Topic 3

Economic Statistics

Agenda

- Recap what we've done so far
- What are we trying to do?
- What exactly GDP is and why it's useful
- How do we calculate GDP?
- NGDP vs. RGDP: How to account for price changes
- Unemployment
- Policy and Unemployment

Let's test your understanding

Which of the following would be included in Japan's 2009 GDP?

Item	Include?	Reason
In 2009, sale of Starbucks coffee in Tokyo		
In 2009, purchase of land to build a house		
In 2009, sale of a handgun by organized crime		
In 2009, salary of a waiter at a restaurant		
In 2010, sale of Starbucks coffee in Osaka		

Let's test your understanding

Which of the following would be included in Japan's 2009 GDP?

Item	Include?	Reason
In 2009, sale of Starbucks coffee in Tokyo	✓	
In 2009, purchase of land to build a house	✗	Transfer of ownership
In 2009, sale of a handgun by organized crime	✗	Underground economy
In 2009, salary of a waiter at a restaurant	✗	Intermediate good (part of price of meal)
In 2010, sale of Starbucks coffee in Osaka	✗	Wrong year

Review of the abbreviations

- Y = GDP
- R = Revenue
- C = Consumption
- G = Gov't Spending
- I = Investment
- X = Exports
- M = Imports
- NX = Net Exports

- Therefore we have:
  - Y = R
  - Y = C + G + I + X – M
    = C + G + I + NX

Let's see what this looks like for the USA

- Data from the Bureau of Economic Analysis
- This is what pundits mean when they say we're a consumption-driven economy
- Also note that our trade deficit (i.e. we import more than we export)

Table 1.1.5. Gross Domestic Product

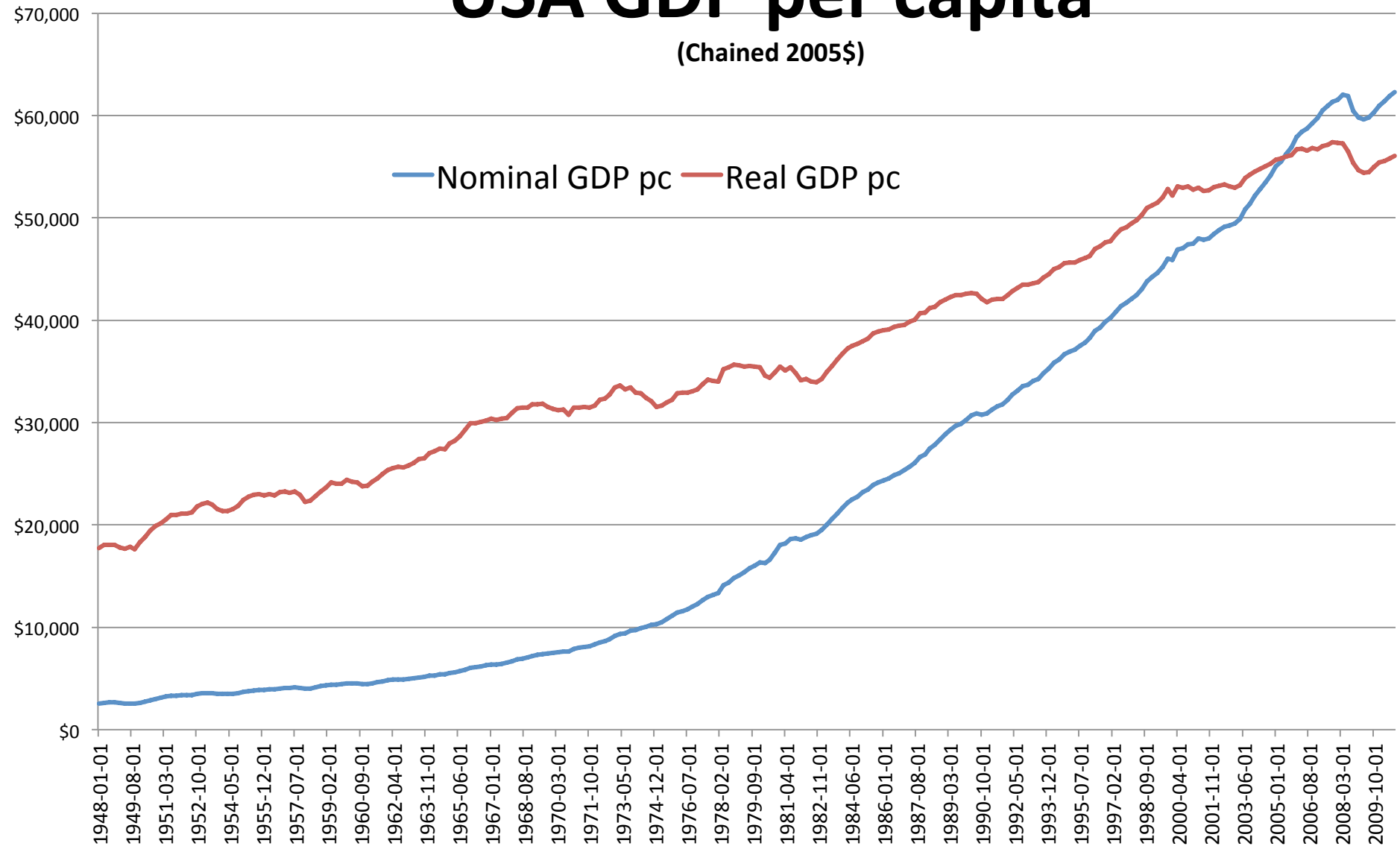
[Billions of dollars] Seasonally adjusted at annual rates

Bureau of Economic Analysis. Last Revised on: January 30, 2014 - Next Release Date February 28, 2014

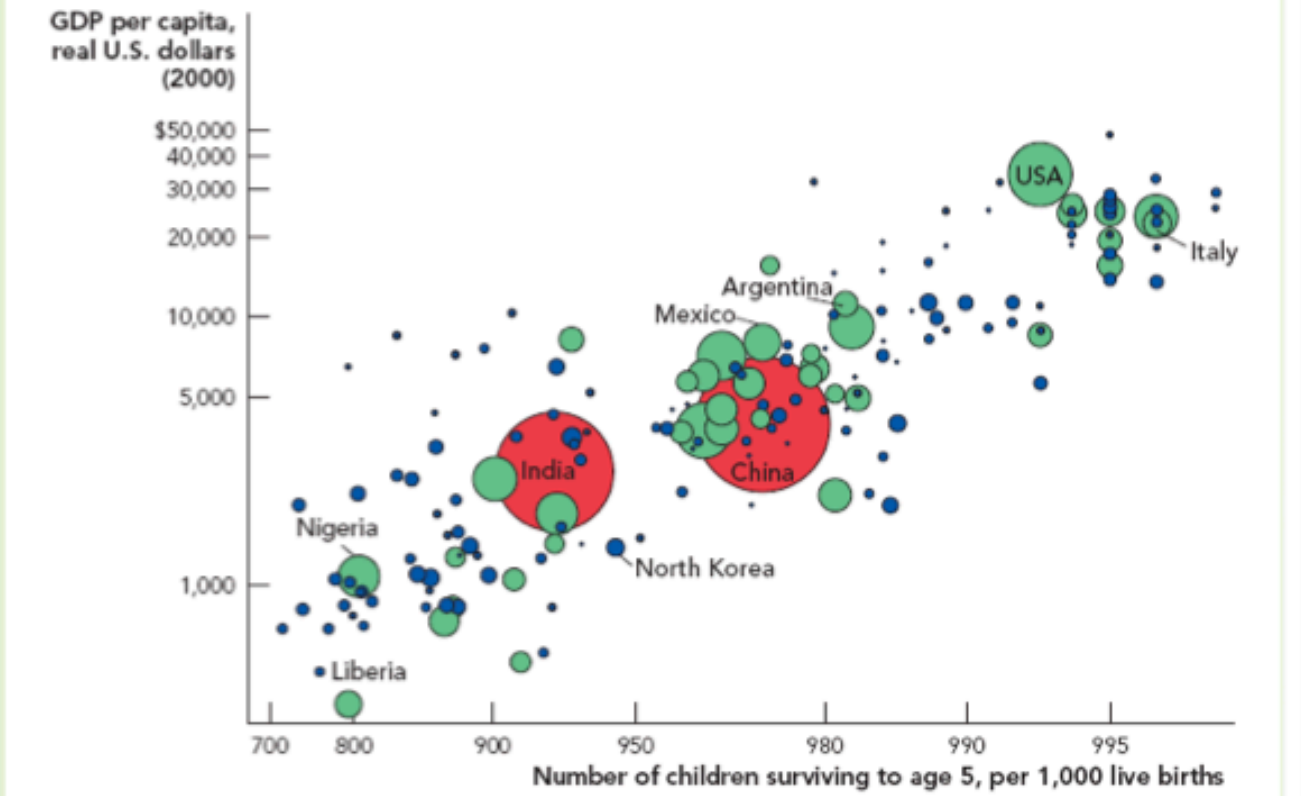
Line		2013				2013 (%)			
		I	II	III	IV	I	II	III	IV
1	**Gross domestic product**	16535.3	16661	16912.9	17102.5	**100%**	**100%**	**100%**	**100%**
2	**Personal consumption expenditures**	**11379.2**	**11427.1**	**11537.7**	**11653.1**	**69%**	**69%**	**68%**	**68%**
3	Goods	3851.8	3848.5	3912.8	3942.4				
4	Durable goods	1244.8	1257.5	1274	1284.4				
5	Nondurable goods	2607	2591	2638.8	2658				
6	Services	7527.4	7578.6	7624.8	7710.6				
7	**Gross private domestic investment**	**2555.1**	**2621**	**2738**	**2773.7**	**15%**	**16%**	**16%**	**16%**
8	Fixed investment	2491.7	2543.8	2593.2	2616.9				
9	Nonresidential	2001.4	2030.6	2060.5	2087.4				
10	Structures	429.1	452.6	470.7	474.2				
11	Equipment	928	934.6	935.8	951				
12	Intellectual property products	644.3	643.5	654.1	662.2				
13	Residential	490.3	513.2	532.6	529.6				
14	Change in private inventories	63.4	77.2	144.8	156.7				
15	**Net exports of goods and services**	**-523.1**	**-509**	**-500.2**	**-442.8**	**-3%**	**-3%**	**-3%**	**-3%**
16	Exports	2214.2	2238.9	2265.8	2329.7				
17	Goods	1531.6	1548.8	1572.1	1627.4				
18	Services	682.6	690.2	693.7	702.2				
19	Imports	2737.3	2747.9	2766	2772.5				
20	Goods	2281.9	2288.7	2304.5	2305				
21	Services	455.3	459.3	461.5	467.5				
22	**Government consumption expenditures and gross investment**	**3124.1**	**3121.9**	**3137.5**	**3118.6**	**19%**	**19%**	**19%**	**18%**
23	Federal	1255	1252.6	1251.2	1225.8				
24	National defense	775.8	776.3	777.3	754.7				
25	Nondefense	479.2	476.3	473.9	471.1				
26	State and local	1869.1	1869.3	1886.3	1892.7				

USA GDP per capita

(Chained 2005$)



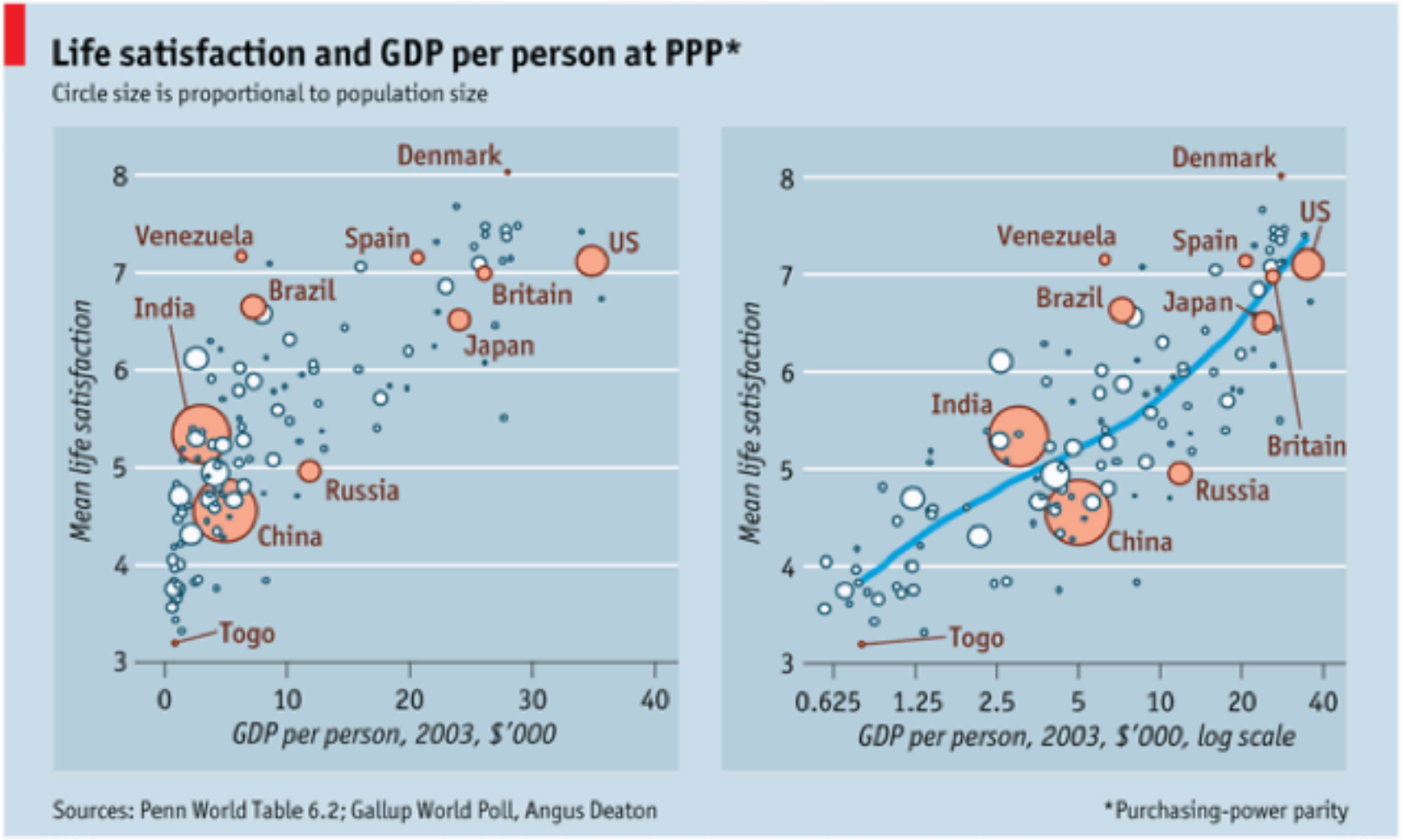
GDP and Health



Wealth and Health Go Together

Source: Penn World Tables and World Bank Group, World Development Indicators 2005.
Note: Circles are proportional to population. Ratio scales.

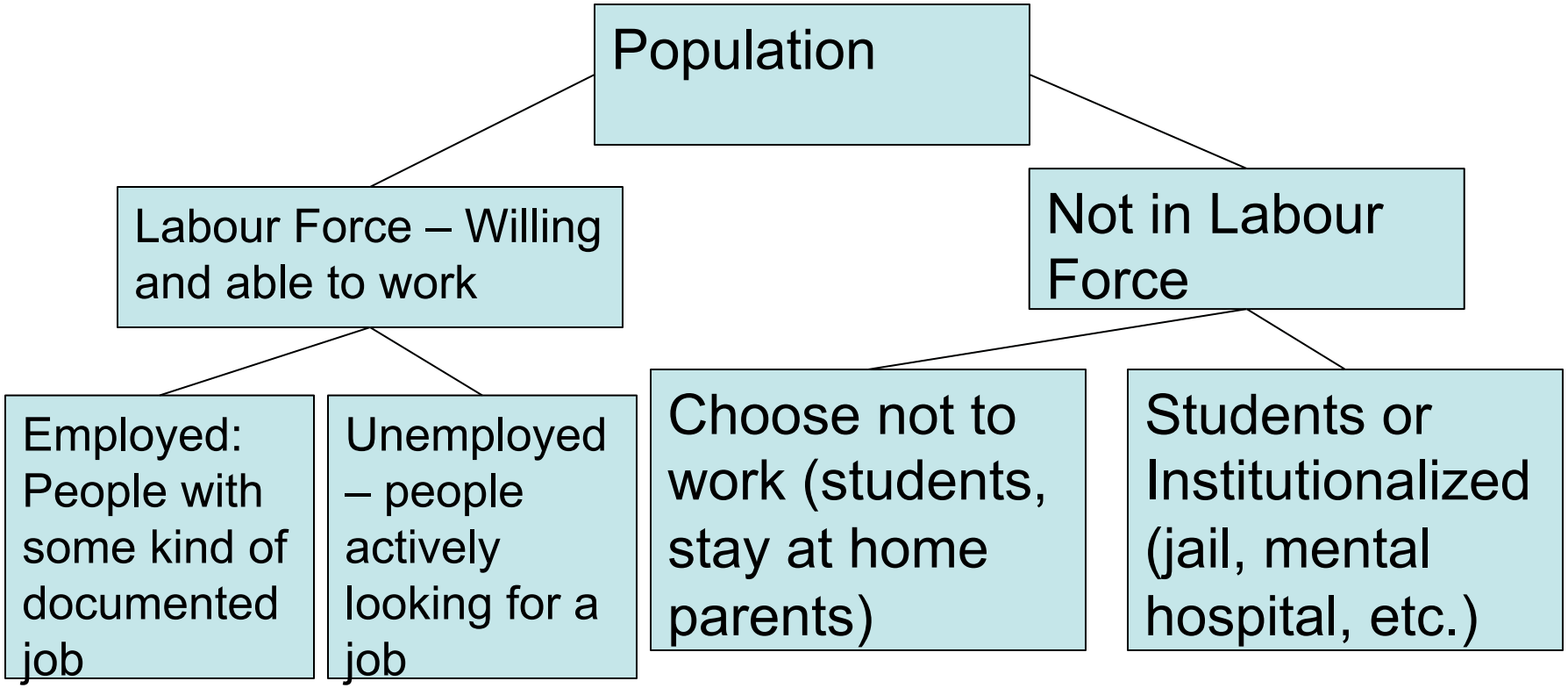
GDP and Satisfaction



Unemployment

An alternative measure of economic health?

How do we break up the population?

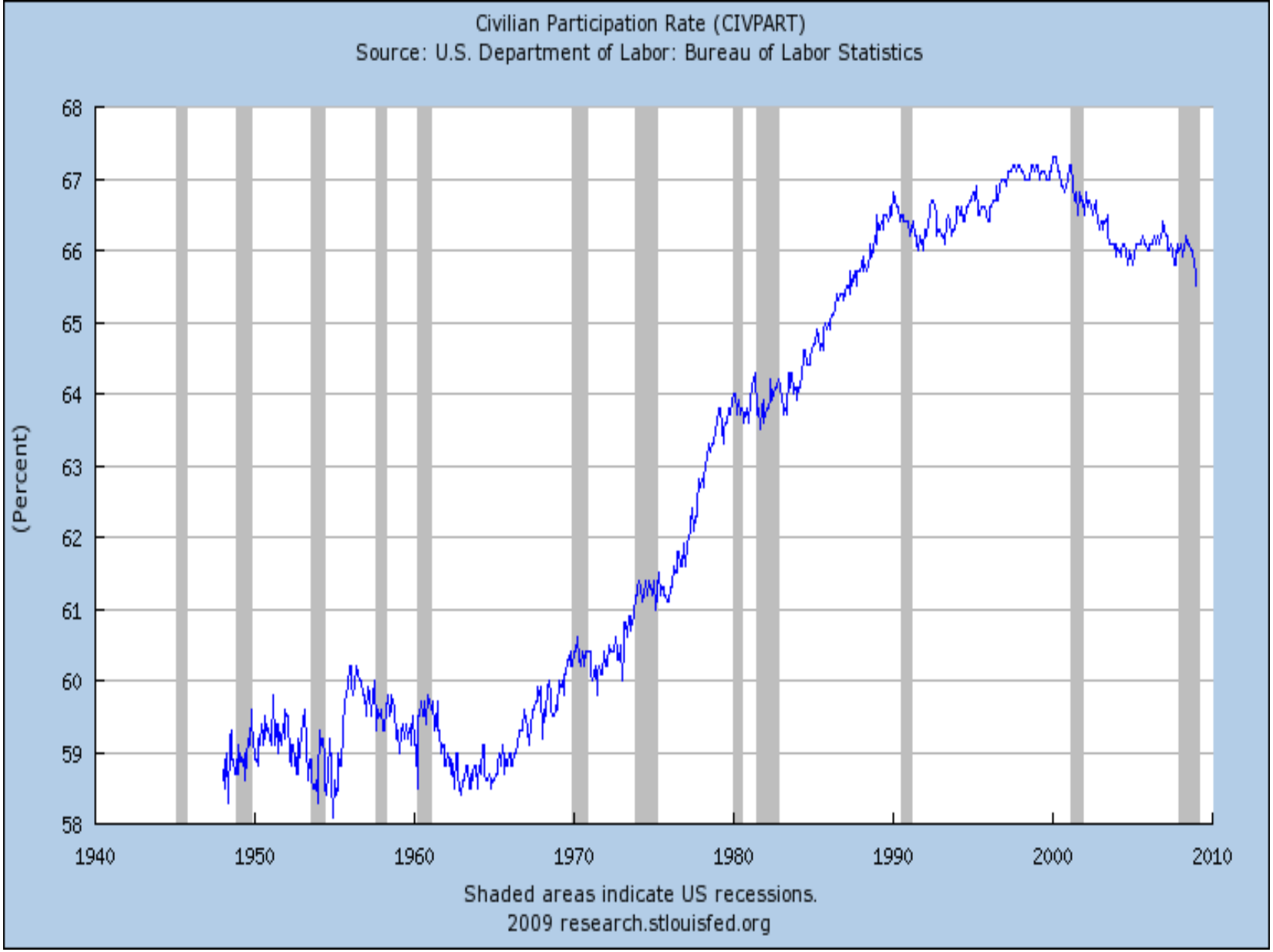


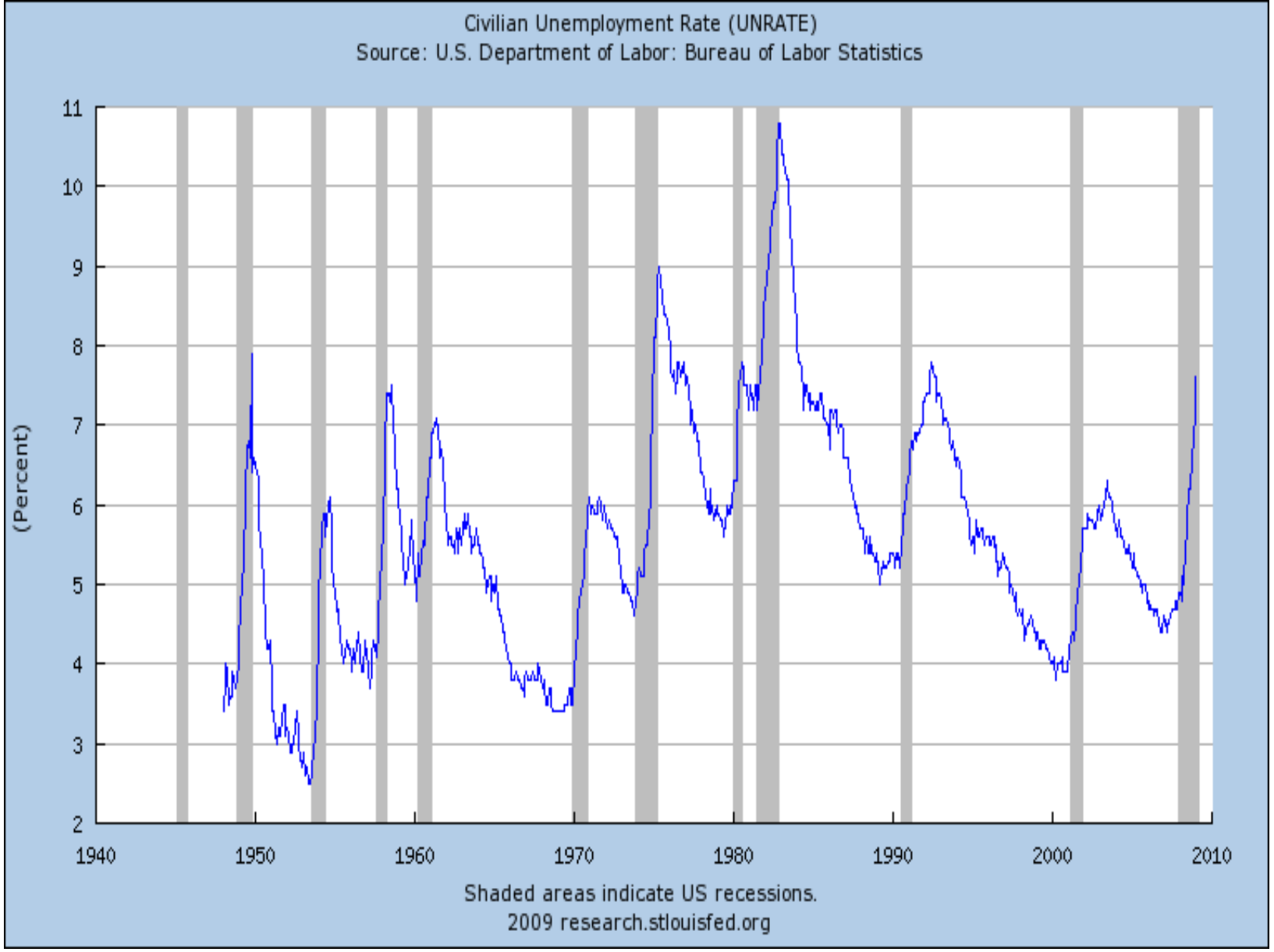
Example

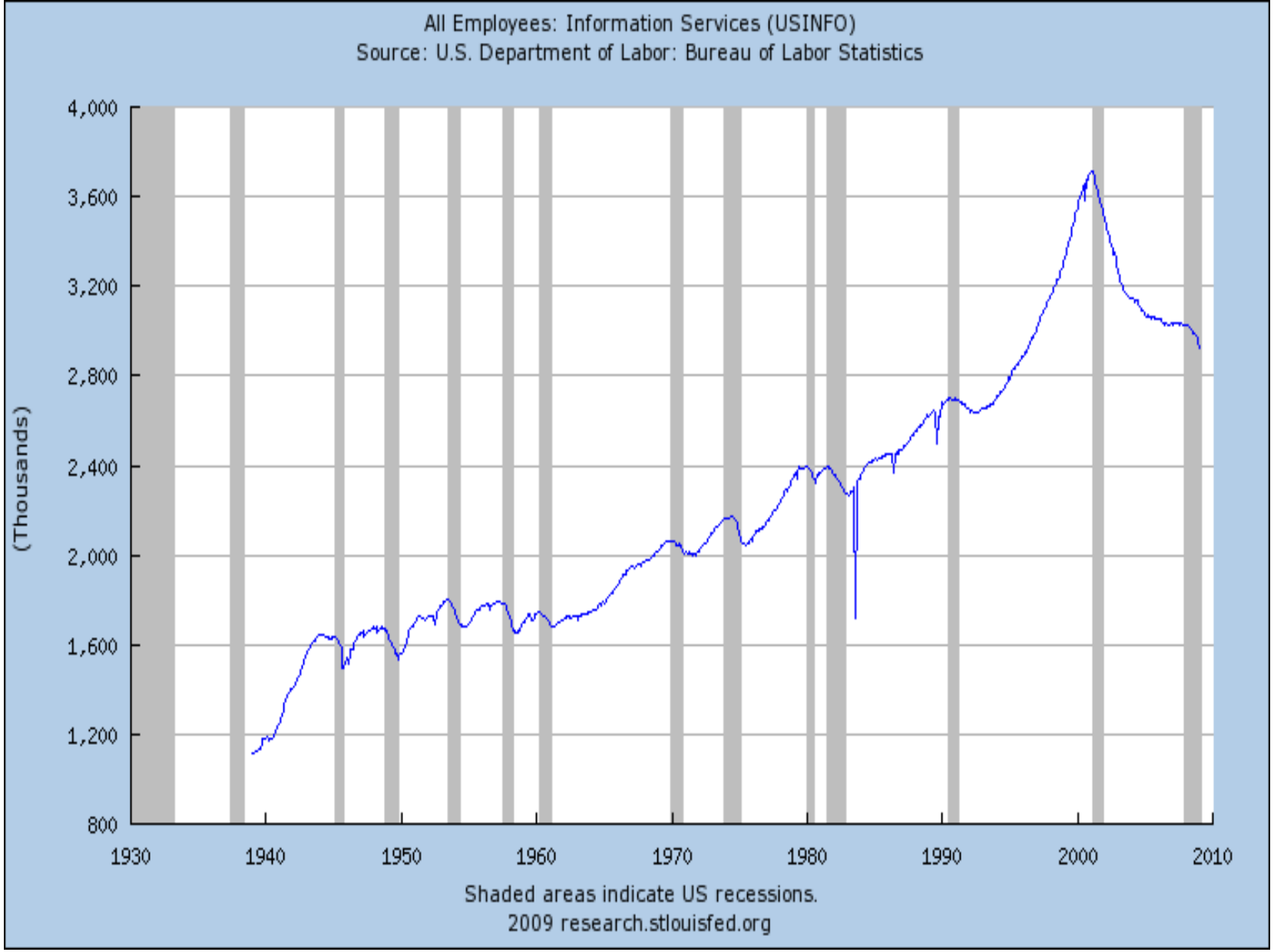
- Suppose that you know the following information about a city in Econland.

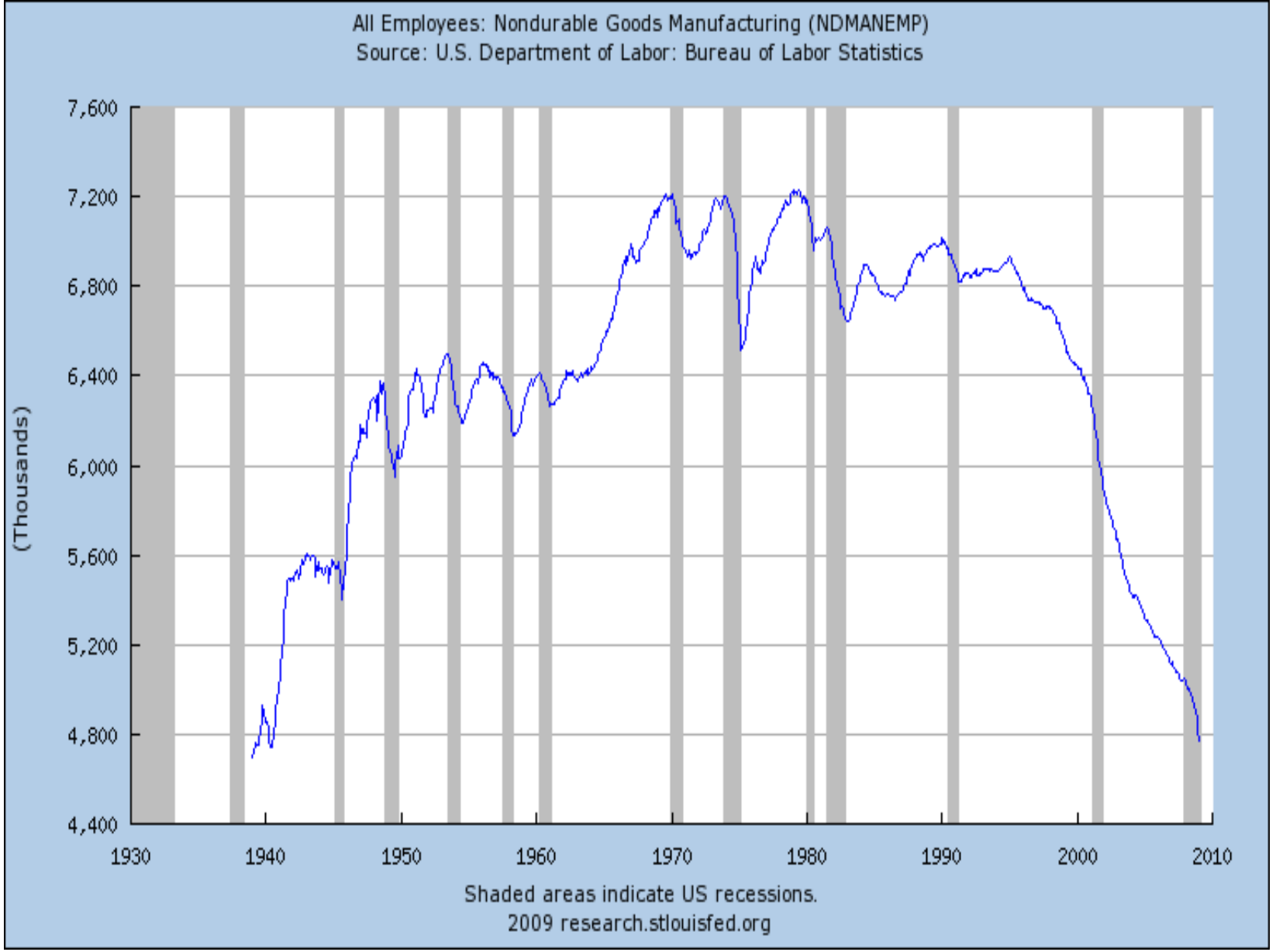
Full time	Part time	Not working, seeking job	Not working, gave up looking.	Children (under 10)
225	100	55	85	35

- (a) Total population? (b) # employed?
  (c) # unemployed? (d) labor force?
  (e) unemp. rate? (e) participation rate?


Civilian Participation Rate (CIVPART)
Source: U.S. Department of Labor: Bureau of Labor Statistics
(Percent)
68
67
66
65
64
63
62
61
60
59
58
1940
1950
1960
1970
1980
1990
2000
2010
Shaded areas indicate US recessions.
2009 research.stlouisfed.org

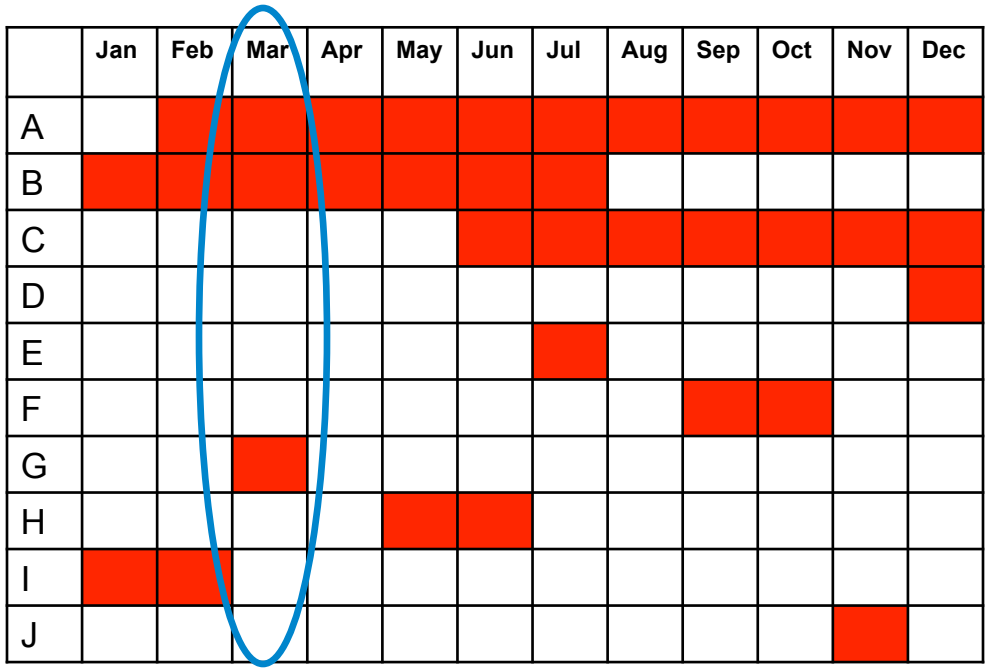

Civilian Unemployment Rate (UNRATE)
Source: U.S. Department of Labor: Bureau of Labor Statistics
(Percent)
11
10
9
8
7
6
5
4
3
2
1940
1950
1960
1970
1980
1990
2000
2010
Shaded areas indicate US recessions.
2009 research.stlouisfed.org




All Employees: Nondurable Goods Manufacturing (NDMANEMP)
Source: U.S. Department of Labor: Bureau of Labor Statistics
(Thousands)
7,600
7,200
6,800
6,400
6,000
5,600
5,200
4,800
4,400
1930
1940
1950
1960
1970
1980
1990
2000
2010
Shaded areas indicate US recessions.
2009 research.stlouisfed.org

Length of Unemployment

- "Most spells of unemployment are short, and most unemployment observed at any given time is long term." Here's an example:



- Rows are people
- 3 long spells, 7 short spells
- In a given month, more long spells than short spells

Key Ideas and Things To Think About

Note: This is NOT a study guide – i.e. do not limit yourself to these items when studying

Key Ideas

- GDP and how we measure it
  - What's included and what isn't
- Calculating GDP in our model
- Nominal GDP vs Real GDP
  - Why choose one over the other?
  - GDP Deflator and Inflation

Key Ideas

- Unemployment – defining and measuring
- Criticisms of measures
- Natural rate of unemployment
  - Why it isn't zero
- Effect of policies on unemployment

Things To Think About

- Has the economy improved under the current presidential administration?
  - As measured by GDP (nominal and real)
  - As measured by unemployment
- Is it reasonable to use unemployment rate only to describe the economy?
- Unemployment analysis