

OUTLINE — October 15, 2018

- Overview of Macro, continued
 - Inflation
- What determines unemployment?
 - Old, rejected, model: “one labor market”
 - Keynesian Model of Macroeconomics
- Measuring Output: Gross Domestic Product (GDP)
 - Output = Income = Expenditure
 - Expenditure = $C + I + G + (EX - IM)$

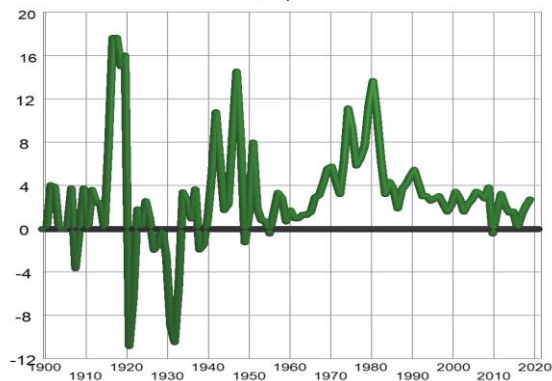
PS 2 due October 15/16 in section

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Inflation Rate, 1956-2018



Inflation Rate, 1900-2018



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

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

Pre-1930s Model: "The" Labor Market



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

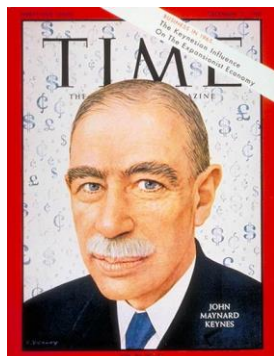
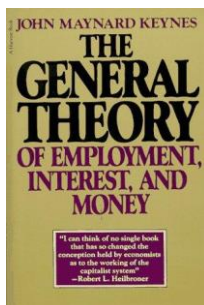
Why that model doesn't apply

- Which assumptions are not valid?

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

What Determines Unemployment?

- John Maynard Keynes



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 19)
- *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

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

How compute GDP?

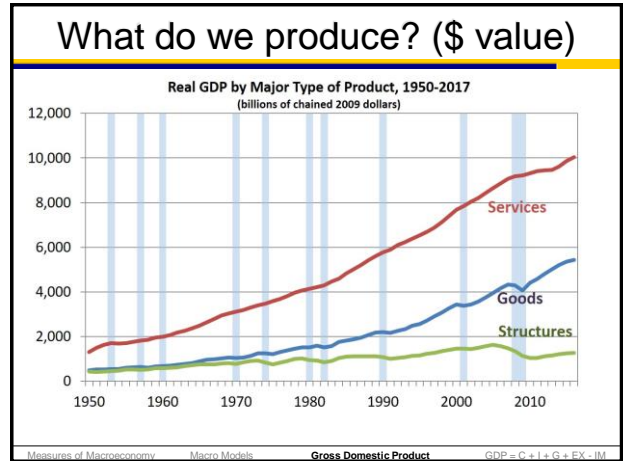
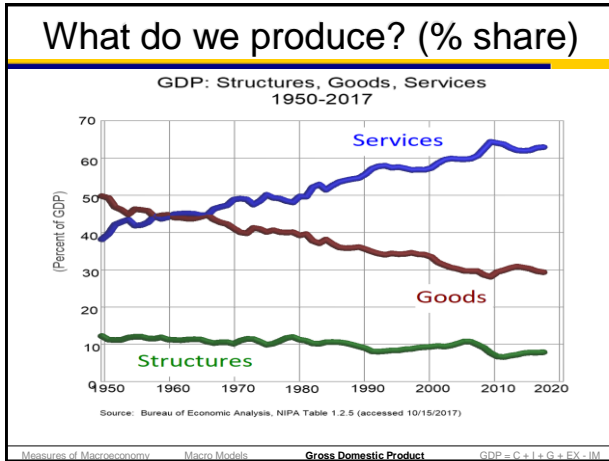
- GDP =
- Nominal GDP: use *current* prices
- Real GDP: use “*base year*” prices

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

How big is GDP?

- Nominal GDP in 2018:II was \$20.4 trillion
 - 20,400,000 million dollars
 - \$20,400,000,000,000
 - Per person (per capita), about \$62,500
- Data source: Bureau of Economic Analysis (www.bea.gov)

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



Omissions from GDP

- Activities that generate output 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

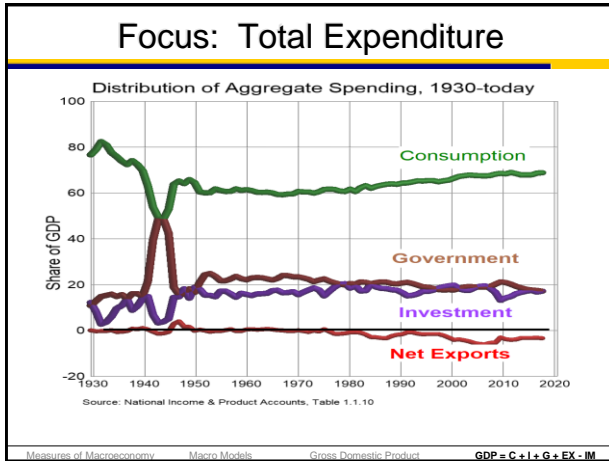
- No direct measure of "total value of output"
- Instead, we have measures of
 - Income earned from producing total output
 - Expenditure (spending) for total output

Total Value of Income
(can measure this)

Total Value of Output
(no direct measure)

Total Value of Expenditure
(can measure this)

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

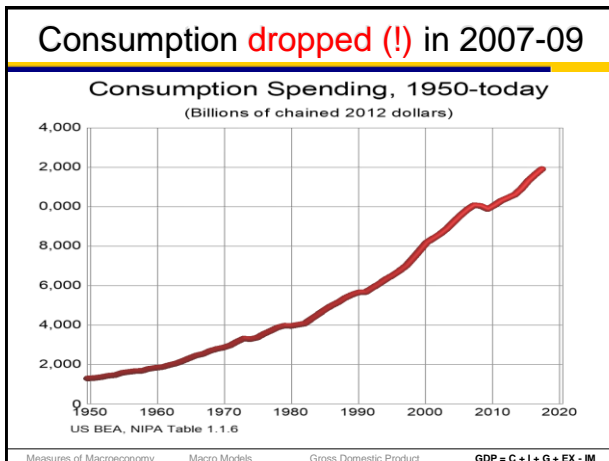


Expenditure

- Consumption spending C

- Investment spending I

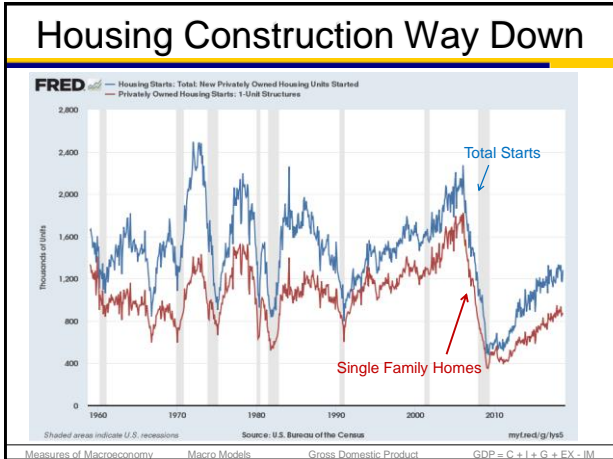
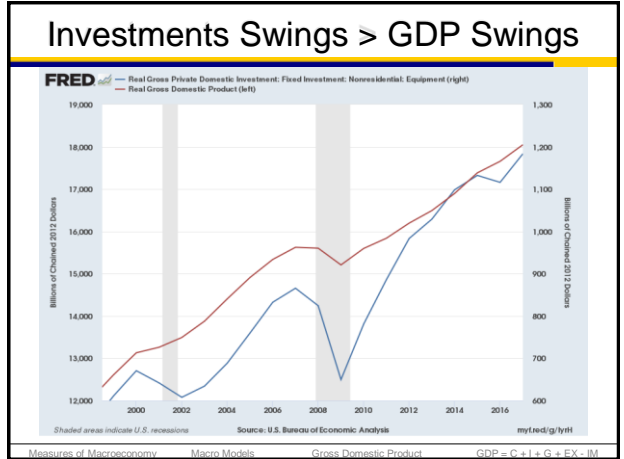
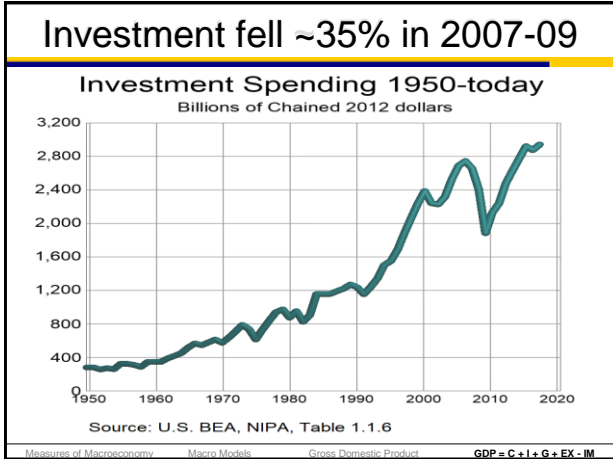
Measures of Macroeconomy Macro Models Gross Domestic Product $GDP = C + I + G + EX - IM$



Investment vs Intermediate Goods

<ul style="list-style-type: none"> ▪ Investment <ul style="list-style-type: none"> ▪ business spending for capital: 	<ul style="list-style-type: none"> ▪ Intermediate goods <ul style="list-style-type: none"> ▪ business spending for goods and services used as inputs in production
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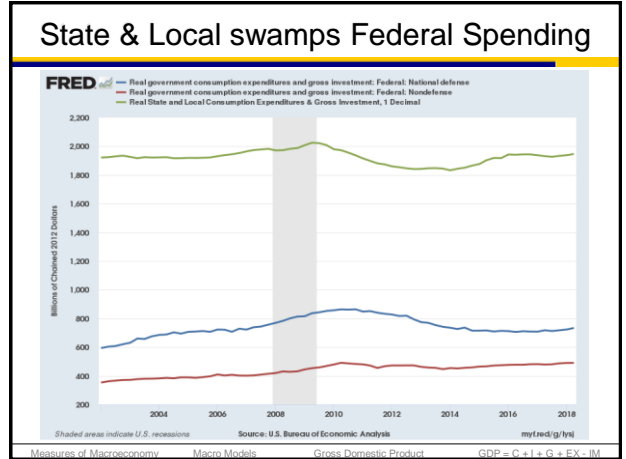
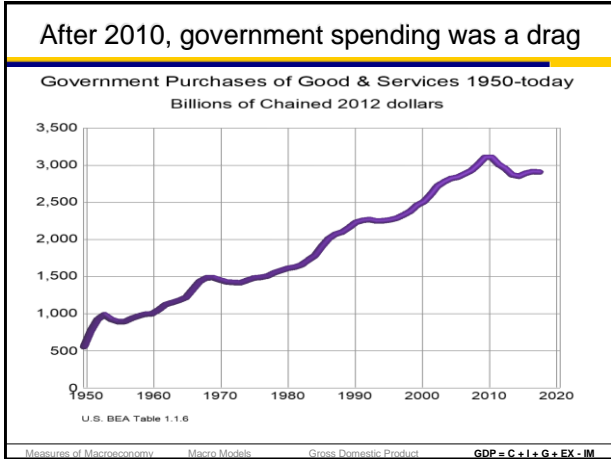
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Expenditure, continued

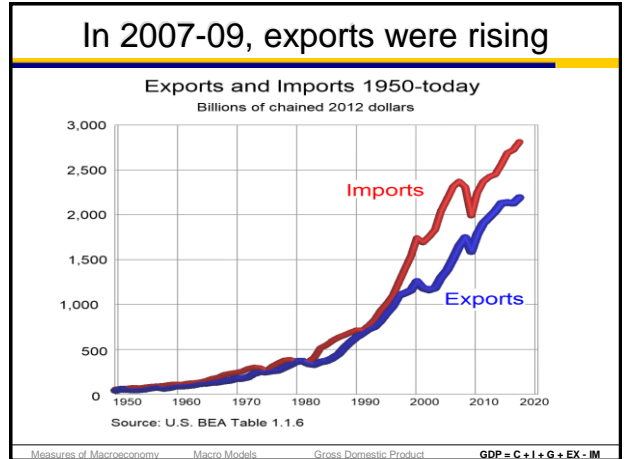
- Government spending G
 - Purchases of goods and services (including government payrolls)
 -

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



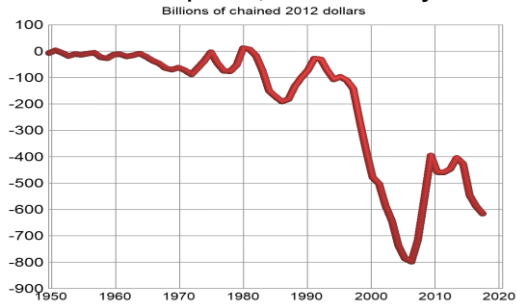
- ### Expenditure, continued
- Export spending EX
 -

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



And exports rose faster than imports

Net Exports, 1950-today



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

Purchases of domestically-produced consumer goods and services

Purchases of foreign-produced consumer goods and services

Investment

Purchases of domestically-produced machines & buildings

Purchases of foreign-produced machines & buildings

Government

Purchases of domestically-produced goods and services

Purchases of foreign-produced goods and services

Exports

Purchases by foreigners of domestically-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:
 - Is there a connection to employment?
 - Don't double count.
 - Who is buying **what** and **where** was it produced?

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