# CRS Report for Congress 

Real Earnings and the Distribution of Earnings, 1995-2005

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# Real Earnings and the Distribution of Earnings, 1995-2005 

## Summary

Real earnings and the distribution of earnings are indicators of a nation's economic well-being. Changes in the level of real earnings (i.e., actual earnings adjusted for inflation) show how the standard of living has changed over time. Changes in the distribution of earnings show how the relative standards of living of different individuals or families have changed over time.

When studying changes in earnings it is useful to compare years when overall labor market conditions are similar. The civilian unemployment rate was $5.6 \%$ in 1995 and $5.5 \%$ in 2004. (Although annual data are available for 2005, the unemployment rate was $5.1 \%$.) A study of earnings can examine the earnings of all workers (i.e., full-time and part-time, part-year and full-year) or, to try to control for changes in annual hours worked, the earnings of full-time, year-round workers.

From 1995 to 2004, real weekly earnings increased for workers across the earnings distribution. Most of this growth occurred between 1995 and the recession year of 2001. Although men earned more than women, the earnings gap between men and women narrowed from 1995 to 2004.

Among all workers, real earnings increased more at the top and bottom of the distribution than in the middle. Some analysts describe this phenomenon as the "hollowing out" of the middle of the distribution. The hollowing out occurred among men, but not women. Two factors may help explain the hollowing out of the distribution. First, from 1995 to 2004, the average workweek of lower-wage workers increased relative to the average workweek of workers in the middle of the distribution. Second, the average hourly wage of lower-wage workers increased relative to the average hourly wage of workers in the middle of the distribution. In both cases, these increases occurred mainly between 1995 and 2001.

Among full-time, year-round workers at the bottom and middle of the earnings distribution, the growth in earnings was more evenly distributed than at the top of the distribution. Among the highest paid workers, the growth in earnings was approximately double the growth for other workers.

Between 1995 and 2004, earnings equality appears to have peaked in 1999. The distribution of weekly earnings among all workers differed from the distribution among full-time, year-round workers. Among all workers, inequality declined slightly from 1995 to 2004. But, during the period, inequality declined from 1995 to 1999 , before increasing from 1999 to 2004. In contrast, inequality increased among full-time, year-round workers from 1995 to 2004. Inequality increased because the top 5\% of earners received a larger share of total earnings, while workers in the middle of the distribution received a smaller share of total earnings.

Some evidence suggests that earnings inequality declined after the 2001 recession until 2004. This report will be updated periodically.

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# Real Earnings and the Distribution of Earnings, 1995-2005 

## Introduction

Real earnings and the distribution of earnings are indicators of a nation's economic well-being. Changes in the level of real earnings (i.e., actual earnings adjusted for inflation) show how the standard of living has changed over time. Changes in the distribution of earnings show how the relative standards of living of different individuals or families have changed over time.

The level of real earnings is related to several policy issues, including saving and investment, research and development, education, healthcare, and trade. The distribution of earnings is related to issues such as taxation, income redistribution, education and training for lower-skilled workers, the cost of higher education, minimum wage, and immigration.

This report examines the trends in real earnings and the distribution of earnings in the United States from 1995 to $2005 .{ }^{1}$ When studying changes in earnings, it is appropriate to compare years when overall labor market conditions are similar. The civilian unemployment rate was $5.6 \%$ in 1995 and $5.5 \%$ in 2004. ${ }^{2}$ In both years, the unemployment rate was falling after short recessions (in 1990-1991 and 2001, respectively). Therefore, in this report, the analysis focuses on changes in real earnings and the distribution of earnings from 1995 to 2004. But, since data for 2005 are the most recent annual data available, the report also shows earnings for 2005. The report provides separate analyses for men and women.

This report analyzes individual earnings. A study of individual income or of family earnings or income may reach different conclusions. ${ }^{3}$ The report does not review research on the causes of changes in inequality. ${ }^{4}$

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## Definition of Earnings and Unit of Analysis

The results of an analysis of real earnings and the distribution of earnings may be affected by the definition of earnings, whose earnings are studied (e.g., all workers, full-time workers, or prime-age workers), the measure of inequality, and the time period studied.

Earnings are payments that individuals receive for their labor services. Individuals may be paid for a period of time worked (e.g., an hourly wage) or the quantity of goods or services produced (e.g., a piece rate). Individuals may also receive a salary, which is a given amount paid every week or month, or other time period. Earnings may be defined as cash wages or as total compensation. The latter consists of cash wages plus fringe benefits such as employer-provided health insurance, paid vacations, or employer contributions to a retirement plan.

The results of an analysis of individual earnings may differ from a study of individual income or family earnings or income. ${ }^{5}$ Many individuals and families receive cash or in-kind benefits from sources other than work (e.g., interest, dividends, rent, cash welfare assistance, refundable tax credits, or in-kind benefits such as food, housing, or healthcare). Some families have more wage earners than other families.

This report analyzes individual weekly earnings, where earnings consist of cash wages before taxes or other deductions. Individual earnings consist of total annual earnings from all jobs. Weekly earnings are annual earnings divided by the number of weeks worked. The analysis includes wage and salary workers and self-employed workers who are ages 16 or older. Because there are differences in the labor market characteristics of men and women, the earnings of men and women are analyzed separately. ${ }^{6}$ The analysis uses data from the March Current Population Survey (CPS), which is a household survey conducted by the Census Bureau for the Bureau of Labor Statistics (BLS). An explanation of the data and methodology used in this report is provided in the Appendix.

Finally, the report analyzes the earnings of two groups of workers: (1) all workers and (2) persons employed full-time, year-round. Full-time workers are persons who work 35 or more hours a week. Persons who work year-round are persons who work 50 or more weeks a year.

[^1]Analyzing the earnings of full-time, year-round workers helps control for changes in hours worked per week, temporary and seasonal employment, and spells of unemployment. ${ }^{7}$ As the economy expanded after the 1990-1991 recession, the percentage of workers employed full-time increased from $78.8 \%$ in 1995 to $81.0 \%$ in 2000. During the same period, the percentage of workers employed full-time, year-round increased from $63.2 \%$ to $67.5 \%$. After the 2001 recession, these percentages leveled off. ${ }^{8}$ (See Figure 1.)

Figure 1. Percentage of Full-Time Workers and Full-Time, Year-Round Workers, 1995-2005


Source: Calculated by CRS from the March Current Population Survey (CPS).

## Summary of Findings

- From 1995 to 2004, real earnings increased for workers at all earnings levels. Most of the growth occurred between 1995 and the recession year of 2001. Although men earned more than women, the earnings gap narrowed over the 10 -year period.
- Among all workers, real earnings increased more at the top and bottom of the earnings distribution. Some analysts call this phenomenon the "hollowing out" of the middle of the earnings

[^2]
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distribution. The hollowing may have been due, in part, to an increase in the average workweek (i.e., the average number of hours worked) and in the average hourly wage of lower-wage workers relative to workers in the middle of the distribution.

- Among full-time, year-round workers in the bottom and middle of the earnings distribution, the growth in real earnings was more evenly distributed than at the top of the distribution. Among the highest paid workers, the growth in earnings was approximately double the growth for other workers.
- Among all workers, inequality declined slightly from 1995 to 2004. During the period, however, inequality fell from 1995 to 1999 , before increasing from 1999 to 2004.
- Among full-time, year-round workers, inequality increased from 1995 to 2004. Inequality increased because the top $5 \%$ of earners received a larger share of total earnings, while workers in the middle of the distribution received a smaller share of total earnings.
- Some evidence suggests that inequality declined after the recession in 2001 until 2004.


## Policies to Increase Real Earnings or Reduce Inequality

A variety of policy options are available to increase real earnings or reduce earnings inequality. Policies to increase real earnings may differ from policies to reduce inequality. In some cases, the policies may conflict.

## Real Earnings

Productivity. Real earnings rise with increased productivity. Productivity may rise with greater saving (private and public), more capital investment per worker, more investment in human capital (e.g., education, training, and healthcare), and advances in technology. Technological innovation may include improved equipment, the introduction of new products, or improved methods of production, transportation, and communication.

Economic Efficiency. Another way to increase real earnings is to improve what economists call economic efficiency. According to standard economic theory, competitive markets generally result in the most efficient allocation of resources, where resources consist of individuals with different skills, capital goods (e.g., computers, machinery, and buildings), and natural resources. A more efficient allocation of resources generally results in a higher standard of living; that is, greater total output and consumer satisfaction.

Economic efficiency can be improved with a greater exchange of goods (e.g., trade) and a better allocation of labor and capital (e.g., neutral tax policies, migration, or the deregulation of labor, product, or other markets).

## Inequality

Inequality may be reduced using either direct or indirect policies. Direct policies include income transfer programs. Indirect policies consist of programs that improve the income-producing human capital (e.g., education, training, or healthcare) of lower-skilled workers. Policies to reduce inequality may involve a tradeoff, however, with policies to improve economic efficiency. ${ }^{9}$

Indirect Policies. Inequality can be reduced with policies that reduce the relative supply of less-skilled labor, increase the relative supply of skilled labor, or both. Such policies may include increased investment in early childhood education, improved education from kindergarten through high school, greater adult education, and improved access to health care for lower income workers and families. Inequality may also be reduced by increasing the relative supply of college-educated workers; for example, policies that lower the cost of higher education or increase educational assistance to lower income students. Some policies may be more cost effective than others.

[^3]Direct Policies. Income inequality may also be reduced through income redistribution programs. These programs include policies such as progressive taxation - including refundable tax credits like the Earned Income Tax Credit (EITC) or the Child Tax Credit (CTC). They also include in-kind transfers; for example, of food, housing, and healthcare.

Tradeoff with Economic Efficiency. Competitive markets may allocate resources efficiently, but they may result in a distribution of earnings that some policymakers find unacceptable. Thus, policies to reduce inequality may involve a tradeoff with improved economic efficiency. Some economists argue that a higher minimum wage, easier union recognition procedures, or different trade policies may reduce inequality. Other economists argue that these policies may reduce total economic output and may not have a significant impact on inequality. Similarly, some economists argue that progressive taxation and income redistribution programs may harm economic efficiency. For example, progressive taxation may discourage saving and investment. Transfer payments or other forms of nonlabor income may reduce the supply of labor (i.e., they may affect decisions to work or how much to work).

Macroeconomic Policies. The findings in this report indicate that earnings inequality fell in the mid- to late 1990s as the economy expanded and the unemployment rate fell. Therefore, fiscal and monetary policies that reduce and maintain low unemployment may also affect the degree of inequality. Fiscal policy consists of government choices that affect spending and revenue. Monetary policy consists of actions by the Federal Reserve Bank that affect money supply and interest rates.

## The Trend in Real Weekly Earnings

The remainder of this report provides a detailed description of the findings. This section examines the trend in real weekly earnings from 1995 to 2004. Nominal, or actual, earnings are adjusted for inflation using the Consumer Price Index for All Urban Consumers, adjusted to take into account the current methods for measuring price changes (CPI-U-RS). An explanation of this index is provided in the Appendix.

This section shows the trend in real earnings for workers at the $20^{\text {th }}, 40^{\text {th }}, 60^{\text {th }}$, $80^{\text {th }}$, and $95^{\text {th }}$ percentiles. If weekly earnings are arranged from lowest to highest, workers at the $20^{\text {th }}$ percentile earn more than $20 \%$ of workers, workers at the $40^{\text {th }}$ percentile earn more than $40 \%$ of workers, and so on.

## All Workers

The trend in real weekly earnings for all workers from 1995 to 2005 is shown in Table 1. Separately, the table also shows the trend in real weekly earnings for men and women. Figures 2, 3, and 4 provide graphical representations of the findings in Table 1.

From 1995 to 2004, real weekly earnings increased for workers at all percentiles. (See Table 1.) The increases were greater, however, at the lower and upper ends of the distribution than in the middle of the distribution. For example, earnings increased by $14.2 \%$ at the $20^{\text {th }}$ percentile and by $12.8 \%$ at the $95^{\text {th }}$ percentile, but by $9.4 \%$ at the $60^{\text {th }}$ percentile. Some analysts call this phenomenon the "hollowing out" of the middle of the earnings distribution.

Table 1 also shows three differences in the real weekly earnings of men and women. First, at each percentile, the real weekly earnings of men are greater than the earnings of women. For example, in 2004, men at the $20^{\text {th }}$ percentile had real earnings of $\$ 336$ a week, compared to $\$ 219$ for women. At the $60^{\text {th }}$ percentile men and women earned $\$ 835$ and $\$ 596$, respectively. At the $95^{\text {th }}$ percentile, men earned $\$ 2,475$ a week, compared to $\$ 1,550$ a week for women.

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Table 1. The Trend in Real Weekly Wages: All Workers, 1995-2005

| Percentile | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Percent Change, 1995 to 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A. All Workers |  |  |  |  |  |  |  |  |  |  |  |
| $20^{\text {th }}$ Percentile | \$235 | \$238 | \$243 | \$253 | \$264 | \$272 | \$276 | \$271 | \$266 | \$268 | \$277 | 14.2\% |
| $40^{\text {th }}$ Percentile | \$416 | \$429 | \$438 | \$460 | \$451 | \$472 | \$475 | \$480 | \$486 | \$477 | \$481 | 14.7\% |
| $60^{\text {th }}$ Percentile | \$636 | \$643 | \$663 | \$690 | \$677 | \$698 | \$707 | \$726 | \$714 | \$696 | \$700 | 9.4\% |
| $80^{\text {th }}$ Percentile | \$978 | \$977 | \$1,003 | \$1,035 | \$1,081 | \$1,090 | \$1,082 | \$1,086 | \$1,102 | \$1,093 | \$1,100 | 11.7\% |
| $95^{\text {th }}$ Percentile | \$1,761 | \$1,787 | \$1,866 | \$1,886 | \$1,982 | \$1,984 | \$2,098 | \$2,088 | \$2,041 | \$1,987 | \$2,046 | 12.8\% |
|  | B. Men |  |  |  |  |  |  |  |  |  |  |  |
| $20^{\text {th }}$ Percentile | \$294 | \$298 | \$311 | \$324 | \$336 | \$340 | \$334 | \$334 | \$336 | \$336 | \$335 | 14.4\% |
| $40^{\text {th }}$ Percentile | \$514 | \$524 | \$548 | \$575 | \$563 | \$567 | \$573 | \$585 | \$571 | \$576 | \$577 | 12.2\% |
| $60^{\text {th }}$ Percentile | \$783 | \$780 | \$816 | \$828 | \$852 | \$852 | \$848 | \$835 | \$849 | \$835 | \$831 | 6.6\% |
| $80^{\text {th }}$ Percentile | \$1,174 | \$1,191 | \$1,189 | \$1,242 | \$1,284 | \$1,308 | \$1,272 | \$1,303 | \$1,327 | \$1,292 | \$1,300 | 10.0\% |
| $95^{\text {th }}$ Percentile | \$2,094 | \$2,144 | \$2,286 | \$2,300 | \$2,343 | \$2,376 | \$2,439 | \$2,505 | \$2,449 | \$2,475 | \$2,500 | 18.2\% |
|  | C. Women |  |  |  |  |  |  |  |  |  |  |  |
| $20^{\text {th }}$ Percentile | \$186 | \$191 | \$194 | \$207 | \$215 | \$218 | \$221 | \$226 | \$222 | \$219 | \$231 | 17.8\% |
| $40^{\text {th }}$ Percentile | \$322 | \$334 | \$350 | \$359 | \$360 | \$386 | \$386 | \$397 | \$403 | \$397 | \$385 | 23.3\% |
| $60^{\text {th }}$ Percentile | \$489 | \$500 | \$515 | \$552 | \$563 | \$567 | \$573 | \$585 | \$592 | \$596 | \$577 | 21.9\% |
| $80^{\text {th }}$ Percentile | \$758 | \$762 | \$793 | \$805 | \$834 | \$872 | \$848 | \$868 | \$884 | \$878 | \$885 | 15.8\% |
| $95^{\text {th }}$ Percentile | \$1,272 | \$1,310 | \$1,348 | \$1,387 | \$1,464 | \$1,482 | \$1,544 | \$1,538 | \$1,571 | \$1,550 | \$1,538 | $21.9 \%$ |

Source: Calculated by CRS from the March Current Population Survey (CPS).
Note: Weekly earnings are in 2005 dollars.

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Second, from 1995 to 2004, the earnings gap between men and women narrowed. For women at the $20^{\text {th }}$ percentile, real weekly earnings increased by $17.8 \%$, compared to a $14.4 \%$ increase among men. ${ }^{10}$ At the $60^{\text {th }}$ percentile, the real earnings of women increased by $21.9 \%$, compared to $6.6 \%$ for men. At the $95^{\text {th }}$ percentile women's earnings increased by $21.9 \%$, compared to an increase of $18.2 \%$ for men.

Third, the hollowing out of the earnings distribution observed among all workers was due to differences between men and women in the growth of earnings. For women, the growth in earnings was more evenly distributed than among men. The biggest difference between men and woman was at the $60^{\text {th }}$ percentile, where the real earnings of women increased by $21.9 \%$, compared to a $6.6 \%$ increase for men.

Figure 2. Real Weekly Wages, All Workers, 1995-2005


Finally, much of the wage growth from 1995 to 2004 occurred before the recession year of 2001. For example, Table 1 shows that, for workers at the $20^{\text {th }}$ percentile, real weekly earnings increased by $17.4 \%$ from 1995 to 2001, and fell by $2.7 \%$ from 2001 to 2004 . At the $60^{\text {th }}$ percentile, real earnings increased by $11.1 \%$ from 1995 to 2001, but fell by $1.6 \%$ from 2001 to 2004. At the $95^{\text {th }}$ percentile, real wages increased by $19.1 \%$ from 1995 to 2001, then fell by $5.3 \%$ from 2001 to 2004.

[^4]Although the peak years differed, the pattern was similar for men and women - except for women at the $60^{\text {th }}$ percentile, whose real weekly earnings increased steadily throughout the period from 1995 to 2004 (before falling in 2005). (Compare Figures 3 and 4.)

Figure 3. Real Weekly Wages, Men, 1995-2005


Hollowing Out of the Earnings Distribution. Table 1 shows that for all workers, and for men, the earnings at the top and bottom of the distribution increased more than earnings in the middle of the distribution. Therefore, there may have been a hollowing out of the middle of the earnings distribution. This hollowing out may have been due, in part, to two factors. First, from 1995 to 2004, the average workweek of lower-wage workers increased relative to the average workweek of workers in the middle of the earnings distribution. Second, the average hourly wage of lower-wage workers increased relative to the average hourly wage of workers in the middle of the distribution.

From 1995 to 2000, the average workweek of workers in the first quintile increased by 1.2 hours - from 26.5 hours to 27.7 hours, before falling to 27.1 hours in 2004. In the middle three quintiles the average workweek did not change. ${ }^{11}$ It was 40.8 hours in 1995 and 2000 and 40.7 hours in 2004.

From 1995 to 2004, the average real hourly wage of workers in the first quintile increased by $18.3 \%$ (from $\$ 6.21$ to $\$ 7.35$ ), compared to a $12.1 \%$ increase (from $\$ 14.22$ to $\$ 15.93$ ) for workers in the middle three quintiles. Most of the increase

[^5]( $16.4 \%$ ) in the average real hourly wage in the first quintile occurred between 1995 and the recession year of 2001.

Figure 4. Real Weekly Wages, Women, 1995-2005


Thus, to some extent, the hollowing out of the earnings distribution from 1995 to 2004 may have been due to improved economic conditions during the 1990s. As the economy expands and the unemployment rate falls, the average workweek often rises and the relative earnings of lower-wage workers often increase relative to the earnings of other workers. ${ }^{12}$ An increase in the basic federal minimum wage in 1996 and 1997 may also have had an effect on the real hourly wage of lower-wage workers. ${ }^{13}$ On the other hand, following welfare reform in 1996, the employment of single mothers increased significantly. ${ }^{14}$

## Full-Time, Year-Round Workers

Table 2 shows the trend in real weekly earnings for workers who worked fulltime, year-round from 1995 to 2005. Figures 5, 6, and 7 provide graphical representations of the data in Table 2.

[^6]From 1995 to 2004, the growth in real weekly earnings of full-time, year-round workers differed from the growth of real earnings for all workers in two ways. First, for full-time, year-round workers, there was no hollowing out of the earnings distribution. From 1995 to 2004, real earnings at the lower and middle percentiles increased by $6.0 \%$ to $8.3 \%$. (See Table 2.) Second, at the $95^{\text {th }}$ percentile, the increase in real earnings ( $14.6 \%$ ) was approximately double the growth in earnings at the other percentiles.

In other ways, the growth in real earnings of full-time, year-round was similar to the growth in earnings for all workers. At each percentile, men earned more than women. For example, in 2004, men at the $20^{\text {th }}$ percentile earned $\$ 462$ a week, compared to $\$ 380$ for women. At the $60^{\text {th }}$ percentile men had real weekly earnings of $\$ 962$, compared to $\$ 703$ a week for women. At the $95^{\text {th }}$ percentile, men earned $\$ 2,673$ a week, and women earned $\$ 1,673$ a week.

In addition, from 1995 to 2004, the earnings gap narrowed between men and women who worked full-time, year-round. For women at the $20^{\text {th }}$ percentile, real weekly earnings increased by $10.3 \%$, compared to $3.8 \%$ for men. At the $60^{\text {th }}$ percentile, the real earnings of women increased by $10.3 \%$, compared to $8.3 \%$ for men. At the $95^{\text {th }}$ percentile the earnings of women increased by $21.9 \%$, compared to an increase of $14.8 \%$ for men. ${ }^{15}$

Figure 5. Real Weekly Wages, Full-Time, Year-Round Workers, 1995-2005


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Table 2. The Trend in Real Weekly Wages: Full-Time, Year-Round Workers, 1995-2005

| Percentile | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Percent Change, 1995 to 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A. All Full-Time, Year-Round Workers |  |  |  |  |  |  |  |  |  |  |  |
| $20^{\text {th }}$ Percentile | \$382 | \$386 | \$397 | \$414 | \$405 | \$414 | \$424 | \$418 | \$408 | \$410 | \$404 | 7.3\% |
| $40^{\text {th }}$ Percentile | \$563 | \$572 | \$583 | \$598 | \$605 | \$610 | \$615 | \$626 | \$612 | \$596 | \$596 | 6.0\% |
| $60^{\text {th }}$ Percentile | \$778 | \$781 | \$812 | \$805 | \$822 | \$828 | \$848 | \$835 | \$828 | \$827 | \$827 | 6.3\% |
| $80^{\text {th }}$ Percentile | \$1,101 | \$1,141 | \$1,166 | \$1,150 | \$1,194 | \$1,199 | \$1,230 | \$1,253 | \$1,224 | \$1,192 | \$1,231 | 8.3\% |
| $95^{\text {th }}$ Percentile | \$1,908 | \$1,906 | \$1,983 | \$2,070 | \$2,153 | \$2,180 | \$2,121 | \$2,192 | \$2,245 | \$2,186 | \$2,250 | 14.6\% |
|  | B. Men |  |  |  |  |  |  |  |  |  |  |  |
| $20^{\text {th }}$ Percentile | \$440 | \$450 | \$466 | \$460 | \$459 | \$458 | \$467 | \$459 | \$469 | \$457 | \$462 | 3.8\% |
| $40^{\text {th }}$ Percentile | \$636 | \$643 | \$676 | \$690 | \$676 | \$680 | \$679 | \$689 | \$694 | \$696 | \$673 | 9.4\% |
| $60^{\text {th }}$ Percentile | \$881 | \$903 | \$933 | \$920 | \$946 | \$968 | \$954 | \$939 | \$959 | \$954 | \$962 | 8.3\% |
| $80^{\text {th }}$ Percentile | \$1,258 | \$1,263 | \$1,283 | \$1,349 | \$1,352 | \$1,417 | \$1,378 | \$1,461 | \$1,429 | \$1,391 | \$1,394 | 10.6\% |
| $95^{\text {th }}$ Percentile | \$2,251 | \$2,263 | \$2,332 | \$2,300 | \$2,478 | \$2,616 | \$2,545 | \$2,609 | \$2,612 | \$2,584 | \$2,673 | 14.8\% |
|  | C. Women |  |  |  |  |  |  |  |  |  |  |  |
| $20^{\text {th }}$ Percentile | \$342 | \$347 | \$350 | \$345 | \$355 | \$362 | \$382 | \$376 | \$371 | \$378 | \$380 | 10.3\% |
| $40^{\text {th }}$ Percentile | \$487 | \$476 | \$490 | \$506 | \$507 | \$523 | \$530 | \$522 | \$531 | \$517 | \$520 | 6.2\% |
| $60^{\text {th }}$ Percentile | \$631 | \$643 | \$653 | \$690 | \$676 | \$680 | \$700 | \$710 | \$714 | \$696 | \$703 | 10.3\% |
| $80^{\text {th }}$ Percentile | \$881 | \$885 | \$910 | \$920 | \$937 | \$952 | \$957 | \$994 | \$1,020 | \$994 | \$1,000 | 12.8\% |
| $95^{\text {th }}$ Percentile | \$1,370 | \$1,429 | \$1,423 | \$1,495 | \$1,557 | \$1,526 | \$1,591 | \$1,628 | \$1,653 | \$1,669 | \$1,673 | 21.9\% |

Source: Calculated by CRS from the March Current Population Survey (CPS).
Note: Weekly earnings are in 2005 dollars.

Finally, like the real earnings of all workers, much of the gain in earnings of full-time, year-round workers occurred between 1995 and the recession in 2001. For example, for workers at the $20^{\text {th }}$ percentile, real weekly wages increased by $11.1 \%$ from 1995 to 2001, and fell by $3.4 \%$ from 2001 to 2004. At the $60^{\text {th }}$ percentile, real wages increased by $9.0 \%$ from 1995 to 2001, but fell by $2.5 \%$ from 2001 to 2004. At the $95^{\text {th }}$ percentile, however, real earnings increased steadily from 1995 to 2004. ${ }^{16}$ Although the peak years differed, the pattern was similar for men and women. For men, there was some leveling off in the growth in earnings at the $95^{\text {th }}$ percentile. (Compare Figures 6 and 7.)

Figure 6. Real Weekly Wages, Full-Time, Year-Round Workers, Men, 1995-2005


Source: Calculated by CRS from the March Current Population Survey (CPS).

[^8]Figure 7. Real Weekly Wages, Full-Time, Year-Round Workers, Women, 1995-2005


Source: Calculated by CRS from the March Current Population Survey (CPS).

## The Distribution of Weekly Earnings

This section examines the trend in the distribution of weekly earnings from 1995 to 2004. Different measures of inequality provide different information and can lead to different conclusions about the trend in the distribution of earnings. Most measures identify whether inequality differs between groups or has changed over time. But some measures may not reveal how inequality differs between groups or has changed. This report uses two measures of inequality: the Gini coefficient and the share of total weekly earnings received by each quintile (or fifth) of workers. Together, the two measures indicate whether the distribution of earnings changed and, if so, how it changed.

## Gini Coefficient

The Gini coefficient is a measure of earnings equality that ranges from 0 to 1 . If the earnings of all individuals are the same, the Gini coefficient is equal to 0 , representing complete equality. If one worker receives all the earnings and all other workers receive zero earnings, the Gini coefficient is equal to 1 . Thus, a larger coefficient indicates a greater degree of inequality. More information on the Gini coefficient is provided in the Appendix.

Table 3 shows Gini coefficients for all workers and for full-time, year-round workers for the period 1995 to 2005. The results in Table 3 are shown graphically in Figures 8 and 9.

All Workers. The top panel of Table 3, and Figure 8, show that, for all workers, from 1995 to 2004 inequality did not change significantly; that is, the decline in the Gini coefficient (from 0.474 to 0.467 ) was not statistically significant. ${ }^{17}$ However, inequality declined from 1995 to 1999, and then increased from 1999 to 2004. The pattern was the same for men and women, except that for women the decline in inequality occurred from 1995 to 2000. Inequality among women increased after 2000, but declined again after the recession in 2001.

Full-Time, Year-Round Workers. Table 3 shows that the distribution of earnings among full-time, year-round workers was more equal than among all workers. Unlike the distribution of earnings among all workers, however, the bottom panel of Table 3, and Figure 9, shows that, for full-time, year-round workers, inequality increased from 1995 to 2004. For men, inequality declined from 1995 to 1999, and increased from 1999 to 2004. For women, inequality generally increased throughout the period from 1995 to 2004.

[^9]Table 3. Gini Coefficients for All Workers and for Full-Time, Year-Round Workers, 1995-2005

| Year | Total | Men | Women |
| :---: | :---: | :---: | :---: |
| A. All Workers |  |  |  |
| 1995 | 0.474 | 0.468 | 0.444 |
| 1996 | 0.464 | 0.458 | 0.435 |
| 1997 | 0.466 | 0.460 | 0.436 |
| 1998 | 0.466 | 0.458 | 0.444 |
| 1999 | 0.453 | 0.444 | 0.428 |
| 2000 | 0.467 | 0.469 | 0.425 |
| 2001 | 0.471 | 0.466 | 0.447 |
| 2002 | 0.472 | 0.475 | 0.433 |
| 2003 | 0.468 | 0.464 | 0.446 |
| 2004 | 0.467 | 0.466 | 0.437 |
| 2005 | 0.475 | 0.479 | 0.439 |

B. Full-Time, Year-Round Workers

| 1995 | 0.387 | 0.396 | 0.331 |
| :--- | :--- | :--- | :--- |
| 1996 | 0.393 | 0.400 | 0.342 |
| 1997 | 0.391 | 0.399 | 0.339 |
| 1998 | 0.390 | 0.397 | 0.343 |
| 1999 | 0.380 | 0.384 | 0.337 |
| 2000 | 0.402 | 0.415 | 0.339 |
| 2001 | 0.406 | 0.415 | 0.359 |
| 2002 | 0.402 | 0.414 | 0.349 |
| 2003 | 0.398 | 0.407 | 0.356 |
| 2004 | 0.402 | 0.414 | 0.354 |
| 2005 | 0.407 | 0.421 | 0.355 |

Source: Calculated by CRS from the March Current Population Survey (CPS).

Figure 8. Gini Coefficient for All Workers, 1995-2005


Source: Calculated by CRS from the March Current Population Survey (CPS).

Figure 9. Gini Coefficient for Full-Time, Year-Round Workers, 1995-2005


Source: Calculated by CRS from the March Current Population Survey (CPS).

## The Trend in the Share of Total Earnings by Quintile

The Gini coefficient shows whether the distribution of earnings has become either more or less equal. But it does not show where the distribution may have changed. To examine where the earnings distribution may have changed, this section shows the share of total weekly earnings received by each quintile (or fifth) of workers.

Tables 4 and 5 show the share of total weekly earnings received by each quintile of workers from 1995 to 2005. In this report, the top quintile of earners is separated into two groups: the top $5 \%$ of earners and the top $81 \%$ to $95 \%$ of earners. The Appendix provides more information on this measure of equality.

All Workers. Among all workers, inequality declined from 1995 to 2004. (See Table 4.) Inequality declined because the share of total weekly earnings received by the lowest quintile of workers increased by $5.8 \%$, while the share of earnings received by the top $5 \%$ of earners declined by $2.9 \%$. However, the improvement in inequality occurred mainly between 1995 and 1999. Inequality increased from 1999 to 2004. ${ }^{18}$ Between 1999 and 2004, however, the increase in inequality may have occurred mainly between 1999 and the recession in 2001. For example, from 2001 to 2004, the share of earnings received by the top $5 \%$ of earners decreased by $3.6 \%{ }^{19}$

From 1995 to 2004, there were some differences in the distribution of earnings of men and women in the middle of the distribution. The share of earnings received by men in the middle three quintiles increased from 1995 to 1999, then decreased from 1999 to 2004. Among women there was no change over the 10 -year period in the share of earnings received by the middle three quintiles. For both men and women, earnings among the top 5\% of earnings decreased from 1995 to 1999, then increased from 1999 to 2004.

Full-Time, Year-Round Workers. Like the Gini coefficient, the calculations in Table 5 show that, from 1995 to 2004 inequality increased among full-time, year-round workers. Inequality increased because the top $5 \%$ of earners received a greater share of earnings, while the share of earnings received by the third and fourth quintiles decreased. The share of earnings received by the lowest and second quintiles did not change. The increase in inequality occurred mainly from 1999 to 2004. Again, most of the increase may have occurred between 1999 and the

[^10]recession of 2001. From 2001 to 2004, the share of earnings received by the top 5\% of full-time, year-round earners decreased by $3.9 \% .^{20}$

As was the case with all workers, from 1995 to 2004, there were some differences in the distribution of earnings of men and women in the middle of the distribution. The share of earnings received by full-time, year-round men in the middle three quintiles declined from 1999 to 2004. (The changes from 1995 to 1999 were not statistically significant.) Among women there was no change in the share of earnings received by the middle three quintiles. For both men and women, there was no change in the shares of earnings received by the top $5 \%$ of earners from 1995 to 1999 , but their shares increased from 1999 to 2004.

[^11]CRS-21
Table 4. Share of Total Weekly Earnings, All Workers, 1995-2005

| Earnings Group | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Percent Change, 1995 to 1999 | Percent Change, 1999 to 2004 | Percent Change, 1995 to 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A. All Workers |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest Quintile | 3.59 | 3.76 | 3.73 | 3.79 | 3.87 | 3.86 | 3.83 | 3.83 | 3.79 | 3.80 | 3.80 | 7.8\% | -1.8\% | $5.8 \%$ |
| Second Quintile | 8.89 | 9.09 | 9.09 | 9.12 | 9.31 | 9.17 | 9.08 | 9.08 | 9.12 | 9.17 | 9.01 | 4.7\% | -1.5\% | 3.1\% |
| Third Quintile | 14.40 | 14.64 | 14.61 | 14.59 | 14.89 | 14.43 | 14.32 | 14.28 | 14.38 | 14.44 | 14.12 | 3.4\% | -3.0\% | 0.3\% |
| Fourth Quintile | 21.94 | 22.11 | 21.93 | 21.79 | 22.45 | 21.61 | 21.37 | 21.37 | 21.60 | 21.67 | 21.25 | 2.3\% | -3.5\% | -1.2\% |
| 81\%-95\% | 26.22 | 26.57 | 26.36 | 26.27 | 27.34 | 26.19 | 26.27 | 26.31 | 26.69 | 26.71 | 26.32 | 4.3\% | -2.3\% | $1.9 \%$ |
| Top 5\% | 24.95 | 23.82 | 24.27 | 24.45 | 22.15 | 24.74 | 25.13 | 25.13 | 24.42 | 24.22 | 25.49 | -11.2\% | 9.3\% | -2.9\% |
|  | B. Men |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest Quintile | 3.82 | 3.93 | 3.96 | 3.98 | 4.06 | 4.01 | 4.00 | 3.95 | 4.01 | 3.98 | 3.92 | 6.3\% | -2.0\% | 4.2\% |
| Second Quintile | 9.18 | 9.41 | 9.42 | 9.51 | 9.66 | 9.24 | 9.33 | 9.10 | 9.26 | 9.25 | 9.00 | 5.2\% | -4.2\% | 0.8\% |
| Third Quintile | 14.55 | 14.80 | 14.70 | 14.75 | 15.12 | 14.24 | 14.32 | 14.07 | 14.39 | 14.33 | 13.89 | 3.9\% | -5.2\% | -1.5\% |
| Fourth Quintile | 21.60 | 21.85 | 21.53 | 21.59 | 22.30 | 21.13 | 21.13 | 20.88 | 21.40 | 21.27 | 20.77 | 3.2\% | -4.6\% | -1.5\% |
| 81\%-95\% | 25.32 | 25.72 | 25.68 | 25.87 | 26.87 | 25.35 | 25.83 | 25.80 | 26.35 | 26.20 | 25.81 | 6.1\% | -2.5\% | 3.5\% |
| Top 5\% | 25.54 | 24.29 | 24.71 | 24.30 | 21.99 | 26.02 | 25.38 | 26.20 | 24.60 | 24.97 | 26.62 | -13.9\% | 13.6\% | -2.2\% |
|  | C. Women |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest Quintile | 3.86 | 4.06 | 4.00 | 4.07 | 4.16 | 4.21 | 4.08 | 4.12 | 3.97 | 4.03 | 4.10 | 7.8\% | -3.1\% | $4.4 \%$ |
| Second Quintile | 9.56 | 9.74 | 9.73 | 9.62 | 9.89 | 9.99 | 9.61 | 9.89 | 9.61 | 9.75 | 9.74 | 3.5\% | -1.4\% | 2.0\% |
| Third Quintile | 15.32 | 15.49 | 15.49 | 15.23 | 15.61 | 15.80 | 15.10 | 15.54 | 15.21 | 15.47 | 15.29 | 1.9\% | -0.9\% | 1.0\% |
| Fourth Quintile | 23.01 | 23.07 | 23.14 | 22.61 | 23.21 | 23.14 | 22.26 | 22.88 | 22.44 | 22.82 | 22.62 | 0.9\% | -1.7\% | -0.8\% |
| 81\%-95\% | 26.89 | 26.99 | 26.87 | 26.37 | 27.29 | 26.96 | 26.23 | 26.70 | 26.52 | 27.09 | 26.88 | 1.5\% | -0.7\% | 0.7\% |
| Top 5\% | 21.36 | 20.66 | 20.78 | 22.11 | 19.84 | 19.90 | 22.72 | 20.86 | 22.25 | 20.84 | 21.37 | -7.1\% | 5.0\% | -2.4\% |

Source: Calculated by CRS from the March Current Population Survey (CPS). Details may not add to totals because of rounding.

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Table 5. Share of Total Weekly Earnings, Full, Time, Year-Round Workers, 1995-2005

| Earnings Group | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | Percent Change, 1995 to 1999 | Percent Change, 1999 to 2004 | Percent <br> Change, <br> 1995 to 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A. All Full-Time, Year-Round Workers |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest Quintile | 6.27 | 6.25 | 6.28 | 6.27 | 6.31 | 6.14 | 6.15 | 6.21 | 6.20 | 6.11 | 6.07 | 0.6\% | -3.2\% | -2.6\% |
| Second Quintile | 11.10 | 11.09 | 11.13 | 11.12 | 11.20 | 10.79 | 10.73 | 10.76 | 10.85 | 10.80 | 10.62 | 0.9\% | -3.6\% | -2.7\% |
| Third Quintile | 15.59 | 15.35 | 15.41 | 15.47 | 15.74 | 15.07 | 14.93 | 15.04 | 15.12 | 15.04 | 14.92 | 1.0\% | -4.4\% | -3.5\% |
| Fourth Quintile | 21.78 | 21.42 | 21.42 | 21.47 | 22.00 | 21.20 | 20.90 | 21.07 | 21.30 | 21.23 | 21.14 | 1.0\% | -3.5\% | -2.5\% |
| 81\%-95\% | 24.61 | 24.39 | 24.41 | 24.60 | 25.49 | 24.64 | 24.62 | 24.95 | 25.18 | 25.03 | 25.10 | 3.6\% | -1.8\% | 1.7\% |
| Top 5\% | 20.65 | 21.50 | 21.35 | 21.06 | 19.26 | 22.16 | 22.67 | 21.96 | 21.36 | 21.79 | 22.14 | -6.7\% | 13.1\% | 5.5\% |
|  | B. Men |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest Quintile | 6.06 | 6.02 | 6.09 | 6.06 | 6.17 | 5.88 | 5.90 | 5.89 | 5.95 | 5.82 | 5.76 | 1.8\% | -5.7\% | -4.0\% |
| Second Quintile | 10.96 | 10.94 | 10.97 | 11.02 | 11.18 | 10.48 | 10.52 | 10.45 | 10.57 | 10.48 | 10.30 | 2.0\% | -6.3\% | -4.4\% |
| Third Quintile | 15.50 | 15.33 | 15.30 | 15.38 | 15.69 | 14.77 | 14.73 | 14.76 | 15.03 | 14.86 | 14.65 | 1.2\% | -5.3\% | -4.1\% |
| Fourth Quintile | 21.50 | 21.20 | 21.09 | 21.27 | 21.97 | 21.00 | 20.81 | 21.02 | 21.26 | 21.03 | 20.86 | 2.2\% | -4.3\% | -2.2\% |
| 81\%-95\% | 24.30 | 24.17 | 24.34 | 24.68 | 25.37 | 24.35 | 24.54 | 25.00 | 25.35 | 25.08 | 25.05 | 4.4\% | -1.1\% | 3.2\% |
| Top 5\% | 21.69 | 22.34 | 22.21 | 21.59 | 19.61 | 23.51 | 23.49 | 22.87 | 21.84 | 22.74 | 23.38 | -9.6\% | 16.0\% | 4.8\% |
|  | C. Women |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest Quintile | 7.23 | 7.26 | 7.27 | 7.24 | 7.13 | 7.14 | 6.97 | 7.14 | 6.91 | 6.93 | 6.96 | -1.4\% | -2.8\% | -4.1\% |
| Second Quintile | 12.51 | 12.32 | 12.33 | 12.23 | 12.33 | 12.38 | 11.93 | 12.08 | 12.00 | 12.03 | 11.84 | -1.4\% | -2.4\% | -3.8\% |
| Third Quintile | 16.97 | 16.51 | 16.66 | 16.62 | 16.89 | 16.72 | 16.14 | 16.34 | 16.24 | 16.29 | 16.27 | -0.5\% | -3.6\% | -4.0\% |
| Fourth Quintile | 22.83 | 22.20 | 22.40 | 22.20 | 22.67 | 22.45 | 21.75 | 22.10 | 21.98 | 22.11 | 22.24 | -0.7\% | -2.5\% | -3.2\% |
| 81\%-95\% | 24.60 | 24.17 | 24.28 | 24.26 | 24.83 | 24.61 | 24.16 | 24.41 | 24.45 | 24.72 | 24.94 | 0.9\% | -0.4\% | 0.5\% |
| Top 5\% | 15.86 | 17.55 | 17.06 | 17.44 | 16.15 | 16.70 | 19.05 | 17.92 | 18.42 | 17.92 | 17.75 | 1.8\% | 11.0\% | 13.0\% |

Source: Calculated by CRS from the March Current Population Survey (CPS). Details may not add to totals because of rounding.

## Appendix

This appendix provides a brief explanation of the measures of inequality used in this report. It also describes the data and methodology used in the report.

## Measures of Inequality

This report uses two measures of inequality: the Gini coefficient and the share of earnings received by each quintile of workers.

Gini Coefficient. The Gini coefficient is calculated using the following formula:

$$
\mathrm{G}=1.0-\sum_{\mathrm{i}=1}^{11} \mathrm{f}_{\mathrm{i}}\left(\mathrm{p}_{\mathrm{i}}+\mathrm{p}_{\mathrm{i}-1}\right)
$$

where $f_{i}$ is the proportion of earners in interval $i$ and $p_{i}$ is the proportion of total earnings received by earners in interval $i$ and all lower intervals. ${ }^{21}$

Figure 10. Illustration of Lorenz Curves and Gini Coefficients for Two Groups of Workers


Source: Calculated by CRS from the March Current Population Survey (CPS).

[^12]Graphically, the Gini coefficient is illustrated in Figure 10. The horizontal axis shows the percent of all earners; the vertical axis shows the percent of earnings received by all earners. The diagonal line represents total earnings equality. For example, on the diagonal line, $25 \%$ of earners receive $25 \%$ of earnings, $50 \%$ of earners receive $50 \%$ of earnings, and so on.

In Figure 10 the two dotted lines - called Lorenz curves - illustrate two possible earnings distributions. The Gini coefficient is the ratio of (a) the area between the diagonal line and the Lorenz curve and (b) the total area under the diagonal line. Figure 10 illustrates the distribution of earnings for two groups of workers (or the same group of workers at different times). The distribution of earnings for the first group (where the Gini coefficient is .163) is more equal than the distribution of earnings for the second group (where the Gini coefficient is .289). For the first group of workers, the bottom $60 \%$ of workers receive half of all earnings; the top $40 \%$ receive the other half of earnings. In the second group, the bottom $70 \%$ of earners receive half of all earnings; the top $30 \%$ receive the other half.

Share of Total Earnings by Quintile. To calculate the share of earnings received by each quintile, workers are first ranked from lowest to highest paid. Workers are then divided into five equal-size groups, or quintiles. The total earnings received by each quintile is divided by the total earnings of all workers. If everyone's earnings were the same, each quintile would receive one-fifth of all earnings. The greater the share of earnings received by the highest paid workers (i.e., the top quintile) or the smaller the share of earnings received by the lowest paid workers (i.e., the bottom quintile) the greater the degree of inequality. In this report, the top quintile of earners is separated into two groups: the top $5 \%$ of earners and the top $81 \%$ to $95 \%$ of earners.

## Data and Methodology

The analysis in this report uses data from the March Current Population Survey (CPS). The CPS is a household survey conducted by the U.S. Bureau of the Census for the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor. The monthly CPS is the main source of labor force data for the nation, including estimates of the monthly unemployment rate. The CPS collects a wide range of demographic, social, and labor market information.

The CPS sample is representative of the civilian noninstitutional population; it does not include persons on active duty in the Armed Forces or persons in institutions such as nursing homes or correctional facilities. The survey includes civilian noninstitutional persons living in group quarters. (Group quarters are living quarters where residents share common facilities; examples include group homes, fraternities, or sororities. $)^{22}$

Each March, in what is called the Annual Social and Economic Supplement (ASEC), the CPS asks questions about earnings for the previous year. Thus, in

[^13]March 2006, the survey collected information on annual earnings for 2005. The March CPS collects earnings information for both wage and salary workers and selfemployed persons. Some persons may have earnings from both sources. When reporting their annual earnings some self-employed persons may include losses on their investments. This report uses positive earnings only. The March 2006 supplement interviewed about 76,700 households. ${ }^{23}$

In Tables 1 and 2, data for consecutive years should be compared with caution. When answering the question in the March CPS about annual earnings, some respondents may round off their earnings. For example, many people may report that they earn $\$ 50,000$ a year, when they earn either more or less than $\$ 50,000$. From one year to the next, this rounding may affect the observed trend in weekly earnings.

CPI-U-RS. In this report, nominal weekly wages were adjusted for inflation using the CPI-U-RS (the Consumer Price Index for all Urban Consumers Research Series).

Over the years, BLS has introduced a number of changes in the way it measures changes in prices. Each improvement is intended to make the CPI-U more accurate. But the historical CPI-U is not adjusted to take the improvements into account. The CPI-U-RS adjusts the historical CPI-U (starting in 1978) to take into account most of the improvements made in measuring price changes. The CPI-U-RS shows what the CPI-U would have been if current methods had been used to measure inflation. Compared to the CPI-U, the CPI-U-RS provides a more consistent measure of inflation. ${ }^{24}$ From 1995 to 2005, the CPI-U-RS increased by $27.2 \%$. The CPI-U increased by $28.1 \%$.

Topcoded Earnings. In the March CPS, if a person's annual earnings exceed a certain amount, the individual's actual earnings are not reported. Instead, BLS reports the average earnings of those persons whose earnings are above the topcoded amount. For 2005 (i.e., the March 2006 CPS), annual earnings from a person's longest job were topcoded at $\$ 200,000$, or $\$ 3,846.15$ a week. BLS averages earnings for several groups of workers, based on gender, race, Hispanic origin, and work experience. For example, BLS calculates average earnings for all white, nonHispanic men who work full-time, year-round and whose earnings for their longest held job were over $\$ 200,000$. To arrive at total annual earnings, this amount is added to any earnings from other employment (e.g., a person may have held more than one job during the year).

For the period 1995 to 2005, workers with topcoded annual earnings from their longest job generally accounted for less than $1 \%$ of workers. Therefore, in this report, topcoded earnings did not affect the estimates of real weekly earnings or the

[^14]share of total weekly earnings by quintile. Because of topcoding, the Gini coefficients shown in this report may understate the degree of inequality.

Confidence Levels. Estimates based on survey responses from a sample of households have two kinds of error: nonsampling and sampling. Examples of nonsampling error include information that is misreported and errors made in processing collected information. Sampling error occurs because a sample, and not the entire population, of households is surveyed. The difference between an estimate based on a sample of households and the actual population value is known as sampling error. When using sample data, researchers typically construct confidence intervals around population estimates. Confidence intervals provide information about the accuracy of estimated values. With a $95 \%$ confidence interval and repeated samples from a population, $95 \%$ of intervals will include the average estimate of a population characteristic.


[^0]:    ${ }^{1}$ In addition to real earnings and the distribution of earnings, economists also study earnings mobility, or how the earnings of a given sample of workers change over time. A study of earnings mobility may provide different results than the findings in this report.
    ${ }^{2}$ In 2005, the civilian unemployment rate was $5.1 \%$, below the levels of 1995 or 2004.
    ${ }^{3}$ Earnings account for the largest share of individual and family income. In 2005, annual earnings accounted for $82.1 \%$ of total income for individuals 16 and over and $81.9 \%$ of total family income.
    ${ }^{4}$ A hearing before the House Committee on Ways and Means included some discussion of the causes of changes in equality. U.S. Congress, House, Committee on Ways and Means, Hearing on the Economy, Jan. 23, 2007, available at [http://waysandmeans.house.gov].

[^1]:    ${ }^{5}$ For analyses of the distribution of household income, see CRS Report RS20811, The Distribution of Income, by Brian W. Cashell; CRS Report RL32639, Inequality in the Distribution of Income: Trends and International Comparisons, by Brian W. Cashell; and U.S. Department of Commerce, Bureau of the Census, Income, Poverty, and Health Insurance Coverage in the United States: 2003, P 60-226, Aug. 2004, pp. 27-33.
    ${ }^{6}$ In general, women tend to work fewer hours per week than men, spend less time in the labor force, and enter and leave the labor force more often than men. The distribution of women by occupation and industry also differs from men. See CRS Report 98-278 E, The Gender Wage Gap and Pay Equity: Is Comparable Worth the Next Step? by Linda Levine.

[^2]:    ${ }^{7}$ In 1995, full-time, year-round workers worked an average of 43.8 hours a week. In 2001 it was 43.4 hours, where it stayed through 2004.
    ${ }^{8}$ For a discussion of the economic recovery following the 2001 recession, see CRS Report RL32047, The 'Jobless Recovery’ From the 2001 Recession: A Comparison to Earlier Recoveries and Possible Explanations, by Marc Labonte and Linda Levine.

[^3]:    ${ }^{9}$ The literature on the causes of inequality is extensive. These causes are reviewed in Frank Levy and Richard J. Murnane, "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations," Journal of Economic Literature, v. 30, Sept. 1992, pp. 1354-1371; George E. Johnson, "Changes in Earnings Inequality: The Role of Demand Shifts," Journal of Economic Perspectives, v. 11, spring 1997, pp. 41-54; Robert H. Topel,"Factor Proportions and Relative Wages: The Supply-Side Determinants of Wage Inequality," Journal of Economic Perspectives, v. 11, spring 1997, pp. 55-74; Nicole M. Fortin and Thomas Lemieux, "Institutional Changes and Rising Wage Inequality: Is There a Linkage?" Journal of Economic Perspectives, v. 11, spring 1997, pp. 75-96; Yolanda K. Kodrzycki, "Labor Markets and Earnings Inequality: A Status Report," New England Economic Review, May/June 1996, pp. 11-24; CRS Report 98-441 E, Is Globalization the Force Behind Recent Poor U.S. Wage Performance? An Analysis, by Craig K. Elwell; and Sheldon Danziger and Peter Gottschalk, America Unequal (Cambridge, MA: Harvard University Press, 1995), pp. 127-148. For a discussion of the effect of changes in the real value of the minimum wage on the distribution of earnings, see David S. Lee,"Wage Inequality in the United States During the 1980s: Rising Dispersion or Falling Minimum Wage?" The Quarterly Journal of Economics, v. 114, Aug. 1999, pp. 977-1023.

[^4]:    ${ }^{10}$ In Tables 1 and 2 weekly earnings are rounded to the nearest dollar. The percentage changes shown were calculated using unrounded weekly earnings. Therefore, calculations based on rounded earnings may be different from those shown.

[^5]:    ${ }^{11}$ Although there is no official definition of "middle class," some analysts define the middle class as the middle three quintiles of earners.

[^6]:    ${ }^{12}$ To increase output, employers may hire more workers, but they may also ask current workers to work more hours.
    ${ }^{13}$ The basic federal minimum wage was raised from $\$ 4.25$ to $\$ 4.75$ an hour in October 1996 and to $\$ 5.15$ an hour in September 1997.
    ${ }^{14}$ Among other things, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193) set a time limit on cash welfare assistance and imposed greater work requirements on welfare recipients. CRS Report RL32760, Temporary Assistance for Needy Families (TANF) Block Grant: Responses to Frequently Asked Questions, by Gene Falk.

[^7]:    ${ }^{15}$ At the $40^{\text {th }}$ percentile, the real wages of men increased more than the wages of women; $9.4 \%$ and $6.2 \%$, respectively.

[^8]:    ${ }^{16}$ Table 2 shows that, at the $95^{\text {th }}$ percentile, real wages increased steadily from 1995 to 2003, before falling in 2004. But this decrease may have been a function of survey respondents rounding off their earnings. In both 2003 and 2004, nominal annual earnings (i.e., unadjusted for inflation) at the $95^{\text {th }}$ percentile were $\$ 110,000$.

[^9]:    ${ }^{17}$ Unless stated otherwise, the comparisons discussed in this section of the report are significant at either the $95 \%$ or $90 \%$ confidence levels. See Appendix for an explanation of confidence levels.

[^10]:    ${ }^{18}$ For example, the earnings shares received by the two lowest quintiles increased from 1995 to 1999 , but were unchanged from 1999 to 2004. The shares of earnings received by the third and fourth quintiles, as well as by the top $81 \%$ to $95 \%$ of earners, increased from 1995 to 1999 , then declined from 1999 to 2004. The opposite occurred among the top $5 \%$ of earners. Their share of earnings declined from 1995 to 1999, then increased from 1999 to 2004.
    ${ }^{19}$ From 2001 to 2004, the changes in the shares of earnings received by the other earnings groups were not statistically significant.

[^11]:    ${ }^{20}$ From 2001 to 2004, the changes in the shares of earnings received by the other earnings groups were not statistically significant.

[^12]:    ${ }^{21}$ U.S. Bureau of the Census, Studies in the Distribution of Income, Series P60-183, 1992, p. 60.

[^13]:    ${ }^{22}$ U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey: Design and Methodology, Technical Paper 63RV, Mar. 2002, pp. 1-1, 3-7 to 3-9, 5-4.

[^14]:    ${ }^{23}$ U.S. Census Bureau, Current Population Survey, 2006 Annual Social and Economic (ASEC) Supplement, available at [http://www.census.gov/apsd/techdoc/cps/cpsmar06.pdf], p. 2-1.
    ${ }^{24}$ Stewart, Kenneth J, and Stephen B. Reed, "Consumer Price Index Research Series Using Current Methods, 1978-98," Monthly Labor Review, vol. 122, June 1999, p. 29.

