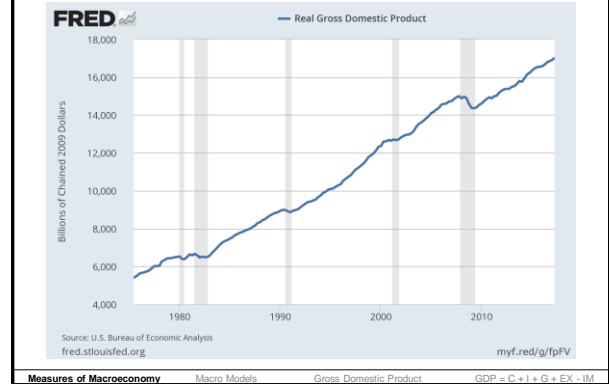## OUTLINE — October 16, 2017

- What determines unemployment?
  - Old, rejected, model: "one labor market"
  - Keynesian Model of Macroeconomics
- Measuring Output: Gross Domestic Product (GDP)
  - Output = Income = Expenditure
  - Expenditure = C + I + G + (EX – IM)

  _____

  PS 3 due 10/23 – 10/24in section

  Midterm 2 in __two weeks__: Wed., Nov 1, 7-8:30 pm

Real GDP, 1975 - 2017

Actual & Potential Real GDP

Recall: Economic Models

- Models are how economists answer questions
- Each model is characterized by
  1. Question
  2. Simplifications or Abstractions
  3. Assumptions about Behavior
- Change assumption → Change model
- To evaluate policy, compare policy's results with the counterfactual (what result would have been in absence of policy), not with the past
- Formulate the counterfactual by using models

Unemployment Rate, 1900 - 2017

Source: Historical Statistics, Econ Report of the President, & www.bls.gov
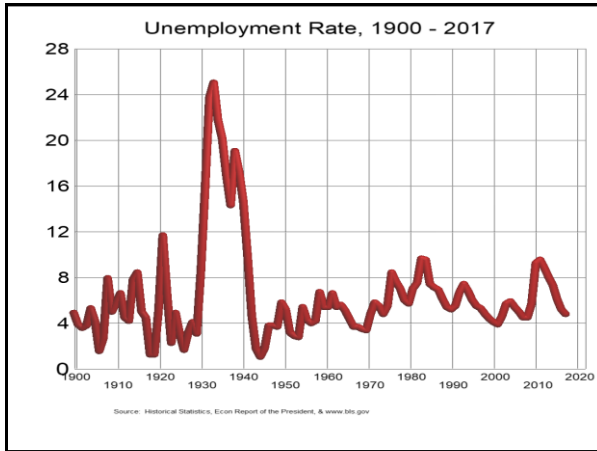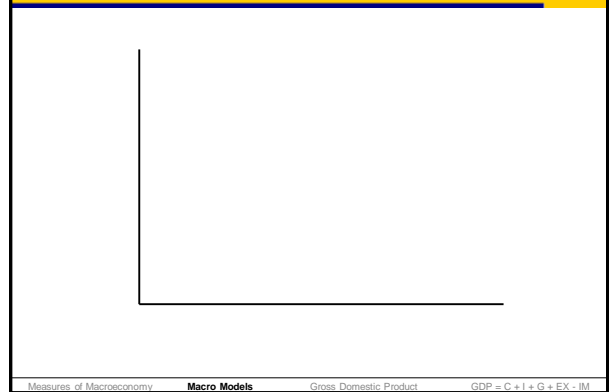

Pre-1930s Model: "The" Labor Market

Measures of Macroeconomy   **Macro Models**   Gross Domestic Product   GDP = C + I + G + EX - IM

What Determines Unemployment?

- John Maynard Keynes
- *Unemployment* is determined by
  - *employment* which is determined by
    - *output produced* which is determined by
    - *aggregate demand* for output
- Key idea:
  - *Someone will hire you if they can sell what you produce*

Measures of Macroeconomy   **Macro Models**   Gross Domestic Product   GDP = C + I + G + EX - IM

What about inflation?

- Phillips Curve (return to this: November 20)
- *Prices & inflation* depend upon
  - *Costs of production* which depend upon
    - *Supply & Demand for inputs* which depend upon
      - *Expectations of prices* and
      - *Productivity of inputs* and
      - *Amount of output produced*

Measures of Macroeconomy   **Macro Models**   Gross Domestic Product   GDP = C + I + G + EX - IM

Gross Domestic Product (GDP)

- Employment depends upon output produced
  - How measure "output produced"?
  - With "gross domestic product" or GDP
- GDP = Total annual economic output in a nation
  - Output
  - Economic
  - In a nation
  - Annual
  - Total

How compute GDP?

- GDP =

- Nominal GDP: use *current* prices

- Real GDP: use "*base year*" prices

How big is GDP?

- Nominal GDP in 2017:II was $19.25 trillion
  - 19,250,000 million dollars
  - $19,250,000,000,000
  - Per person (per capita), about $59,050

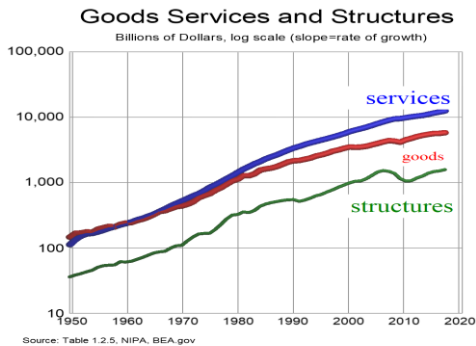- Data source: Bureau of Economic Analysis
  (www.bea.gov)

What do we produce? (shares)
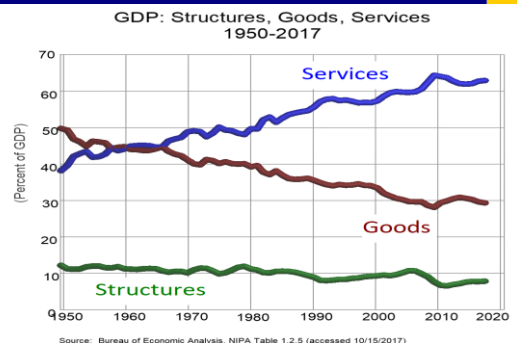
GDP: Structures, Goods, Services 1950-2017

Source: Bureau of Economic Analysis, NIPA Table 1.2.5 (accessed 10/15/2017)

What do we produce? ($ value)

Goods Services and Structures
Billions of Dollars, log scale (slope=rate of growth)

Source: Table 1.2.5, NIPA, BEA.gov

Measures of Macroeconomy   Macro Models   **Gross Domestic Product**   GDP = C + I + G + EX - IM
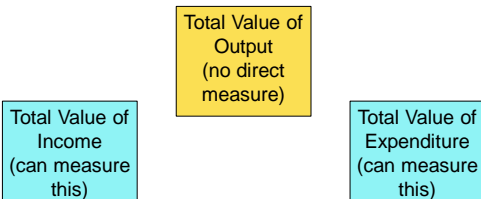
Omissions from GDP

- Activities that generate <u>output</u> but are not counted in GDP

Measures of Macroeconomy   Macro Models   **Gross Domestic Product**   GDP = C + I + G + EX - IM
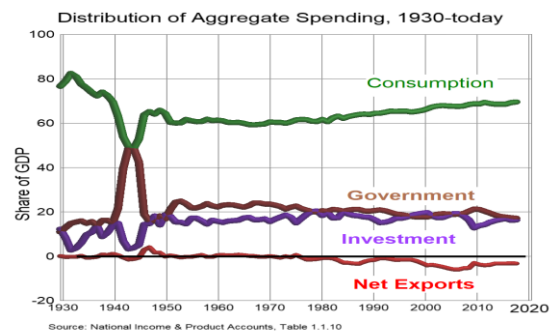
Two Ways to Measure GDP

- No direct measure of "total value of output"
- Instead, we have measures of
  1. Income earned from producing total output
  2. Expenditure (spending) for total output

Total Value of Output (no direct measure)

Total Value of Income (can measure this)

Total Value of Expenditure (can measure this)

Measures of Macroeconomy   Macro Models   **Gross Domestic Product**   GDP = C + I + G + EX - IM

Focus: Total Expenditure

Distribution of Aggregate Spending, 1930-today

Consumption

Government

Investment

Net Exports

Source: National Income & Product Accounts, Table 1.1.10

Measures of Macroeconomy   Macro Models   Gross Domestic Product   **GDP = C + I + G + EX - IM**

Expenditure

- Consumption spending C

- Investment spending I

Consumption dropped (!) in 2007-09

Consumption Spending, 1950-today
(Billions of chained 2009 dollars)
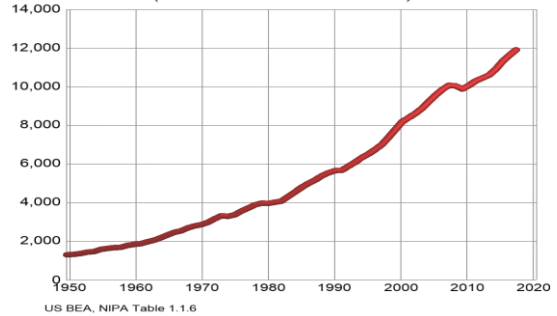
US BEA, NIPA Table 1.1.6

Investment vs Intermediate Goods

Investment	Intermediate goods
- business spending for capital:	- business spending for goods and services used as inputs in production

Investment fell ~35% in 2007-09

Investment Spending 1950-today
Billions of Chained 2009 dollars
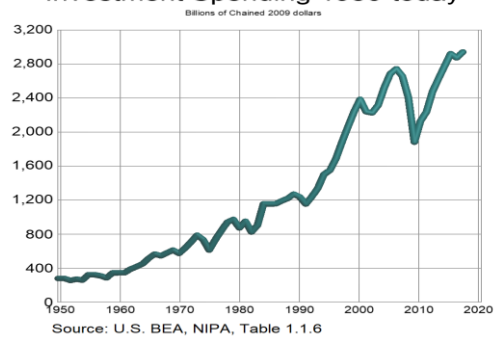
Source: U.S. BEA, NIPA, Table 1.1.6

Investments Swings > GDP Swings
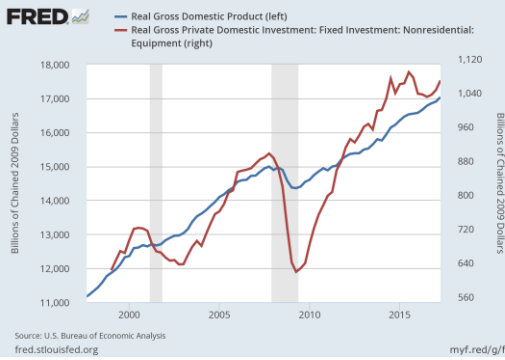
Housing Construction Way Down
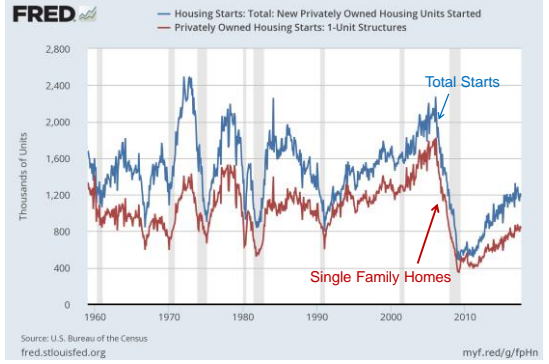
Expenditure, continued

- Government spending G
  - Purchases of goods and services (including government payrolls)

  -

After 2010, government spending was a drag

Government Purchases of Good & Services 1950-today
Billions of Chained 2009 dollars

State & Local swamps Federal Spending

Source: U.S. Bureau of Economic Analysis
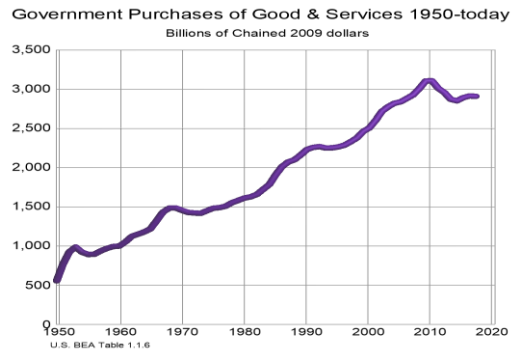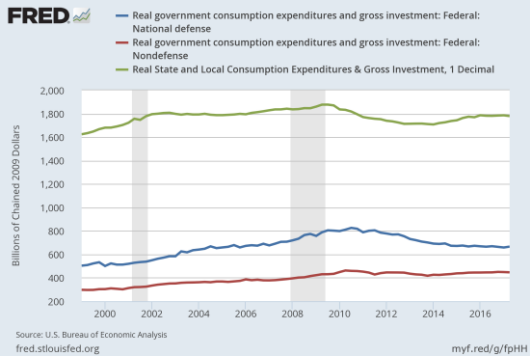fred.stlouisfed.org
myf.red/g/fpHH

Measures of Macroeconomy   Macro Models   Gross Domestic Product   **GDP = C + I + G + EX - IM**

Expenditure, continued

- Export spending EX
  -

- Import spending IM
  -

Measures of Macroeconomy   Macro Models   Gross Domestic Product   **GDP = C + I + G + EX - IM**

In 2007-09, exports were rising

Source: U.S. BEA Table 1.1.6
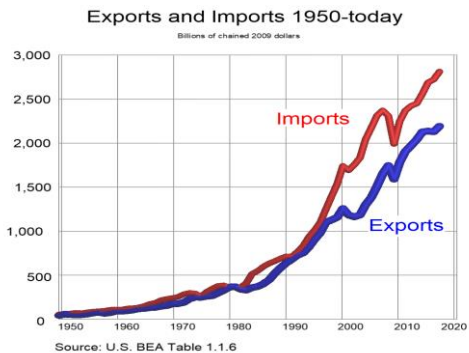
Measures of Macroeconomy   Macro Models   Gross Domestic Product   **GDP = C + I + G + EX - IM**

And exports rose faster than imports

U.S. BEA, NIPA Table 1.1.6

Measures of Macroeconomy   Macro Models   Gross Domestic Product   **GDP = C + I + G + EX - IM**

Aggregate Expenditure

- Aggregate Expenditure = C + I + G + EX – IM
- Why subtract imports?
  - Because C, I, G include both domestic & foreign output
  - AE (or, AD) defined as total expenditure for only domestic output

Consumption	Investment	Government	Exports
Purchases of domestically-produced consumer goods and services	Purchases of domestically-produced machines & buildings	Purchases of domestically-produced goods and services	Purchases by foreigners of domestically-produced goods and services
Purchases of foreign-produced consumer goods and services	Purchases of foreign-produced machines & buildings	Purchases of foreign-produced goods and services	

Measures of Macroeconomy Macro Models Gross Domestic Product **GDP = C + I + G + EX - IM**

Key concepts

- When figuring out IF some activity is counted in GDP and, if so, where, keep these three things in mind:
1. Is there a connection to employment?

2. Don't double count.

3. Who is buying what and where was it produced?

Measures of Macroeconomy Macro Models Gross Domestic Product **GDP = C + I + G + EX - IM**