

# Job Markets

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# A Quiz: Fill In the ??

In ?, President ? formed a "Blue-Ribbon National Commission on Technology, Automation, and Economic Progress" to confront the problem that productivity was rising so fast it might outstrip the demand for labor.

The commission concluded that technology disrupts the labor market but does not ultimately reduce employment. It considered technological dislocations as severe enough to recommend:

A guaranteed minimum income for each family

Making government an employer of last resort for hard-core jobless

Providing two years of free education in community or vocational colleges

Establishing a fully-administered federal employment service

Area economic development sponsored by regional Federal Reserve Banks

# Answers to the Quiz

In 1964, President Lyndon Johnson formed a "Blue-Ribbon National Commission on Technology, Automation, and Economic Progress" to confront the problem that productivity was rising so fast it might outstrip the demand for labor.

The commission concluded that technology disrupts the labor market but does not ultimately reduce employment. It considered technological dislocations as severe enough to recommend:

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Regional Federal Reserve Bank sponsorships of area economic development

# Why Is the Labor Market Different?

Work defines us

Is “life of leisure” what we seek?

Labor income alone determines quality of life for most

Imbalance between worker and employer

Limited information on own abilities and market needs

Significant “path dependence”

Labor market replete with frictions

Search and matching theory

# Simplistic View of Labor Market

Wage rate adjusts to balance labor supply and demand

All who wish to work at the market-clearing wage will find jobs

Workers unemployed because they are unwilling to work at the market-clearing wage

Unemployment is voluntary

If unemployment arises, a decline in wages can eliminate it

# Northwestern's Pioneer of Search and Matching Theory



Dale T. Mortensen, 1939-2014  
Nobel Laureate in Economics, 2010

# Search and Matching Theory

Workers and employers must find one another

They have incomplete and asymmetric information

Workers explore market for offers

Must decide when to stop looking and accept one

Employers explore market for potential workers

Must decide when to stop looking and hire one

Unemployment reflects frictions in finding matches

How can frictions be reduced?

Improve flows of information

Improve worker mobility

Reduce employer costs of hiring and firing

Reduce unemployment benefits

Reduce mismatch of workers skills, employers needs

# Where the Jobs Are (and Were)

Distribution of Full-time and Part-time Employees by Industry (%)

	1929	1973	2015
Agriculture	9	2	1
Mining	3	1	1
Construction	4	5	5
Manufacturing	28	24	9
Transport & utilities	11	6	5
Wholesale trade	5	5	4
Retail trade	12	15	18
FIRE	4	5	6
Services	15	18	35
Federal government	3	7	3
State-local government	7	13	13



# Where the Jobs Are (and Were)

Change in Full-time and Part-time Employees, 1998-2015, thousands

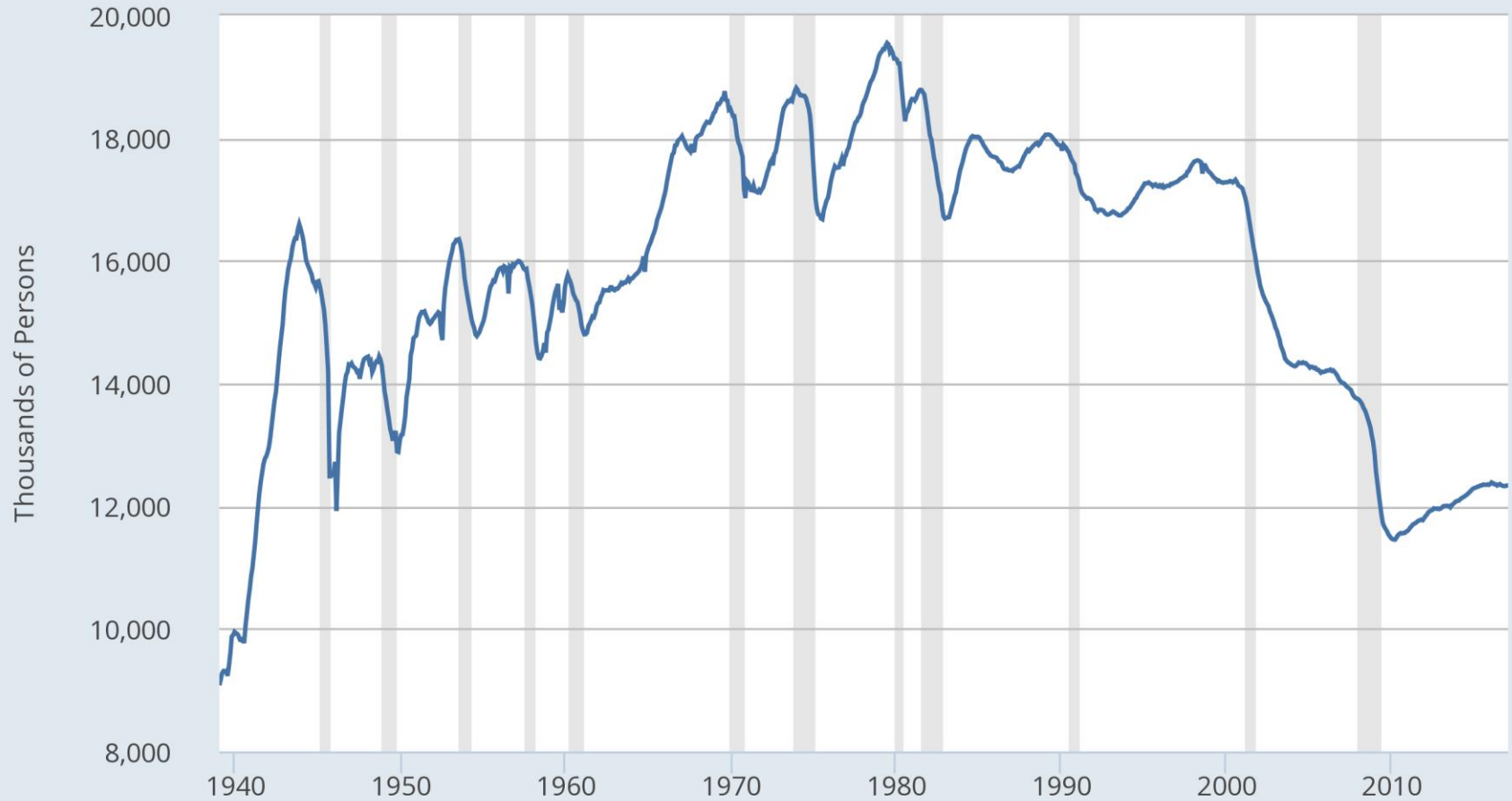
Total	15,040
Health care	6,193
Accommodation and food services	3,428
Professional and technical services	2,502
State-local government	2,245
Administrative and waste management	1,541
Educational services	1,210
Retail trade	979
Transport and warehousing	600
Arts, entertainment, rec	549
Other services	525
Management of companies	502
Finance and insurance	448
Construction	371
Wholesale trade	348
Mining	178
Real estate	123
Agriculture	78
Utilities	-53
Federal government	-156
Information	-469
Manufacturing	-5,272

Source: Bureau of Economic Analysis, National Income and Product Accounts

# Manufacturing Employment Held Up Well Until About 2000

**FRED** 

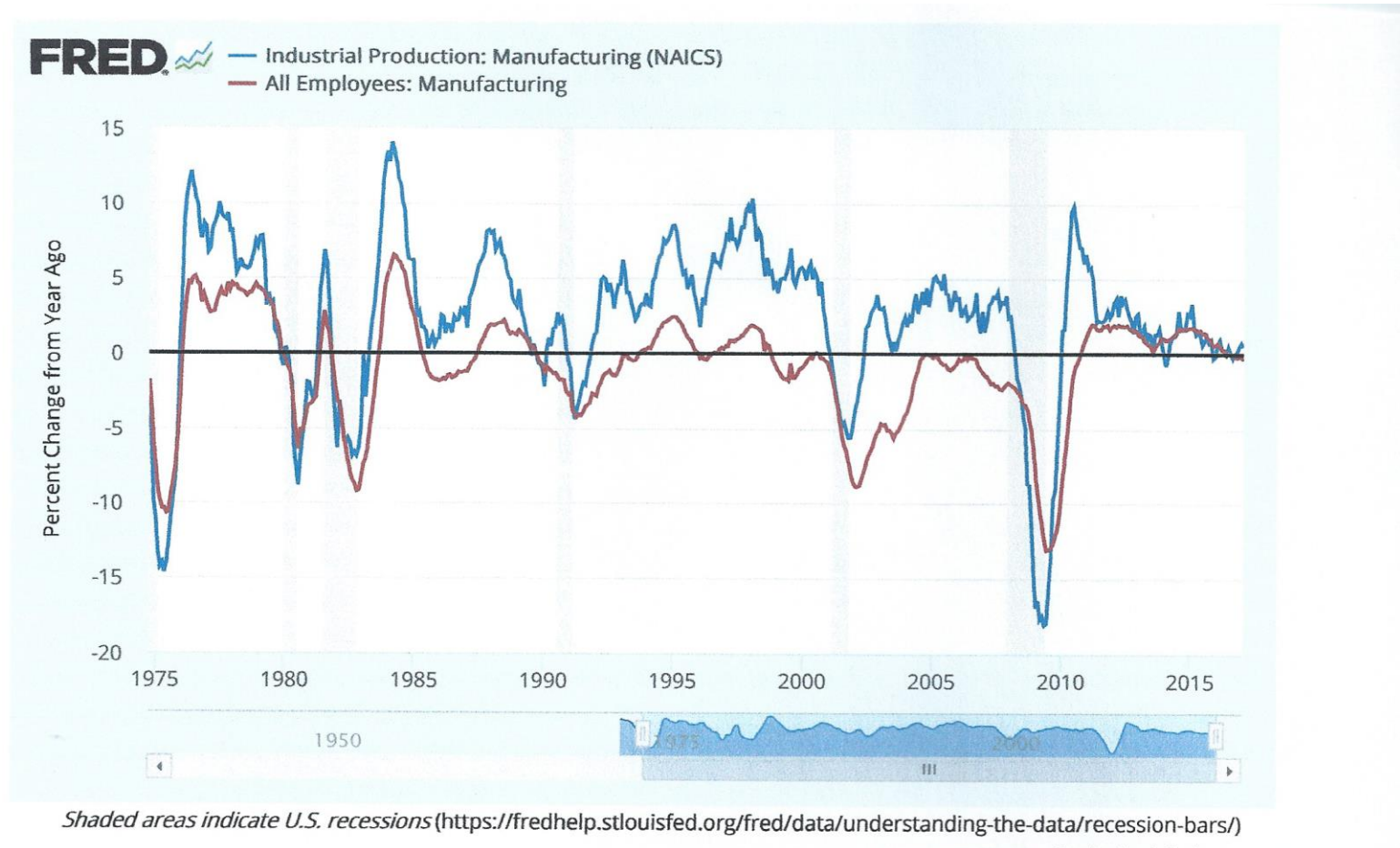
— All Employees: Manufacturing



Source: U.S. Bureau of Labor Statistics  
[fred.stlouisfed.org](http://fred.stlouisfed.org)

[myf.red/g/cOOk](http://myf.red/g/cOOk)

# Manufacturing Output Often Grows Even When Employment Does Not



# U.S. Labor Productivity Growth and Its Sources, 1948-2015

## Private Non-Farm Business Sector

Average annual rate (%)

	Time Period						
	1948	1973	1990	1995	2000	2007	2015
	-1973	-1990	-1995	-2000	-2007	-2015	
Labor productivity	2.9	1.4	1.6	2.9	2.6	1.2	
Sources:							
Labor quality	0.2	0.2	0.5	0.2	0.2	0.3	
Capital intensity	0.9	0.9	0.6	1.2	1.0	0.5	
Technical progress	1.9	0.4	0.5	1.5	1.4	0.4	
Source: Bureau of Labor Statistics							

# Labor Market Terminology

Employed (includes part-time)

Unemployed (must be searching for work)

Labor force = Employed + Unemployed

Unemployment rate = Unemployed / Labor force (%)

Labor force participation rate =

Labor force / Working-age population (%)

Employment ratio = Employment / Working-age population (%)

# Employment Ratio Has Declined in Last Two Decades, But It Is Not Low By Long-term Standards



— Civilian Employment-Population Ratio



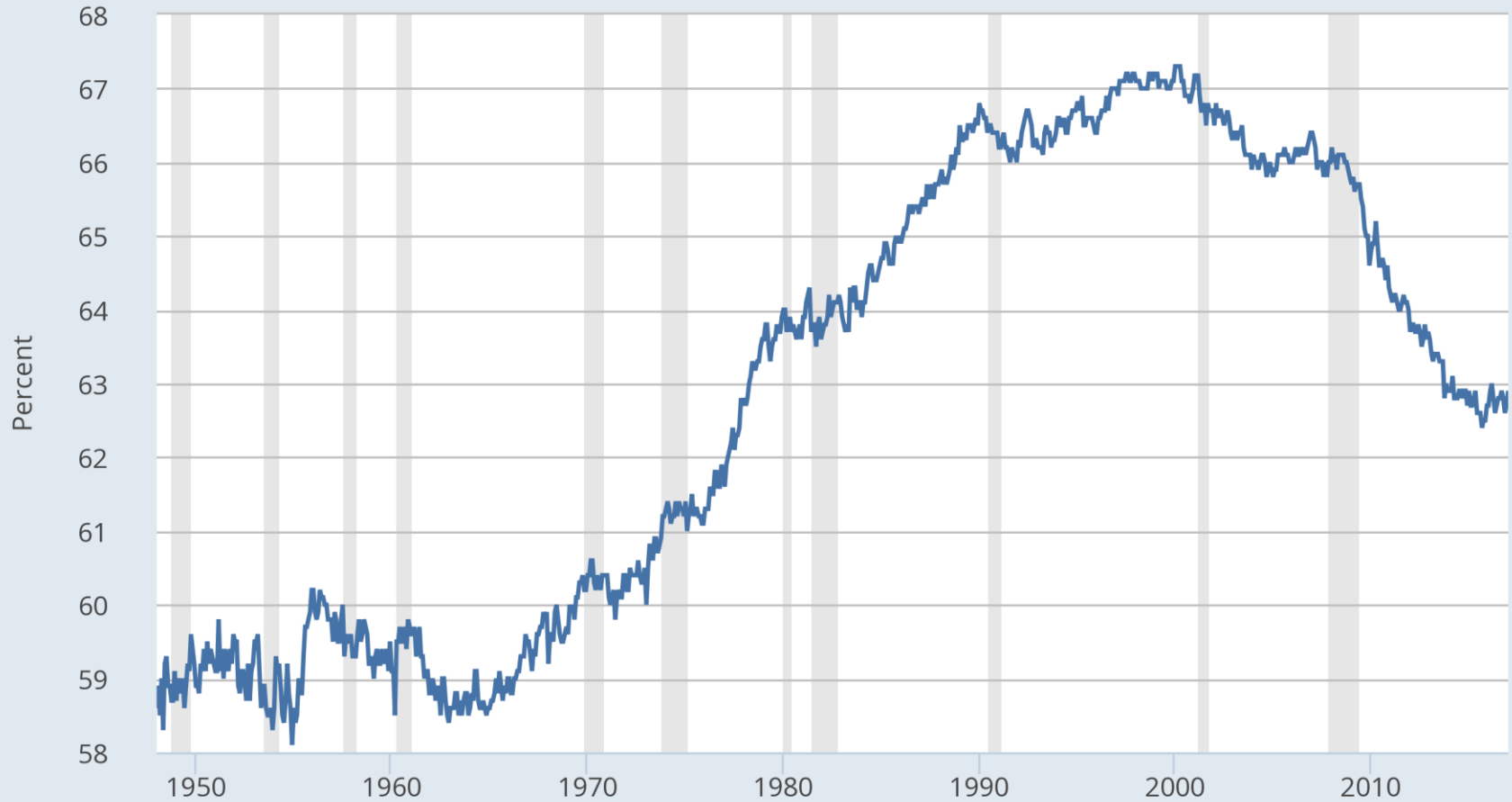
Source: U.S. Bureau of Labor Statistics  
[fred.stlouisfed.org](http://fred.stlouisfed.org)

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# Labor Force Participation Has Declined In Last Two Decades, But Appears to Have Stabilized



— Civilian Labor Force Participation Rate



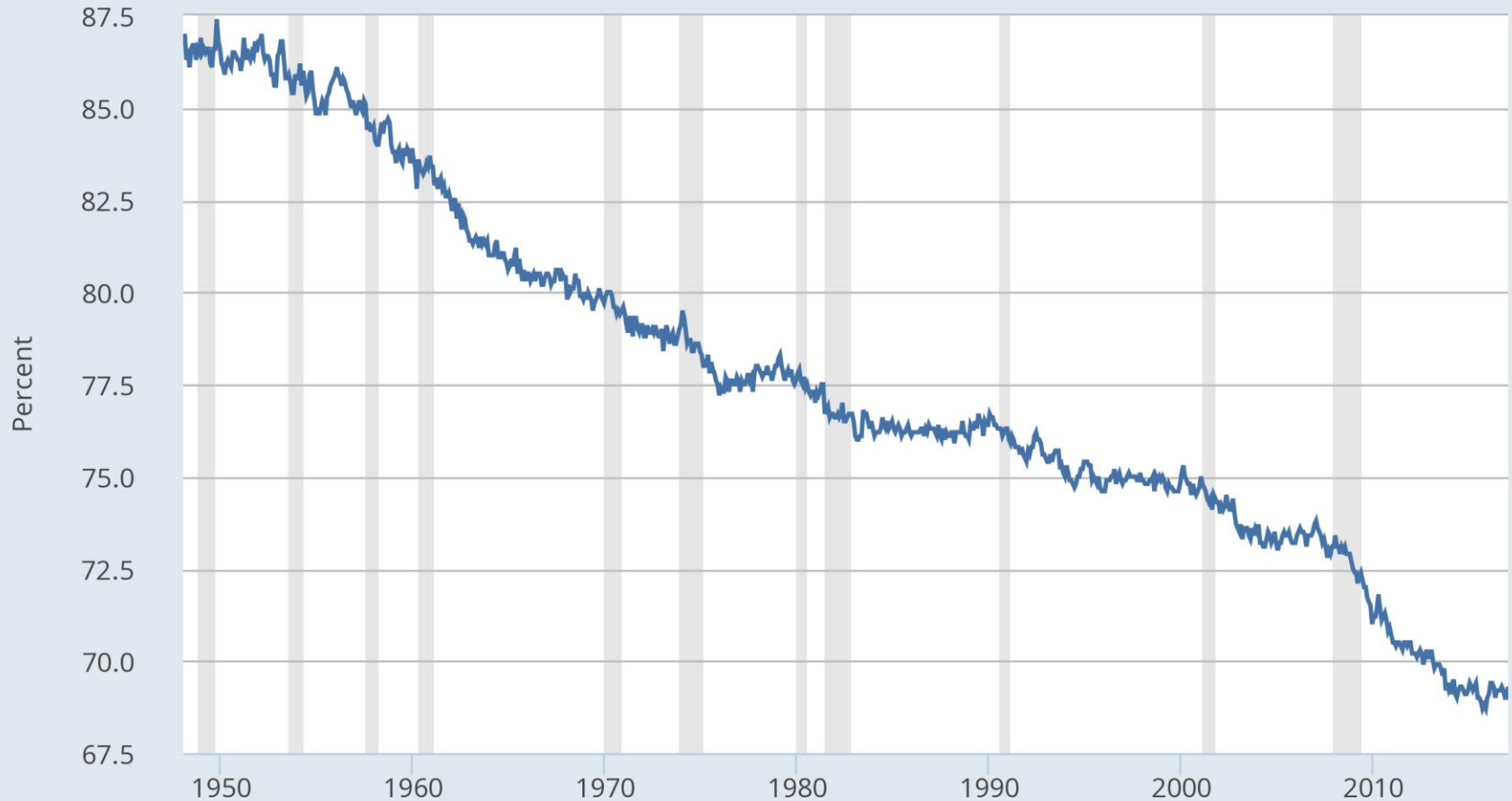
Source: U.S. Bureau of Labor Statistics  
[fred.stlouisfed.org](http://fred.stlouisfed.org)

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# Men's Labor Force Participation Has Been In Steady Decline, But Might Have Stabilized Recently



— Civilian Labor Force Participation Rate: Men



Source: U.S. Bureau of Labor Statistics

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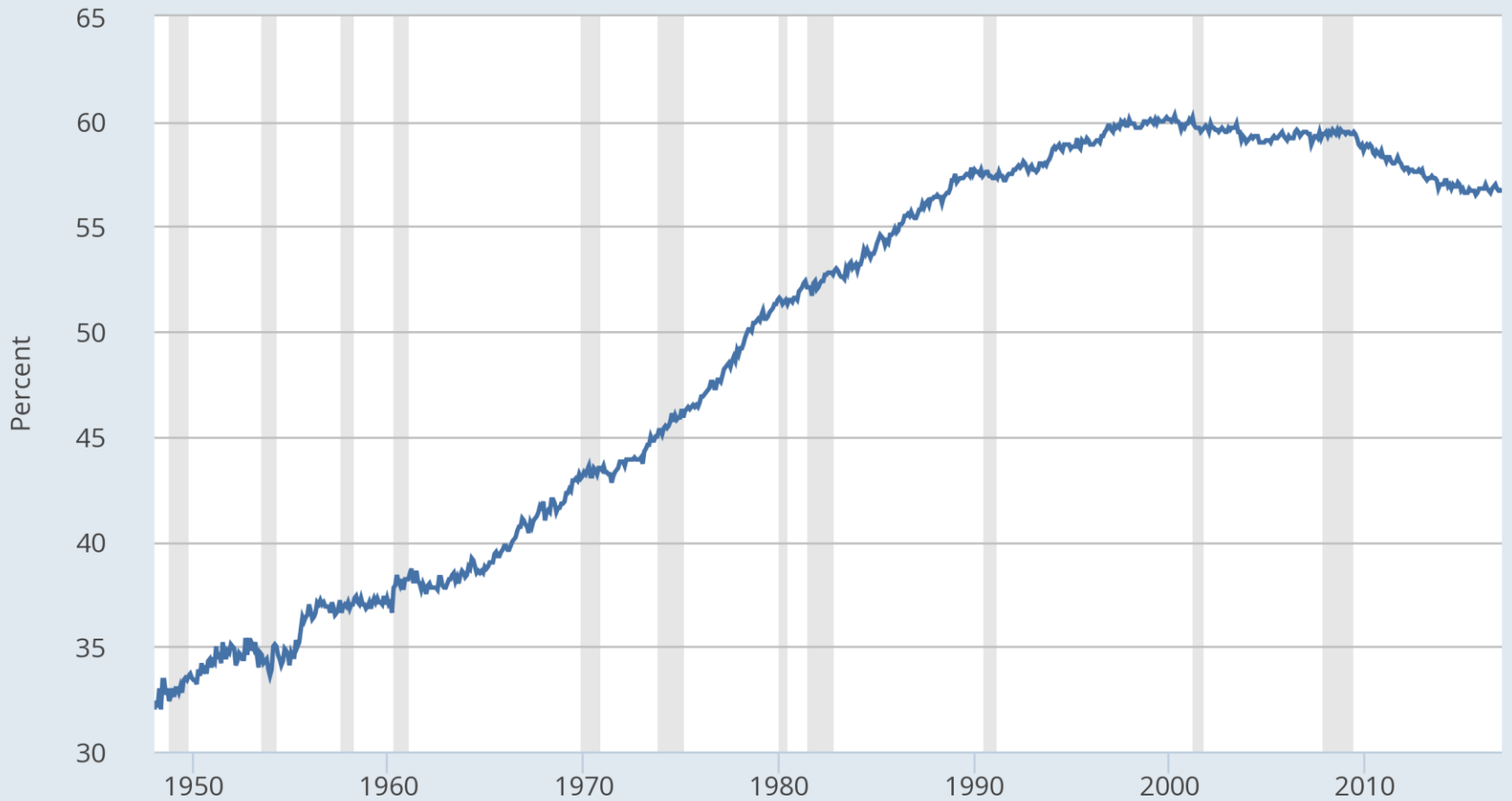
[myf.red/g/cNSE](http://myf.red/g/cNSE)



# Women's Labor Force Participation Rose Sharply to Mid-1990s, Recently in Modest Decline



— Civilian Labor Force Participation Rate: Women



Source: U.S. Bureau of Labor Statistics  
[fred.stlouisfed.org](http://fred.stlouisfed.org)

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# Unemployment Rate Has Dropped Sharply from Recent Recession Peak, Now At Relatively Low Level



— Civilian Unemployment Rate



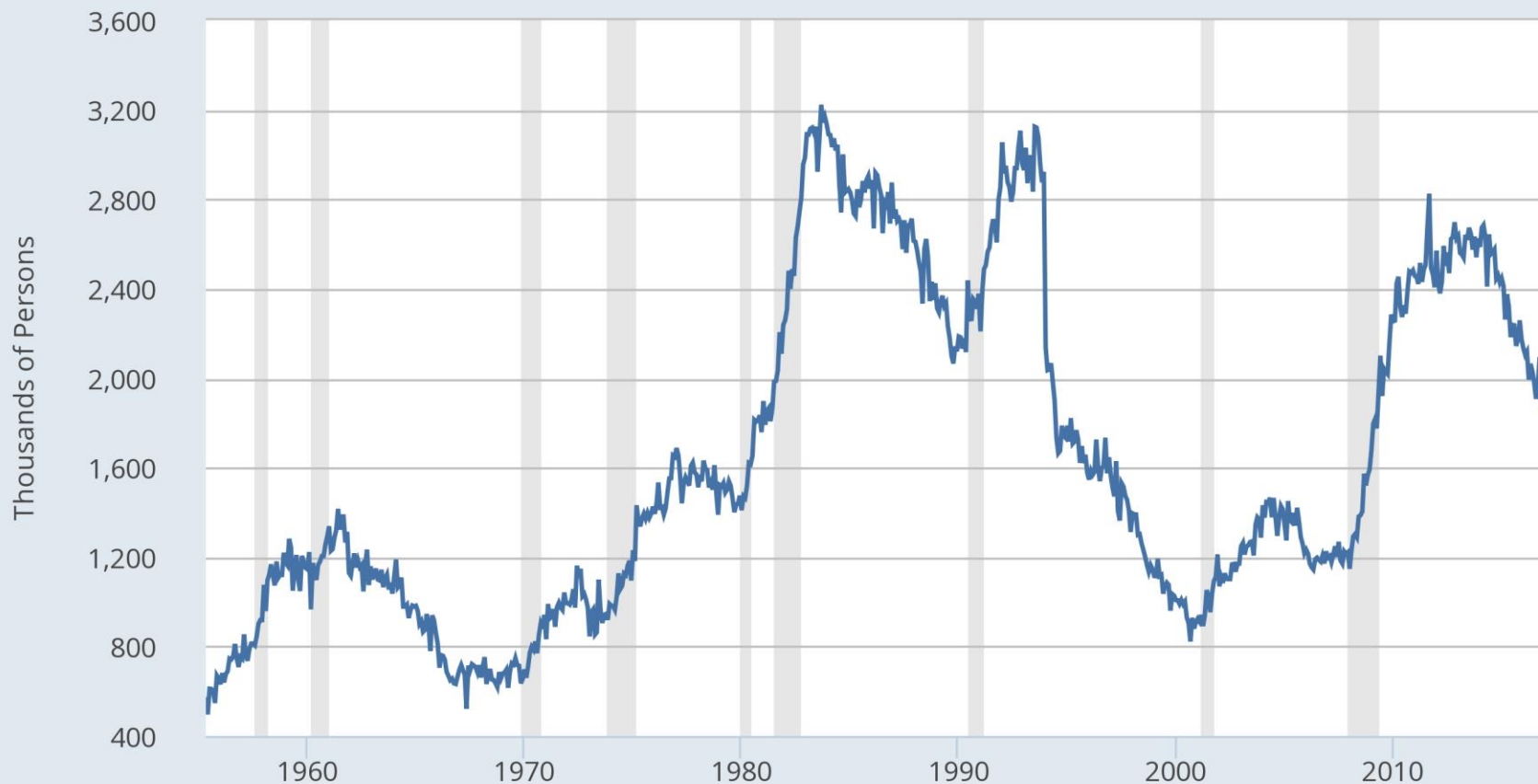
Source: U.S. Bureau of Labor Statistics  
fred.stlouisfed.org

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# Part-time Employment Rose to High Level After Recent Recession, Still Quite High, Though Below Reagan-Era Boom



— Employment Level: Part-Time for Economic Reasons, Could Only Find Part-Time Work, All Industries



Source: U.S. Bureau of Labor Statistics

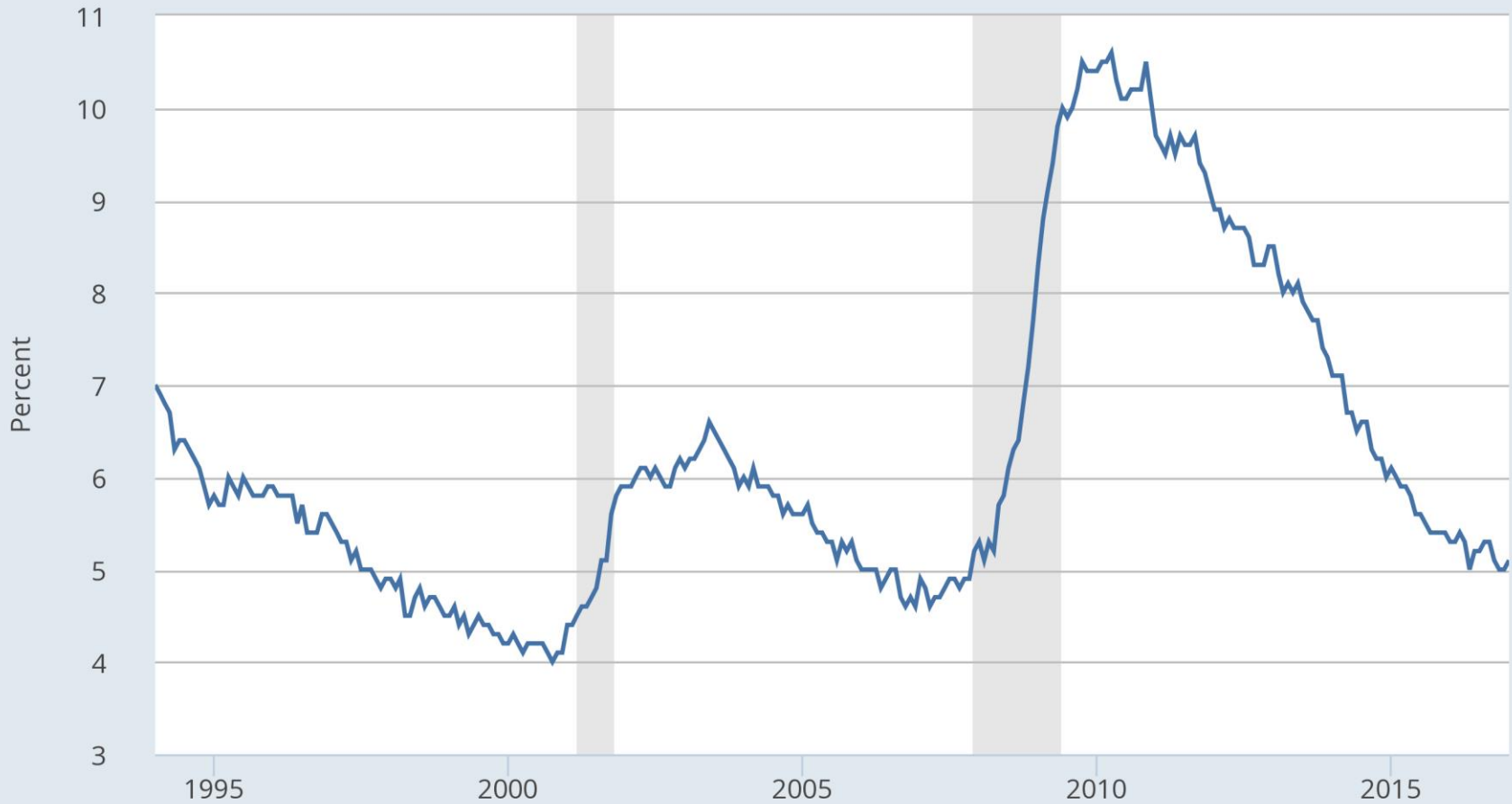
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# Counting Discouraged Workers As Unemployed Adds About 0.5 Percentage Point to Standard Measure



— Special Unemployment Rate: Unemployed and Discouraged Workers



Source: U.S. Bureau of Labor Statistics

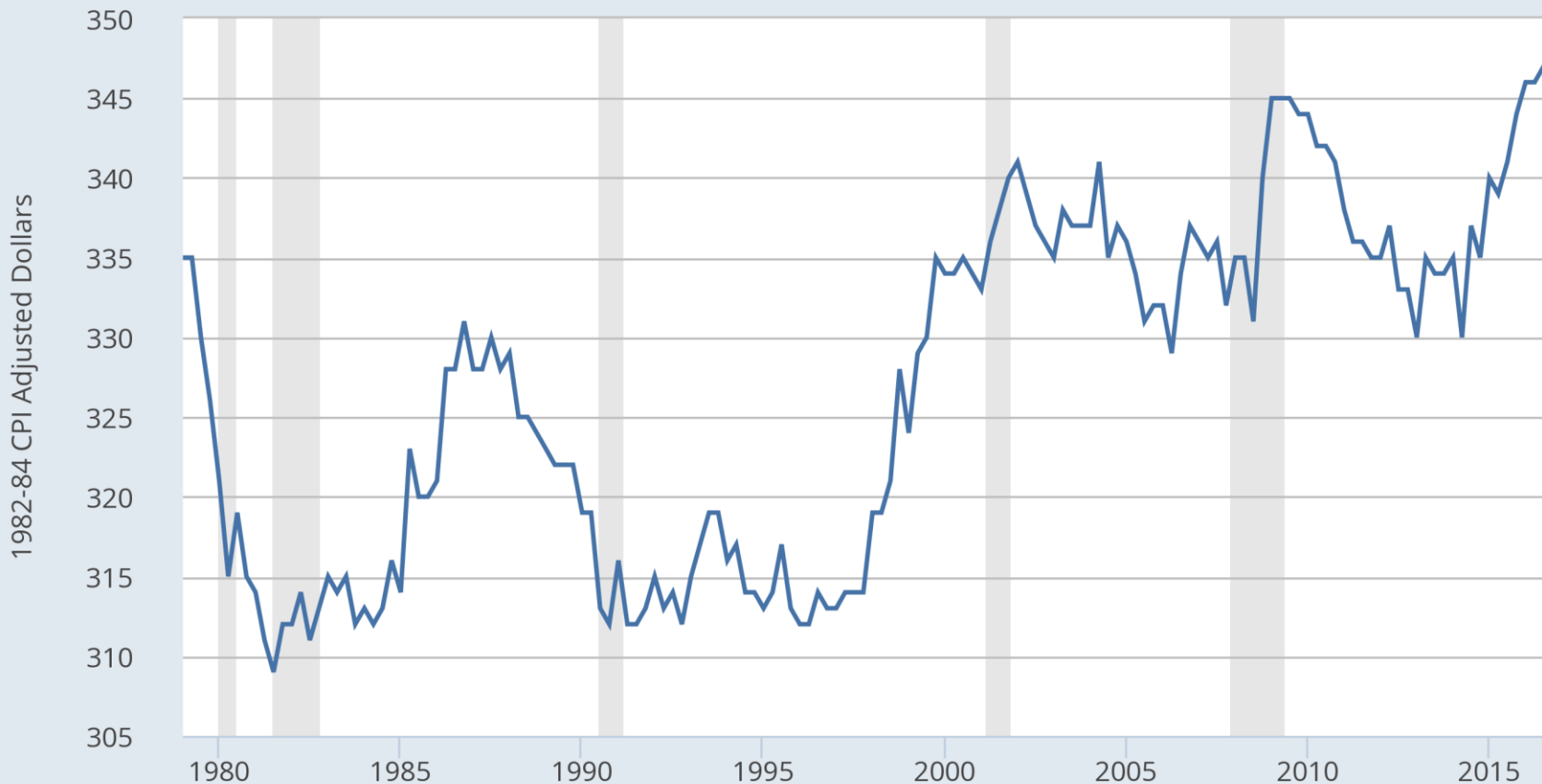
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# Median Weekly Earnings Were Unchanged between 2000-2015, But They Have Risen Recently to New Highs



— Employed full time: Median usual weekly real earnings: Wage and salary workers: 16 years and over



Source: U.S. Bureau of Labor Statistics

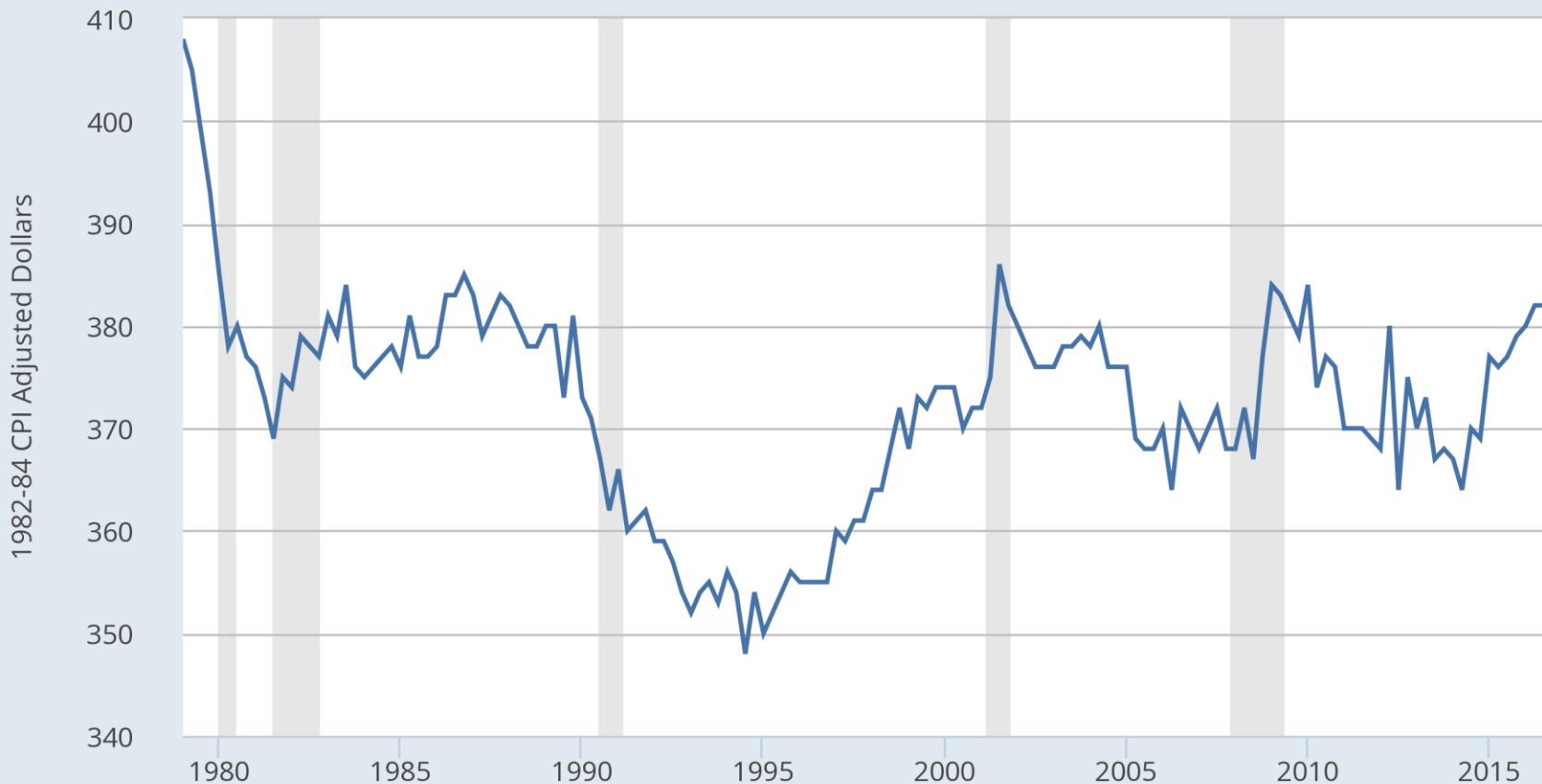
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# Men's Median Weekly Earnings Have Grown Little in Recent Decades



— Employed full time: Median usual weekly real earnings: Wage and salary workers: 16 years and over: Men



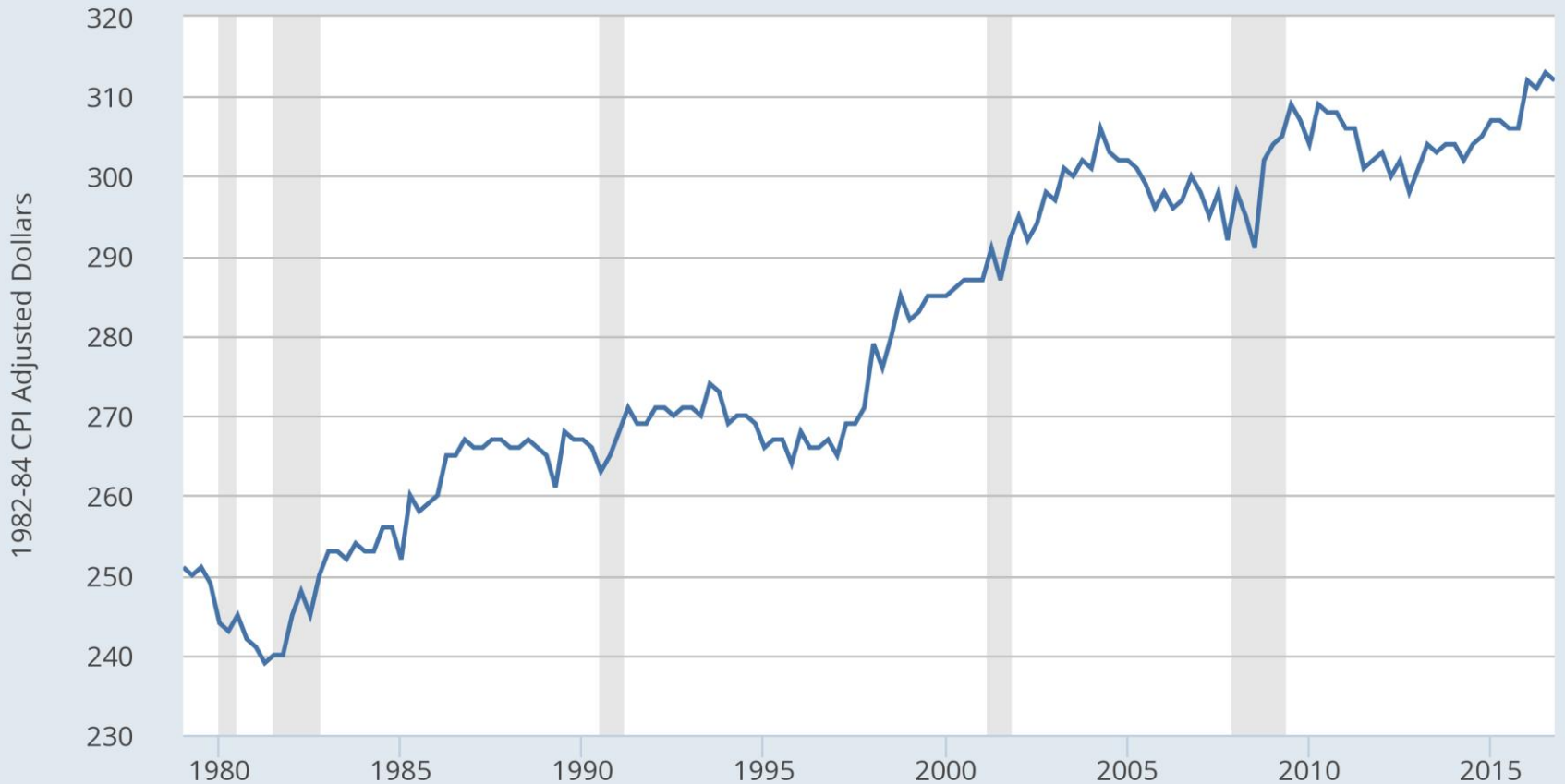
Source: U.S. Bureau of Labor Statistics  
fred.stlouisfed.org

myf.red/g/cNSC

# Women's Median Weekly Earnings Have Grown Over Time, The Greatest Increases Occurring in the 1980's and 1995-2005



— Employed full time: Median usual weekly real earnings: Wage and salary workers: 16 years and over: Women



Source: U.S. Bureau of Labor Statistics

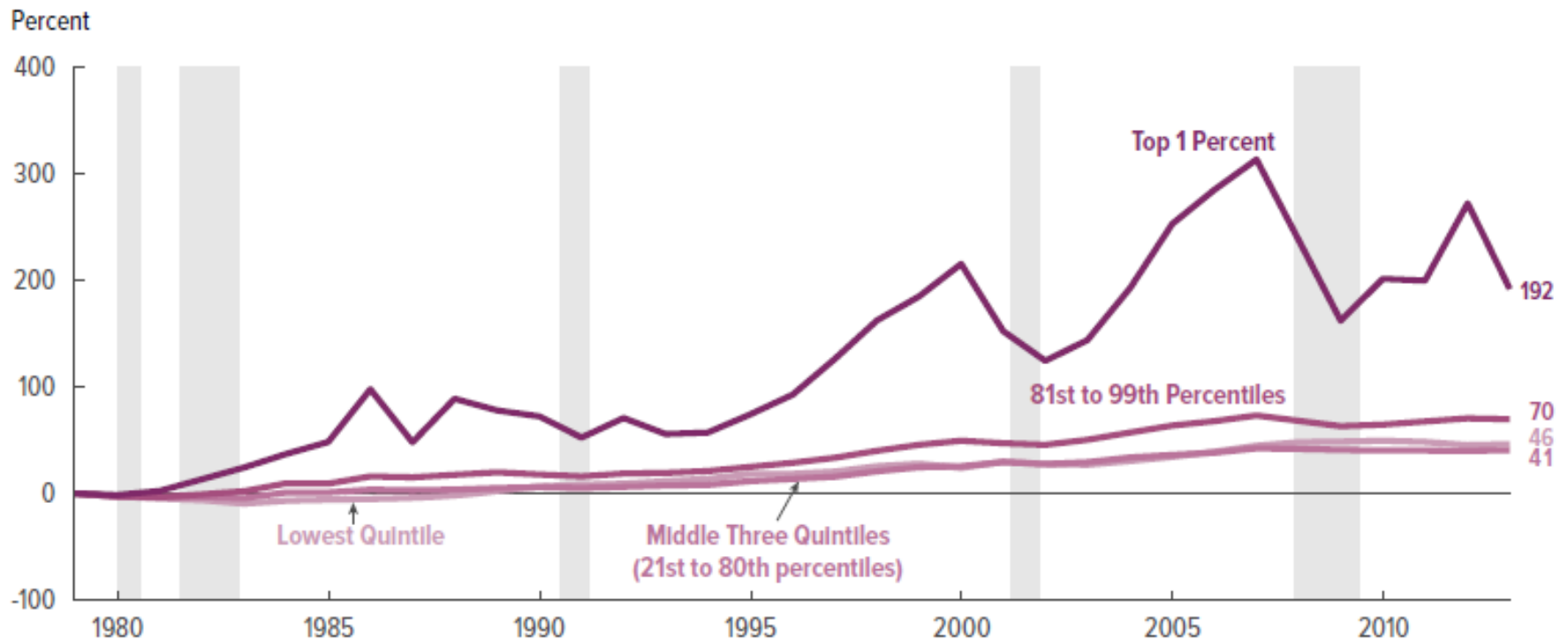
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# Income Gains in Recent Decades Have Gone Mainly to Top Income Earners

Figure 13.

## Cumulative Growth in Average Inflation-Adjusted After-Tax Income, by Before-Tax Income Group, 1979 to 2013



Source: Congressional Budget Office.

After-tax income is before-tax income minus federal taxes.

Before-tax income is market income plus government transfers. Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Those transfers include payments and benefits from federal, state, and local governments.

Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes.

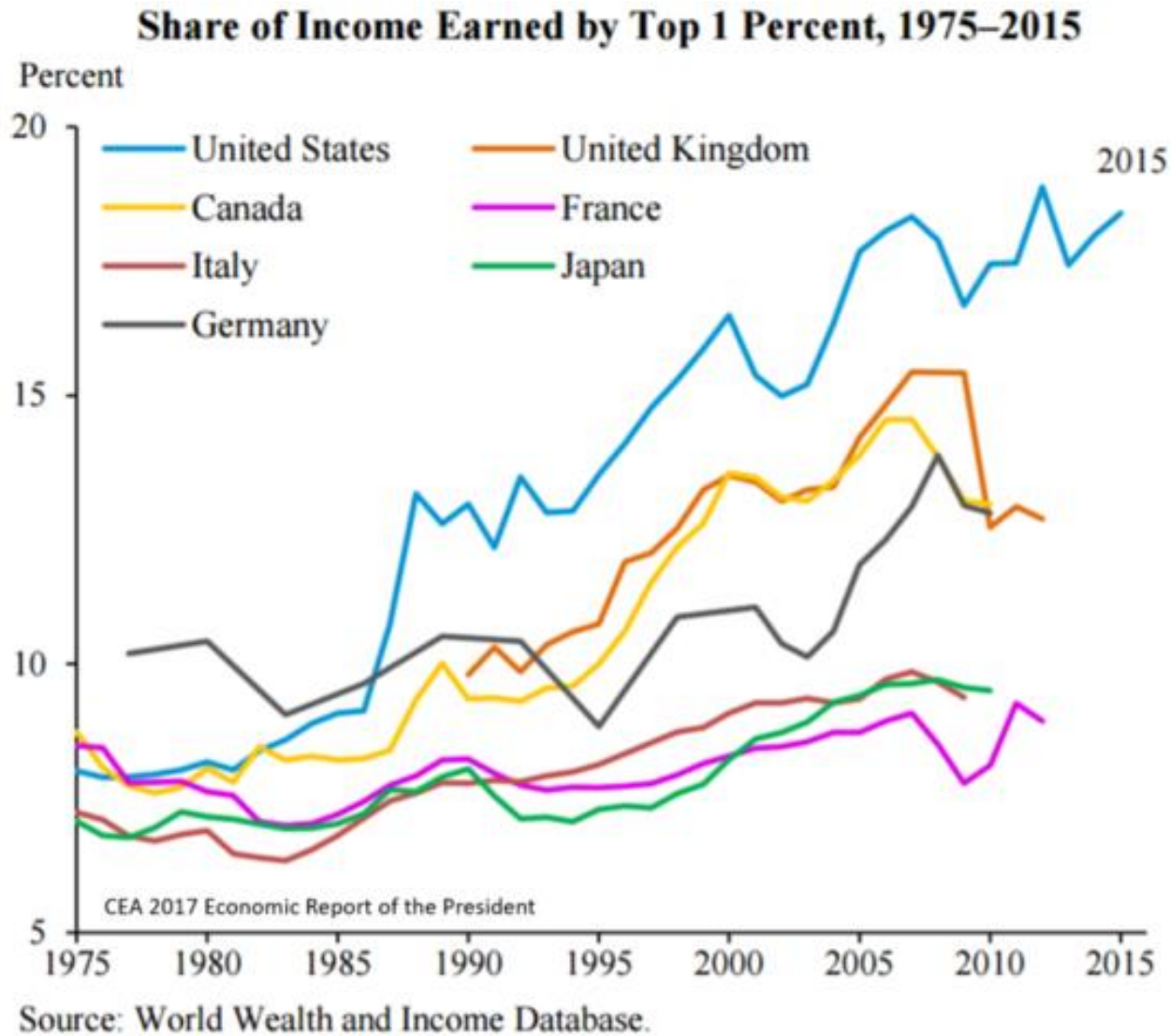
Income is converted to 2013 dollars using the price index for personal consumption expenditures.

Income groups are created by ranking households by before-tax income, adjusted for household size. Quintiles (fifths) contain equal numbers of people; percentiles (hundredths) contain equal numbers of people as well.

For more detailed definitions of income, see the appendix.



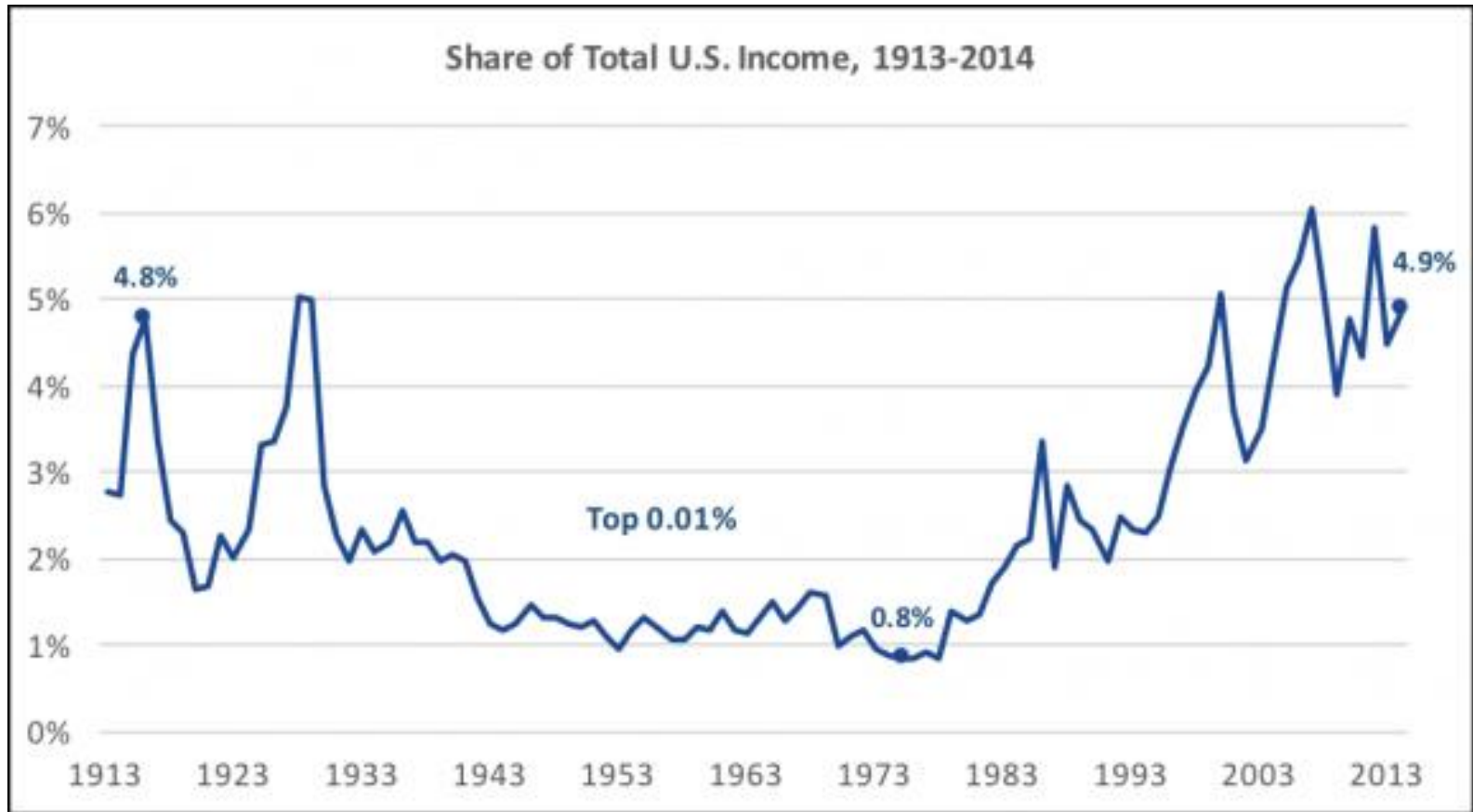
# Income Gains in US More to Top Earners Than in Other Nations



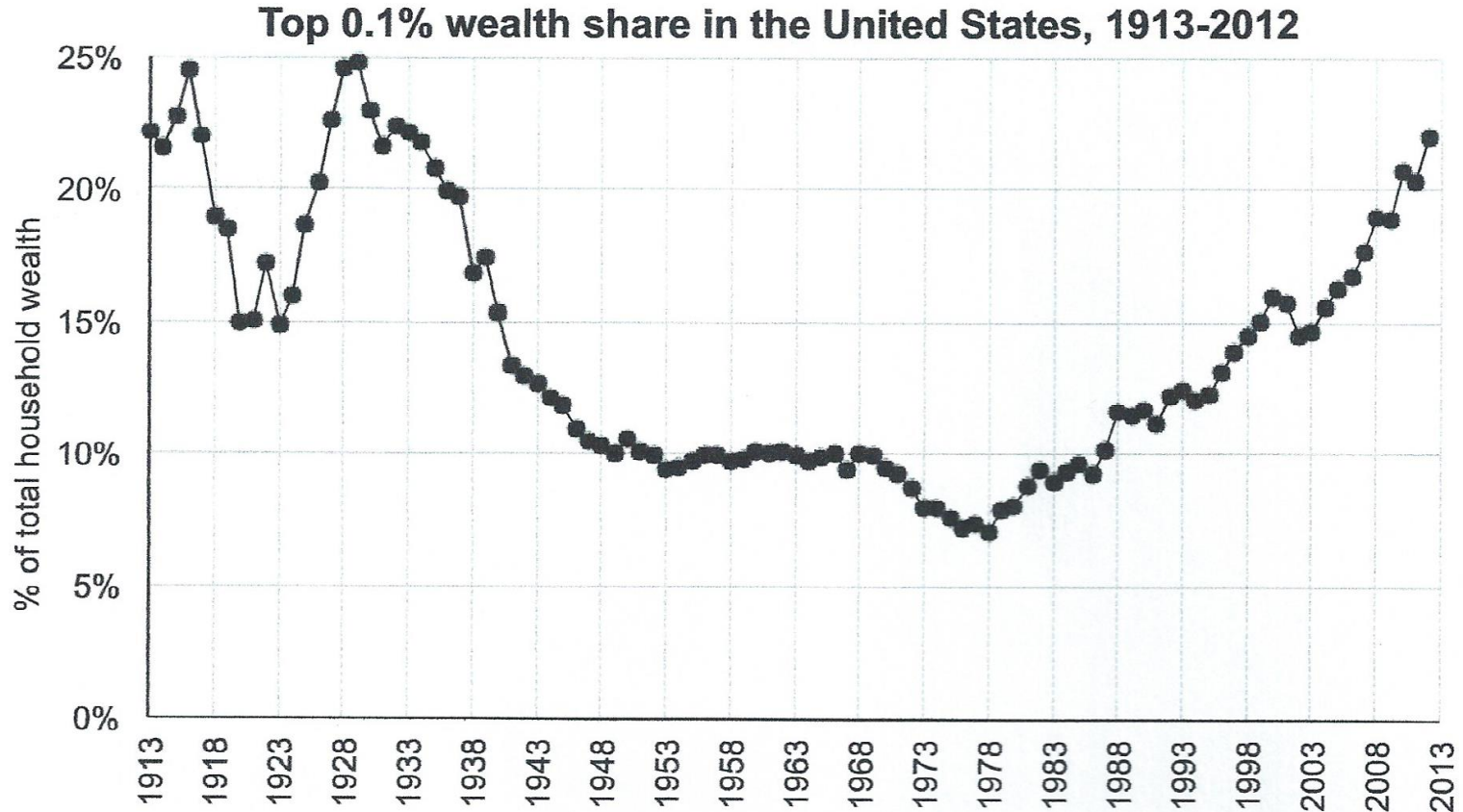
# Share of Income Going to Top 1% Declined Until the Early 1970s, But It Has Now Risen to Levels Near Its Late 1920s Peak



# Share of Income Going to the Top 0.01% Has Surpassed Its 1920's Peak



# Wealth Inequality Is Greater Than Income Inequality, And It Too Has Increased Since the Early 1970s



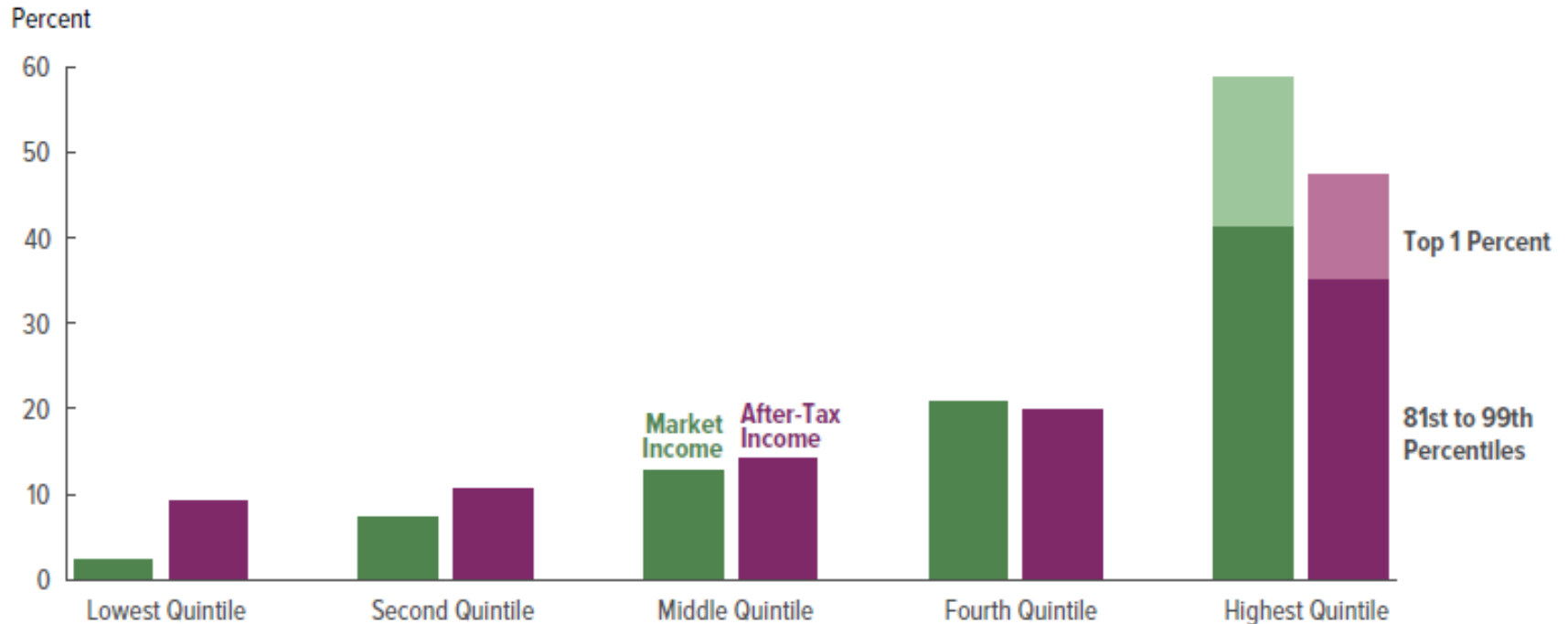
This figure depicts the share of total household wealth held by the 0.1% richest families, as estimated by capitalizing income tax returns. In 2012, the top 0.1% includes about 160,000 families with net wealth above \$20.6 million. Source: Appendix Table B1.

Source: E. Saez and G. Zucman, Wealth Inequality in the United States, NBER Working Paper 20625, Oct. 2014.

# Government Taxes and Transfers Are Moderately Redistributive

Figure 7.

## Shares of Market and After-Tax Income, by Market Income Group, 2013



Source: Congressional Budget Office.

Market income consists of labor income, business income, capital gains (profits realized from the sale of assets), capital income excluding capital gains, income received in retirement for past services, and other sources of income.

After-tax income is market income plus government transfers minus federal taxes. Government transfers are cash payments and in-kind benefits from social insurance and other government assistance programs. Those transfers include payments and benefits from federal, state, and local governments. Federal taxes include individual income taxes, payroll taxes, corporate income taxes, and excise taxes.

Income groups are created by ranking households by market income, adjusted for household size. Quintiles (fifths) contain equal numbers of people; percentiles (hundredths) contain equal numbers of people as well.

For more detailed definitions of income, see the appendix.

# Why Is Income Inequality Increasing?

Decline of labor unions

Skill-biased technological change

Globalization

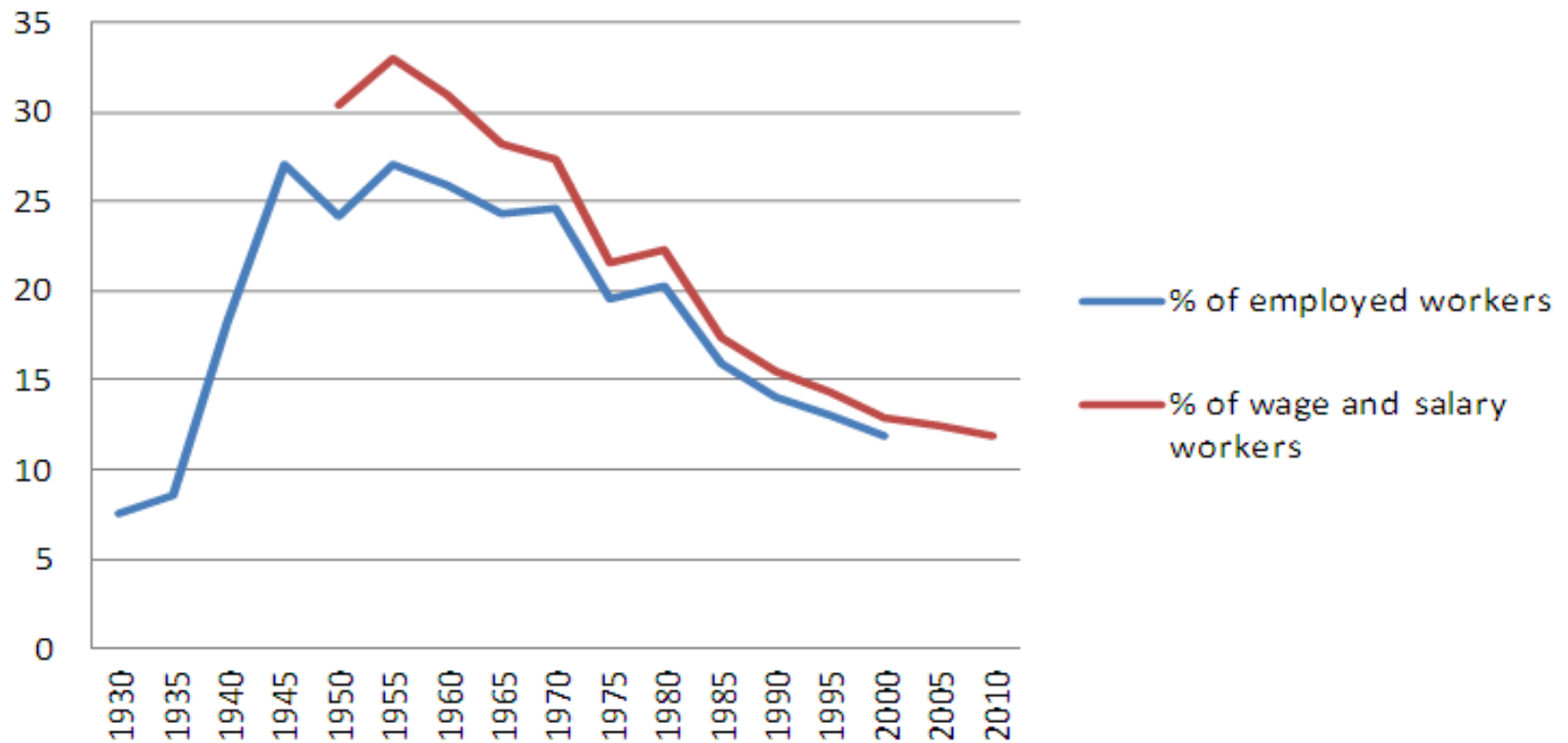
Winner-take-all syndrome

Robert Frank, *The Winner-Take All Society: Why the Few at the Top Get So Much More Than the Rest of Us*, 1996.

Growing wealth inequality

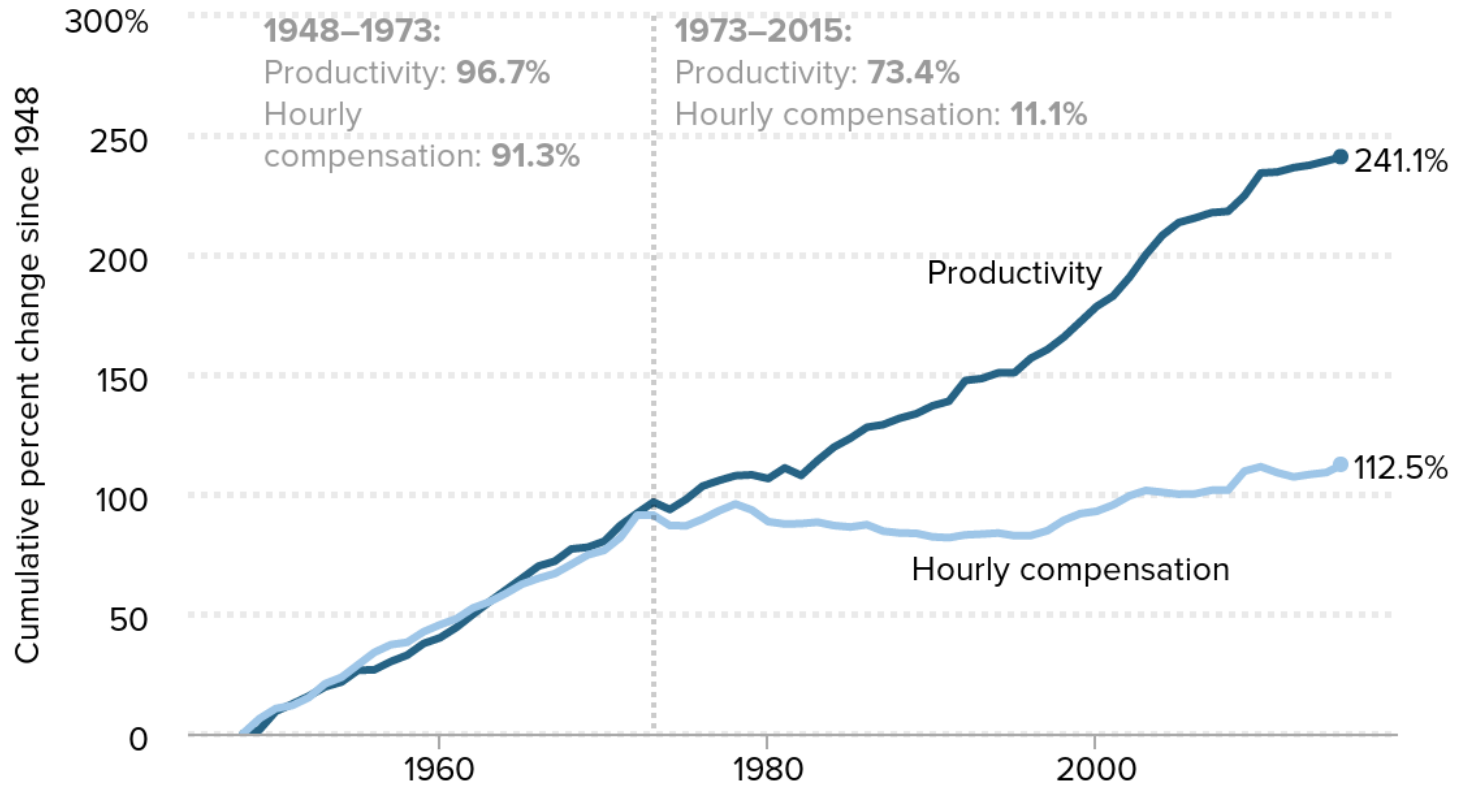
Thomas Piketty, *Capital in the Twenty-First Century*, 2014

# Union Membership in the United States, 1930-2010



Sources: Gerald Meyer, Union Membership Trends in the U.S., Cornell, 2004; Bureau of Labor Statistics

## Disconnect between productivity and a typical worker's compensation, 1948–2015

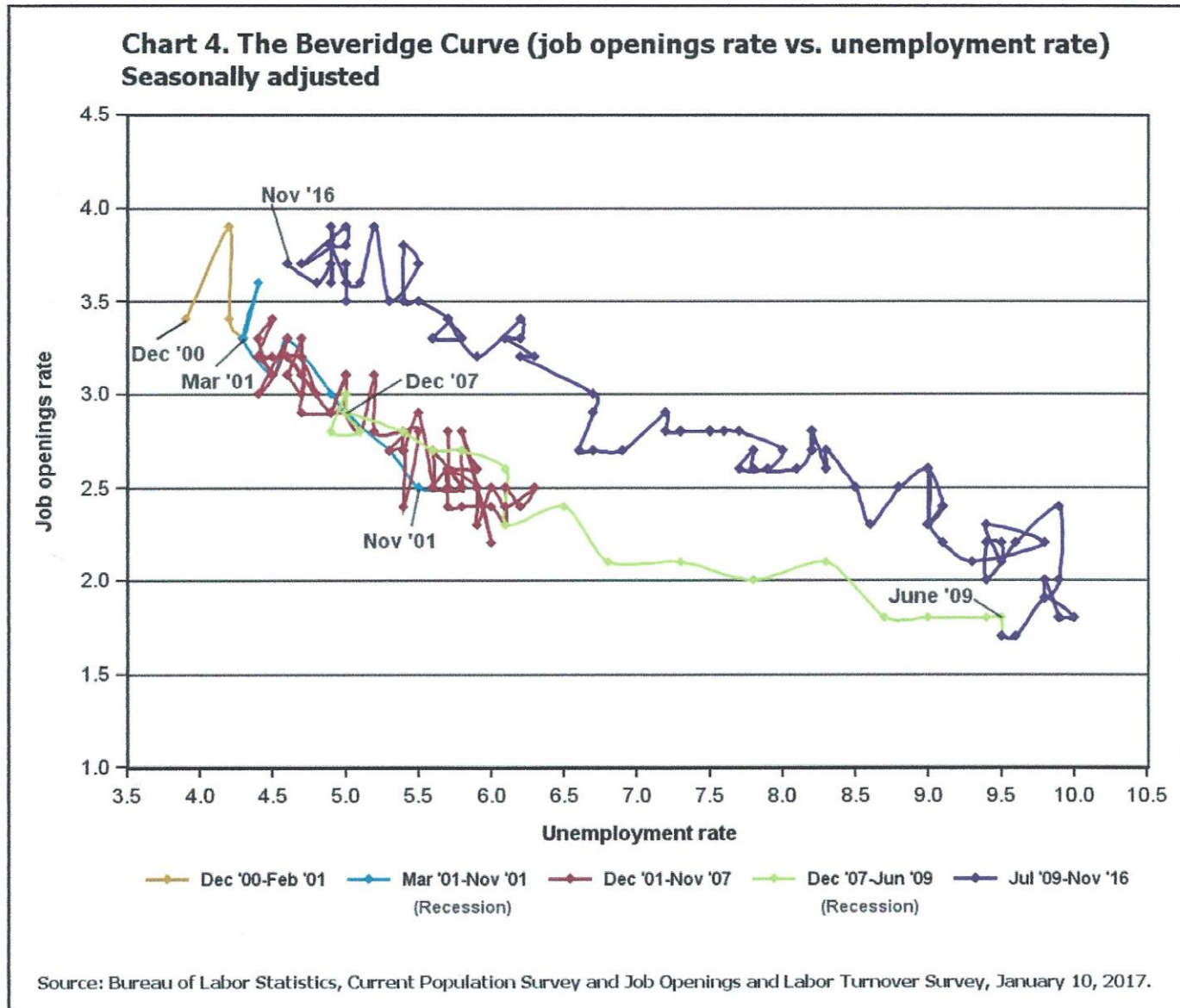


**Note:** Data are for average hourly compensation of production/nonsupervisory workers in the private sector and net productivity of the total economy. "Net productivity" is the growth of output of goods and services minus depreciation per hour worked.

**Source:** EPI analysis of data from the BEA and BLS (see technical appendix of *Understanding the Historic Divergence Between Productivity and a Typical Worker's Pay* for more detailed information)



# Shift Upward of Beveridge Curve Indicates Growing Mismatch in Labor Markets



# How to Alleviate Disruptions Due to Technological Change

Set a guaranteed minimum income for each family

Make government employer of last resort for hard-core jobless

Provide two years of free education in community or vocational colleges

Establish a fully-administered federal employment service

Provide federal assistance to redevelop depressed areas

Add:

Improve primary and secondary education to stress thinking, adaptability

Facilitate mobility (housing policy, medical insurance, subsidize moving)

Increase progressivity of tax structure

**END**