

# Rising Income Inequality

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Econ520

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# The issues

Income inequality has been rising for the past 35 years.

Why has this happened?

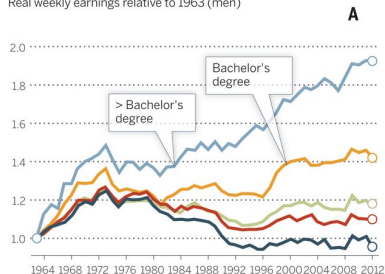
What could be done about it?

We start with the rising return to schooling

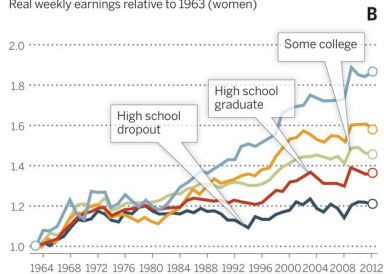
# Rising return to schooling

## Changes in real wage levels of full-time U.S. workers by sex and education, 1963–2012

Real weekly earnings relative to 1963 (men)



Real weekly earnings relative to 1963 (women)



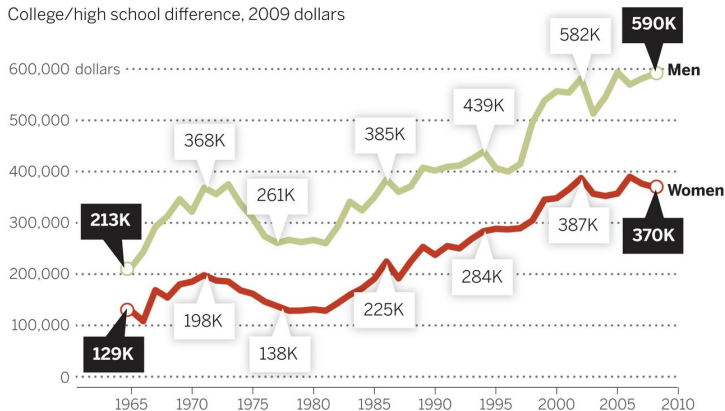
Source: Autor (2014)

Remarkable: No wage gains for high school grads since 1970

# The Value of a College Degree

## Present discounted value of college relative to high school degree net of tuition, 1965–2008

College/high school difference, 2009 dollars

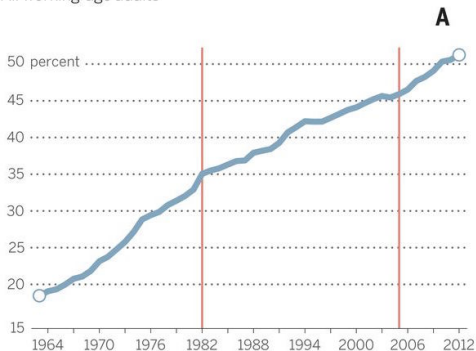


Source: Autor (2014)

# Why Did the College Premium Rise?

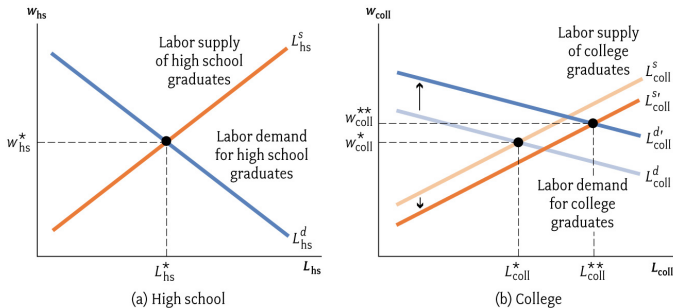
Surprise: The premium rose even as the relative supply of college grads rose.

College share of hours worked (%), 1963–2012:  
All working-age adults



Soure: Autor (2014)

# Skill biased technical change



**FIGURE 7.9 Understanding the Rising Return to Education**

Macroeconomics, Charles I. Jones  
Copyright © 2008 W. W. Norton & Company

Demand for college labor rises faster than supply

# A Simple Model of SBTC

Aggregate production function:  $Y = F(\mu H, L)$

$H$ : college grads,  $L$ : others

Wages = marginal products of labor

SBTC:  $\mu$  grows at a constant rate over time

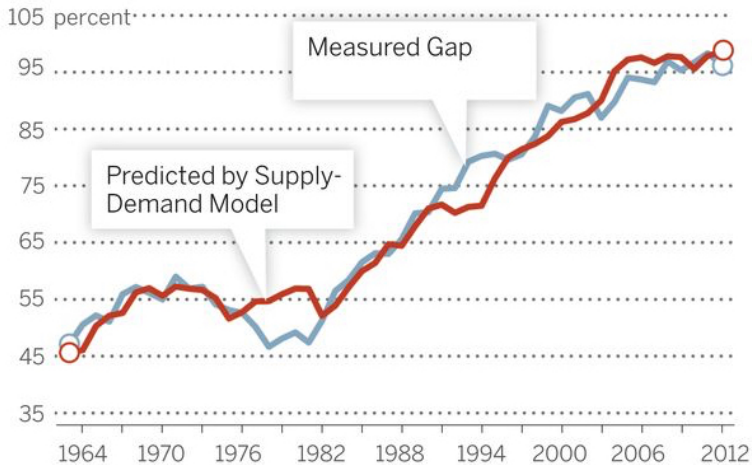
How well does this model fit the data?

- ▶ Take labor supplies from the data (hours worked)
- ▶ Fit a constant growth trend for  $\mu$

## Model Fit

College versus high school  
wage gap (%)

**B**





# Model Implications

For a long time, the demand for skilled labor has been rising

- ▶ in many countries
- ▶ at a constant rate

For a long time, the rising supply of skilled labor prevented the rise of the college premium.

Around 1980, the rise in U.S. college attendance slowed down.

Since then, demand outstrips supply and the college premium rises.

# Skill biased technical change

SBTC is widely viewed as a main contributor to rising wage inequality.

Demand for skilled / managerial occupations rose over time.

Potential causes:

- ▶ computers
- ▶ international trade

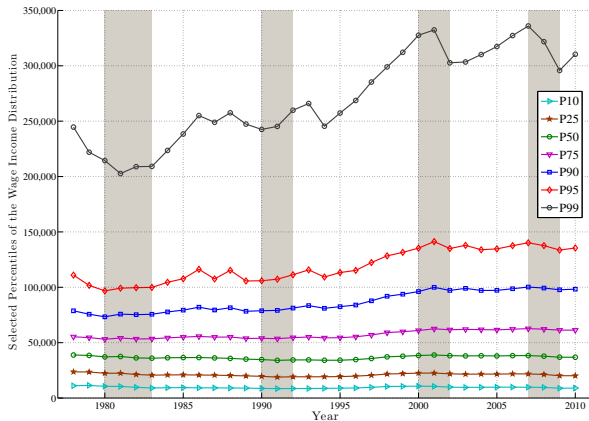
## Policy Implications

What could governments do to reduce wage inequality?

Inequality at the top

# The Top 1% Pull Ahead

Figure 3: Selected Percentiles of Labor Earnings Distribution over Time

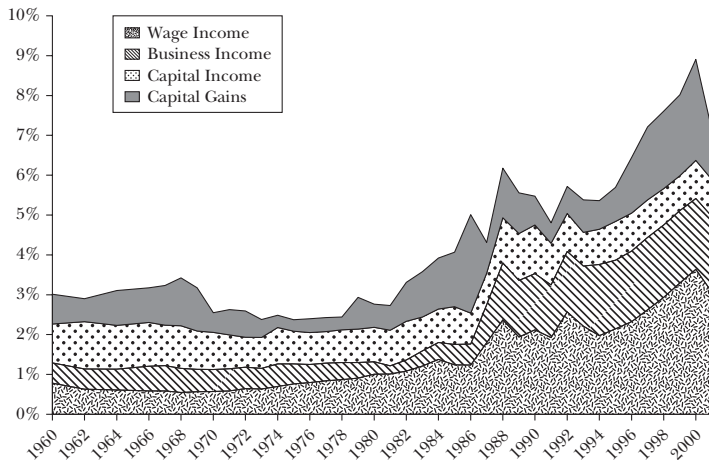


Source: Guvenen et al. 2012

# The top 0.1% Pull Ahead

Figure 2

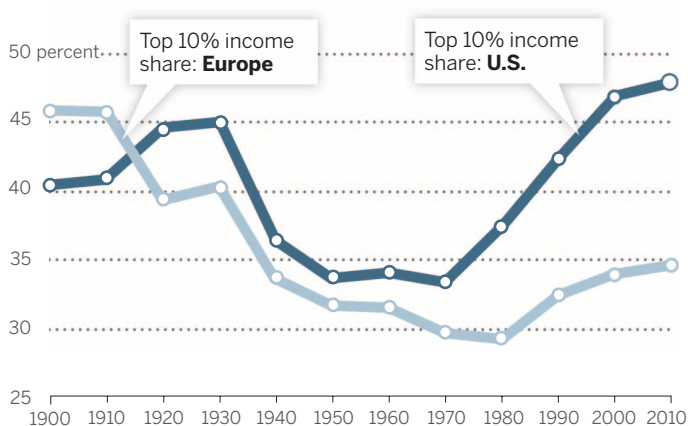
**Income Share and Composition for the Top 0.1 Percent, 1960–2001**



Source: Piketty and Saez (2007)

# Long-run Perspective

Share of top income decile in total pretax income



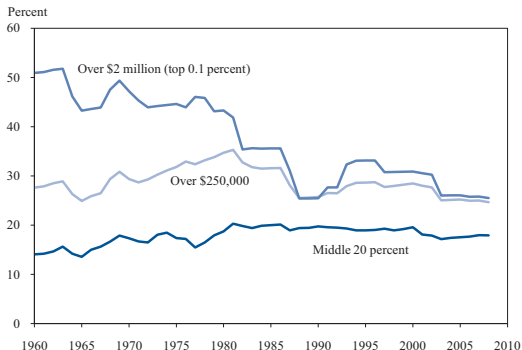
Source: Piketty and Saez (2014)

Why Did Inequality Rise?



# The tax system becomes less progressive

Figure 5-8  
Evolution of Average Tax Rates



Notes: Average tax rates calculated each year for a sample of 2005 taxpayers after adjusting for average wage growth. Dollar figures in 2009 dollars.

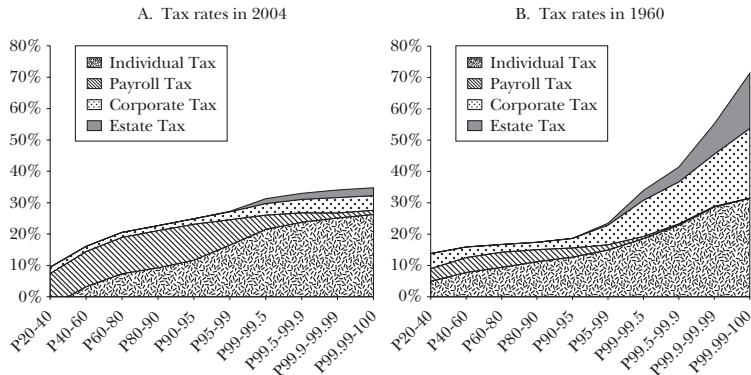
Sources: Department of the Treasury, Internal Revenue Service, Statistics of Income Public Use File 2005; National Bureau of Economic Research TAXSIM (Feenberg and Coutts 1993); CEA calculations.

Source: ERP 2010

# Federal taxes are getting less progressive.

Figure 1

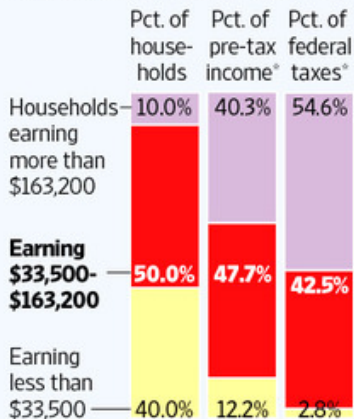
## Federal Tax Rates in the United States in 2004 and 1960



Source: Piketty and Saez (2007)

## Fun Fact

### Who Pays the Taxes



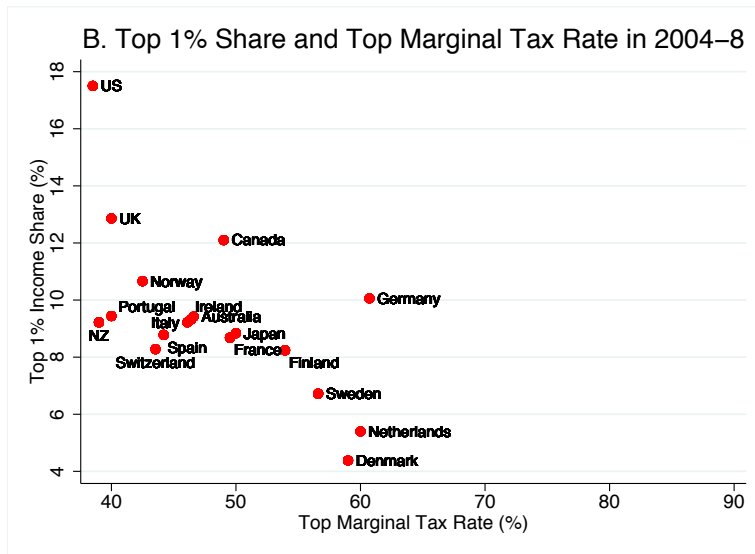
\*Numbers don't add to 100% due to rounding.

Source: Urban-Brookings Tax Policy Center

In 2004, the top 1% of households paid 28% of all federal taxes. The top 0.1% paid 11% of federal taxes.

Source: Economist, 2011

## International Data



Source: Piketty et al. (2011)

## Fun Fact

In 2005 the French payroll tax rate is 67%.

This is one reason why French taxes are essentially flat.

# Summary

Top income shares have increased in many countries, especially in the U.S.

At the same time top marginal tax rates have declined.

Countries with higher tax rates have less inequality.

All of the evidence suggests that taxes account for a share of the rising inequality.

## Other Explanations

Superstars:

- ▶ The incomes of athletes and entertainers have risen much faster than the incomes of workers.

CEO pay:

- ▶ A unique U.S. phenomenon: The average pay of CEOs rose from 27 times average worker pay to 300 times (1973-2000).

Rising corporate profits:

- ▶ not consistent with the data (constant profit share)

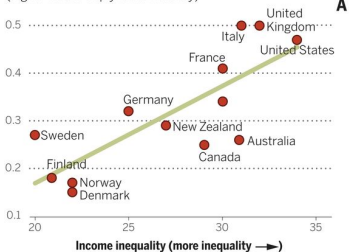
Is inequality bad?



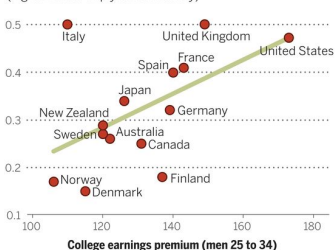
# Inequality and Mobility

## Earnings inequality and economic mobility: cross-national relationships

Generational earnings elasticity  
(higher values imply lower mobility)



Generational earnings elasticity  
(higher values imply lower mobility)



# Inequality and Mobility

High inequality is associated with strong earnings persistence across generations

(low intergenerational mobility)

One possible reason:

When the return to schooling is high, rich parents invest in their kids.

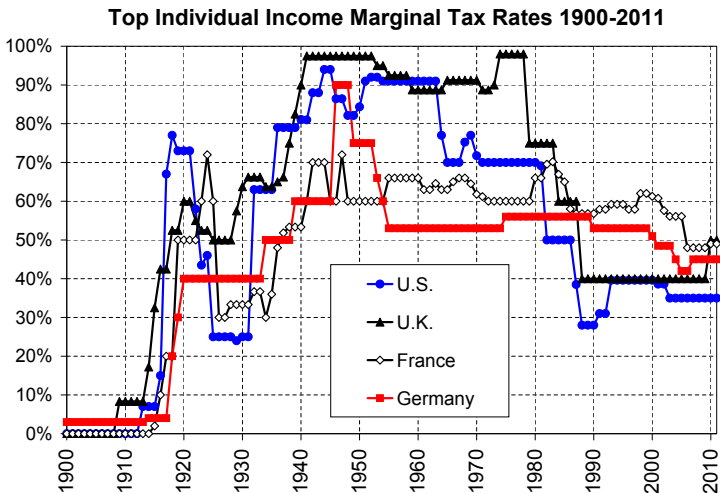
But: Mobility does not seem to have declined over time (in the U.S.)

# How costly is redistribution?

What are the effects of higher (marginal) taxes?

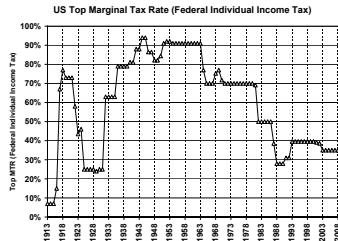
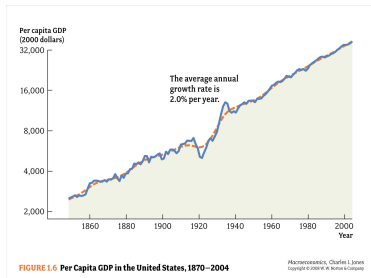
- ▶ Reduced work effort / work hours
- ▶ Less investment?
- ▶ Misallocation of consumption
  - ▶ anything that can be called a business expense is tax deductible
  - ▶ e.g., meals, company cars, first class flights, ...

# Top Marginal Tax Rates



Source: Piketty (2011), fig 1

# How Costly is Redistribution?



Given this data, it is hard to imagine that tax rates have large effects on growth.

# How Costly is Redistribution?

## B. Growth and Change in Top Marginal Tax Rate



Source: Piketty et al. (2011)

# Summary

High marginal tax rates distort choices:

- ▶ work effort, entrepreneurship, saving, ...

Strong evidence that high taxes reduce hours worked

Little evidence that high taxes reduce economic growth

A tricky question:

*What is the optimal top marginal tax rate?*

# Reading

- ▶ Autor (2014) on the race between education and technology.
- ▶ Piketty and Saez (2007)
- ▶ Mankiw (2013): a thoughtful defense of a more conservative view on redistribution.



## Advanced Reading

- ▶ Gordon, Robert J.; Dew-Becker, Ian (2007). "Selected Issues in the Rise of Income Inequality. Brookings Papers on Economic Activity, 2007, 2, pp. 169-190. DOI: 10.1353/eca.2008.0011
- ▶ Dew-Becker, Ian. Gordon, Robert J. (2005). "Where Did the Productivity Growth Go? Inflation Dynamics and the Distribution of Income." Brookings Papers on Economic Activity, 2005, 2, pp. 67-150. DOI: 10.1353/eca.2006.0004
- ▶ Piketty et al. (2011) on optimal taxation.

# References I

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- Mankiw, N. G. (2013): "Defending the One Percent," *The Journal of Economic Perspectives*, 27, 21–34.
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- Piketty, T., E. Saez, and S. Stantcheva (2011): "Optimal taxation of top labor incomes: A tale of three elasticities," Tech. rep., National Bureau of Economic Research.