

### Introduction

There are many different types of inequality among people: educational attainment, work experience, and health—to name a few. This essay discusses economic inequality: its causes, measurement, and the potential impact of its growth in the U.S. economy.

Economists directly link differences in educational attainment and work experience, also known as human capital, to differences in economic outcomes. That is, formal education and job skills determine how likely a person is to find and hold a stable job that pays good wages. The flow of money from wages is the most important source of **income** for most people. Over time, regular income from employment allows people to own **assets** such as a home or a retirement financial portfolio. That stock of assets is called **wealth**.

Data collected by federal organizations such as the Census Bureau and the Board of Governors of the Federal Reserve System (BOG) allow us to measure how unequal the distributions of income and wealth are in the United States. Those data show that, since the 1970s, some individuals and families are earning much more income and accumulating much larger amounts of wealth than the typical family does.

Data reported by the World Bank allow us to compare the distribution of income across countries. As of 2018, the available data show large international differences in income inequality. Although not all countries in the world have data on income inequality, among those that do, the United States ranks among the top 25% most unequal.

### What Causes Inequality?

The root cause of differences in income and wealth across individuals and **households** is a combination of personal and social factors. Personal factors

are unique to individuals and include talent, effort, and luck. Such factors can be either nurtured or hindered by the family upbringing of the individual. Social factors affect groups of people and include education policies, labor market laws, tax codes, and financial regulations. At any moment in time, social factors can overpower personal factors to determine individual prosperity and increase inequality among people.<sup>2</sup>

For example, as gradually more married women started working outside the home between 1960 and 2000, their family incomes increased and the differences in income between households became larger depending on whether they had one or two people earning wages. At the same time, differences in the types of jobs women and men tend to hold also contribute to income inequality between genders.<sup>3</sup>

Because wealth is accumulated over time, older people are generally wealthier than younger people. For that reason, if there are many more young people than old people in the general population and the old hold more wealth than the young, overall wealth inequality will be high.<sup>4</sup>

Finally, some people argue that the type of monetary policy used to ensure steady access to credit by households and businesses during recent economic contractions may contribute to higher levels of income inequality. However, that claim is hotly disputed.<sup>5</sup>

### How Is Income Inequality Measured?

There are different ways to measure how unequal income is in a country. The U.S. Census measures income inequality as the ratio of the mean, or average, income for the highest **quintile** (top 20 percent) of earners divided by the mean income of the lowest quintile (bottom 20 percent) of earners in a particular area. Let's say a small county has 500 people earning an income. To measure how unequal those incomes are, the Census surveys and sorts each person's income from highest to lowest, calculates the average income of the 100 people earning the most and the average income of the 100 people earning the least, and divides the first figure by the second figure.

Figure 1 shows average county-level income inequality measured between 2016 and 2020. The Census considers the average income over a five-year period to account for the fact that peoples' income changes from year to year. Measured this way, income inequality can be as

high as 130 or as low as 5. These measurements mean that the most affluent households in a particular county can earn as much as 130 times or as little as 5 times as much as the least affluent households do.

Another way to measure income inequality in a population is to calculate the **Gini index**. The World Bank uses that index to measure how much the distribution of income among households deviates from a perfectly equal distribution. The Gini index can take any value between 0 and 100. A value of 0 represents perfect equality: All households earn the same income. A value of 100 indicates perfect inequality: One household earns all the income, and all other households earn nothing.

Figure 2 shows country-level income inequality measured with a Gini index in 2018. The highest value is 54, and the lowest value is 25. It is important to note that two countries can have very similar Gini indexes despite having very different distributions of income. For example, in 2018, the Gini index for the United States was 41.4 and for Bulgaria was 41.3, despite the fact that those two countries' economic and social histories are very different.

In the United States, since the 1970s, the Gini index has increased at a steady rate, indicating greater income inequality across families.<sup>6</sup> Some research suggests that this growing difference is related to the increased value of the stock market. Wealthier households hold more stocks than poorer households. So, when stock market prices rise, the income of wealthier households grows relatively more and overall income inequality increases.<sup>7</sup>

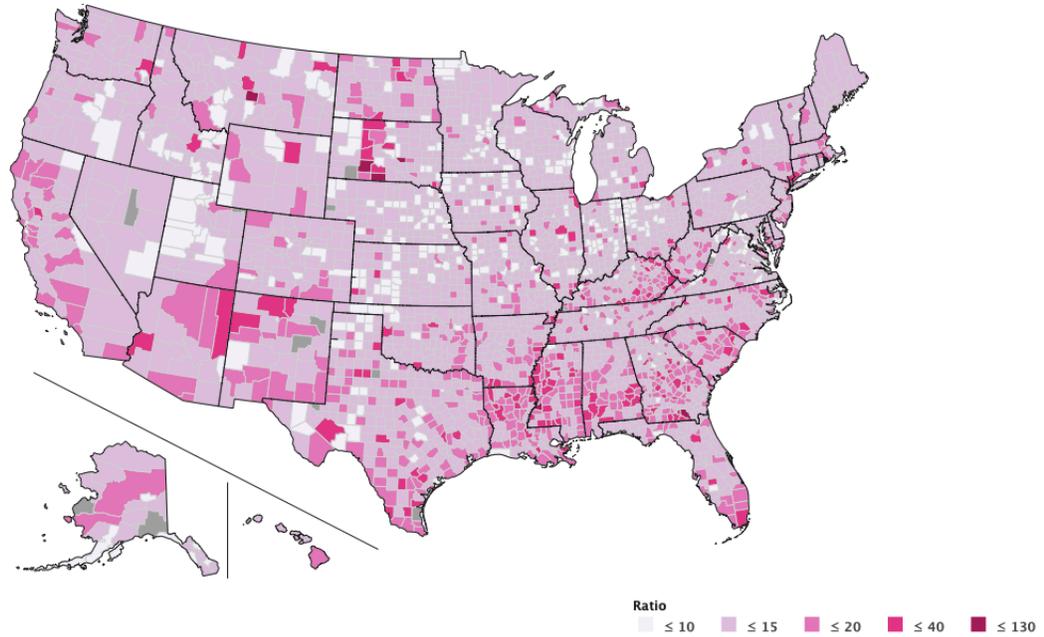
### How Is Wealth Inequality Measured?

The BOG combines information from two different surveys to measure how wealth is distributed among households: It takes the value of a household's assets (e.g., the current market price of a home) and **liabilities** (e.g., the unpaid part of a mortgage for a home) and calculates the difference between the two, which is called **net worth**. Next, the BOG sorts household wealth from highest to lowest and reports the net worth of four different groups: the wealthiest 1% of the population, the next 9%, the next 40%, and the bottom 50%.

Figure 3 shows the share of total net worth held by each of those four groups. In 2021, the wealthiest 1% of the population (about 3.3 million households) held about one-third of total net worth; the next 9% (almost 30

Figure 1  
Income Inequality by County

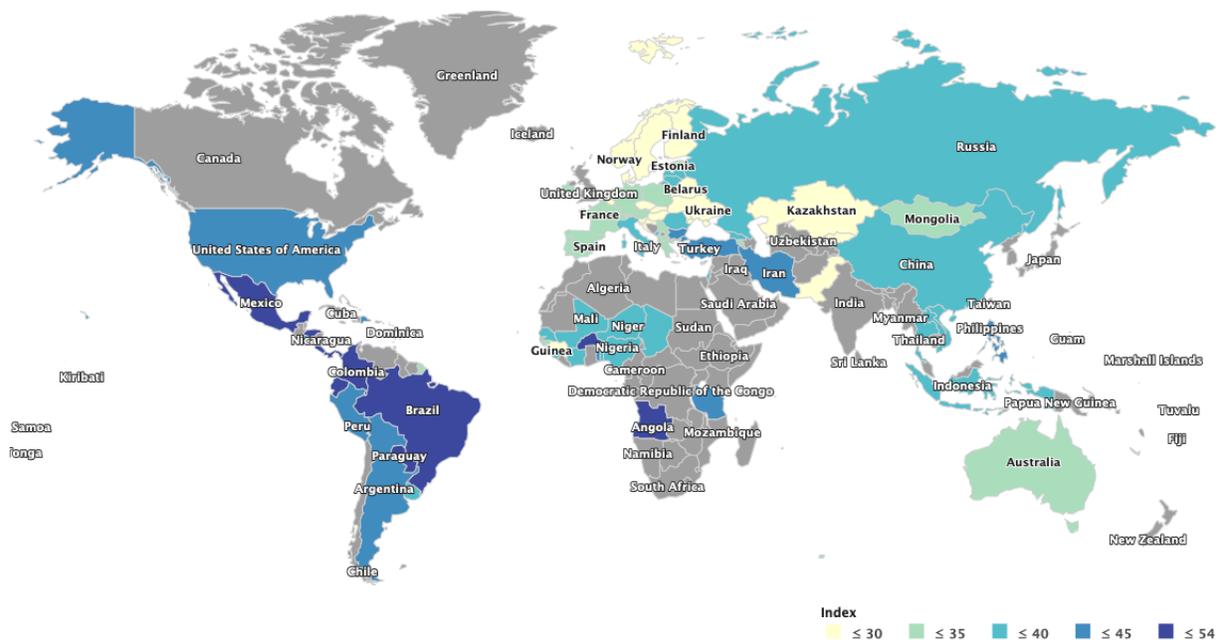
FRED 2020 Income Inequality by County (Ratio)



SOURCE: U.S. Census via FRED®, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/graph/?m=QRCJ>, accessed June 23, 2021.

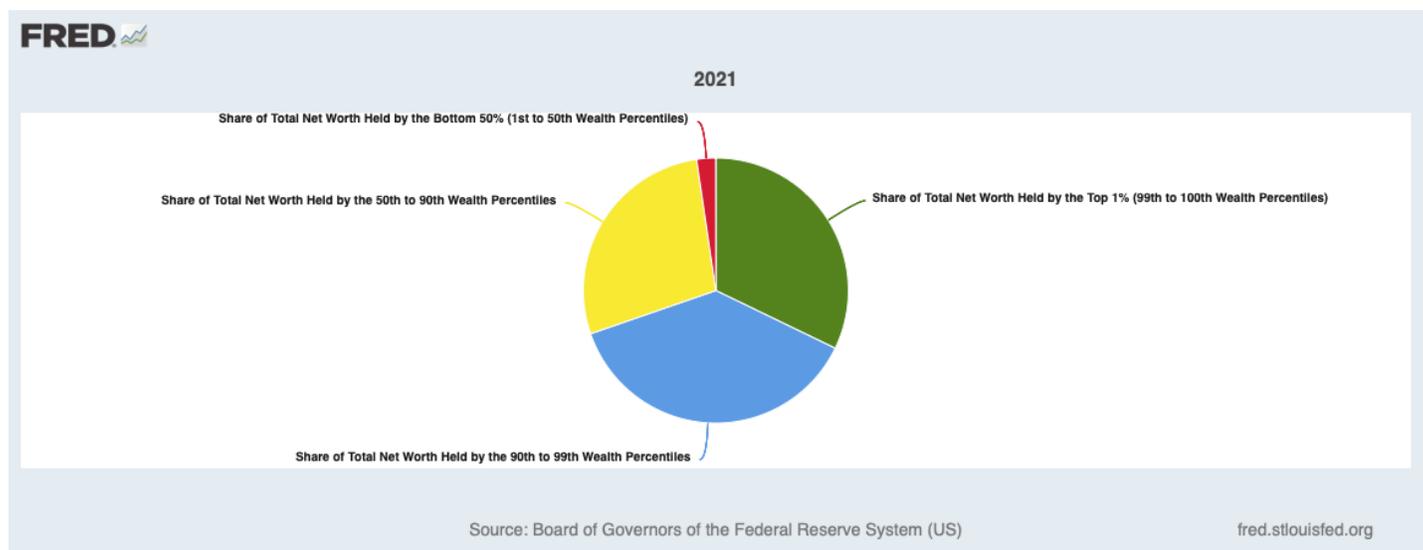
Figure 2  
Gini Index by Nation

FRED 2018 GINI Index by Nation (Index)



SOURCE: World Bank via FRED®, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/graph/?m=QRFh>, accessed April 6, 2021.

Figure 3  
Share of Total Net Worth Held by Population Groups



SOURCE: Board of Governors of the Federal Reserve System via FRED®, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/graph/?g=O2Kq>, accessed April 6, 2021.

million households) held a little more than one-third; the next 40% (about 133 million households) and the bottom 50% (about 166 million households) together held the rest—less than one-third of total net worth.

The data from the BOG show increasing wealth concentration since 1989, when the data first became available.<sup>8</sup> It is important to note that, over time, some individual households can move up or down between wealth groups, depending on the changing value of their assets. Also, some research suggests the particular nature of some economic fluctuations impacts some households' net worth more than others. For example, the real estate crash associated with the 2007-09 recession resulted in large losses for the poorest 50% of the population.<sup>9</sup>

### Does Inequality Matter?

The economic impact of growing income and wealth inequality in the United States is an intensely studied question. Economists are debating how to answer that question by analyzing data and creating mathematical models to study it. Because this is ongoing work, there is no single answer.

Some research shows that, in richer countries, more unequal income makes economic fluctuations more pronounced.<sup>10</sup> That finding means that the changes in

overall income and employment known as business cycles become more dramatic. Moreover, statistical evidence suggests increased income inequality undermines economic growth due to lower educational achievements (and human capital) among poorer individuals and households.<sup>11</sup> As discussed earlier, education builds a person's human capital and is rewarded with higher income from employment. Finally, research suggests the increasing income and wealth inequality can undermine the use of monetary policy (as we know it) to maximize employment and ensure price stability.<sup>12</sup>

### Conclusion

Inequality in individual economic outcomes arises from a combination of personal traits and social conditions. The distributions of income and wealth in a society can be measured in multiple ways: comparing the highest to the lowest earners, calculating an index describing how unequal income is among all individuals, and assessing people's financial wellbeing according to the value of their wealth holdings. Regardless of how we measure income and wealth inequality, their distributions in the United States are becoming more unequal. This trend is likely to impact economic life as we know it. More research is needed to figure out precisely how that may happen. ■

## Notes

<sup>1</sup> Obama, Barack. "Inaugural Address." January 21, 2013; <https://obamawhitehouse.archives.gov/the-press-office/2013/01/21/inaugural-address-president-barack-obama>.

<sup>2</sup> For an example of how the use of city maps to assess lending risk after the Great Depression influenced homeownership rates across population groups for decades afterward, see the following article: Mendez-Carbajo, Diego. "Neighborhood Redlining, Racial Segregation, and Homeownership." Federal Reserve Bank of St. Louis *Page One Economics*, September 2021; <https://research.stlouisfed.org/publications/page1-econ/2021/09/01/neighborhood-redlining-racial-segregation-and-homeownership>.

<sup>3</sup> For more on gender and labor markets, see the following article: Mendez-Carbajo, Diego. "Gender and Labor Markets." Federal Reserve Bank of St. Louis *Page One Economics*, January 2022; <https://research.stlouisfed.org/publications/page1-econ/2022/01/03/gender-and-labor-markets>.

<sup>4</sup> For more on aging and wealth inequality, see the following article: Vandenbroucke, Guillaume and Zhu, Heting. "Aging and Wealth Inequality." Federal Reserve Bank of St. Louis *Economic Synopses*, 2017, No. 2; <https://research.stlouisfed.org/publications/economic-synopses/2017/02/24/aging-and-wealth-inequality/>.

<sup>5</sup> For a contribution to the ongoing debate about the relationship between monetary policy and income inequality, see the following article: Bullard, James. "Income Inequality and Monetary Policy: A Framework with Answers to Three Questions." Presented at the C. Peter McColough Series on International Economics, Council on Foreign Relations, New York, June 26, 2014; [http://research.stlouisfed.org/econ/bullard/pdf/Bullard\\_CFR\\_26June2014\\_Final.pdf](http://research.stlouisfed.org/econ/bullard/pdf/Bullard_CFR_26June2014_Final.pdf).

<sup>6</sup> The following FRED® graph shows the income Gini ratio of all families, reported by the U.S. Census Bureau since 1947: <https://fred.stlouisfed.org/graph?g=MKYg>.

<sup>7</sup> For more on income inequality and the stock market, see the following articles: Bennett, Julie and Chien, YiLi. "The Large Gap in Stock Market Participation Between Black and White Households." Federal Reserve Bank of St. Louis *Economic Synopses*, 2022, No. 7; <https://research.stlouisfed.org/publications/economic-synopses/2022/03/28/the-large-gap-in-stock-market-participation-between-black-and-white-households/>.

Owyang, Michael T. and Shell, Hannah G. "Taking Stock: Income Inequality and the Stock Market." Federal Reserve Bank of St. Louis *Economic Synopses*, 2016, No. 7; <https://research.stlouisfed.org/publications/economic-synopses/2016/04/29/taking-stock-income-inequality-and-the-stock-market/>.

<sup>8</sup> For more about the change in wealth distribution over time, see the following post: Federal Reserve Bank of St. Louis. "Comparing the Assets of the Rich, Poor, and Middle Class." *FRED® Blog*, October 21, 2019; <https://fredblog.stlouisfed.org/2019/10/comparing-the-assets-of-the-rich-poor-and-middle-class/>.

<sup>9</sup> For more on how recessions impact household net worth, see the following article: Mendez-Carbajo, Diego. "How Recessions Have Affected Household Net Worth, 1990-2017: Uneven Experiences by Wealth Quantile." Federal Reserve Bank of St. Louis *Economic Synopses*, 2020, No. 38; <https://research.stlouisfed.org/publications/economic-synopses/2020/08/07/how-recessions-have-affected-household-net-worth-1990-2017-uneven-experiences-by-wealth-quantile>.

<sup>10</sup> For more on the relationship between inequality and economic fluctuations, see the following article: Iyigun, Murat F. and Owen, Ann L. "Income Inequality and Macroeconomic Fluctuations." Board of Governors of the Federal Reserve System *International Finance Discussion Papers*, July 1997; <https://www.federalreserve.gov/econres/ifdp/income-inequality-and-macroeconomic-fluctuations.htm>.

<sup>11</sup> For more on the relationship between income inequality and economic growth, see the following article: Cingano, Federico. "Trends in Income Inequality and its Impact on Economic Growth." Organisation for Economic Co-operation and Development *OECD Social, Employment, and Migration Working Papers*, 2014, No. 163; <https://www.oecd.org/els/soc/trends-in-income-inequality-and-its-impact-on-economic-growth-sem-wp163.pdf>.

<sup>12</sup> For more on the relationship between income inequality and monetary policy, see the following article: Cairo, Isabel and Sim, Jae W. "Income Inequality, Financial Crises, and Monetary Policy." Board of Governors of the Federal Reserve System *Finance and Economics Discussion Series*, July 2018; <https://www.federalreserve.gov/econres/feds/income-inequality-financial-crises-and-monetary-policy.htm>.

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Name \_\_\_\_\_ Period \_\_\_\_\_

Federal Reserve Bank of St. Louis *Page One Economics*®:**“Income and Wealth Inequality”****After reading the article, answer the following questions:**

1. Which of the following is a personal factor influencing individual prosperity?
  - a. Luck
  - b. Gender
  - c. Labor market laws
  - d. Financial regulations
  
2. Which of the following is a social factor influencing individual prosperity?
  - a. Effort
  - b. The tax code
  - c. Ability
  - d. Educational attainment
  
3. Which of the following is not a measure of income or wealth inequality?
  - a. The ratio of the highest incomes to the lowest incomes in a county
  - b. The Gini index in a country
  - c. The average income or wealth in a society
  - d. The share of total assets held by different groups of people
  
4. If the Gini index in a country is equal to 0,
  - a. all individuals in the country have the same educational attainment.
  - b. one individual has all the income and everybody else has none.
  - c. all individuals in the country earn the same income.
  - d. the distribution of income is perfectly unequal.
  
5. Which of the following is a personal financial asset?
  - a. A mortgage loan
  - b. A payday loan
  - c. A credit card balance
  - d. A savings account

6. Which of the following is a personal financial liability?
  - a. A gift of cash
  - b. A student loan
  - c. A checking account
  - d. A life insurance policy
  
7. If the value of one person's assets equals the value of their liabilities,
  - a. they hold no debt.
  - b. their net worth is zero.
  - c. they have no income.
  - d. their net worth is maximized.
  
8. Which of the following is a potential problem derived from increased income and wealth inequality?
  - a. Economic fluctuations become more pronounced.
  - b. Economic growth accelerates beyond control.
  - c. Unemployment is likely to be unsustainably low.
  - d. Consumer price inflation is likely to rise over time.