UNITED STATES MILITARY ACADEMY
WEST POINT

SS201: Principles of Economics

Lesson 20: Macroeconomic Aggregates

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Transitioning from Micro to Macro

Preparation

Friendly Public Service Announcement...

If you normally don't read the book, this block is the time you need to start.

Not a lot of math, graphs to illustrate these concepts.

More terms / definitions and intuition than previously.

Empirical Macroeconomics and models require a lot of math tools you don't have.

Transitioning from Micro to Macro

Themes

Microeconomics

- The spot market for a single good
  - One good, one market
  - One firm
  - One worker or consumer
- Will a business operate or close in the short term?
- How will a tax on a single good affect the price and quantity of that good?

Macroeconomics

- The country's or world's economy as a whole
  - Combined analysis of all goods, all workers, all firms
  - Money / Currency
- Why are some countries more prosperous than others?
- How does the financial system affect economic growth?

Transitioning from Micro to Macro

Measurements

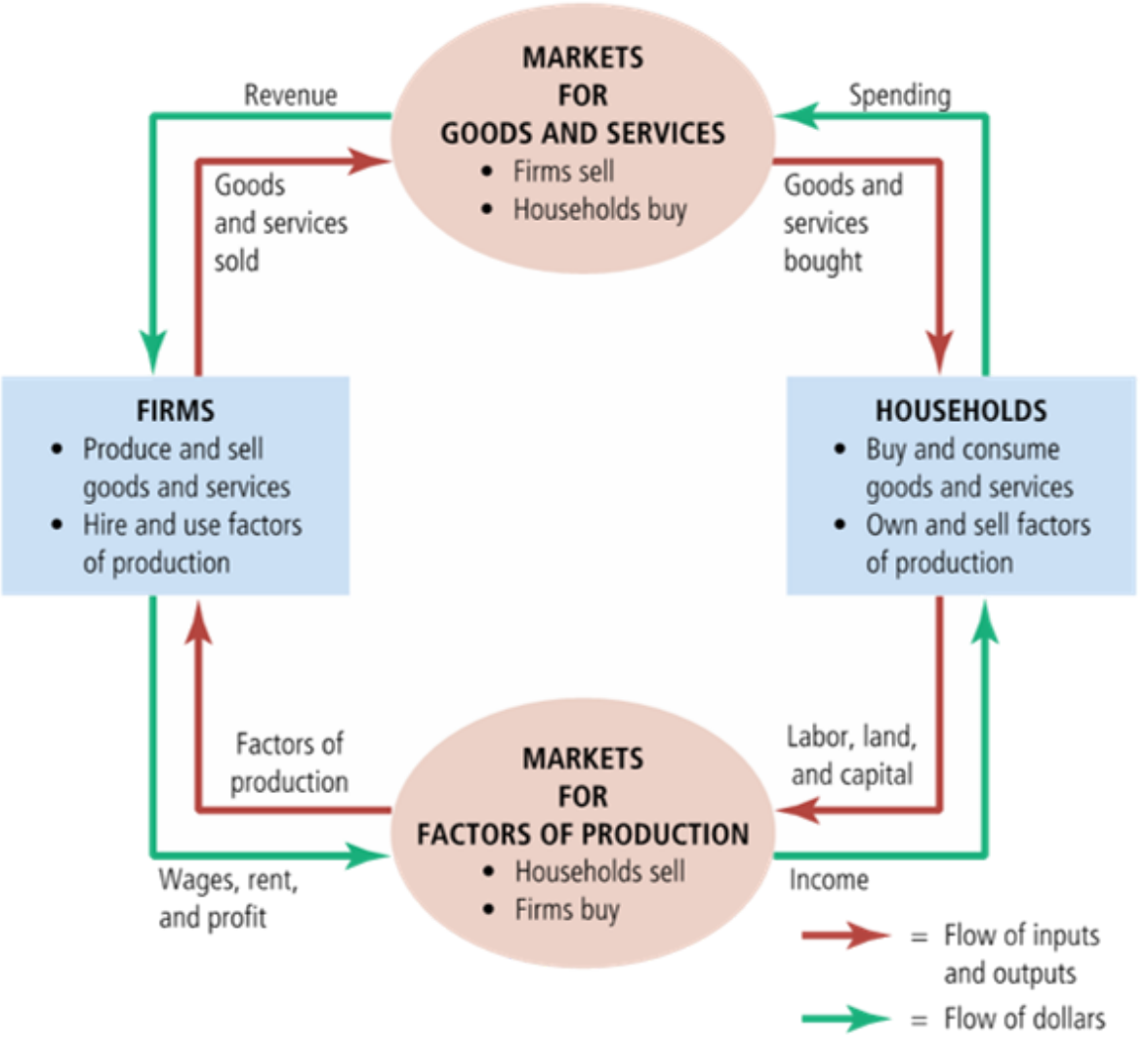
Microeconomics

- Price
- Quantity

Macroeconomics

- Price Index (CPI, GDP Deflator)
- Real GDP

Transitioning from Micro to Macro



Gross Domestic Product

$$Y = C + I + G + NX$$

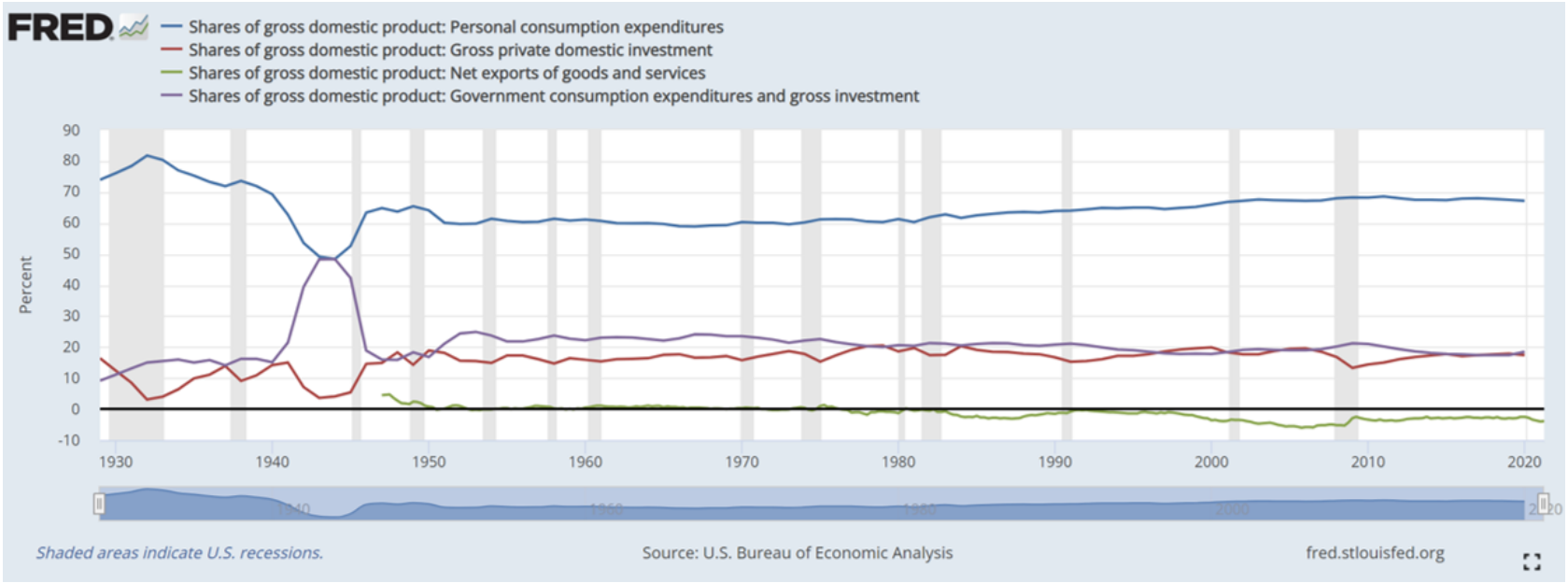
Consumption (C)
- Household spending on goods and services

Investment (I)
- Goods used in the future to produce more goods and services
- Includes buildings and inventory accumulation
- NOT individuals or banks buying stocks (equity)

Government (G)
- Federal, state, or local spending on actual goods and services
- NOT taxes or transfer payments (ex. Social Security, welfare, etc.)

Net Exports (NX)
- Exports – Imports
- We include all the stuff we make that other countries use
- But don’t include the parts of C, I, and G that were produced in other countries, so subtract off

Gross Domestic Product



Price Levels

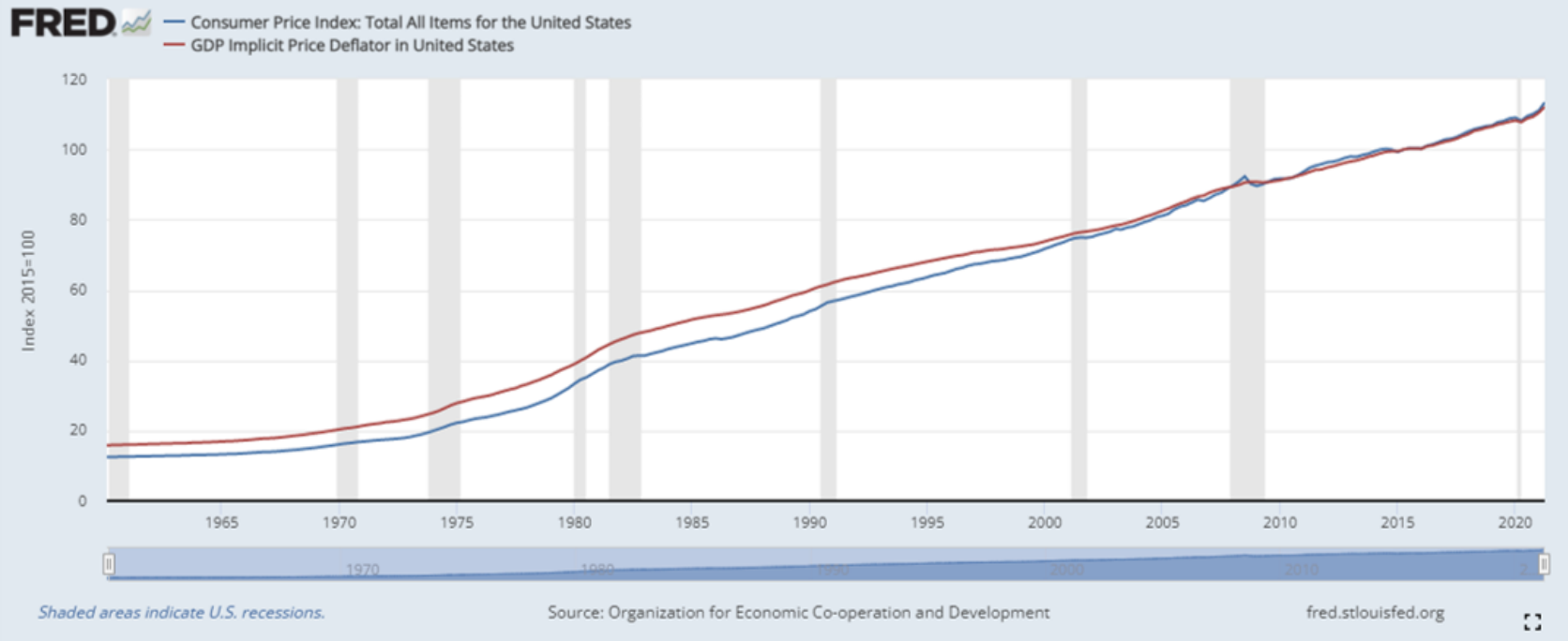
GDP Deflator

$$GDP_D = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

Consumer Price Index (CPI)

$$CPI = \frac{\text{Current Year Basket Prices}}{\text{Base Year Basket Prices}} \times 100$$

Price Levels



Real vs. Nominal

- Why make this distinction?
- What is the difference?

What year did Army pay increase the most?

Year	Pay Raise
2023	4.60%
2022	2.70%
2021	3.00%
2020	3.10%
2019	2.60%
2018	2.40%
2017	2.10%
2016	1.30%
2015	1.00%
2014	1.00%
2013	1.70%
2012	1.60%
2011	1.40%

What year did Army pay increase the most?

Year	Pay Raise	Inflation	Real Raise
2023	4.60%	8.20%	-3.60%
2022	2.70%	4.70%	-2.00%
2021	3.00%	1.23%	1.77%
2020	3.10%	1.81%	1.29%
2019	2.60%	2.44%	0.16%
2018	2.40%	2.13%	0.27%
2017	2.10%	1.26%	0.84%
2016	1.30%	0.11%	1.19%
2015	1.00%	1.62%	-0.62%
2014	1.00%	1.46%	-0.46%
2013	1.70%	2.06%	-0.36%
2012	1.60%	3.15%	-1.55%
2011	1.40%	1.64%	-0.24%

Inflation

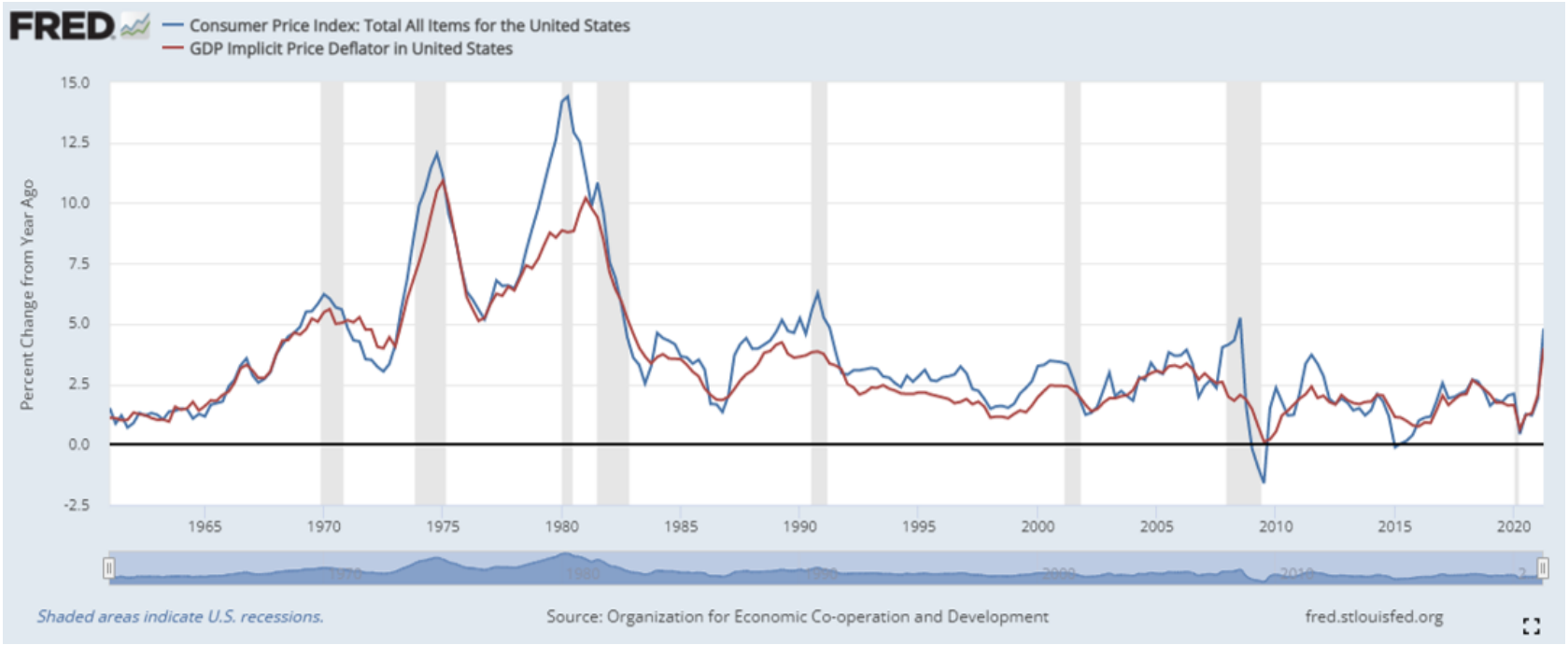
GDP Deflator:

$$\frac{\text{GDP Deflator Year (Y)} - \text{GDP Deflator Base Year}}{\text{GDP Deflator Base Year}} \times 100$$

CPI:

$$\frac{\text{CPI Year (Y)} - \text{CPI Base Year}}{\text{CPI Base Year}} \times 100$$

Inflation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Consumer Price Index: Total All Items for the United States
GDP Implicit Price Deflator in United States
Percent Change from Year Ago
15.0
12.5
10.0
7.5
5.0
2.5
0.0
-2.5
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015
2020
Shaded areas indicate U.S. recessions.
Source: Organization for Economic Co-operation and Development
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