

# Topics in Labor Economics

## Inequality: Symptoms, Causes, and Remedies

Jiaming Mao

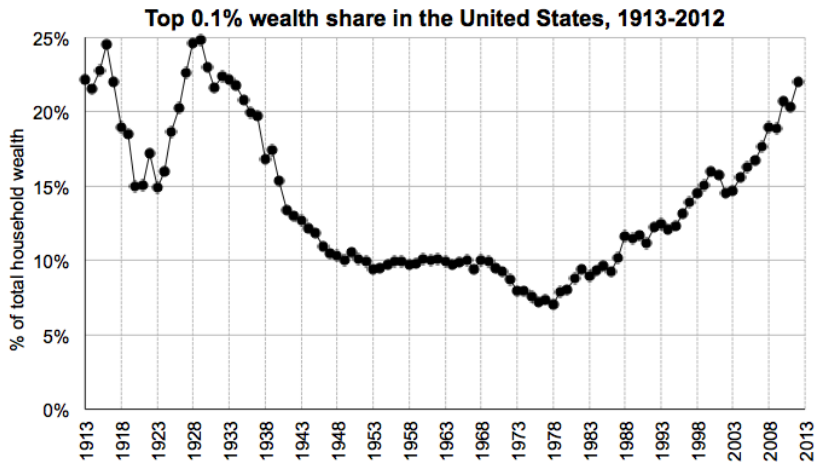
WISE, XMU

November, 2015

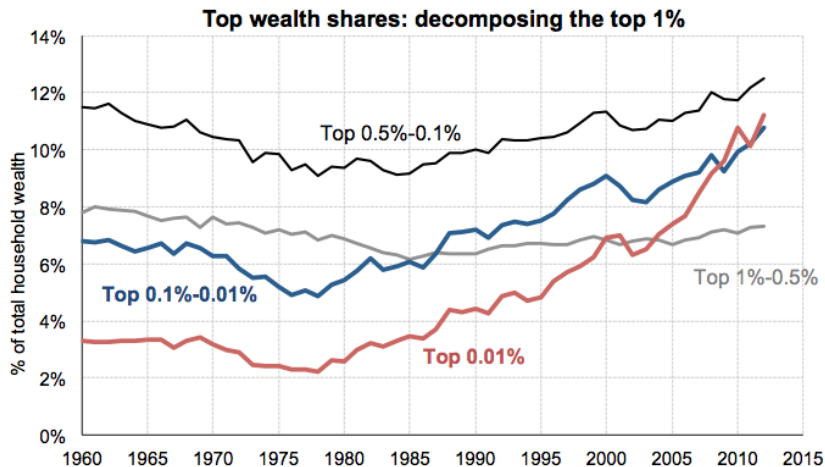
# Measuring Inequality: Key Concepts

- **Income** is a flow = **Labor income** + **Capital income**
- Labor income = **Wage and Salaries** + benefits + proprietor's income
- Capital income is the return on Wealth
- **Wealth** is a stock accumulated from savings and inheritances

# Wealth Concentration



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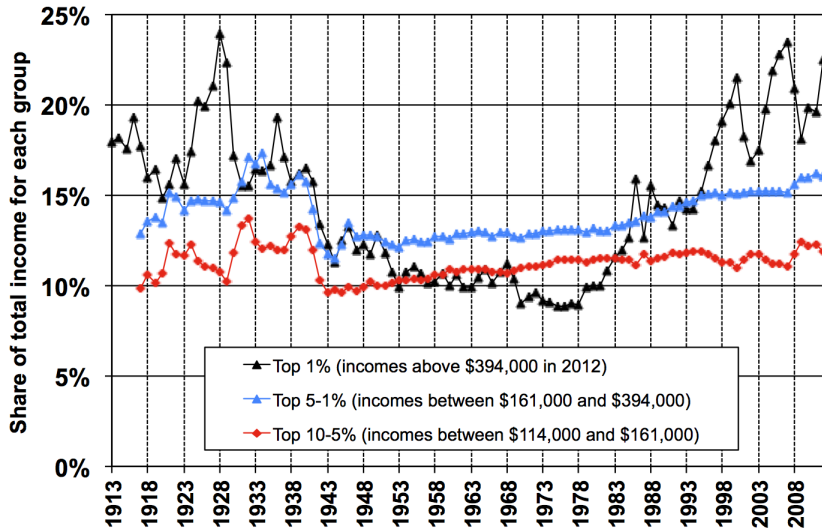


# Wealth Concentration (2012)

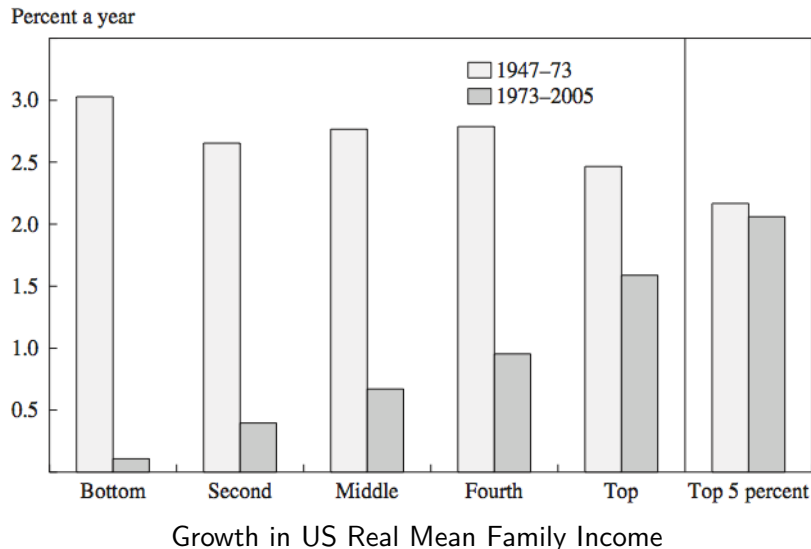
Wealth group	Number of families	Wealth threshold	Average wealth	Wealth share
<b>A. Top Wealth Groups</b>				
Full Population	160,700,000		\$343,000	100%
Top 10%	16,070,000	\$660,000	\$2,560,000	77.2%
Top 1%	1,607,000	\$3,960,000	\$13,840,000	41.8%
Top 0.1%	160,700	\$20,600,000	\$72,800,000	22.0%
Top .01%	16,070	\$111,000,000	\$371,000,000	11.2%

# Income Concentration

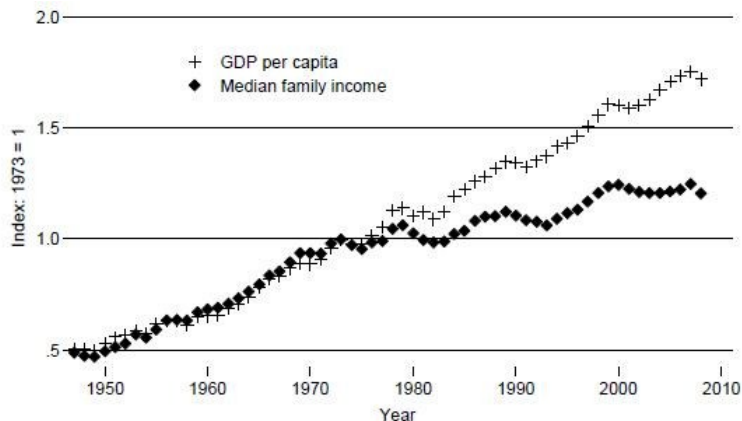
## Decomposing Top 10% into 3 Groups, 1913-2012



# Income Growth by Quintile



# Income and GDP per capita



Note: Inflation adjustment for both GDP and family incomes is via the CPI-U-RS.

Source: My calculations using Bureau of Economic Analysis and Census Bureau data, [www.bea.gov/national/index.htm#gdp](http://www.bea.gov/national/index.htm#gdp) and [www.census.gov/hhes/www/income/histinc/histinctb.html](http://www.census.gov/hhes/www/income/histinc/histinctb.html).



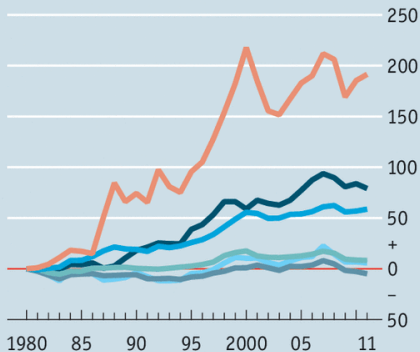
# Wage Growth

## The wages of scale

US households, average wage income

Cumulative % change since 1980

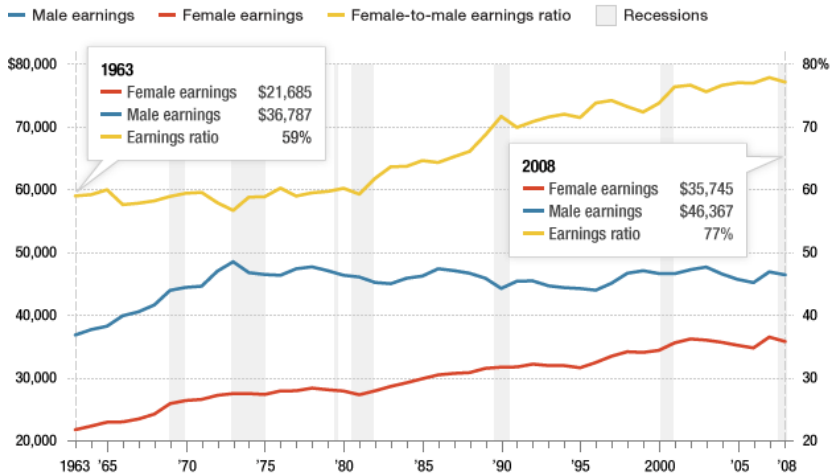
- Top 1%
- Fourth quintile
- Second quintile
- Highest quintile
- Middle quintile
- Lowest quintile



Sources: Congressional Budget Office; *The Economist*

# Wage Growth by Gender

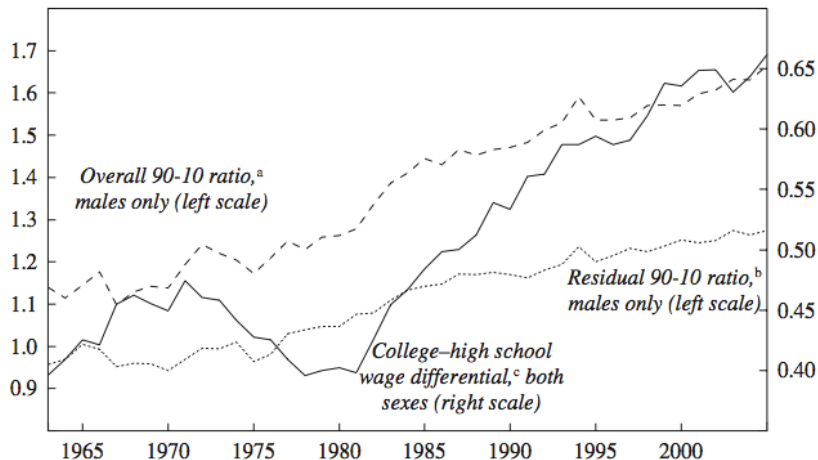
Annual median earnings, by sex (2008-adjusted dollars)



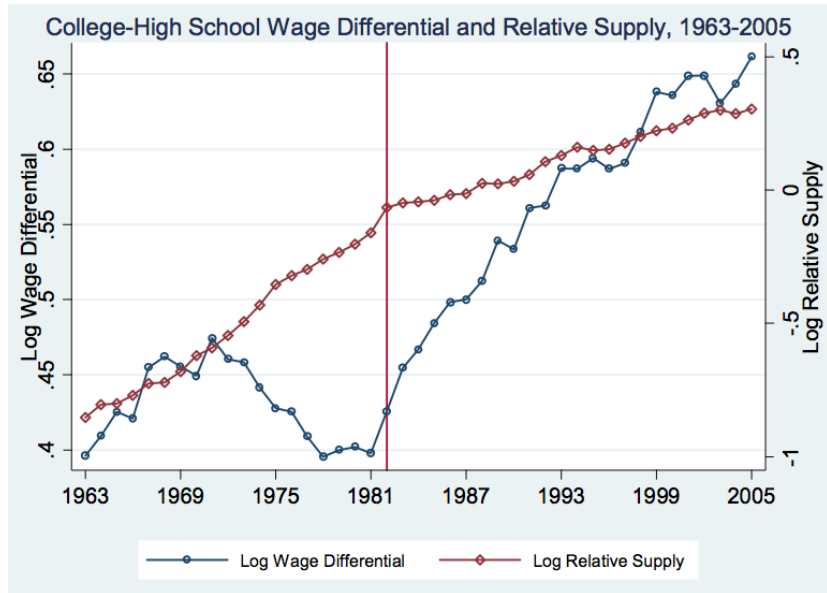
# Causes

- Technology Change
- Globalization
- Deregulation
- Taxation

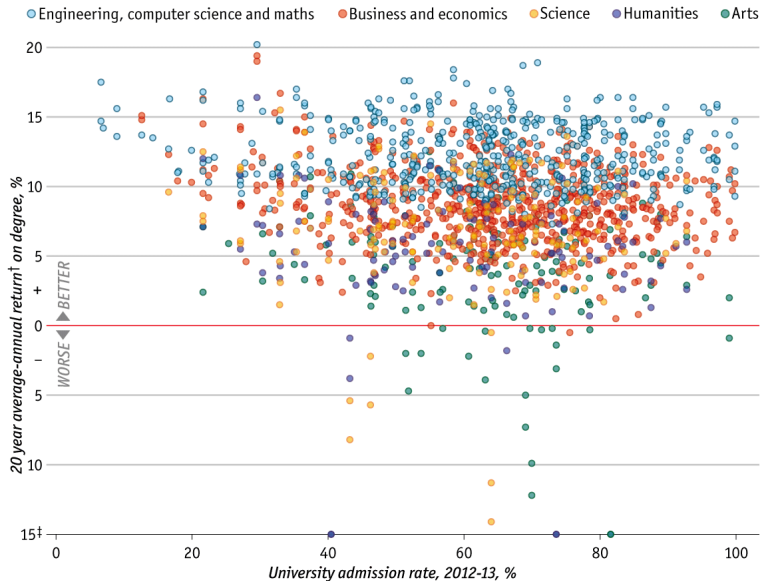
# Skill-biased Technological Change (SBTC)



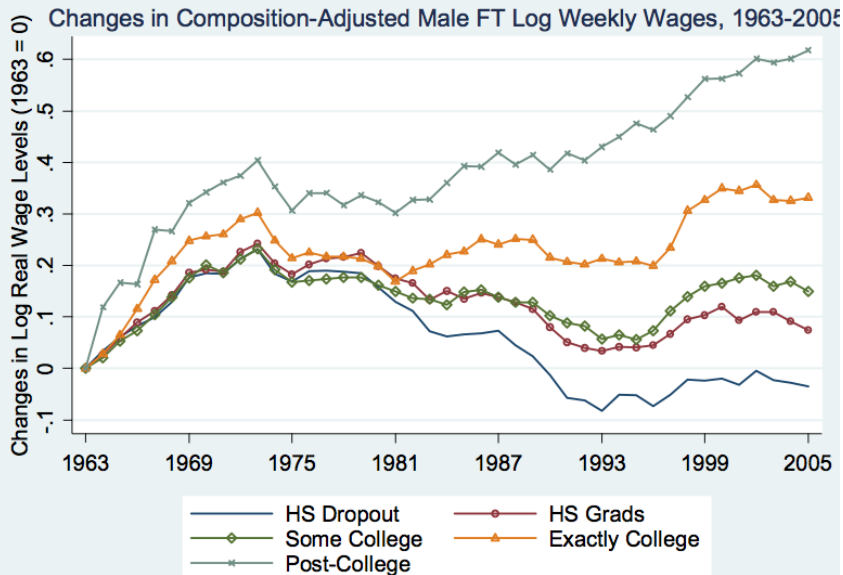
# College Premium



# Return to College Major



# Return to Education



# Brain v. Brawn Hypothesis



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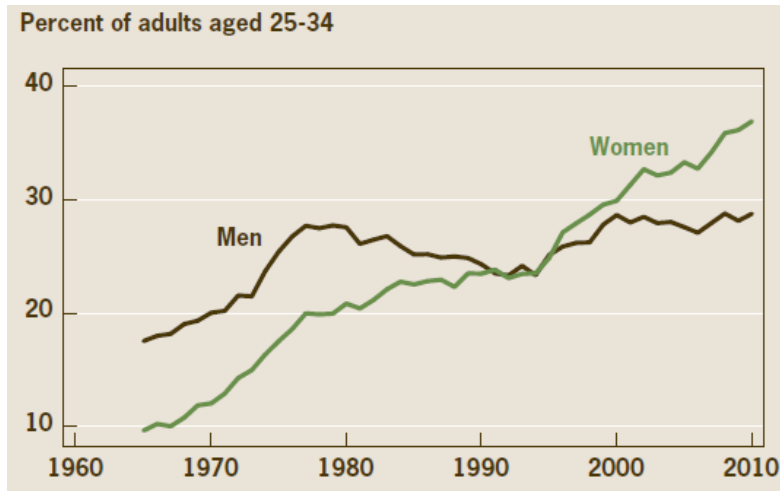
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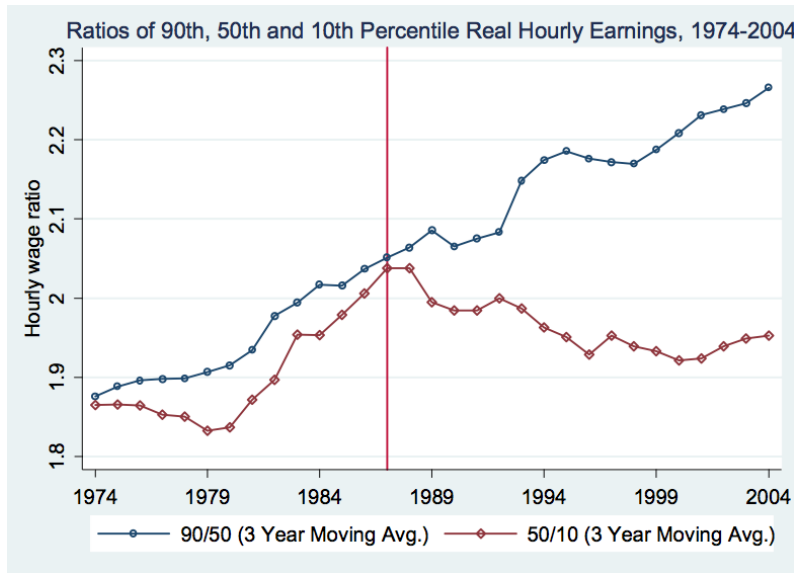
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  - ▶ Women acquiring more education than men.
  - ▶ A higher percentage of women choosing skill-intensive (white-collar) jobs than men.
  - ▶ Increasing inequality among men and women and decreasing inequality between men and women.

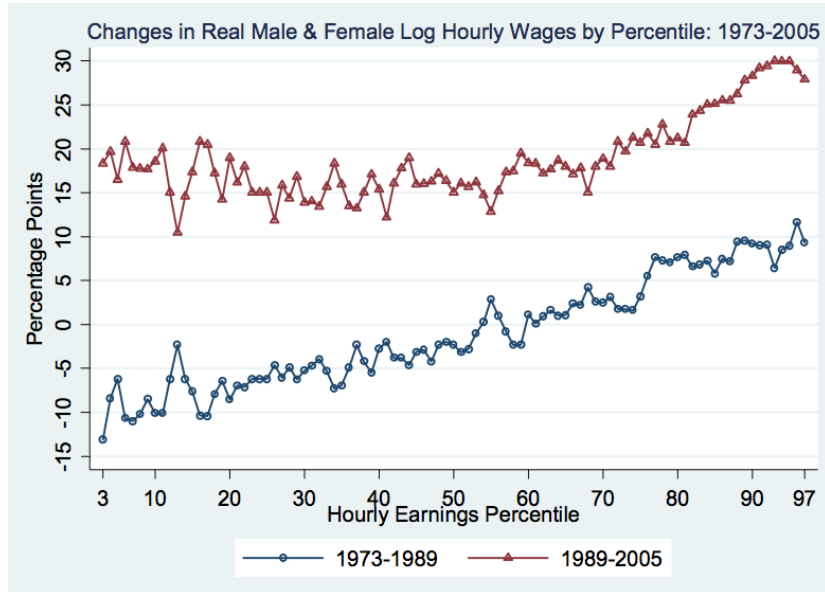
# College Attainment by Gender



# Wage Polarization

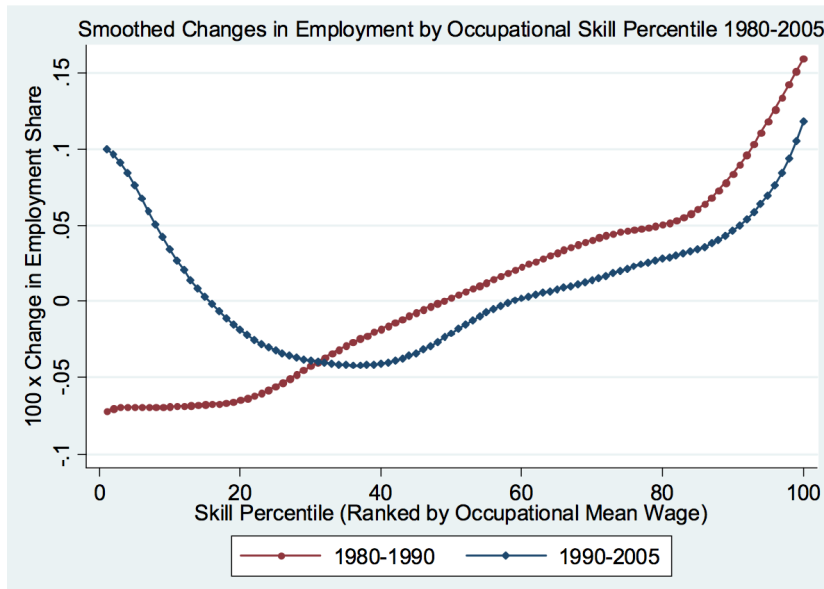


# Wage Polarization





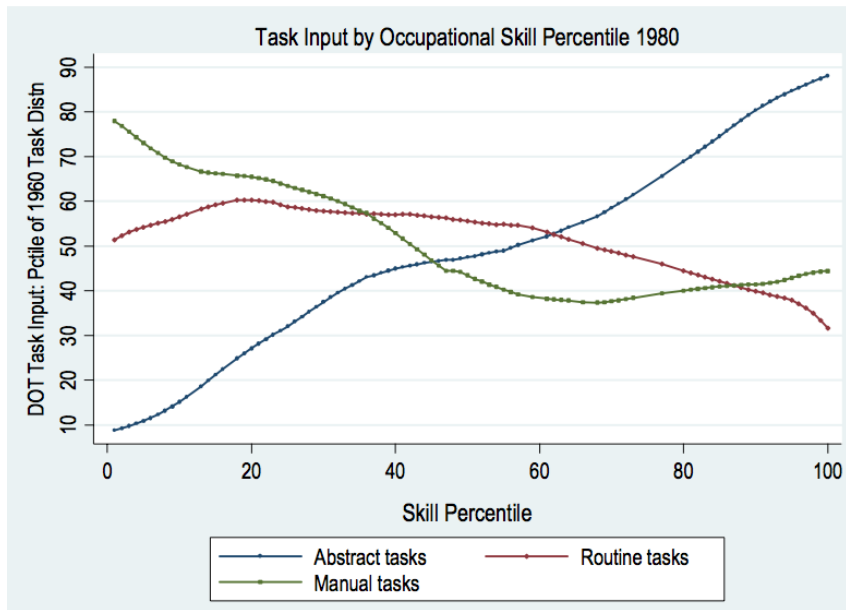
# Employment Polarization



# Task Model

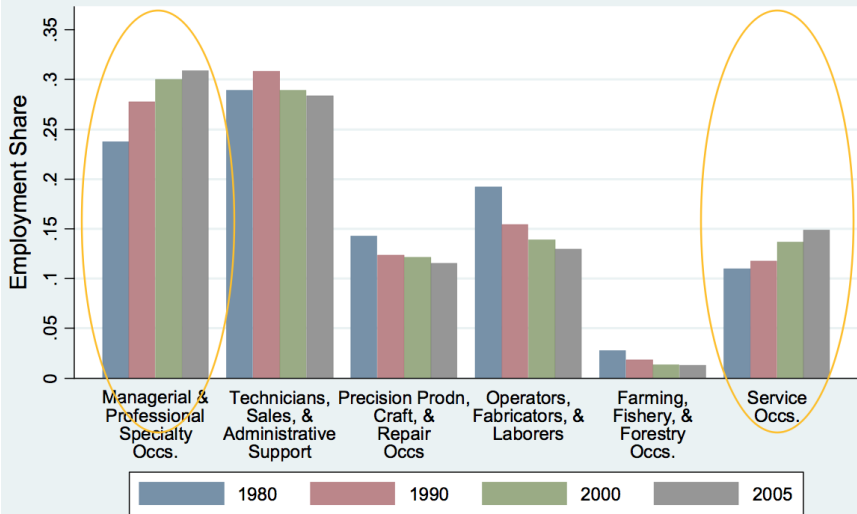
	Routine tasks	Nonroutine tasks
	Analytic and interactive tasks	
Examples	<ul style="list-style-type: none"><li>• Record-keeping</li><li>• Calculation</li><li>• Repetitive customer service (e.g., bank teller)</li></ul>	<ul style="list-style-type: none"><li>• Forming/testing hypotheses</li><li>• Medical diagnosis</li><li>• Legal writing</li><li>• Persuading/selling</li><li>• Managing others</li></ul>
Computer impact	<ul style="list-style-type: none"><li>• Substantial substitution</li></ul>	<ul style="list-style-type: none"><li>• Strong complementarities</li></ul>
	Manual tasks	
Examples	<ul style="list-style-type: none"><li>• Picking or sorting</li><li>• Repetitive assembly</li></ul>	<ul style="list-style-type: none"><li>• Janitorial services</li><li>• Truck driving</li></ul>
Computer impact	<ul style="list-style-type: none"><li>• Substantial substitution</li></ul>	<ul style="list-style-type: none"><li>• Limited opportunities for substitution or complementarity</li></ul>

# Task Model



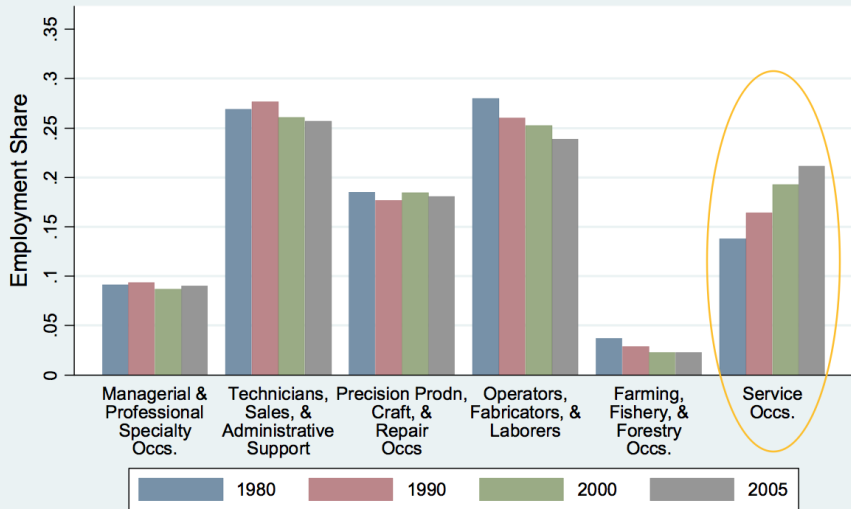
## Employment Shares by Occupation 1980-2005

### All Education Groups



## Employment Shares by Occupation 1980-2005

### Non-College Workers



# Occupation by Employment Growth (UK, 1979-1999)

## Top 10:

- Care assistants: 419%
- Software engineers: 405%
- Management consultants and business analysts: 335%
- Computer systems and data processing managers: 313%
- Computer analysts and programmers: 298%
- Educational assistants: 286%
- Hospital ward assistants: 262%
- Actors, entertainers, producers: 224%
- Treasurers and financial managers: 217%
- Financial institution and office managers: 201%

# Occupation by Employment Growth (UK, 1979-1999)

## Bottom 10:

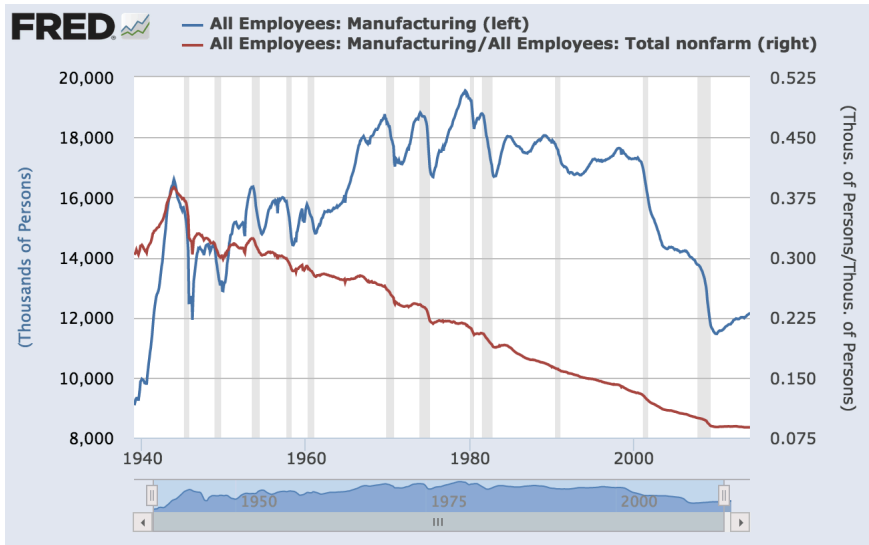
- Boring and drilling machine operators: -94%
- Coal mine laborers: -94%
- Face-trained coal-mining workers: -93%
- Grinding machine operators: -85%
- Laborers in foundries: -83%
- Laborers in engineering: -78%
- Electrical, energy, and related plant operatives: -78%
- Spinners, doublers, and twistors: -75%
- Originators, compositors, and print preparers: -75%
- Retail signal operatives: -74%

# Causes

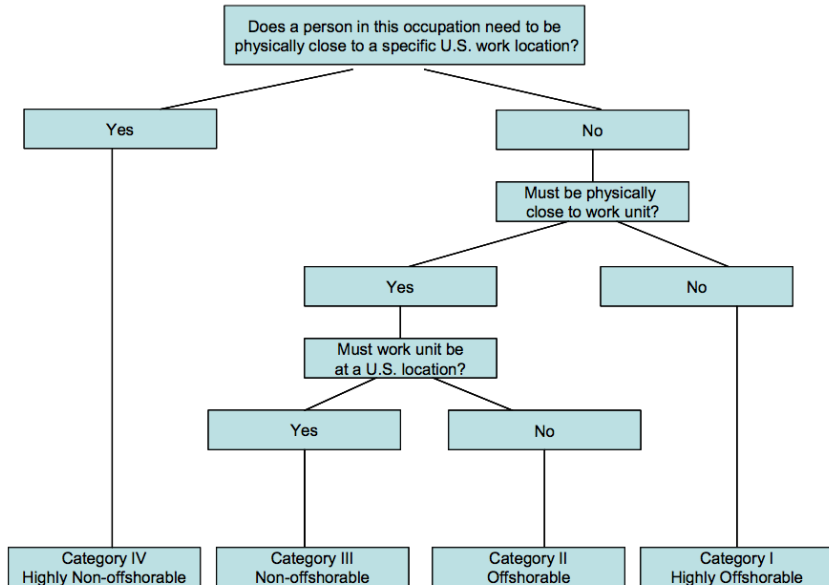
- Technology Change
- Globalization
- Deregulation
- Taxation



# Decline of Manufacturing



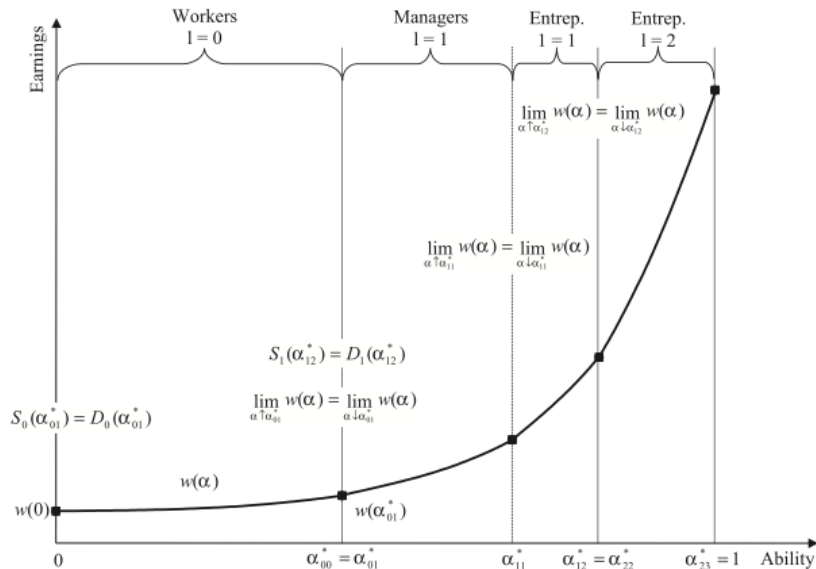
# Offshorability



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Occupation	SOC code	Category	Index number	Number of Workers
Computer programmers	15-1021	I	100	389,090
Telemarketers	41-9041	I	95	400,860
Computer systems analysts	15-1051	I	93	492,120
Billing and posting clerks and Machine operators	43-3021	I	90	513,020
Bookkeeping, accounting, And auditing clerks	43-3031	I	84	1,815,340
Computer support specialists	15-1041	I and II	92/68	499,860
Computer software engineers, Applications	15-1031	II	74	455,980
Computer software engineers, systems software	15-1032	II	74	320,720
Accountants <sup>b</sup>	13-2011	II	72	591,311
Welders, cutters, solderers, and brazers	51-4121	II	70	358,050
Helpers—production workers	51-9198	II	70	528,610
First-line supervisors/managers of production and operating workers	51-1011	II	68	679,930
Packaging and filling machine operators and tenders	51-9111	II	68	396,270
Team assemblers	51-2092	II	65	1,242,370

# Firm Hierarchy Model



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  - ▶ lowers communication cost. This increases the wage of managers as they can manage larger teams and reduces the wage of workers they are increasingly required only to do the most routine tasks.



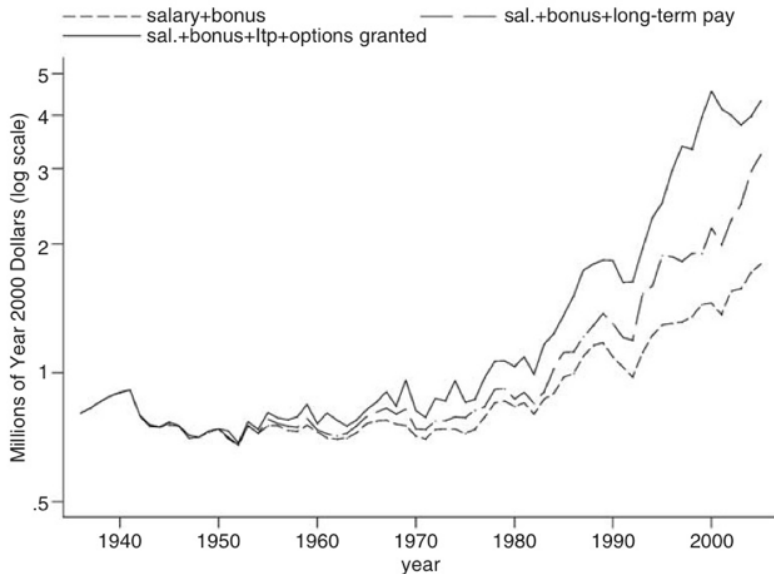
# Firm Hierarchy Model

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- If a firm has many layers so that the highest layer managers manages a firm with a large number of workers, she can leverage her knowledge immensely, resulting in very high earnings.

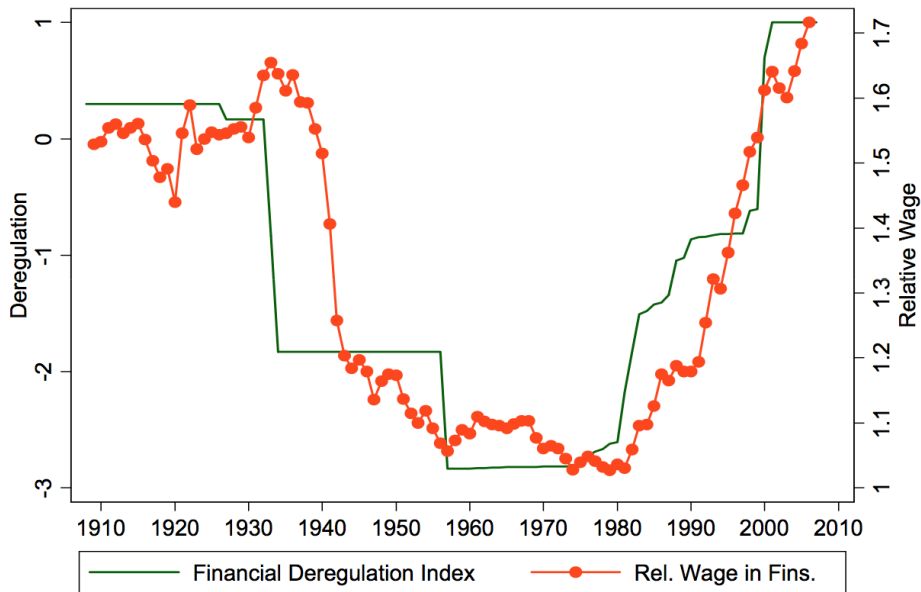
# Median Total CEO Compensation



# Causes

- Technology Change
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# Relative Financial Wage and Financial Deregulation



# Causes

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# Declining Labor Share

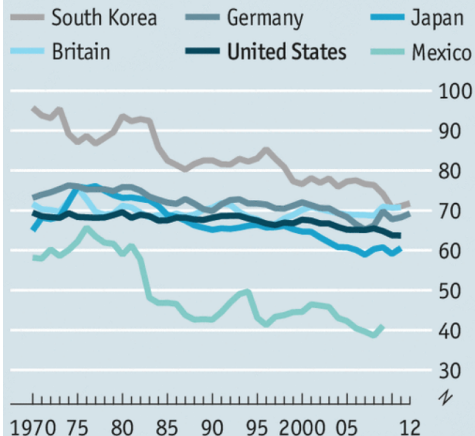
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## Unrewarding work

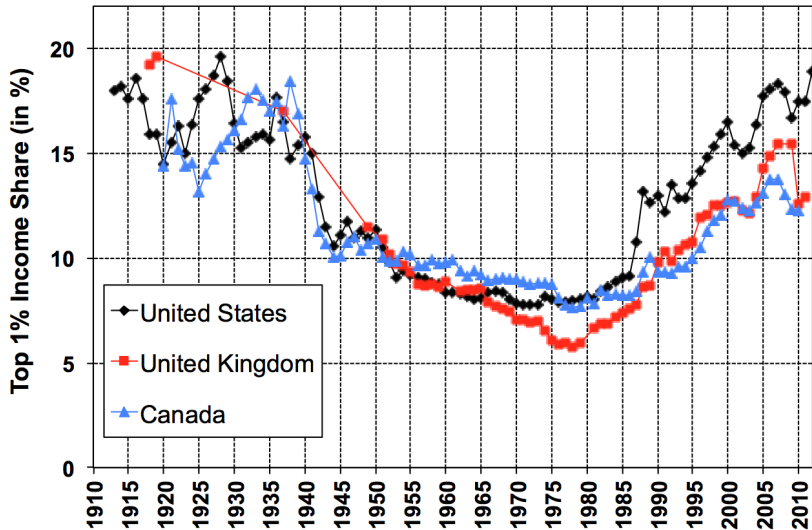
Labour costs as % of nominal GDP





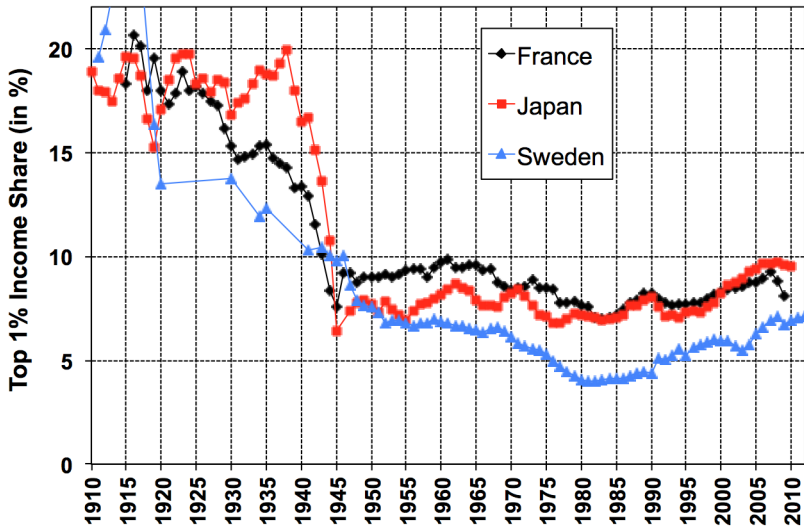
# Income Concentration

## Top 1% share: English Speaking countries (U-shaped)



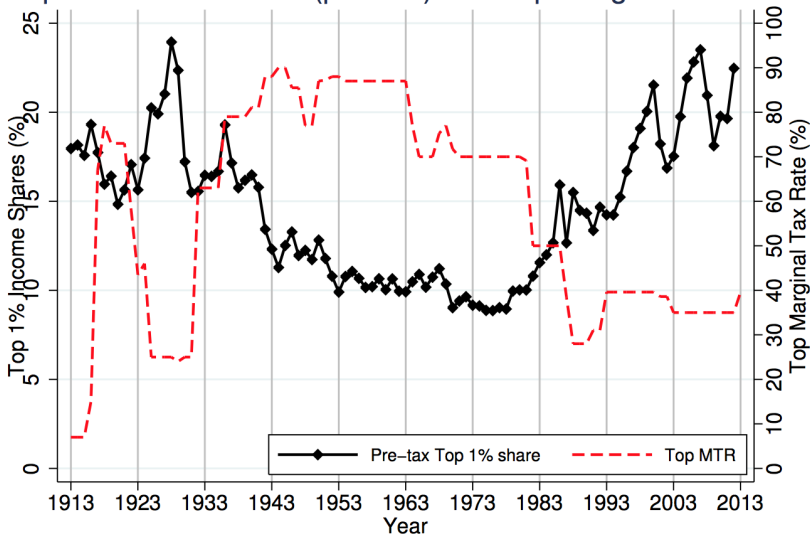
# Income Concentration

Top 1% share: Continental Europe and Japan (L-shaped)



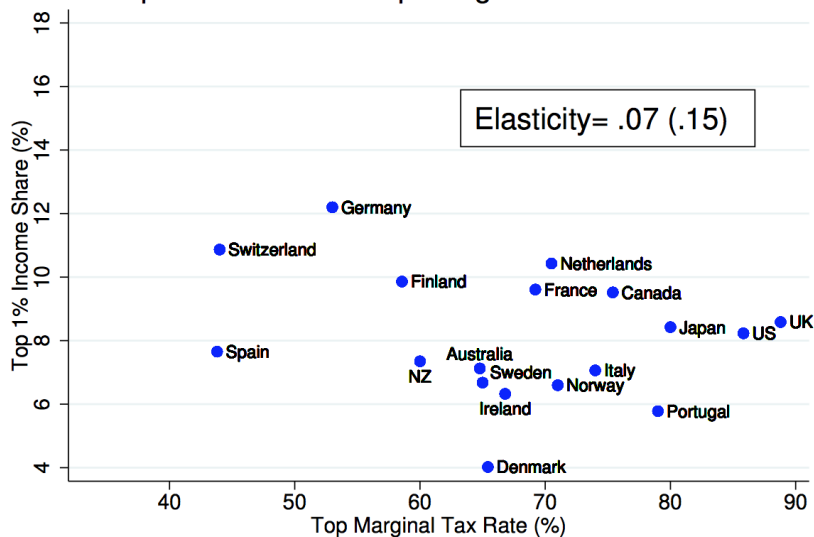
# Taxation and Income Concentration

Top 1% Income Share (pre-tax) and Top Marginal Tax Rate



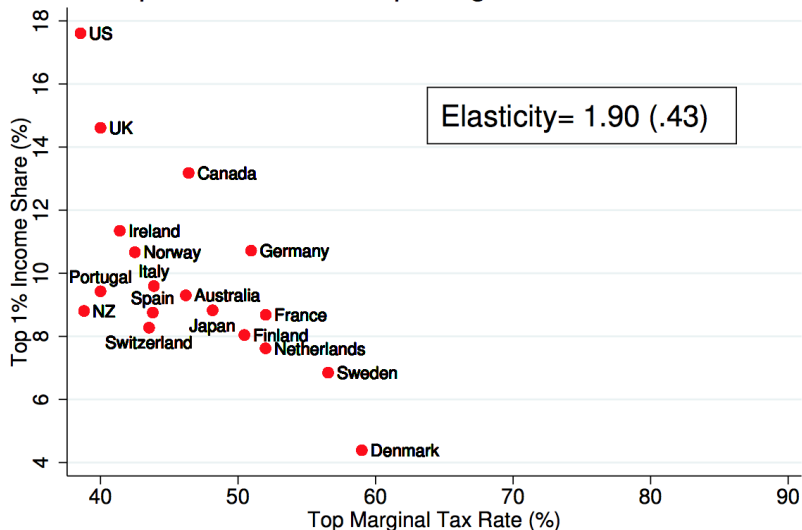
# Taxation and Income Concentration

## A. Top 1% Share and Top Marginal Tax Rate in 1960–4

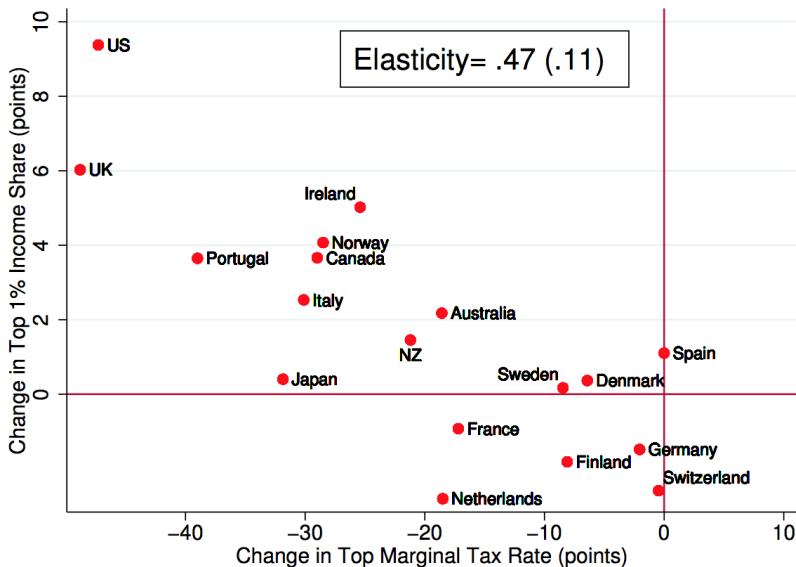


# Taxation and Income Concentration

## B. Top 1% Share and Top Marginal Tax Rate in 2005–9



# Taxation and Income Concentration



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  - ▶ Top tax rates should not be too high.
- Rent-seeking: Top earners extract more profits when top tax rates are low.
  - ▶ High top tax rates are desirable.

# Remedies?