

# Hours Worked: Europe vs U.S.

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Econ520

April 12, 2012

- Europeans work fewer hours per year than do Americans.
- Why?

# Hours Worked

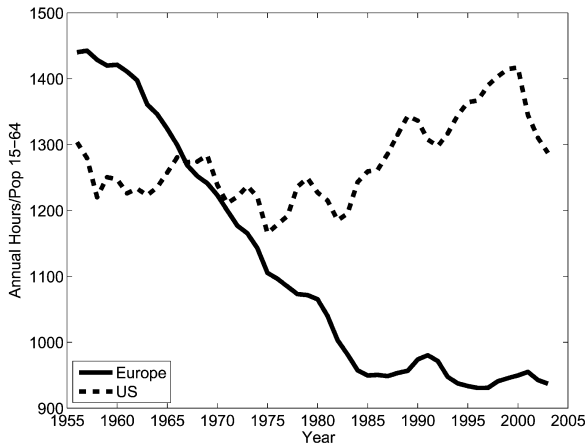


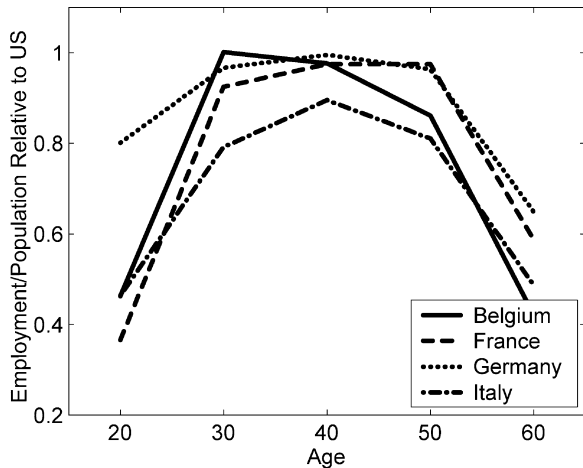
FIG. 1.—Aggregate hours in the United States and Europe

Source: Rogerson (2008)

Mean hours per working-age person: constant in the U.S., falling in Europe.

Question: **Why are Europeans not working any more?**

# Who is not working?



Source: Rogerson 2006

Note how this ties in with the Ljungqvist/Sargent story on turbulence.

# Structural differences

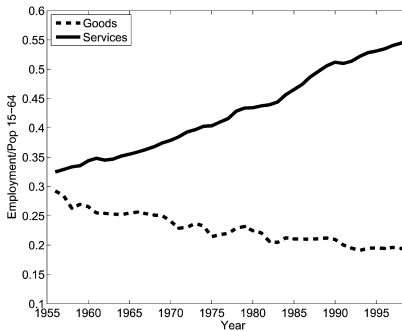


FIG. 2—U.S. sectoral employment rates

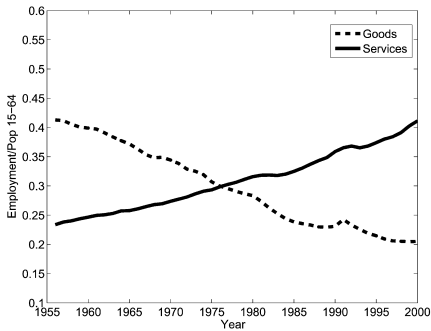


FIG. 3—European sectoral employment rates

Americans mostly work more in services.

# Structural differences

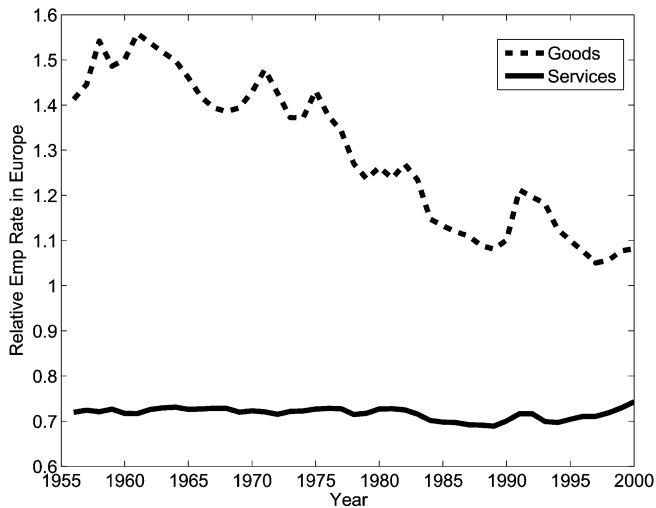


FIG. 6.—Relative sectoral employment in Europe

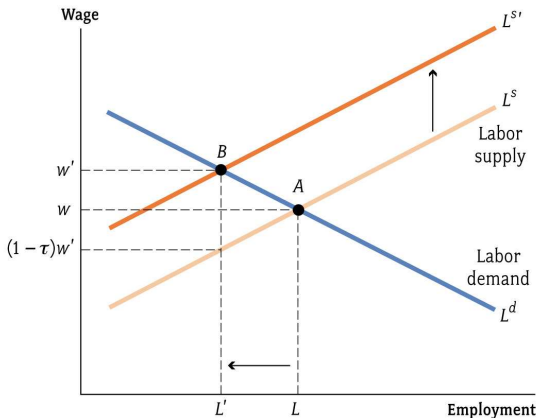
Fraction working in each sector: Europe / US

# What is the puzzle?

- It looks like the key is understanding falling relative hours in goods production.
- Not so
- European productivity caught up with the US over this period.
- One would expect a structural transformation from goods to services
- We see that in the US but not in Europe
- The puzzle: Europe failed to develop the market services sector.

# What does the Walrasian Model predict?

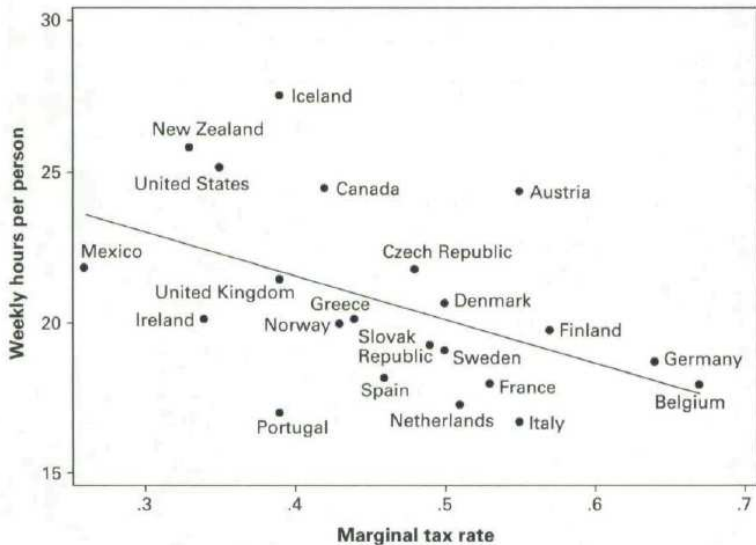
One possibility: Wage taxes reduce labor supply.



**FIGURE 7.4** An Income Tax at Rate  $\tau$

*Macroeconomics*, Charles I. Jones  
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# Hours and taxes in the data



Source: Alesina et al.

# Walrasian Model

1950s:

- taxes and hours are similar in Europe and the U.S.
- Europe is poorer, so the service sector is smaller

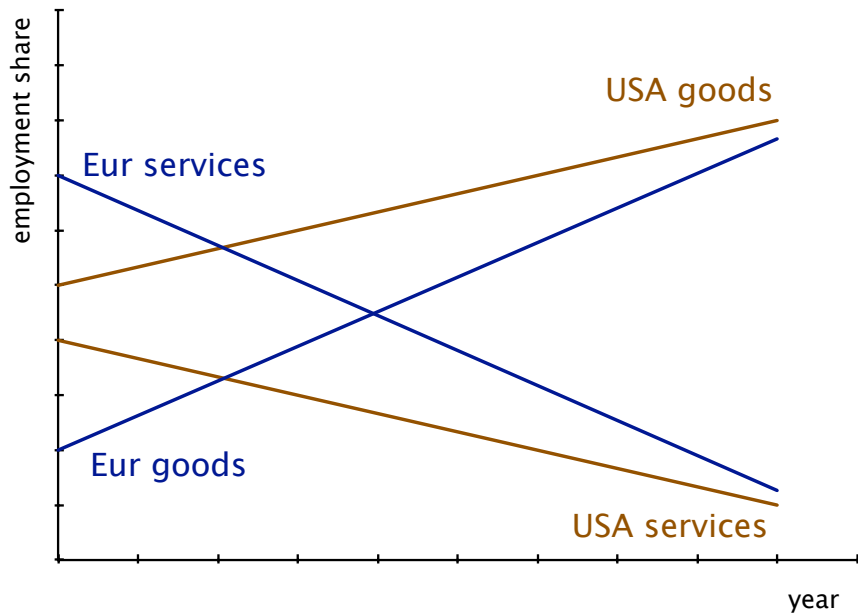
2000s:

- European productivity has increased - the service sector gets larger
- European taxes have increased - the service sector moves to home production

The Walrasian model accounts quantitatively for changes in

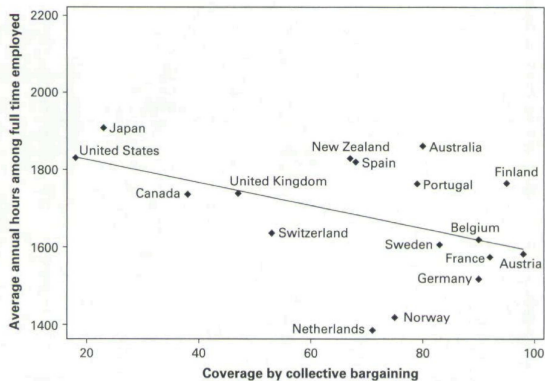
- hours worked by sector (Europe / US)
- changes in non-market hours (Rogerson 2008)

# Illustration: Walrasian Model



- An alternative view: European labor market institutions reduce hours.
- Examples:
  - longer mandatory vacations
  - shorter work week
  - more sick days / holidays

# Union Coverage



Source: Alesina et al. (2005)

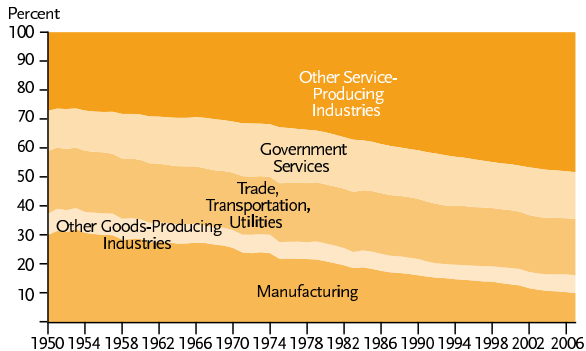
- Europeans worked as much as Americans in the 1950s.
- Then hours worked in Europe declined by 30%.
- Proximate reason: Europe failed to develop a service sector.
- The main reason: taxes shift the services sector out of the market.
- Competing interpretation: Regulated labor markets (perhaps with turbulence) prevent entry of the young and lead to early retirement.

Digression

The Structural Transformation from Manufacturing to  
Services

# Employment Shares

Figure 5  
Share of Nonfarm Employment by Major Industrial Sector, 1950 to 2007



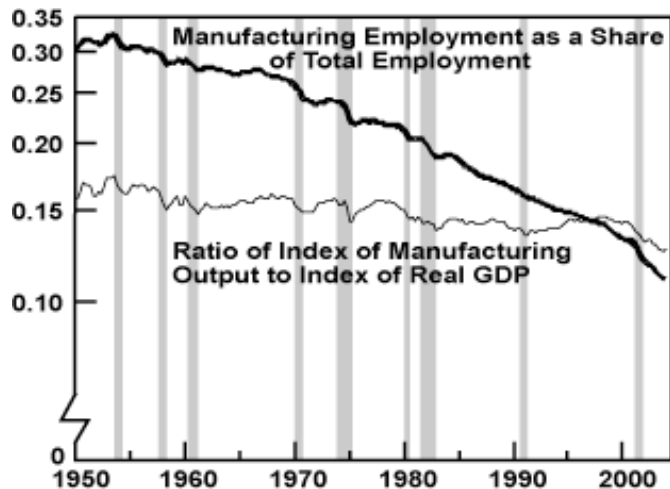
Source: Bureau of Labor Statistics, Current Employment Statistics, 1950 to 2007 (March).

Source: Population Bulletin, 2008



Source: Economist (2005)

# Manufacturing output



Source: CBO, 2004

What does this figure imply for productivity growth in manufacturing?

# Why Is Manufacturing In Decline?

## 1 Preferences

- 1 as economies develop, agriculture and manufacturing decline as shares of consumption

## 2 Fast productivity growth

- 1 employment in manufacturing is falling while output keeps growing

## 3 International trade

- 1 services become tradeable - rich countries exports them

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- Economist (2005). The great jobs switch The fall in manufacturing employment in developed economies is a sign of economic progress, not decline. <http://www.economist.com/node/4458528>