

Changes in the Wage Structure

January 19, 2014

The basic goal of this part of this course is to think about wages and labor market dynamics

To motivate why this is important lets look at the change in the U.S. wage structure over the last 30 years

(generally not unique to the U.S. but more pronounced here)

I will present figures and tables from the Acemoglu and Autor handbook of Labor Economics chapter.

CPS Data

- Started in 1963
- Large data set by household (around 50,000 households each month)
- Primary source of data for labor force characteristics
- 4 months on/8 months off/4 months on
- Surveyed by residence
- Every March:
 - Earnings last year/week
 - hours last year/week
 - School,age,race,gender
 - Industry and occupation of job

Lets begin by looking at wages by education and gender

Figure 1

Composition Adjusted College/High-School Log Weekly Wage Ratio, 1963-2008

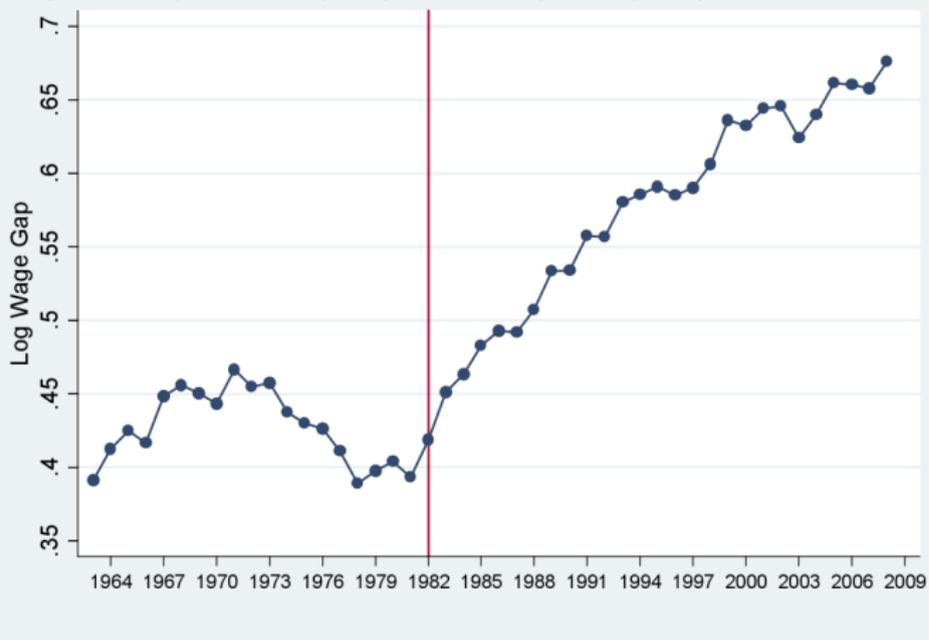


Figure 2

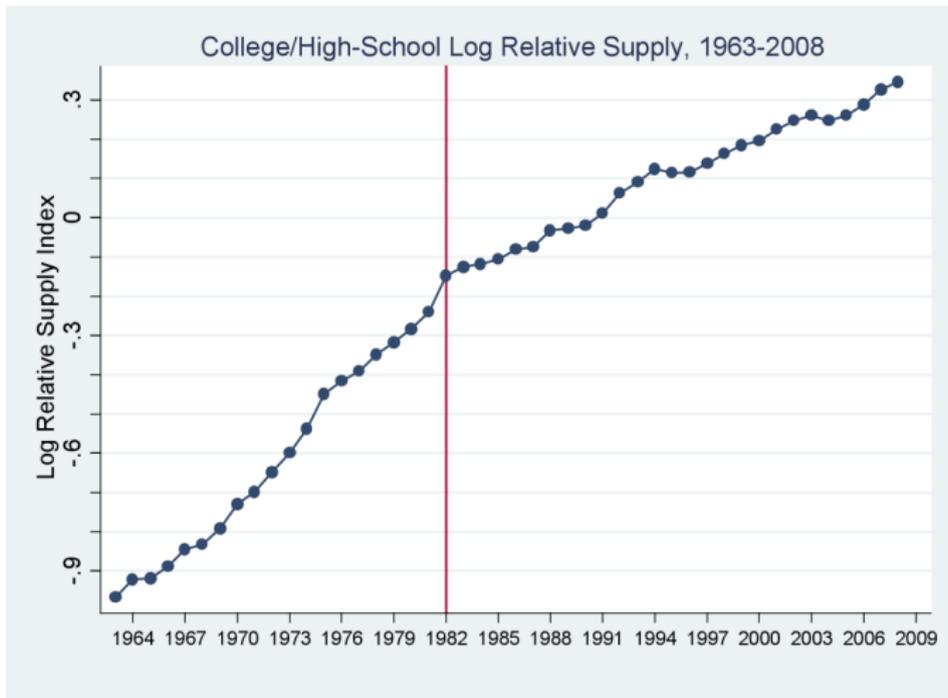


Figure 3a

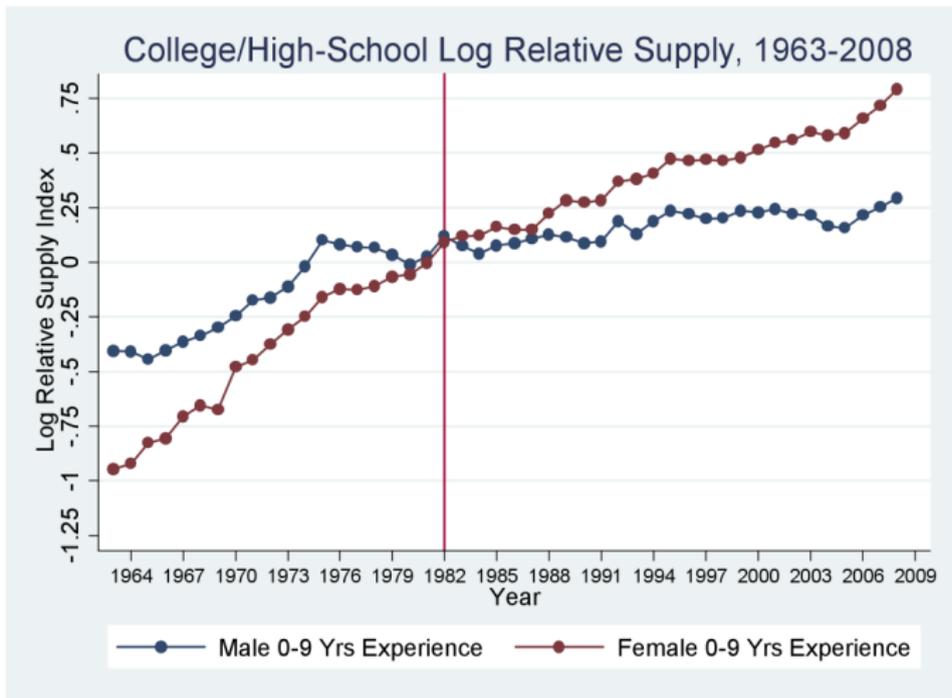


Figure 4a

Real, Composition-Adjusted Log Weekly Wages for Full-Time Full-Year Workers
1963-2008 Males

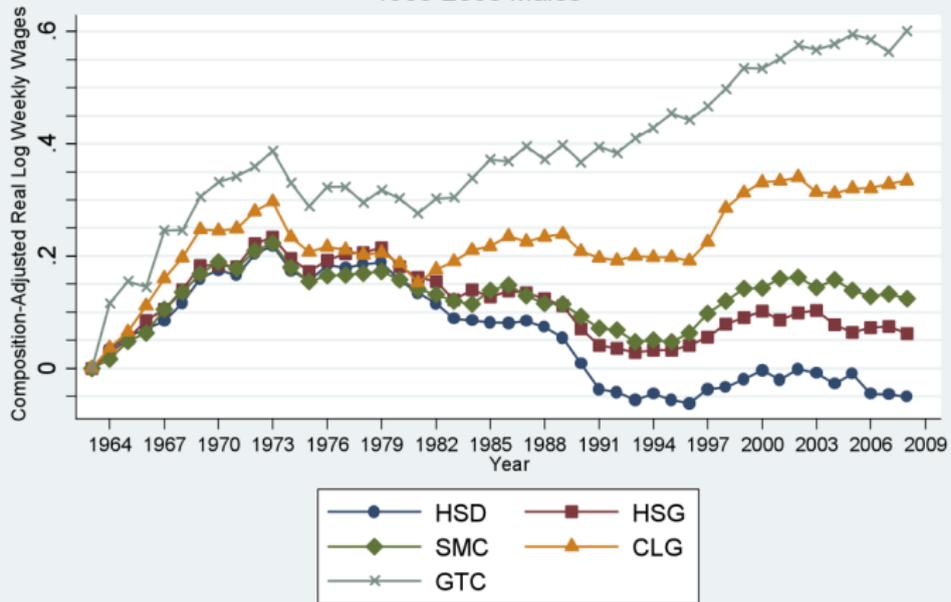


Figure 4b

Real, Composition-Adjusted Log Weekly Wages for Full-Time Full-Year Workers
1963-2008 Females



Table 1a. Changes in Real, Composition-Adjusted Log Weekly wages for Full-Time, Full-Year Workers, 1963 - 2008: By Educational Category and Sex
(100 x Change in Mean Log Real Weekly Wages)

	1963- 1972	1972- 1979	1979- 1989	1989- 1999	1999- 2008	1963- 2008
All	21.1	-1.7	-1.7	2.7	-0.3	20.1
Males	23.4	-2.8	-6.6	0.5	-1.2	13.3
Females	18.1	-0.2	4.9	5.8	1.0	29.6
Education (years)						
0-11						
Men	20.4	-1.5	-13.4	-7.4	-3.1	-5.1
Women	16.2	2.1	-2.7	0.2	-2.8	13.0
12						
Men	22.2	-0.7	-10.3	-2.1	-2.9	6.2
Women	17.3	0.7	1.9	3.7	1.8	25.4
13-15						
Men	20.9	-3.7	-5.8	2.8	-1.8	12.4
Women	18.7	1.0	5.8	6.4	1.0	33.0
16+						
Men	30.6	-6.3	4.9	9.5	3.6	42.2
Women	20.1	-5.0	14.6	12.8	2.5	44.9
16-17						
Men	28.0	-7.4	3.3	7.4	2.2	33.4
Women	18.7	-5.7	15.6	10.7	2.1	41.4
18+						
Men	36.0	-4.2	8.0	13.7	6.6	60.1
Women	23.7	-3.3	11.9	18.4	3.7	54.4

Source: March CPS data for earnings years 1963-2008. See note to Figure 1.

Next consider more general earnings inequality

Figure 7a

Cumulative Log Change in Real Weekly Earnings at the 90th, 50th and 10th Wage Percentiles
1963-2008: Full-Time Full-Year Males and Females

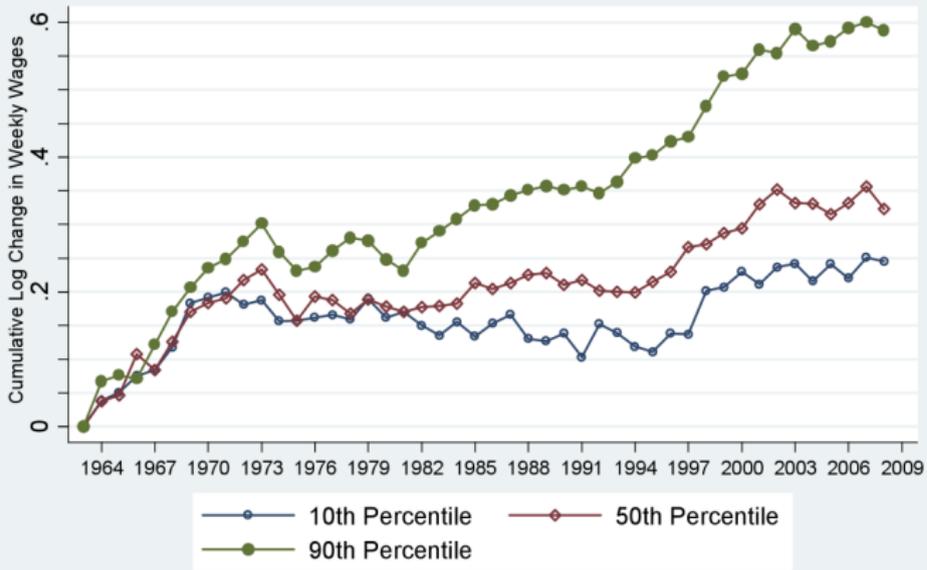


Figure 7b

Cumulative Log Change in Real Weekly Earnings at the 90th, 50th and 10th Wage Percentiles
1963-2008; Full-Time Full-Year Males

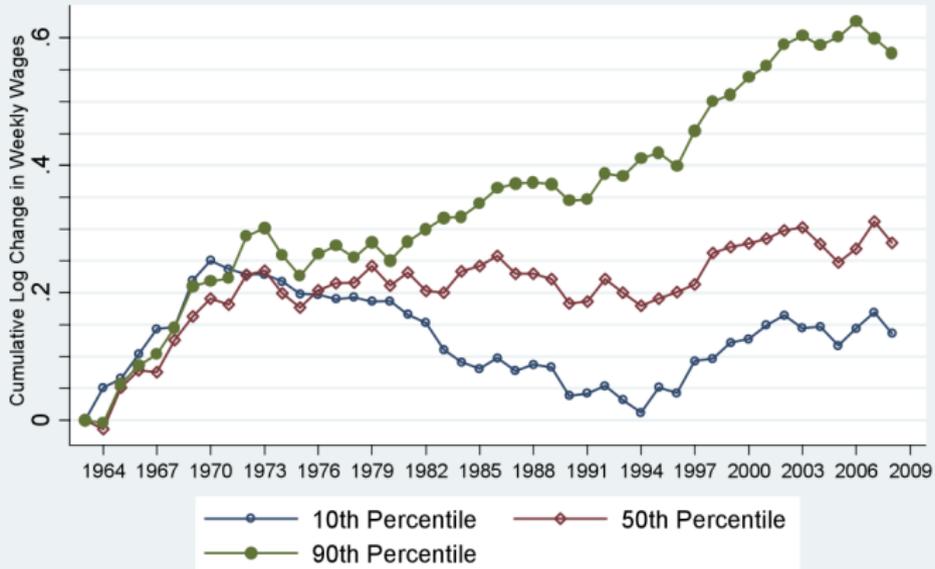


Figure 7c

Cumulative Log Change in Real Weekly Earnings at the 90th, 50th and 10th
Wage Percentiles

1963-2008: Full-Time Full-Year Females

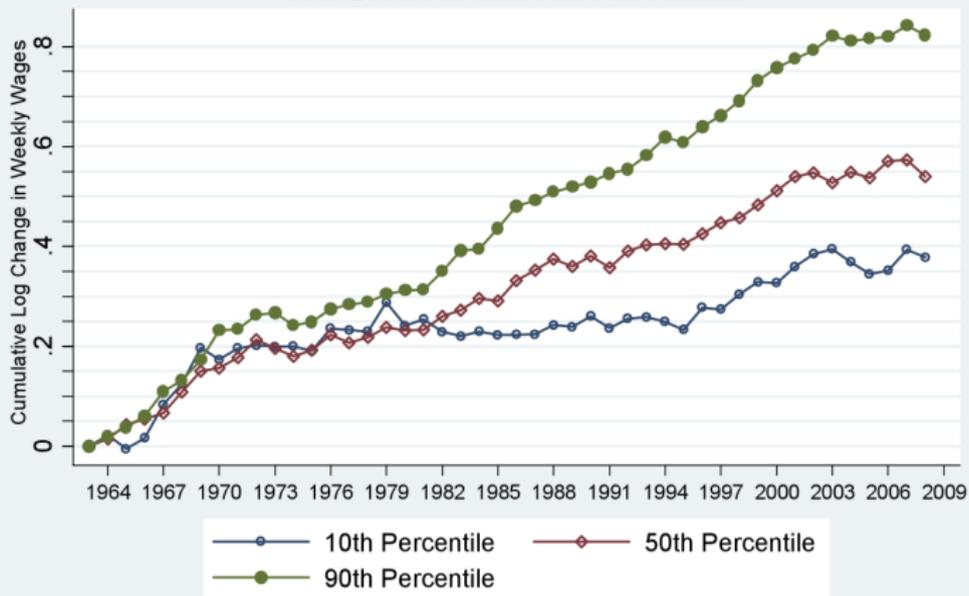


Figure 9a



Figure 9b

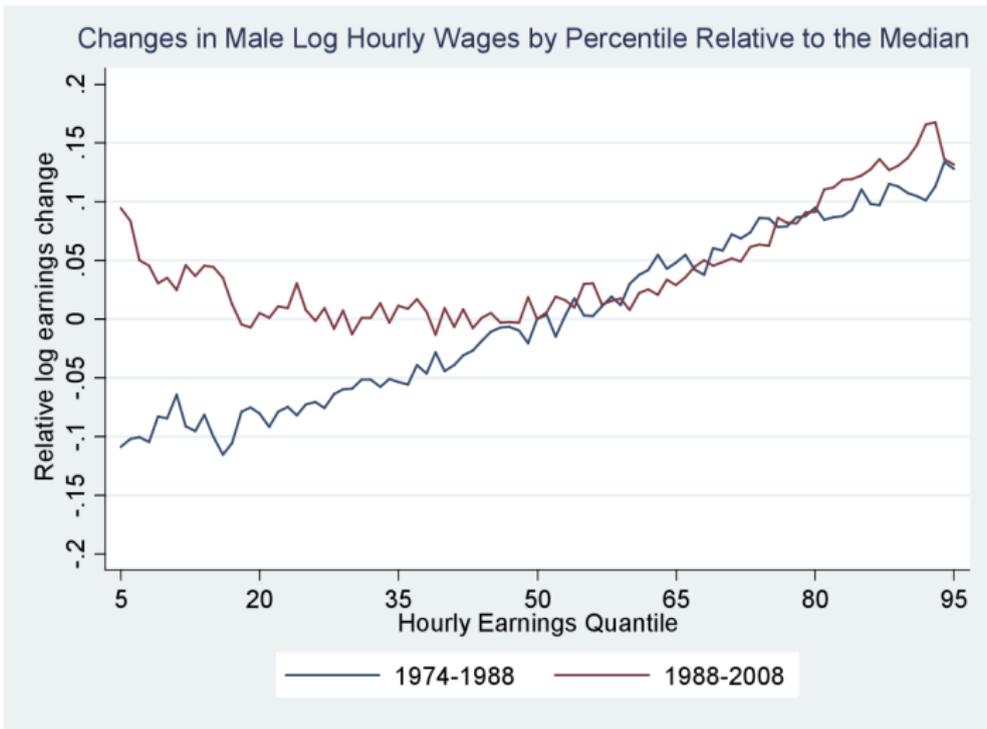
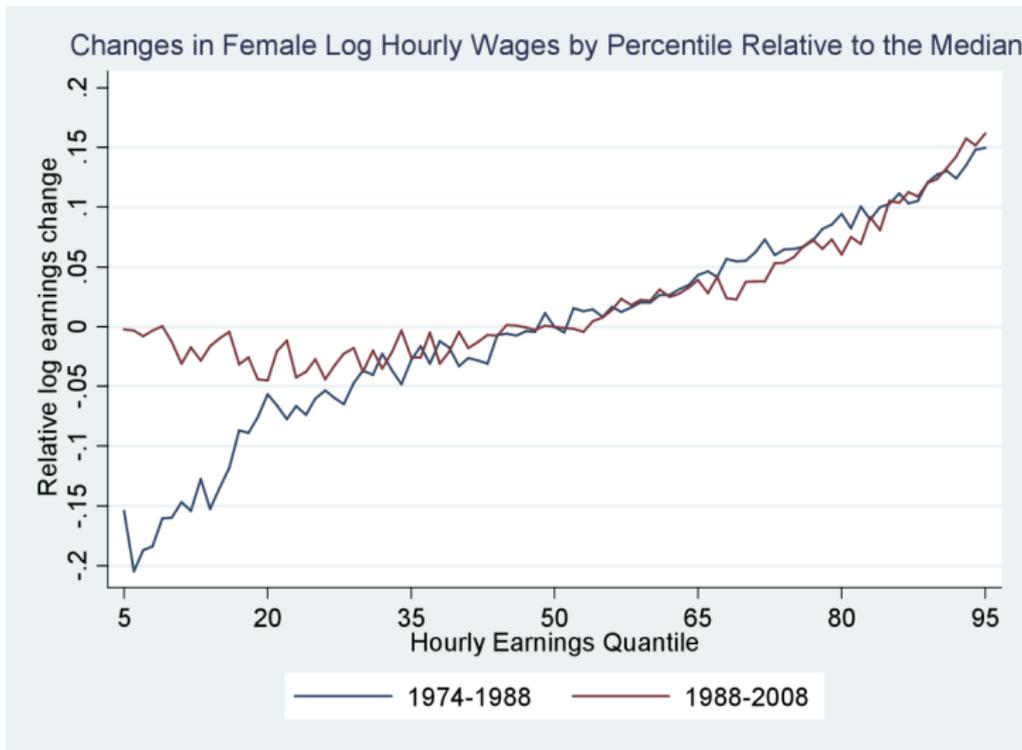


Figure 9c



One explanation of the 90s is polarization-workers moving into high skilled and low skilled occupations

Figure 10

Smoothed Changes in Employment by Occupational Skill Percentile 1979-2007

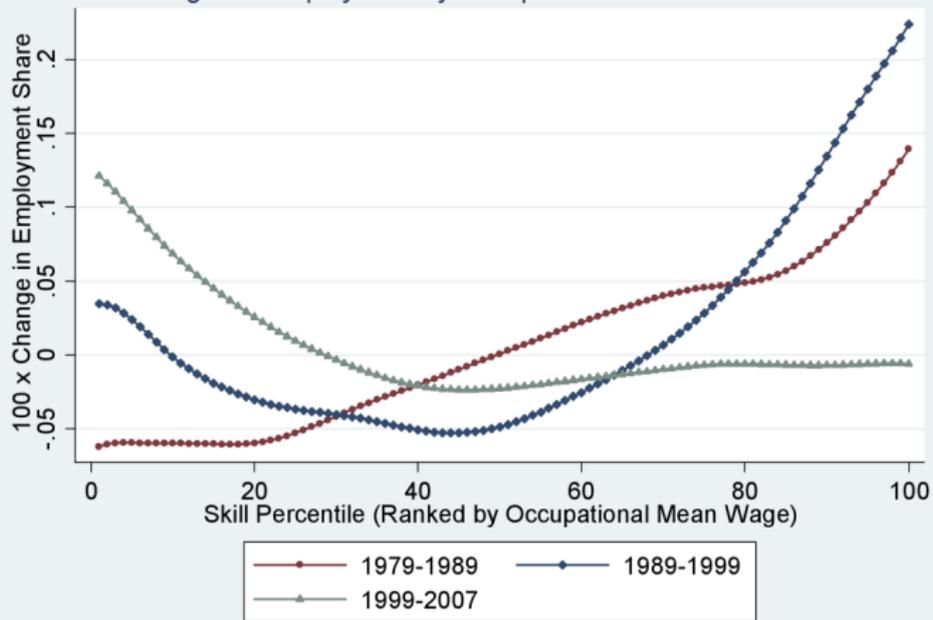


Table 2. Employment and Wages in Ten Broad Occupations, 1959-2007

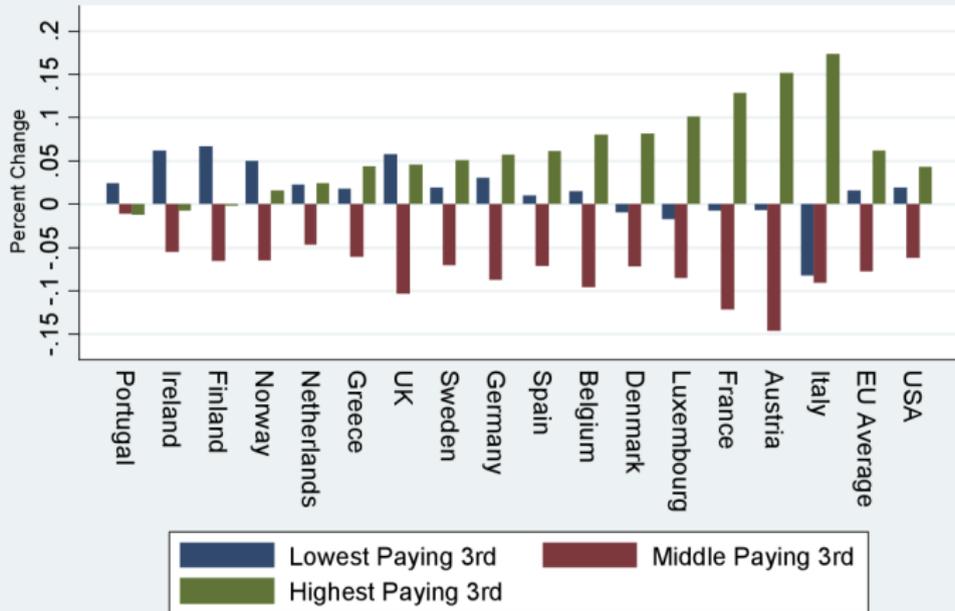
	1959	1969	1979	1989	1999	2007
	<u>A. Employment Shares</u>					
Managers	8.9	8.5	9.8	11.8	14.1	14.4
Professionals	8.6	10.7	11.7	13.4	14.9	15.7
Technicians	2.2	2.6	3.1	3.6	3.6	3.5
Sales	8.3	8.3	10.0	11.9	11.3	11.4
Office and admin	15.1	18.1	17.3	16.6	15.3	14.0
Production, craft and repair	13.8	12.7	12.7	11.1	11.2	10.1
Operators, fabricators and laborers	24.7	22.6	19.2	15.6	13.0	11.9
Protective service	1.1	1.1	1.5	1.8	2.0	2.2
Food prep, buildings and grounds, cleaning	4.8	6.0	7.4	7.6	7.5	8.8
Personal care and personal services	6.7	6.6	5.0	4.9	5.9	6.8

B. 100*Log Weekly Full-Time, Full-Year Wages
Relative to the 1959 Mean

Managers	47.9	67.3	60.9	67.5	80.8	88.5
Professionals	27.4	54.1	49.3	62.9	72.2	75.5
Technicians	16.5	33.5	34.3	45.6	64.3	68.5
Sales	-6.2	10.5	9.8	20.5	28.3	27.9
Office and admin	-6.5	7.6	7.1	13.8	19.3	17.5
Production, craft and repair	23.1	41.1	42.3	42.1	43.1	39.9
Operators, fabricators and laborers	-4.7	11.1	15.7	15.1	22.5	17.3
Protective service	15.3	41.4	34.3	40.6	49.1	50.3
Food prep, buildings and grounds, cleaning	-54.7	-31.5	-29.5	-23.1	-15.3	-22.0
Personal care and personal services	-76.9	-46.7	-29.2	-18.8	-5.8	-10.4

Figure 11

Change in Employment Shares by Occupation 1993-2006 in 16 European Countries
Occupations Grouped by Wage Tercile: Low, Middle, High

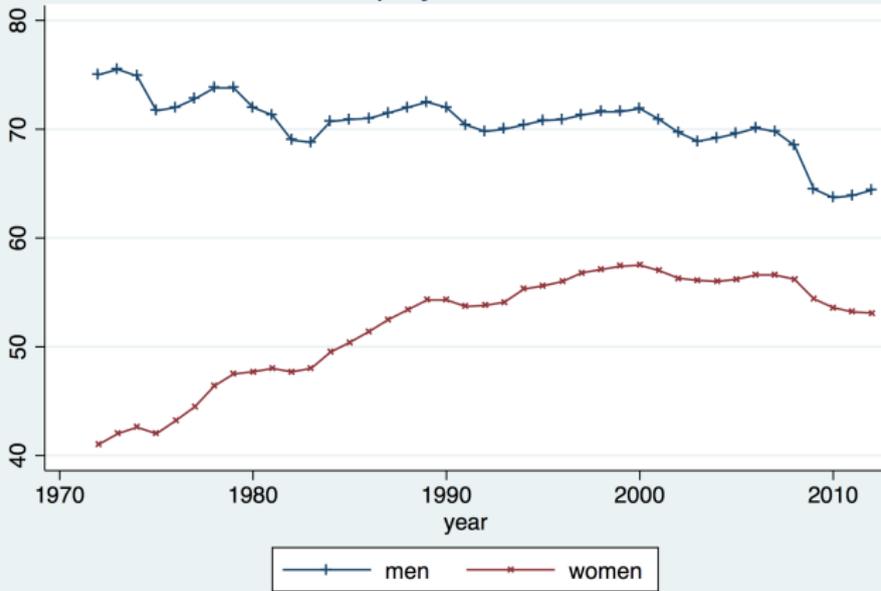


Though it really isn't a major focus of my part of the course, lets look at labor supply as well.

I created this myself from data I got from the BLS website

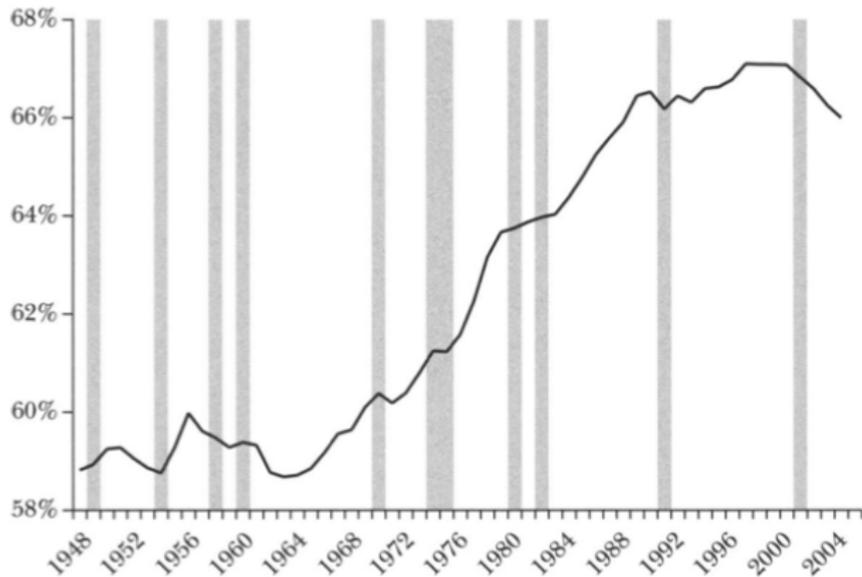
Empolyment Rates of the civilian noninstitutional population 16 years and over by sex, 1972 to date

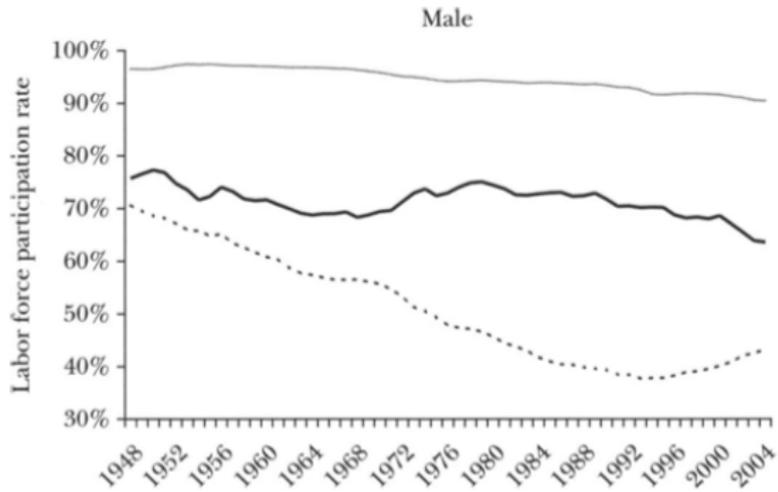
Employment Rates



Some more broken down from Juhn and Potter, *Journal of Economic Perspectives*, 2006

Figure 1
Civilian Labor Force Participation Rate





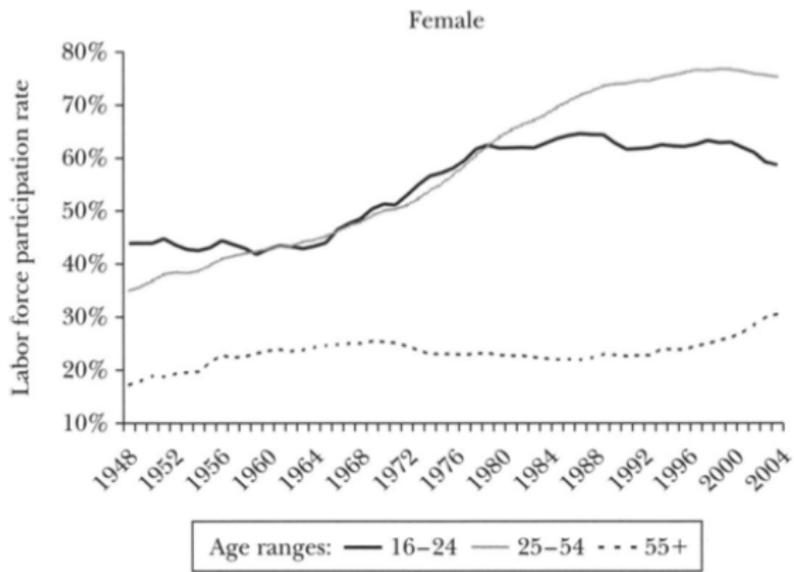


Table 2

Labor Force Participation Rate of Women Aged 20–60 by Marital Status, Children, Race and Education

	1969	1979	1989	1999	2004
Women, aged 20–60	49.9	61.7	70.9	74.9	73.4
<i>A. Marital status</i>					
All married	43.7	56.1	67.5	72.2	70.8
Widowed/divorced	67.9	71.1	75.0	78.6	78.4
Never married	74.6	77.2	78.3	79.0	76.2
<i>B. Marital status and presence of children</i>					
Married mothers	38.9	52.4	65.8	70.3	68.4
Widowed/divorced mothers	61.3	68.1	72.5	80.4	81.0
Never-married mothers	62.9	65.3	63.0	75.4	71.7
<i>C. Race</i>					
White	48.9	61.4	71.1	75.0	73.6
Black	58.1	64.2	70.5	76.2	74.8
Other	50.2	61.9	68.3	69.4	68.2
<i>D. Education</i>					
High school dropouts	43.5	46.8	48.3	53.0	50.9
High school graduates	52.0	63.2	71.4	73.2	70.8
Some college	51.4	66.3	75.6	77.6	76.1
College graduates	62.3	75.4	82.7	83.4	81.2

Table 3

Labor Force Status of Prime-Aged Males 25–54 Years Old

	1969	1979	1989	1999	2004
<i>A. Nonemployment category</i>					
Unemployed	1.2	3.7	4.5	3.2	5.1
Out of the labor force	3.8	5.6	6.8	9.0	10.5
Did not work last year	2.6	4.8	6.0	7.6	10.2
Did not work last year due to disability/illness	1.9	3.0	3.3	4.6	5.5
<i>B. Labor force participation by education: white males</i>					
High school dropouts	94.6	90.0	85.9	83.2	82.8
High school graduates	98.1	96.3	94.5	91.9	89.4
Some college	96.7	95.6	94.9	93.0	91.4
College graduates	97.7	97.3	97.4	95.9	95.2
<i>C. Labor force participation by education: black males</i>					
High school dropouts	90.8	80.3	75.6	60.7	59.1
High school graduates	94.9	92.4	87.8	82.3	77.8
Some college	93.6	92.7	92.7	86.9	82.5
College graduates	93.7	94.9	96.3	91.7	91.6