What Should We Teach in Intermediate Macroeconomics?

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Teaching Intermediate Macro

- My perspective comes from
  - Co-author of Abel-Bernanke-Croushore, *Macroeconomics,* 9th ed.
  - Instructor of Intermediate Macro courses at
    - Penn State Univ. (UG) [1984-1989]
    - Univ. of Richmond (UG and MBA) [2003-present]
    - Columbia Univ. (EMBA) [2013-present]
  - Head of Macro section at Federal Reserve Bank of Philadelphia [1989-2003]

Teaching Intermediate Macro

- Ideas that follow are on my website:

https://facultystaff.richmond.edu/~dcrousho/online_macro.html

Teaching Intermediate Macro

- Concepts
  - Building and understanding macroeconomic models and how they work
    - Most analytical course in the curriculum
    - Leads to deep thinking about models and equilibrium
    - Models: students learn essentials and concepts of simplifying model to understand key concepts, then adding realism
    - General Equilibrium: students learn to go beyond initial effects to determine adjustments that lead to long-run equilibrium
      - IS/LM?

Teaching Intermediate Macro

- Core set of concepts
  - Big picture
    - Models
    - Equilibrium
    - Classical vs. Keynesian theories
    - Policy
  - Growth and cycles

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- Core set of concepts
  - Sectoral breakdown and driving forces of each sector
    - Labor
    - Consumption
    - Investment
    - Net exports
    - Government
    - Money and financial assets

Teaching Intermediate Macro

- Relating theory to data
  - Extensive use of FRED or Bloomberg
  - Here the instructor can have substantial value added
  - Many options for structure
    - Students present data in class
    - Professor shows data in class
    - Teams set up by sector
    - Students work with data during class
    - Students work with data out of class

Students present data in class

- Second day of class
  - Assign each student (or team) a variable to follow during semester, see list on my web site
- Assignment 1: find release dates
- They do two-minute presentation each time after their variable is released; must include one or two plots in Excel
  - Presentation 1: basics of variable and latest numbers, simple plot
  - Presentation 2: more advanced plot of variable
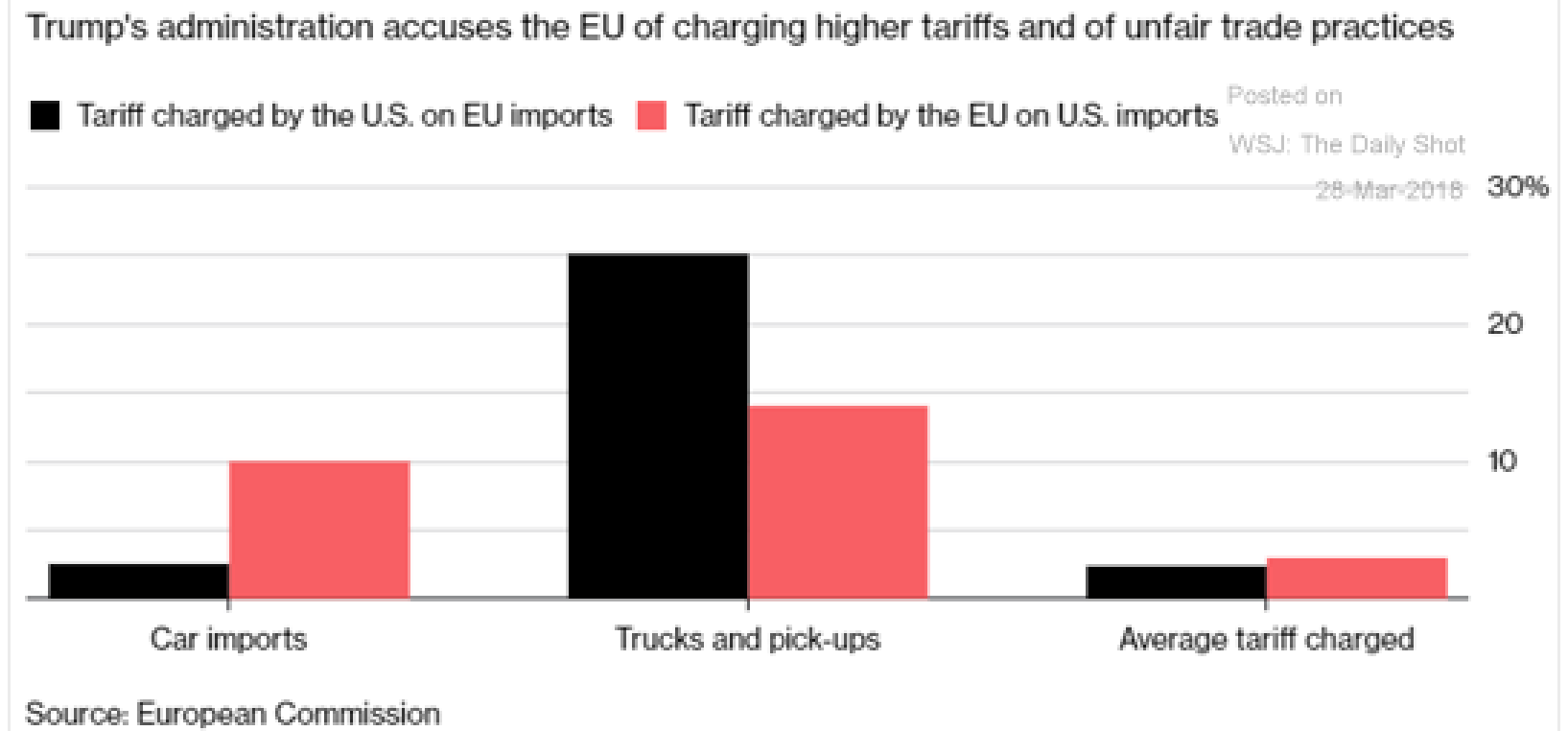 - Presentation 3: multi-variable plot

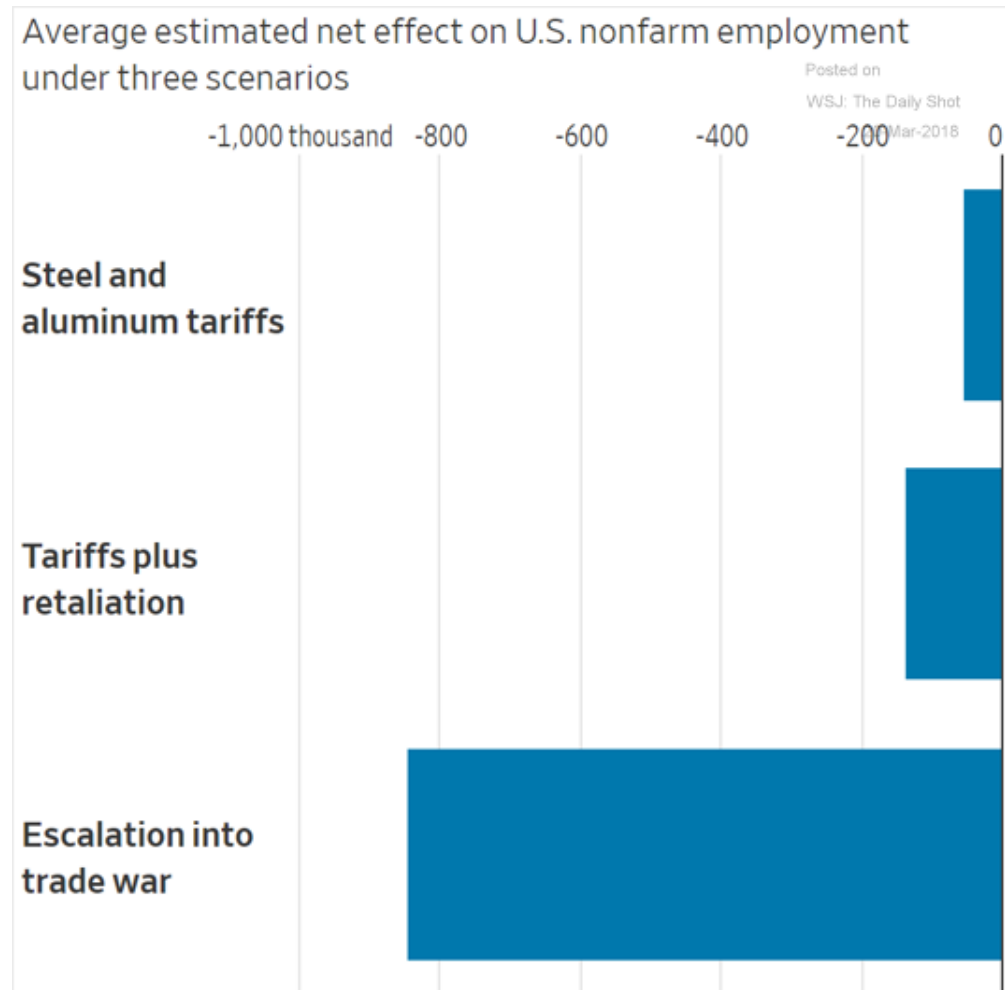# An example: dollar vs international investment

Professor shows data in class

- Present recent data
- Especially if data illustrate concept related to theory
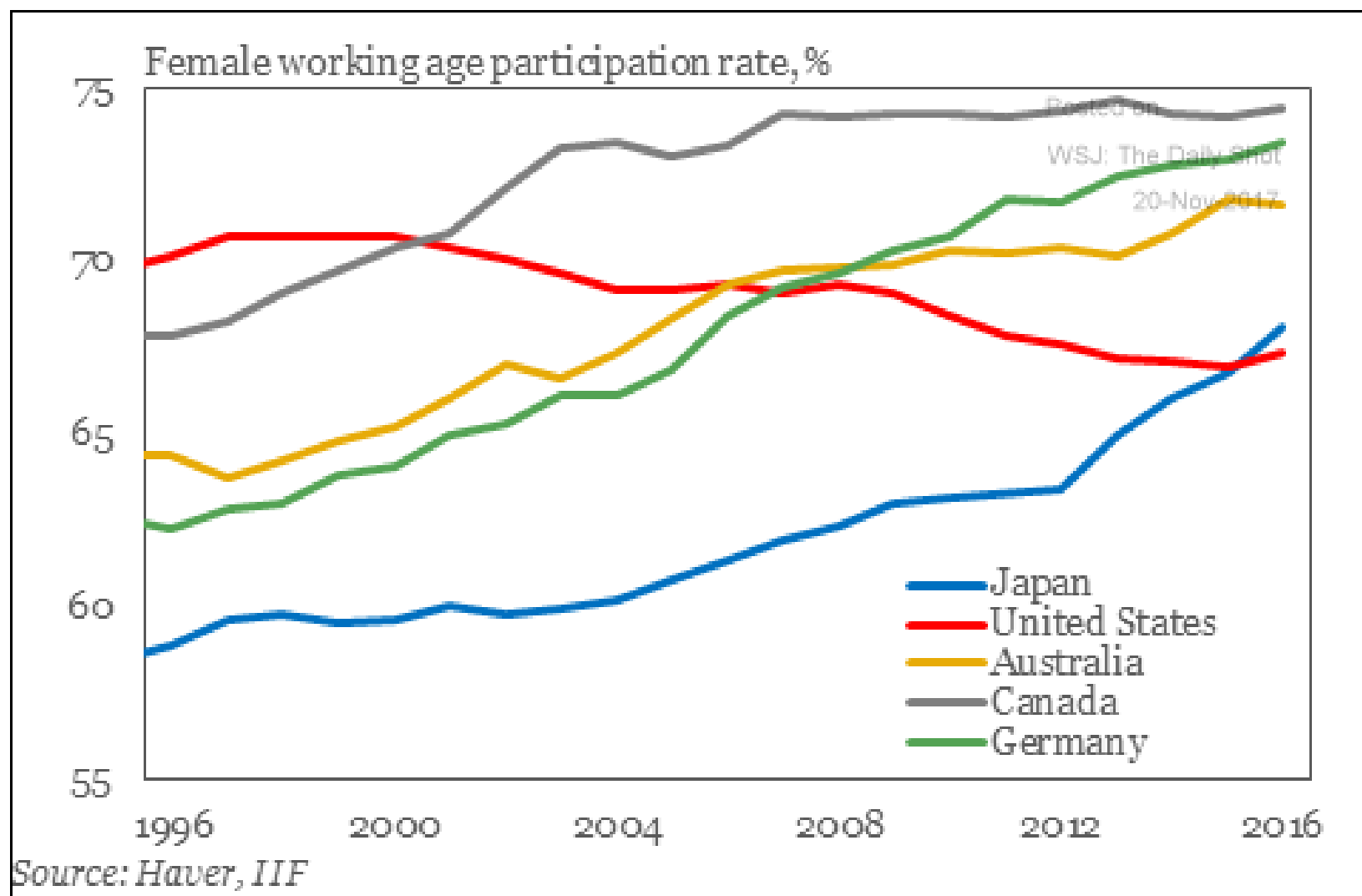
An example: tariffs

Trump's administration accuses the EU of charging higher tariffs and of unfair trade practices

■ Tariff charged by the U.S. on EU imports ■ Tariff charged by the EU on U.S. imports

Posted on
WSJ: The Daily Shot
28-Mar-2018

30%

20

10

Car imports   Trucks and pick-ups   Average tariff charged

Source: European Commission

An example: tariffs

Average estimated net effect on U.S. nonfarm employment under three scenarios

Posted on
WSJ: The Daily Shot
Mar-2018

Steel and aluminum tariffs

Tariffs plus retaliation

Escalation into trade war

Note: Survey conducted March 9-13, 2018
Source: WSJ Survey of Economists

An example: women lfpr

Female working age participation rate, %

Posted on
WSJ: The Daily Shot
20-Nov-2017

Japan
United States
Australia
Canada
Germany

Source: Haver, IIF

Teams set up by sector

- Assign each team a sector
  - Household (consumption, housing, confidence)
  - Business (industrial production, corp. profits, durables)
  - Government (spending, deficit, taxes, debt)
  - International (exchange rates, current account)
  - Labor Markets (employment, wages)
  - Inflation (consumer prices, expectations)
  - Financial sector (stock prices, interest rates)
- Produce newsletter three times during semester
  - Useful for student-managed investment fund
  - Competition for best graph (Daily Shot)

An example: Daily Shot (WSJ)
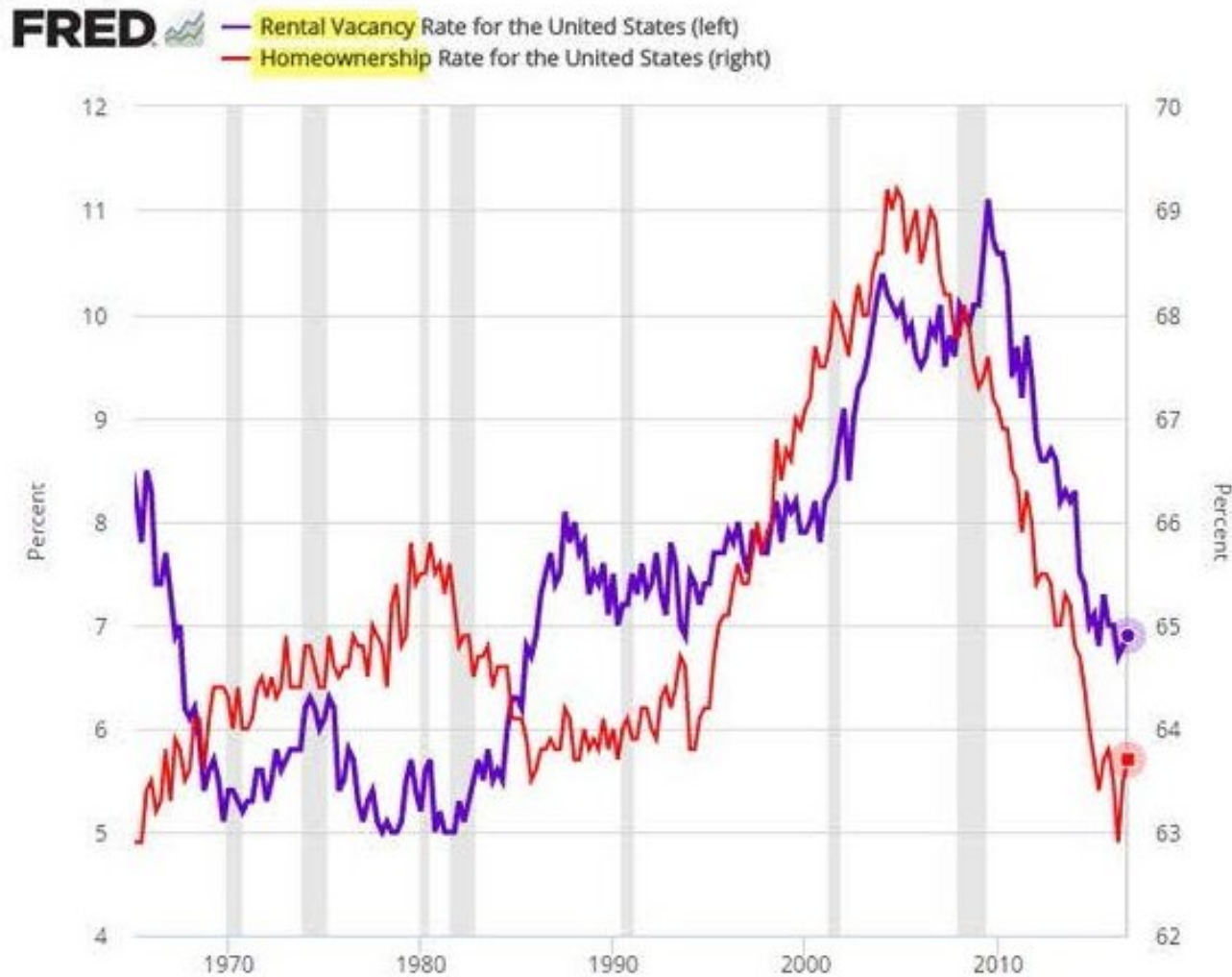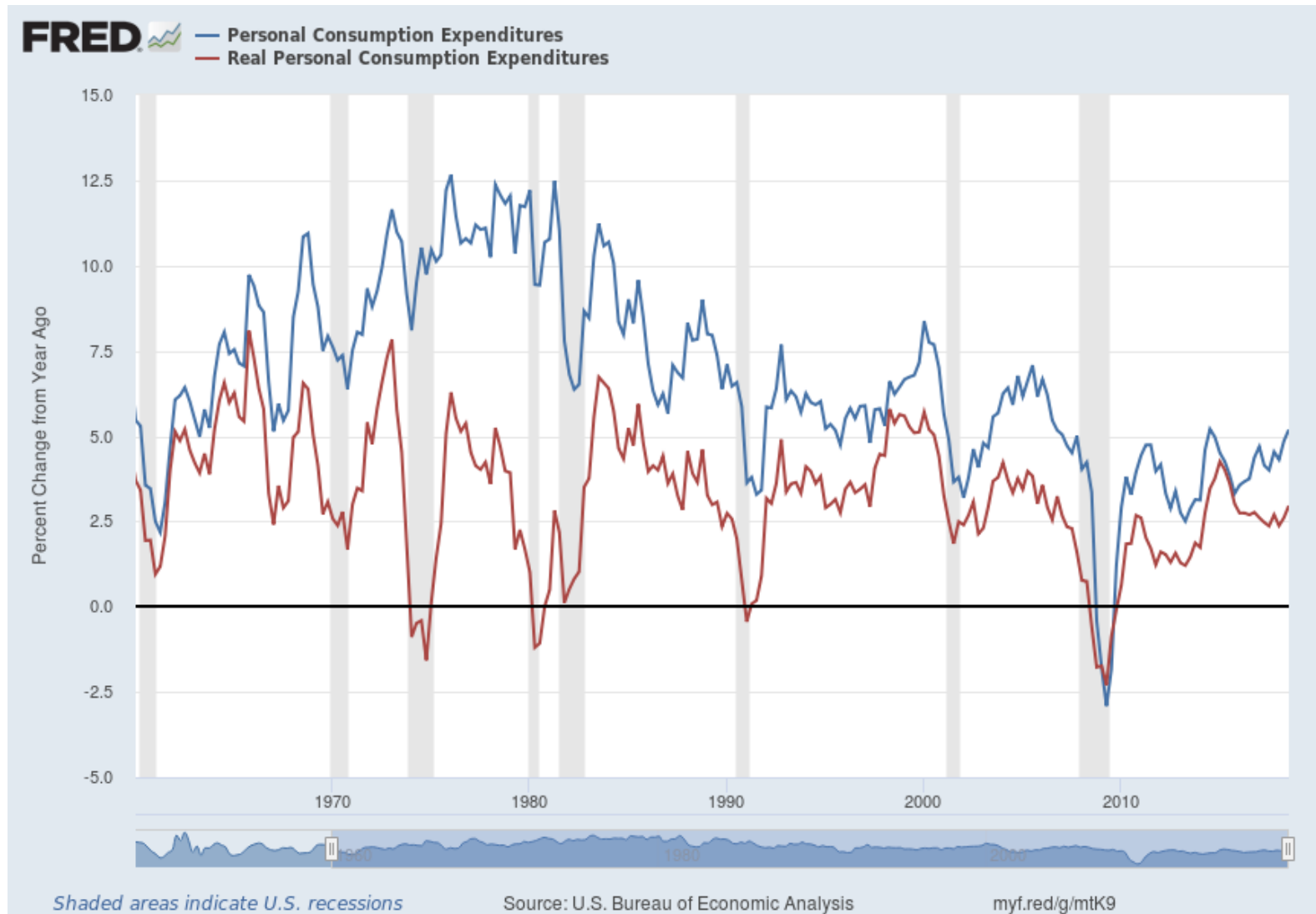
Students work with data during class

- Students bring laptops and work on data project in class (20 minutes, one session each week)
- Monitor and note that results will be on exams
- First session: introduction to FRED and how to do simple things
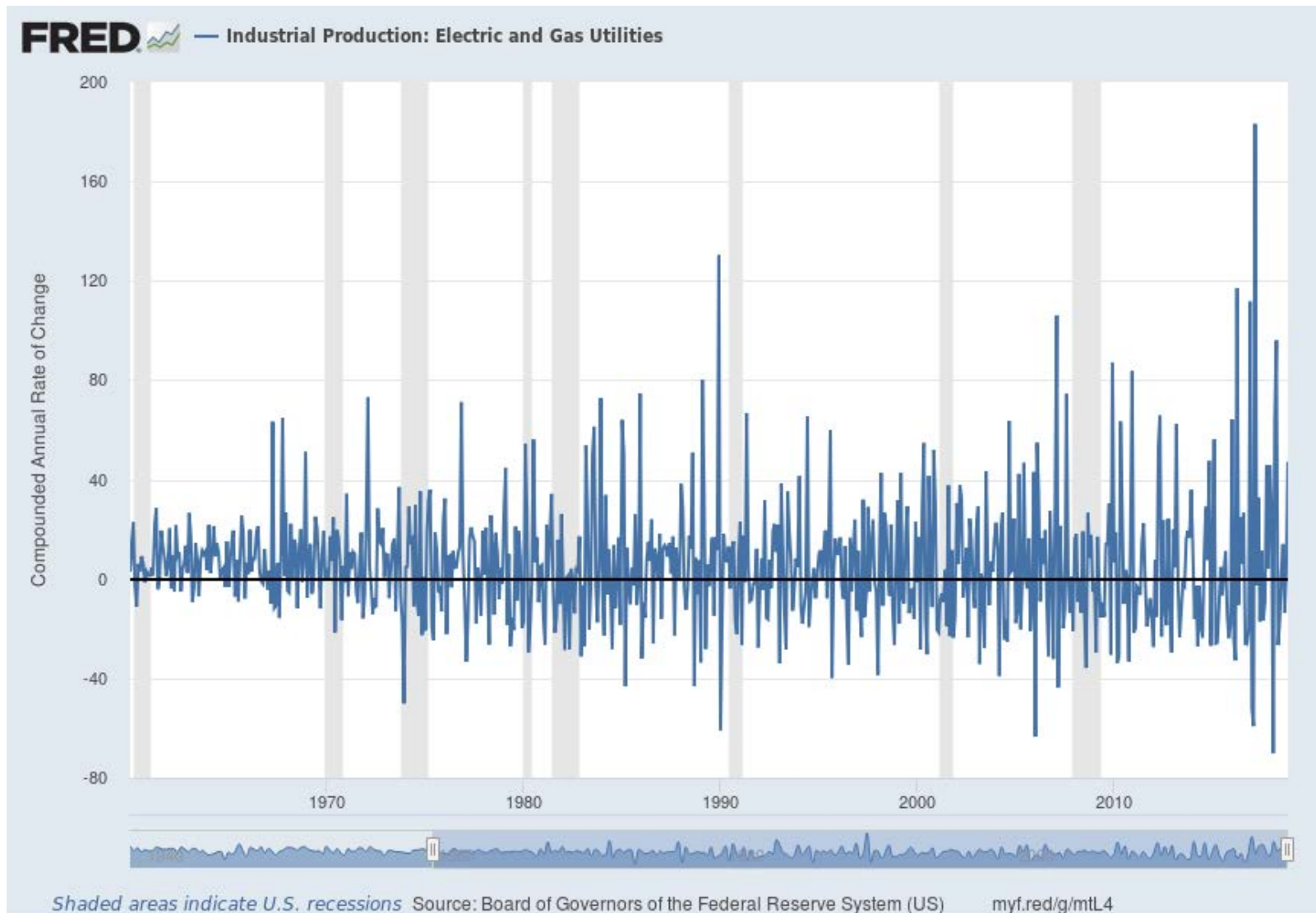- Topics can be tailored to your class

Students work with data during class

- Nominal versus real variables
- Noise versus signal
- Understanding data revisions
- Seasonal adjustment
- Cross-country comparisons
- Gains from looking at disaggregated data
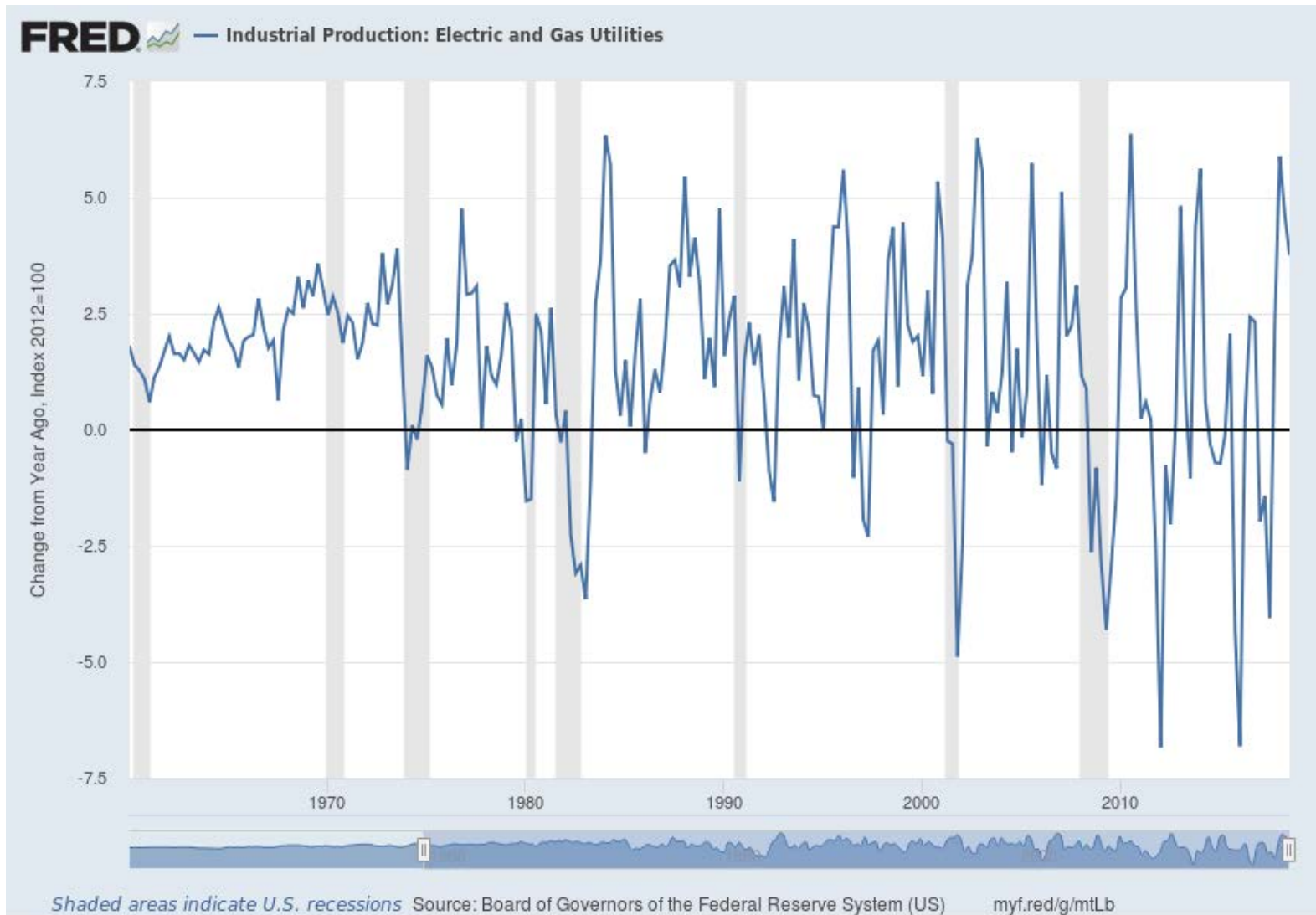- Current state of economy
- Engaging in monetary policy in practice
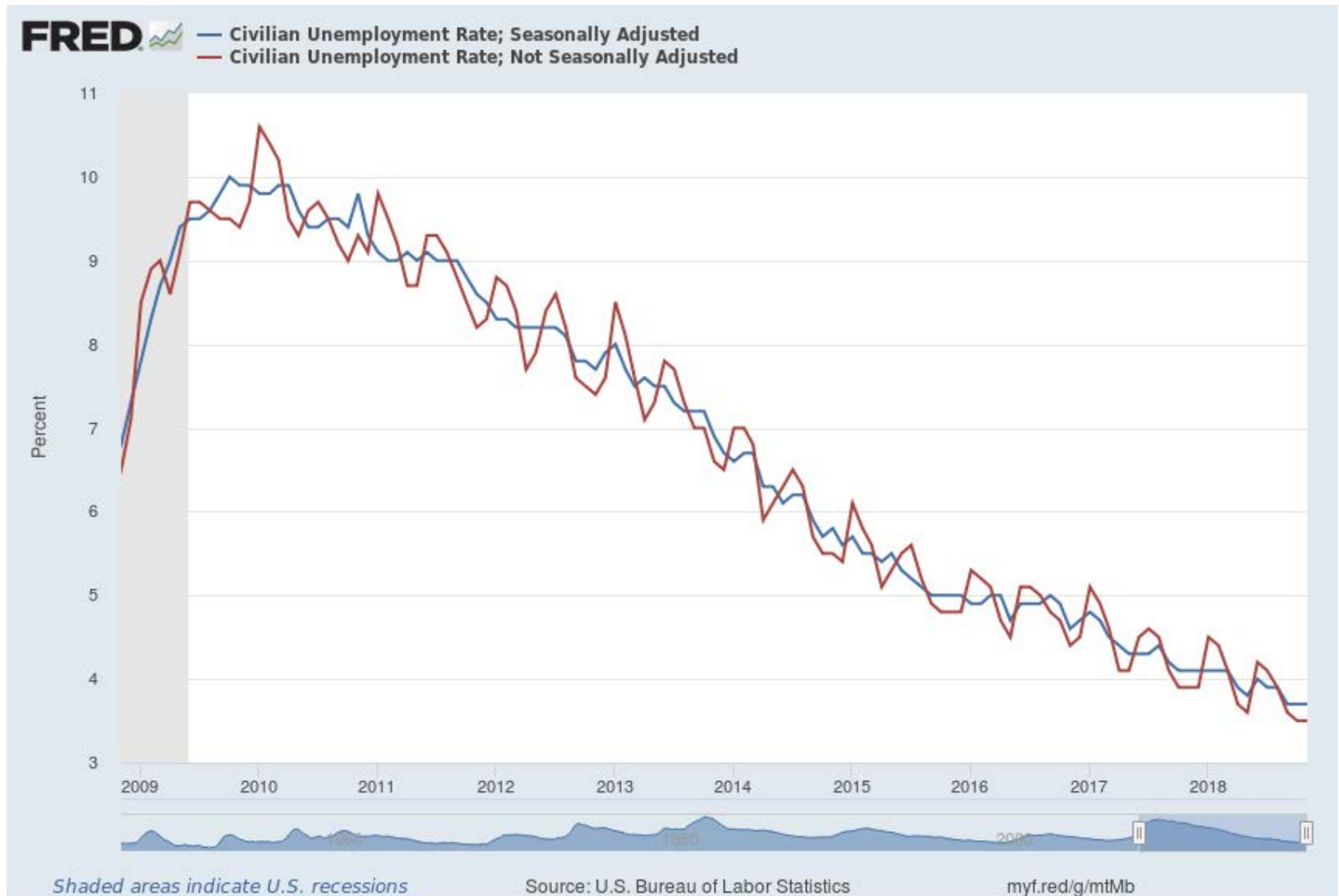
An example: real vs nominal

Shaded areas indicate U.S. recessions
Source: U.S. Bureau of Economic Analysis
myf.red/g/mtK9

An example: noise versus signal

FRED — Industrial Production: Electric and Gas Utilities

Shaded areas indicate U.S. recessions Source: Board of Governors of the Federal Reserve System (US)   myf.red/g/mtL4

An example: noise versus signal

Industrial Production: Electric and Gas Utilities

Shaded areas indicate U.S. recessions Source: Board of Governors of the Federal Reserve System (US) myf.red/g/mtLb

An example: seasonal adjustment

An example: disaggregated data

FRED — Civilian Labor Force Participation Rate
— Civilian Labor Force Participation Rate: Women
— Civilian Labor Force Participation Rate: Men

Shaded areas indicate U.S. recessions   Source: U.S. Bureau of Labor Statistics   myf.red/g/mtMm
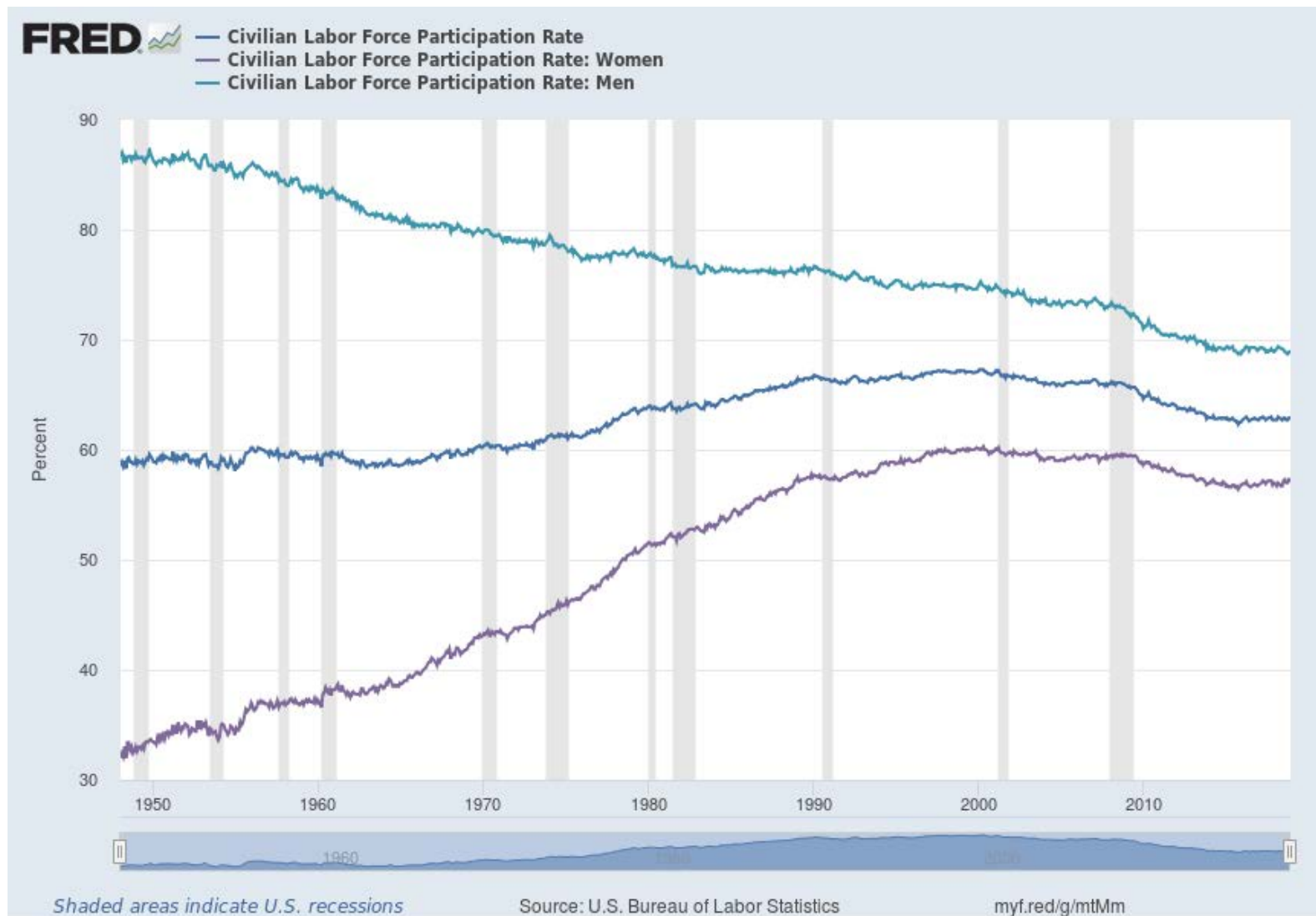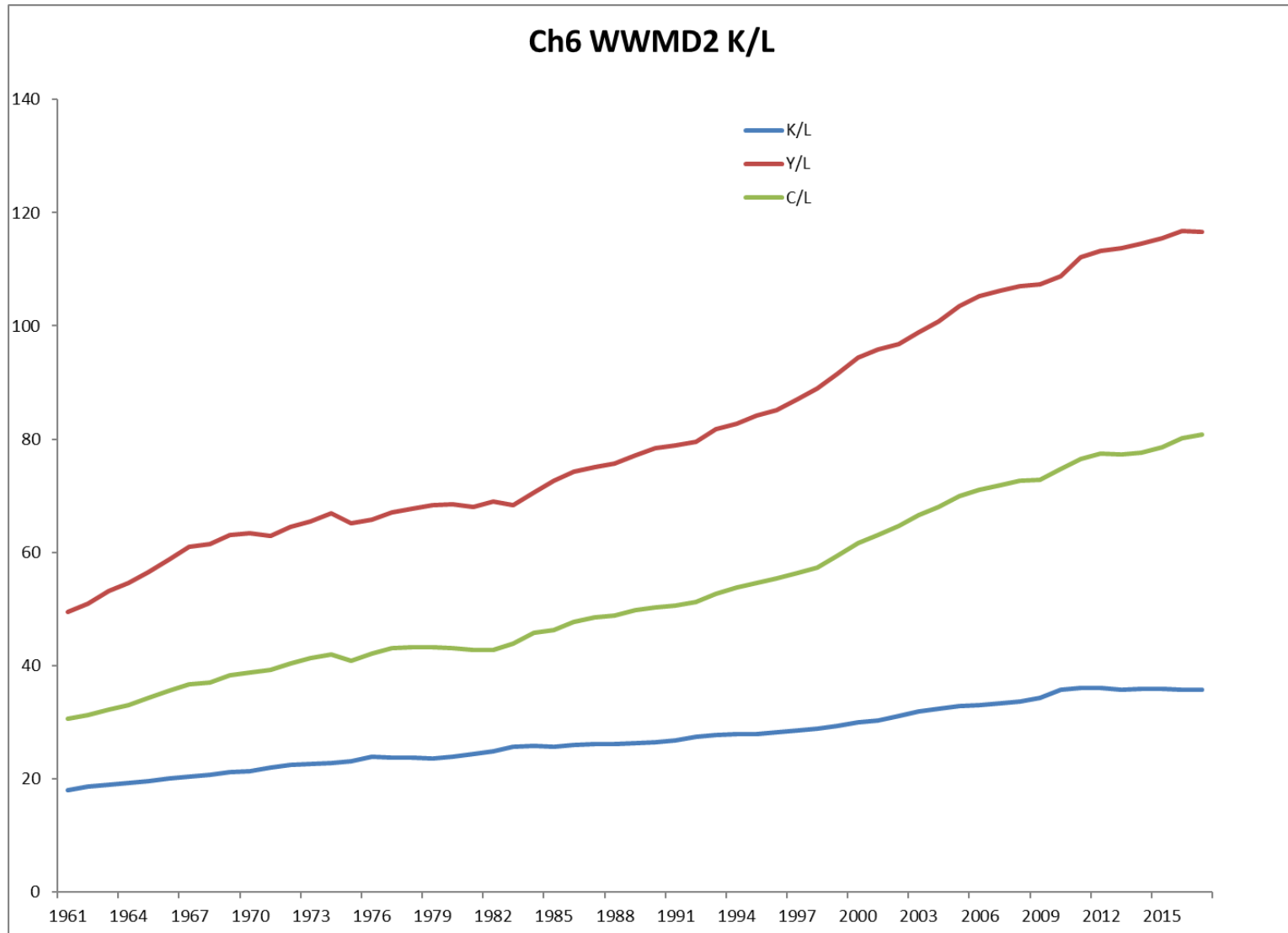
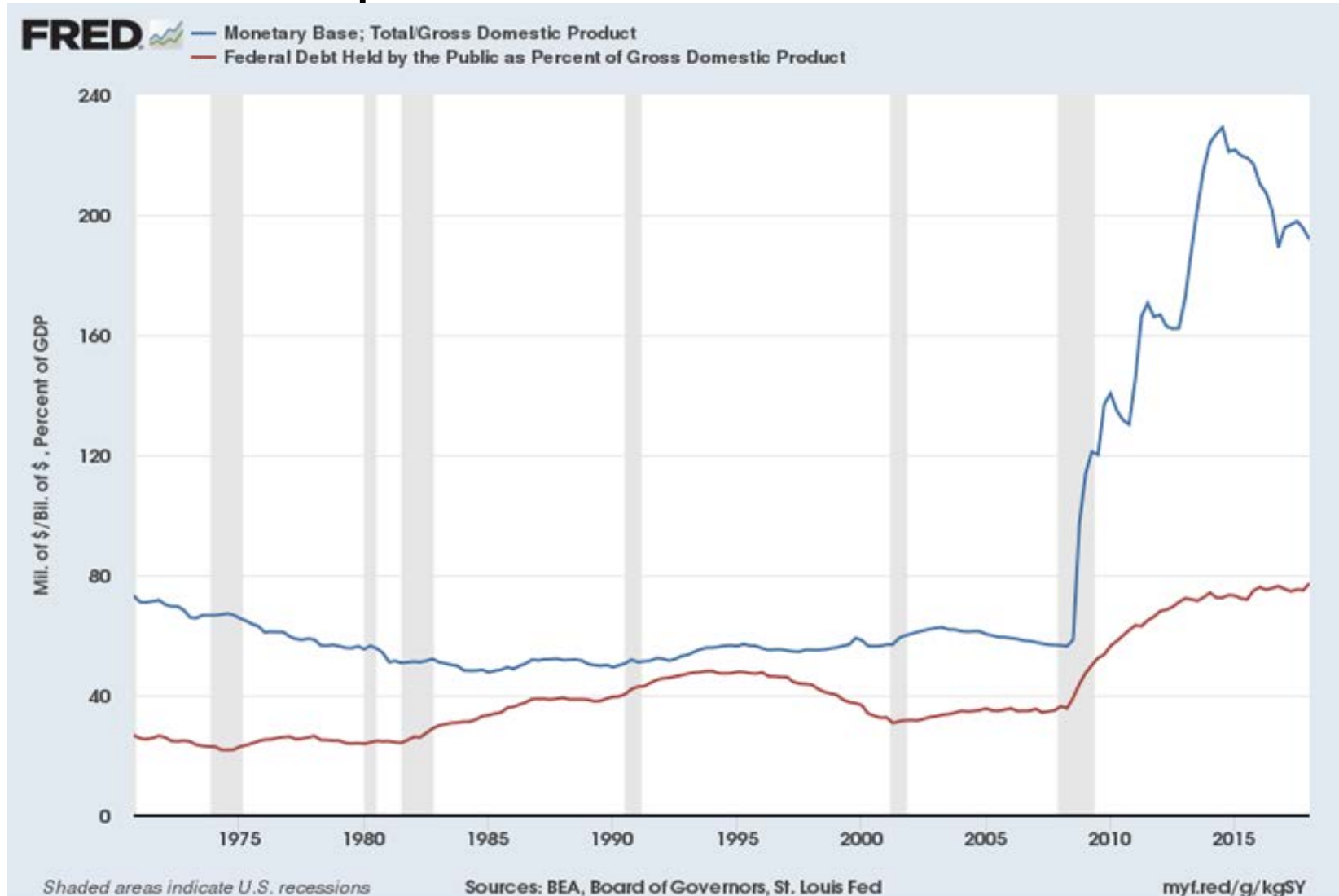# Students work with data outside of class

- Working with Macroeconomic Data section in textbook
- Many ideas to illustrate theory and relate it to data
  - Calculate real interest rates and show how they have changed over time
  - Calculate the openness index as the sum of imports as a share of GDP and exports as a share of GDP
  - Test the rationality of forecasts of interest rates or inflation rates by creating a scatter plot of forecasts versus actuals
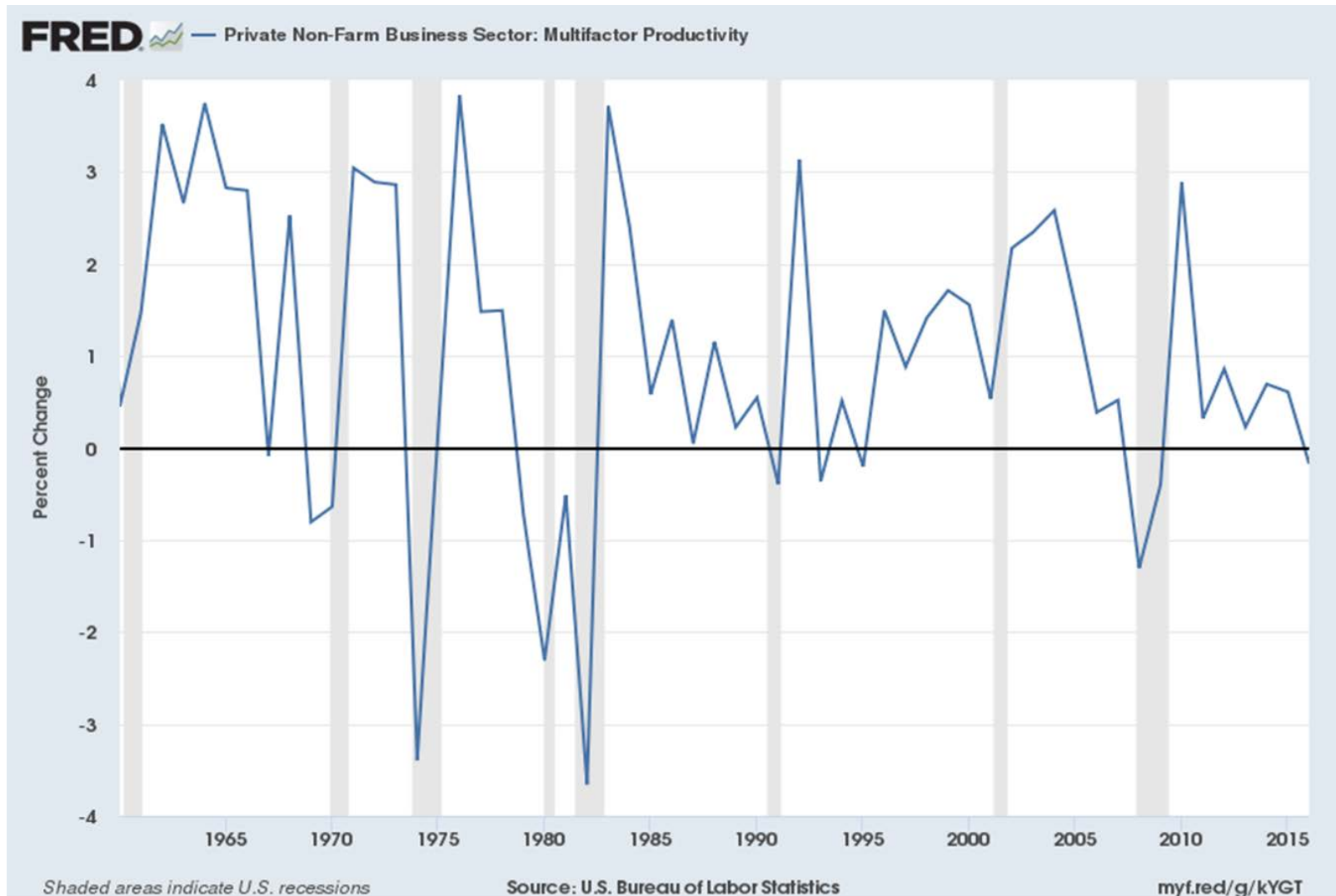
An example: steady state?

Ch6 WWMD2 K/L

Legend: K/L, Y/L, C/L

An example: monetization of debt

An example: TFP growth in cycles

FRED — Private Non-Farm Business Sector: Multifactor Productivity

Shaded areas indicate U.S. recessions   Source: U.S. Bureau of Labor Statistics   myf.red/g/kYGT

Teaching Intermediate Macro

- Summary
  - Relate data to theory for great instructor value-added
  - Many options for structure
    - Students present data in class
    - Professor shows data in class
    - Teams set up by sector
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    - Students work with data out of class
- See my web site for details and lists of variables

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