Economics 1: Introduction to Economics

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Administrivia

March 30, 2016 8-9 AM
Wheeler Auditorium, U.C. Berkeley

Meta-Announcement

- We are moving announcements and administrivia out of lecture time and onto the “announcements” bCourses page…
- That is all…

For the Rest of the Course…

- 2016-03-28 Mo - 2016-04-06 We: Measurement, Growth, and the Circular Flow (FBAH chs. 15-21)
- 2016-04-11 Mo - 2016-04-20 We: The Keynesian Approach (FBHA chs. 22-25)
- 2016-04-25 We - 2016-05-09 Mo: Yet More Issues, Final Review, and Exam (FBHA ch. 26)

For the Rest of the Course…

- Measurement, Growth, and the Circular Flow:
  - 2016-03-28 Mo Lecture: Measuring the Macroeconomy (Read Frank et al. chs 15-17)
  - 2016-03-30 We Lecture: Economic Growth in the Very Long Run (Read Frank et al. ch 18)
  - 2016-04-04 Mo Lecture: Saving, Investment, Finance, Money, Prices, and Banking (Read Frank et al. chs. 19-20)
  - 2016-04-06 We Lecture: Business Cycles (Read Frank et al. ch 21)
    - 2016-04-06 Wu/-07 Th Assignment: Problem Set 5 (growth and the circular flow)

For the Rest of the Course…

- The Keynesian Approach:
  - 2016-04-11 Mo Lecture: Income and Spending (Read Frank et al. ch 22) (2016-04-11 Mo)
  - 2016-04-13 We Lecture: The Federal Reserve and Monetary Policy (Read Frank et al. ch 23) (2016-04-13 We)
    - 2016-04-13 We/-14 Th Assignment: Problem Set 6 (the Keynesian model) due
  - 2016-04-18 Mo Lecture: Aggregate Demand and Aggregate Supply (Read Frank et al. ch 24)
  - 2016-04-20 We Lecture: Macroeconomic Policy (Read Frank et al. ch 25)
    - 2016-04-20 We/-21 Th Assignment: Problem Set 7 (macroeconomic policy)

For the Rest of the Course…

- Yet More Issues:
  - 2016-04-25 We Lecture: The International Economy (Read Frank et al. ch 26)
- The Wrap-Up
  - 2016-04-27 FINAL REVIEW
    - 2016-04-27 We/-28 Th Assignment: Problem Set 8 (international and other issues)
  - 2016-05-04 We/-05 Th Section Review Meetings
    - 2016-05-04 We/-05 Th Assignment: Problem Set 9 (final review) due
  - 2016-05-09 Mo: FINAL EXAM

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Orientation

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"The Market" as an Institution

- We start from what look like to us deep truths of human psychology
  - People are *acquisitive*
  - People engage in *reciprocity*—i.e., want to enter into reciprocal gift-exchange relationships in which they are neither cheaters nor saps
  - With those they *trust*…

"The Market" as an Institution II

- We devised property as a way of constructing expectations of trust…
- We devised money as a substitute for trust…
- And so, on the back of these human propensities for acquisition and for trusted gift-exchange, we have constructed a largely-peaceful global 7.4B-strong highly-productive societal division of labor:

    - Built on assigning things to *owners*—who thus have responsibility for stewardship and the incentive to be good stewards…
    - And on very large-scale webs of *win-win exchange*…
    - Regulated by *market prices…*

- This is a very valuable and important societal institution…
- Economics is the study of how it—what we usually call "the market"—works…

"The Market" as an Institution III

- In analyzing the market as an institution, we need to cover:
  - The success of the market
  - The failures of the market
  - The political-economic-sociological-historical context of the market
  - The impact of a market economy on the other institutions and practices of society
- Plus there is the peculiar domain of "macroeconomics"

The Market Balance Sheet: Pro

- The market failure-free competitive market in equilibrium, from the perspective of a utilitarian seeking to achieve the greatest-good-of-the-greatest-number, accomplishes these goals:

1. It produces at a scale that exhausts all possible *win-win exchanges*—and is "efficient" in that sense.
2. It allocates the roles of producers and sellers to those who can make and sell them in a way least costly to society's overall resources—to those with the lowest *opportunity cost*.
3. It rations the commodities produced to those with the greatest *willingness-to-pay*—to those who, by the money standard, need and want them the most.

The Market Balance Sheet: Con

- Markets can go wrong. They can:

    1. not fail but be failed by governments that fail to properly structure and support them—or that break them via quotas, price floors/ceilings, etc.

    2. be out-of-equilibrium

    3. see actors have market power

    4. be afflicted—if that is the word—by non-rivalry (increasing returns to scale; natural monopolies)

    5. suffer externalities (in production and in consumption, positive and negative; closely related to non-excludibility)

    6. suffer from information lack or asymmetry

    7. suffer from maldistributions—for the market will only see you if you have a willingness to pay, which is predicated on an ability to pay…

    8. suffer from non-excludability (public goods, etc.)

    9. suffer from miscalculations and behavioral biases

    10. suffer from failures of *aggregate demand*

To Your i>Clickers…

- Amartya Sen's theory of famines is best summarized as: Famines occur because…
  A. …there is not enough food to feed everyone.
  B. …poor people do not have enough money.
  C. …the market system privileges the demands of the rich for food-as-a-luxury over the demands of the poor for food-for-survival
  D. (A) and (C)
  E. (A), (B), and (C)

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Measuring the Economy: Prices, Inflation, Nominal GDP, and Real GDP

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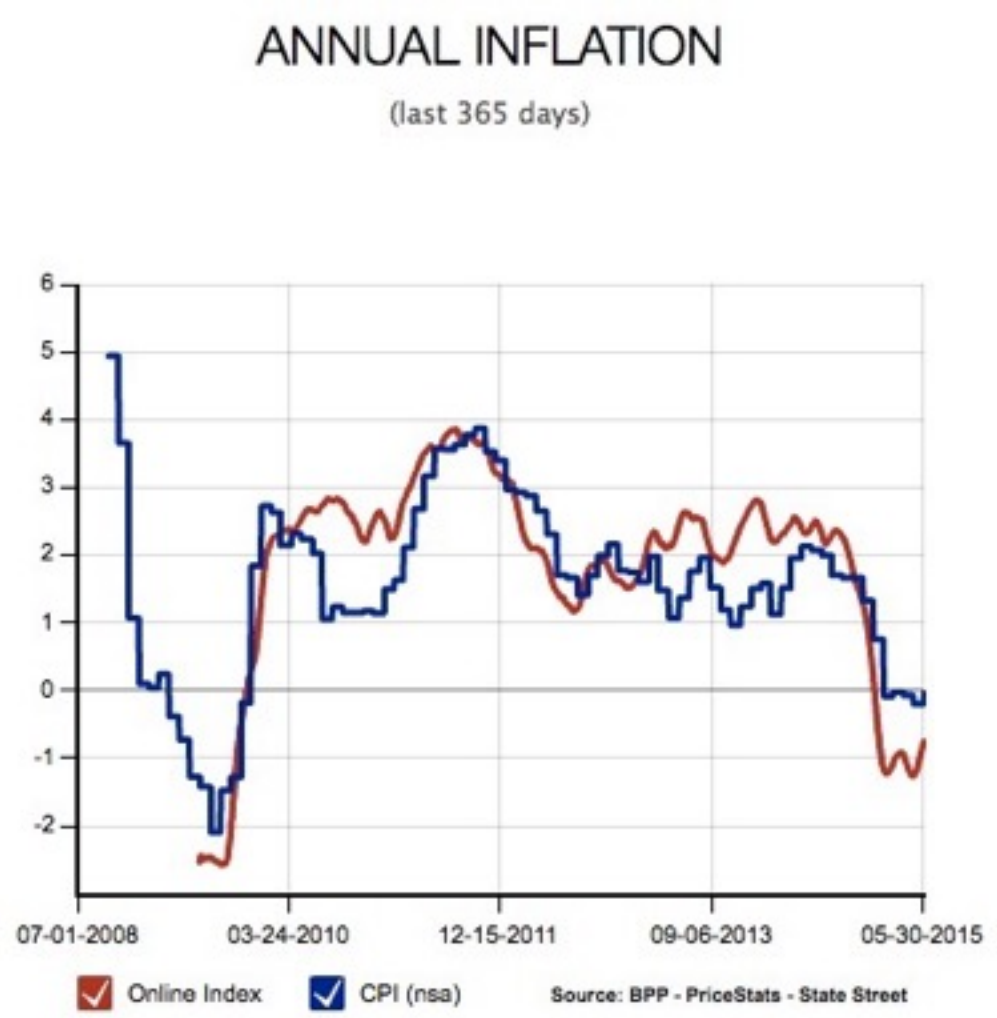
Nominal GDP versus Real GDP

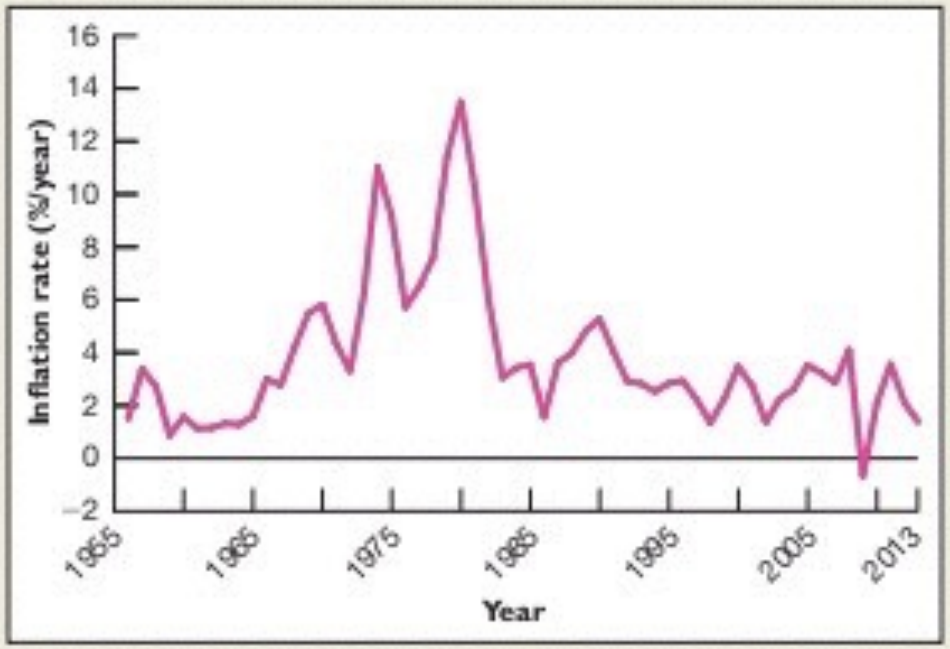
- The purchasing power of money
    - MIT's Billion Prices Project
    - The BLS and the CPI
    - Close agreement between series constructed on very different principles is quite heartening and quite reassuring
- Want to distinguish changes in GDP that come about as a result of changes in production from those that come about as a result of changes in the purchasing power of money

The Inflation Rate

- The rate of change of the price level—in percent per year—is the inflation rate…
- The Federal Reserve thinks it appropriate for the U.S. economy to have a CPI-inflation rate that is steady at about 2.5%/year
- Inflation works as a tax on liquid savings
- And as making rational calculation more difficult
- But, in general, inflation raises both your costs and your income by about the same percentage



Inflation Makes Politicians Unpopular



Source: FRED, Federal Reserve Economic Data, from the Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/fred2/.

FIGURE 16.1

The U.S. Inflation Rate, 1956–2013.

The U.S. Inflation rate has fluctuated over time. Inflation was high in the 1970s but has been quite low recently.

- The burst of >4%/year inflation from 1968-1984 was a big deal in American politics, government, and political economy
- After 1984, nobody wanted to go through that again
- Hence our current Age of the Central Banker

Real and Nominal Wages

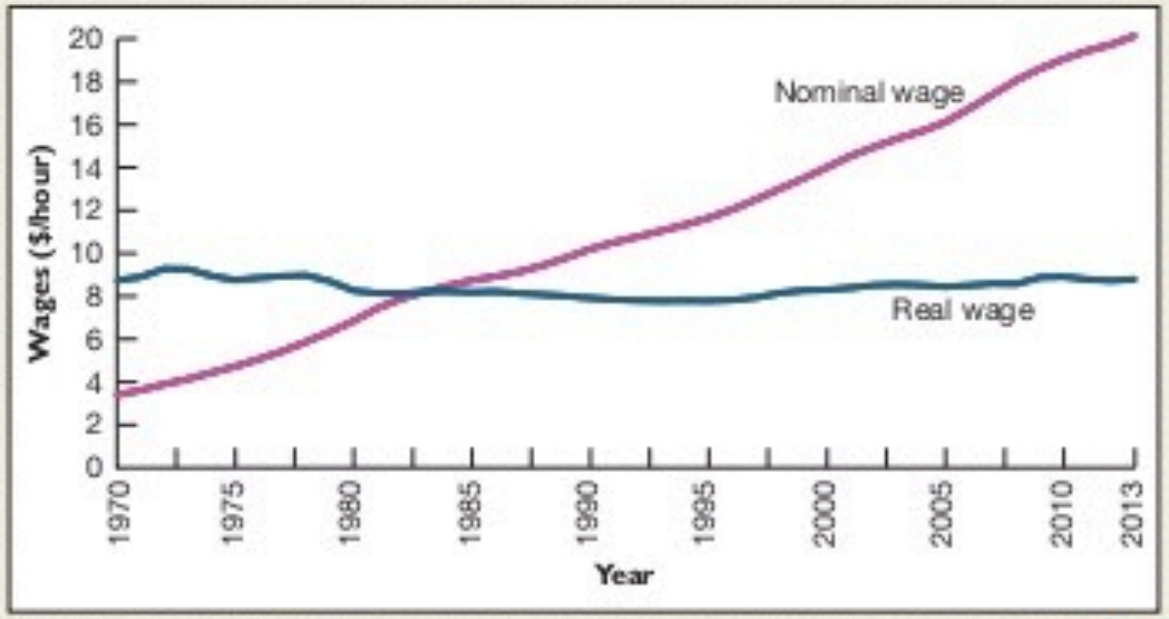


FIGURE 16.2

Nominal and Real Wages for Production Workers, 1970–2013.

Though nominal wages of production workers have risen dramatically since 1970, real wages have stagnated.

Source: FRED, Federal Reserve Economic Data, from the Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/fred2/.

- American wage stagnation since 1970
- American production workers paid >$21/hr today, <$3.75 in 1970, yet all of that increase “eaten up” by inflation

Measuring the Economy: Prices, The Labor Market

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Employment and Unemployment

TABLE 17.5
U.S. Employment Data, August 2014 (in millions)

Employed	146.37
Unemployed	9.59
Labor force	155.96
Not in labor force	92.27
Working-age (over 16) population	248.23
Unemployment rate = 9.59/155.96 = 6.1%	
Participation rate = 155.96/248.23 = 62.8%	

Source: Bureau of Labor Statistics, www.bls.gov.

- 158M workers
- 10M unemployed

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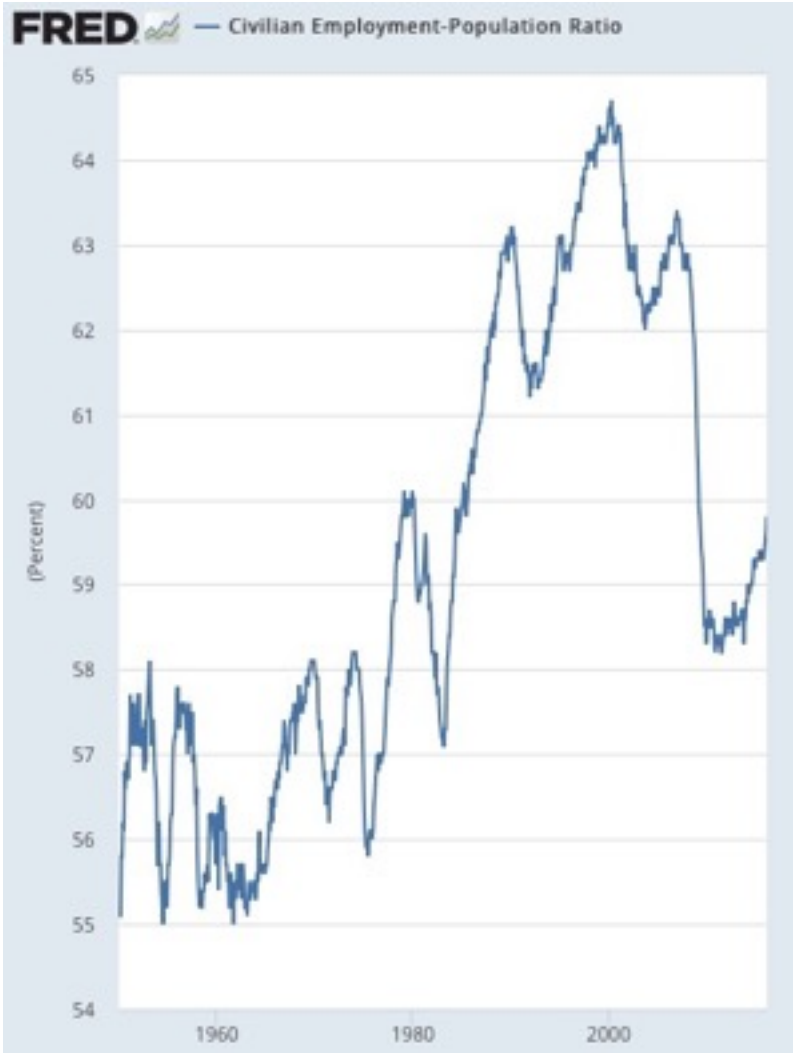
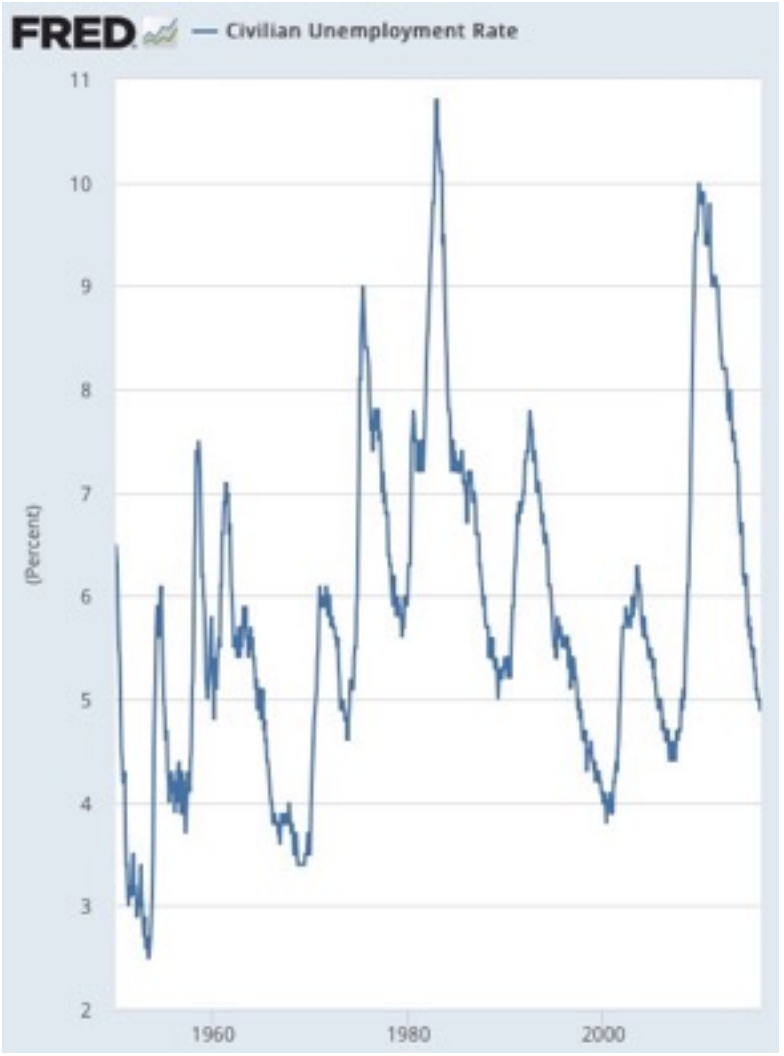
Unemployment and Employment Over Time





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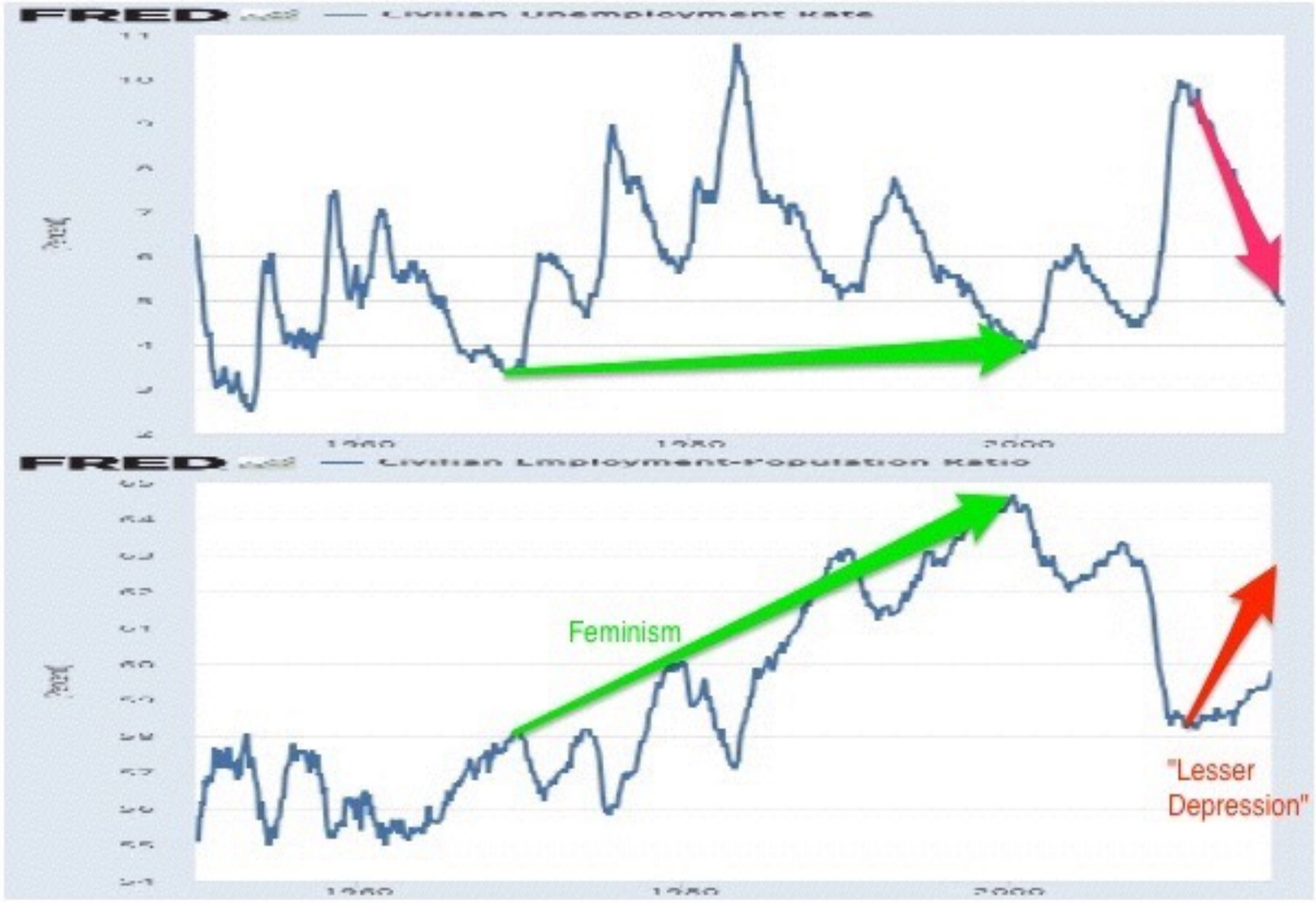

To Your i>Clickers…

- Among the most central and key measures we calculate of the state of the overall economy include:
  A. The price level, unemployment, average utility, and the scope of the division of labor.
  B. Real GDP *per capita*, inflation, unemployment, and the employment-to-population ratio.
  C. The markup over marginal cost, inflation, unemployment, and real GDP.
  D. The interest rate, inflation, unemployment, and the employment-to-population ratio.
  E. None of the above

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Measuring the Economy: Economic Growth

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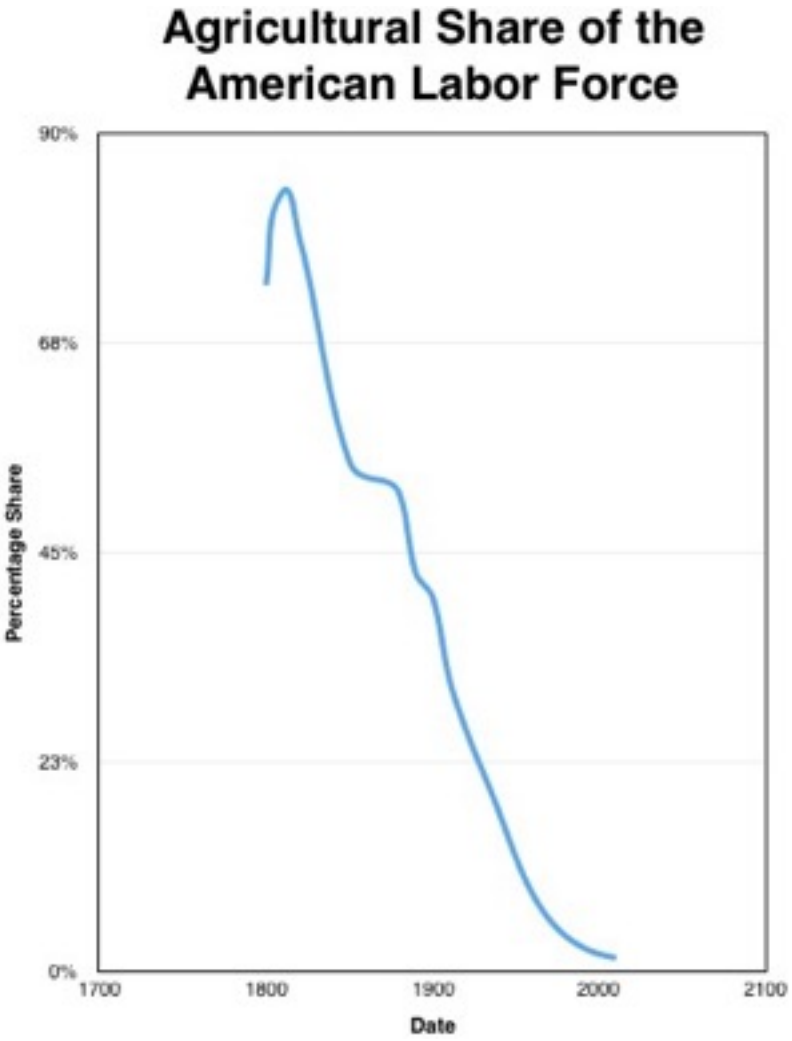
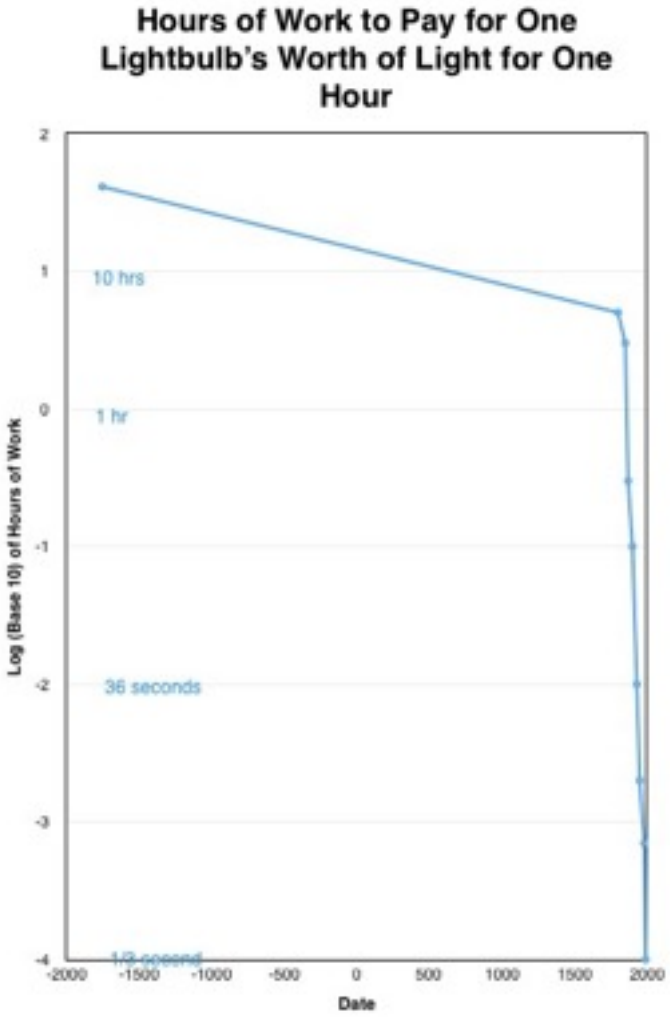
Economic Growth: American Agriculture

- It took 30 hours for an American male northern worker in 1850 to earn enough to buy a bushel of corn
- It takes 12 minutes today
- Share of labor force in agriculture has fallen by a factor of 50 in two centuries
- Real food consumption per capita has gone up by a factor of 5
- 250-fold increase in the productivity of an American farmer
- That's ln(250)/200 = 2.7%/yr rate of growth
- And American farmers in 1800 twice as productive as average European farmers…



Economic Growth: The Price of Lighting

- As late as 1800, it took 5 hours for an average worker to earn enough to afford to produce a lightbulb's worth of light for one hour.
- Today that labor-time cost is less than 1/3 of a second.
- That is 100,000-fold improvement in productivity in two centuries:
- ln(100000)/200 = 5.6%/year



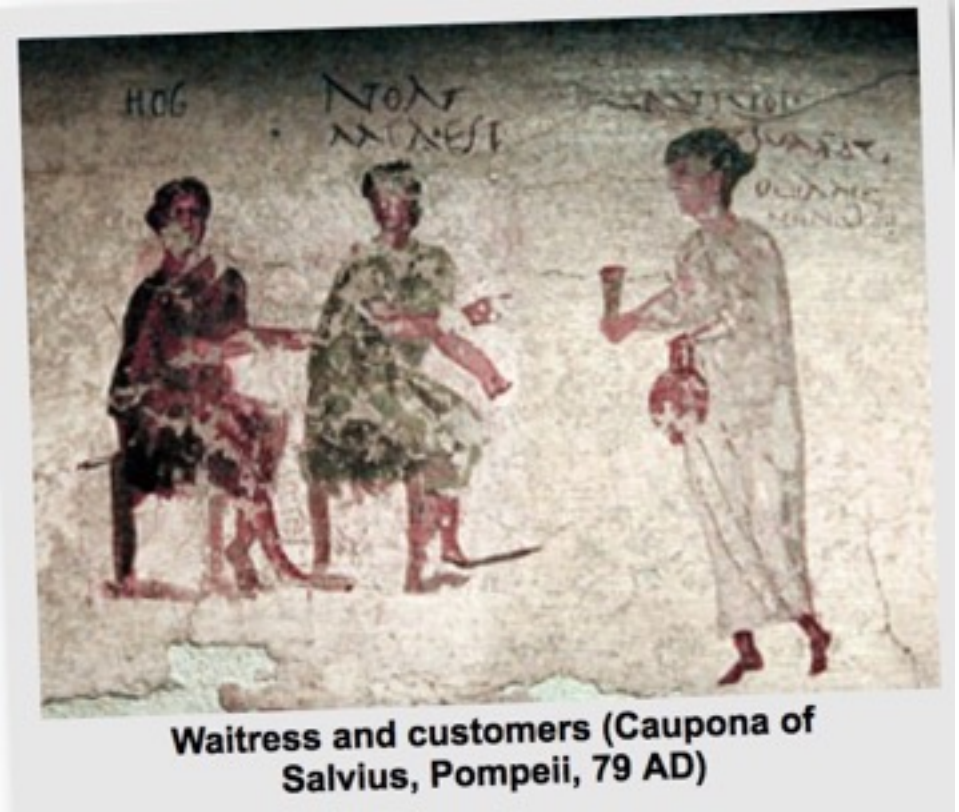
Economic Growth: Personal Services

- How much more productive are workers in the personal services sector today than they were in, say, 79?
- Whatever productivity growth there has been in personal services has been dwarfed by productivity growth in agricultural, manufacturing, and utilities
- But what about "impersonal services"—hiring someone to sing to you, for example?

Waitress and customers (Caupona of Salvius, Pompeii, 79 AD)

Measuring Economic Growth

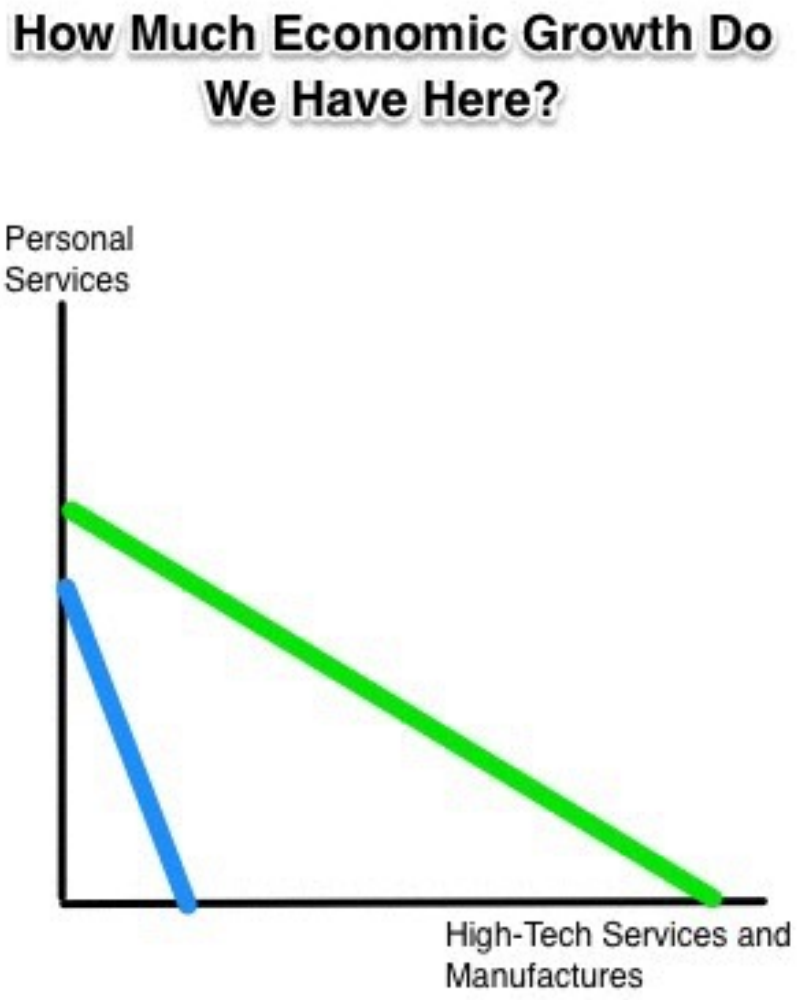
- Calculating the rate of economic growth:
  - Take the share of spending in a sector
  - Multiply that by the rate of productivity growth in that sector
  - Add up for all sectors
- That is the rate of economic growth



Waitress and customers (Caupona of Salvius, Pompeii, 79 AD)

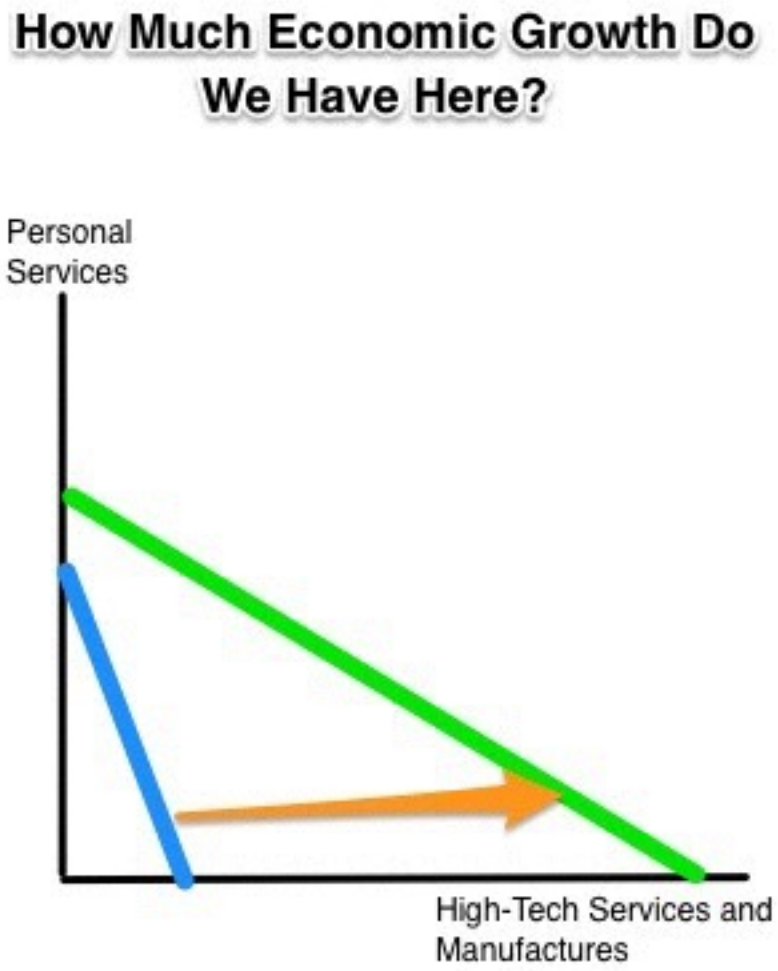
Production Possibilities: High-Tech vs. Personal Services

- How much economic growth do we have here?
- 20%? Or 500%?
- It really depends how you get there
- Moving along the production-possibility curve at any one point in time—that's not "economic growth", that's simply adjustment to changing tastes



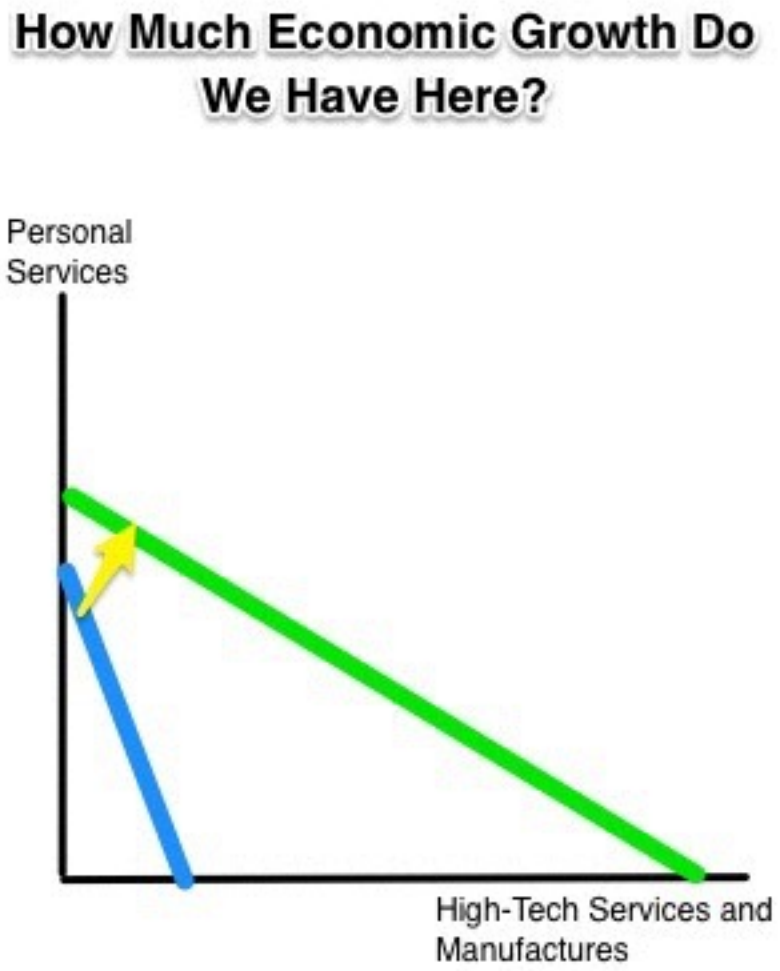
Production Possibilities: High-Tech vs. Personal Services II

- If you value high-tech toys, growth has been enormous
- A hundred thousand-fold for light
- Fifty-fold for agriculture
- But suppose that you care a lot about personal services?



Production Possibilities: High-Tech vs. Personal Services III

- But suppose that you care a lot about personal services?
- Better tools to provide personal services, yes, but five-fold tops…
- How do you average 5, 50, and 100000 in a sensible way to get a measure of economic growth since 1800?



Measuring Economic Growth

- And what about things that are free?
- What we really want is a surplus-based measure…
- Measured economic growth is and can only be a measure of the proportion of societal resources used to produce last year's marketed output releasable to other uses this year…

Waitress and customers (Caupona of Salvius, Pompeii, 79 AD)

Economic Growth: Our Estimates

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Our Measures of Economic Growth

- We know what monks paid their construction workers.
- We know what bread and other staples cost.
- These estimates are surely underestimates…
- Why the stagnation before 1800?

Figure 1: Real Wages of Construction Workers in England as Estimated by Greg Clark, 1200-Present

Source: Gregory Clark (2007), *A Farewell to Alms; A Brief Economic History of the World* (Princeton: 0691121354).

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And a Global Ten-Millennia Bird's-Eye View of It All…

- Linguistic quasi-speciation 100,000 years ago?
- Radiation from the Horn of Africa 50,000 years ago?
- Neolithic Revolution 10000 years ago.
- Malthusian Agrarianism —near-stagnation—as the default state of post-Neolithic humanity?
- Industrial Revolution
- Modern Economic Growth
- Astronomy and the Fermi Paradox: The Great Filter

In the Shadow of Malthus

Year	Population (Millions)	GDP per Capita ($2015)	Total World GDP ($2015 Billions)
-8000	5	$750	$4
-1000	50	$750	$38
0	170	$750	$128
1500	500	$750	$375
1800	750	$1000	$750
1900	1500	$2000	$3000
2000	6200	$7700	$47740
2015	7400	$10000	$74000