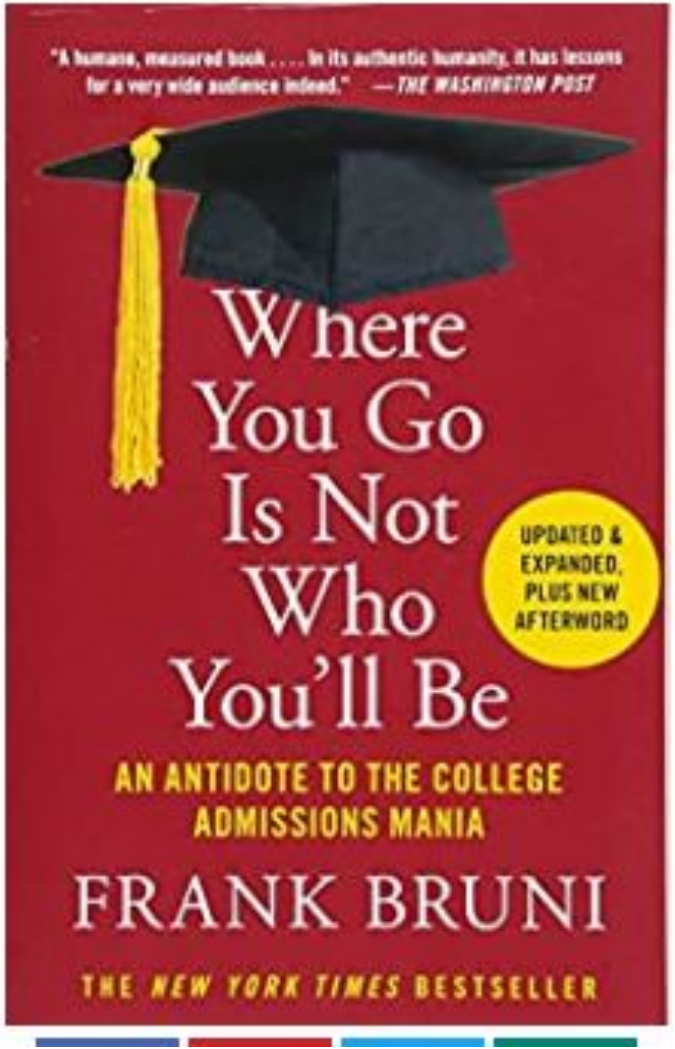
Turbinado Tuesday, October 25
Worcestershire Wednesday, October 26

- Warm up: Talk to your neighbor about what might cause inflation.
- *Learning targets: I can explain problems with CPI and the three causes of inflation.*
- **Darion, Dawson and Ryan must take quiz.**
- **Unit 2 test multiple choice and FRQ: Wednesday, Nov. 2 (B day) and Thursday, Nov. 3 (A day)**
- **HW 2d due today; Fun Set 2.3 due next class (27th or 28th); HW 2e due Mon, Oct. 31 (B) or Tues., Nov. 1 (A)**


"A humane, measured book . . . . In its authentic humanity, it has lessons for a very wide audience indeed." —THE WASHINGTON POST
Where You Go Is Not Who You'll Be
UPDATED & EXPANDED, PLUS NEW AFTERWORD
AN ANTIDOTE TO THE COLLEGE ADMISSIONS MANIA
FRANK BRUNI
THE NEW YORK TIMES BESTSELLER

“What I got out of being at a place like [the University of] Delaware was a real diversity in terms of the economic and social strata of people who went there. I met lots of different people who had lots of different life experiences. . . . I look back at those four years so fondly. I had an amazingly good time and great experience. There’s nothing I would change.”

-Chris Christie, Governor of New Jersey and 2016 presidential candidate, about choosing U. of DE

Source: Bruni, Frank. *Where You Go Is Not Who You’ll Be: An Antidote to the College Admissions Mania.* New York, Hachette Book Group, 2016.

Problems with the CPI (See text book--will be on test!)

1. **Substitution Bias-** As prices increase for the fixed market basket, consumers buy less of these products and more substitutes that may not be part of the market basket. **(Result: CPI may be higher than what consumers are really paying.)**

2. **New Products-** The CPI market basket may not include the newest consumer products. **(Result: CPI measures prices but not the increase in choices.)**

3. **Product Quality-** The CPI ignores both improvements and decline in product quality. **(Result: CPI may suggest that prices stay the same though the economic well being has improved significantly.)**

Three Causes of Inflation

1. If everyone suddenly had a million dollars, what would happen?
2. What two things cause prices to increase? (Use supply and demand graphs)

3 Causes of Inflation

1. Demand-Pull Inflation

DEMAND PULLS UP PRICES!!!

"Too many dollars chasing too few goods"

An overheated economy with excessive spending but same amount of goods.

2. Cost-Push Inflation

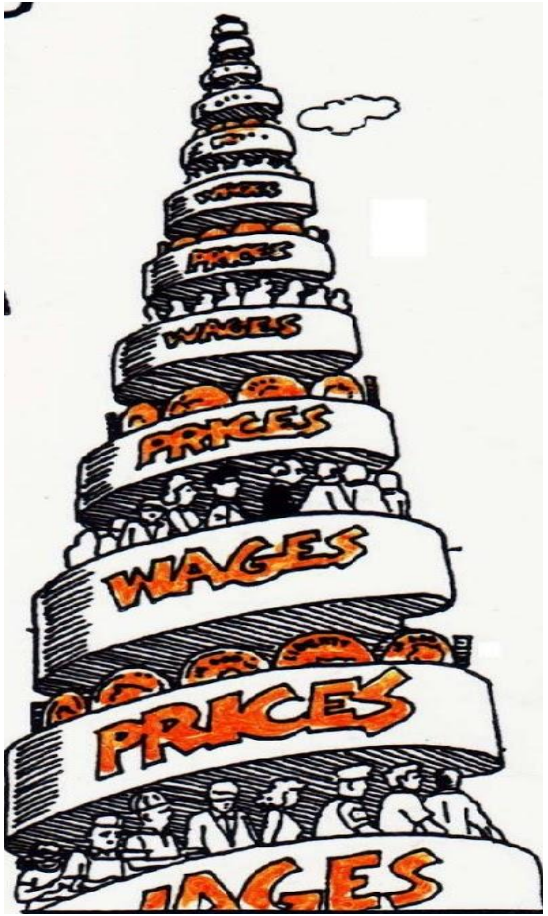
Higher production costs increase prices.

A negative supply shock increases the costs of production and forces producers to increase prices.

The Wage-Price Spiral

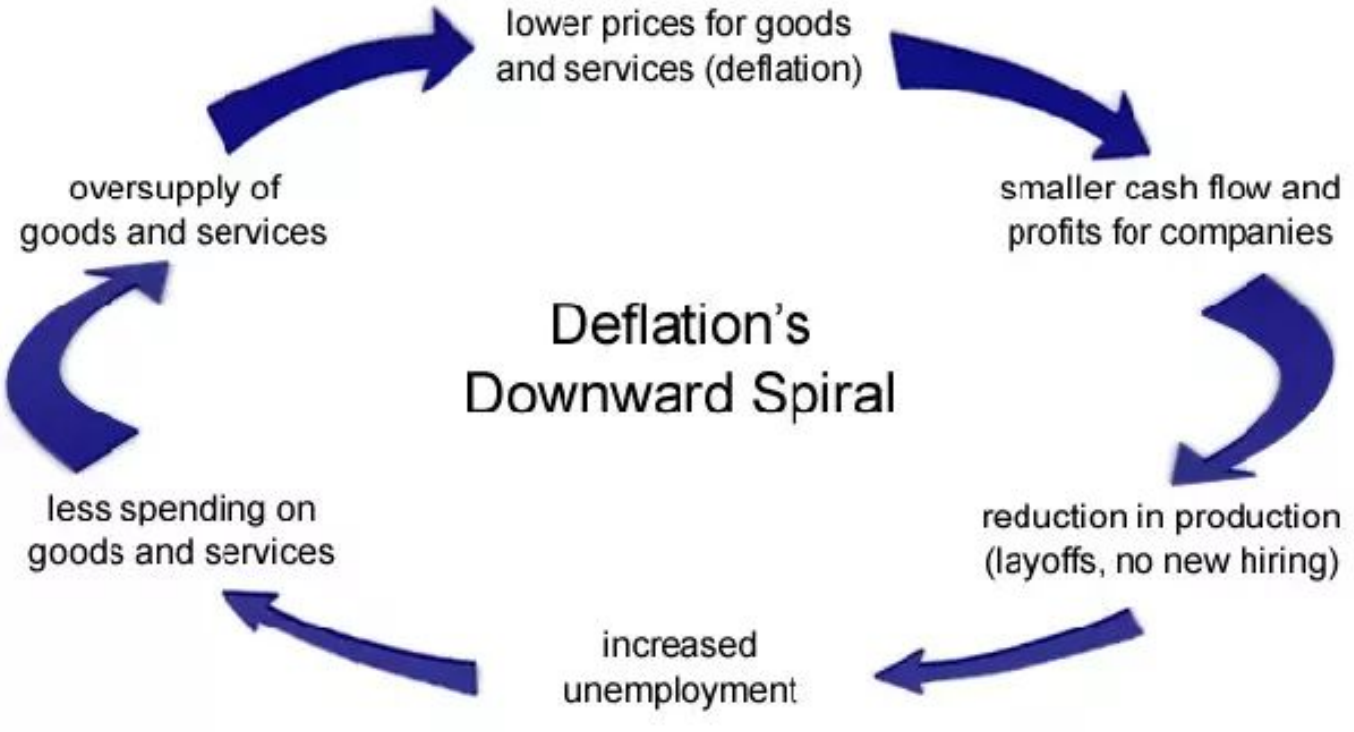
A Perpetual Process:

1. Workers demand raises.
2. Owners increase prices to pay for raises.
3. High prices cause workers to demand higher raises.
4. Owners increase prices to pay for higher raises.
5. High prices cause workers to demand higher raises.
6. Owners increase prices to pay for higher raises.



EXTENDED LEARNING

There can also be a downward spiral of deflation… Think about the Great Depression!



3 Causes of Inflation

3. The Government Prints TOO MUCH Money (The Quantity Theory)

- **Governments that keep printing money to pay debts end up with <u>hyperinflation</u>.**
- **Result: Banks refuse to lend so investment falls and people don't save up to buy things.**

Examples:

- **Bolivia, Peru, Brazil, Zimbabwe, Venezuela**
- **Germany after WWI**

7. Hyperinflation is typically caused by

(A) high tax rates that discourage work effort
(B) continuous expansion of the money supply to finance government budget deficits
(C) trade surpluses that are caused by strong protectionist policies
(D) bad harvests that lead to widespread shortages
(E) a large decline in corporate profits that leads to a decrease in production

Quiz Review

CPI measures . . . ?

- Changes in price NOT changes in quantity
- Therefore, when calculating CPI we need to freeze the weight (quantities) at the base year and use current year prices
- This is the opposite of calculating real GDP!

Fun Set 2.3

Threadbare Thursday, October 27
Friendly Friday, October 28

- Warm up: Talk to your neighbor about what was the toughest part of Fun Set 2.3 for you.
- *Learning targets: I can interpret the effects of inflation on nominal wages. I can deflate nominal values using a price index. I can explain the costs of unexpected inflation.*
- **Unit 2 test multiple choice and FRQ: Wednesday, Nov. 2 (B day) and Thursday, Nov. 3 (A day)**
- **Fun Set 2.3 due today; HW 2e due Mon, Oct. 31 (B) or Tues., Nov. 1 (A)**
- **Note that I assigned practice questions and progress checks in AP classroom! Do those to prepare for test.**

Fun Set 2.3 Review

FIXED Basket of Goods and Services (2019 is the base year)

	2019 Price	2019 Quantity	2019 Market Basket **(2019 P x 2019 Q)**	2020 Price	2020 Quantity	2020 Market Basket **(2020 P x 2019 Q)**
Good 1	$2.00	20		$2.10	18	
Good 2	$4.00	10		$4.60	13	
Good 3	$3.00	40		$3.30	41	

Based on the table above, do the following calculations. **Show your work!**

1. Calculate the cost of the market basket in each year.
2. Using year 1 as the base year, calculate the CPI for each year.
3. Using the change over time formula and the CPIs for each year, calculate the inflation rate from year 1 to year 2.

Use the information in the table below to calculate the inflation rate from year 1 to year 2. Year 1 is the base year.

The Market Basket Represents a FIXED bundle of Goods and Services

	Year 1 Price	Year 1 Quantity	Year 1 Market Basket	Year 2 Price	Year 2 Quantity	Year 2 Market Basket
Good 1	$7.00	20		$5.25	22	
Good 2	$20.00	23		$25.00	20	
Good 3	$25.00	8		$40.00	10	
	Year 1 Market Basket Value =			Year 2 Market Basket Value =		

1. Calculate the value of the market basket for each year
2. Calculate the CPI for each year using the market basket
3. Calculate the inflation rate from year 1 to year 2 using the CPIs

Year	Quantity produced	Price per unit	Nominal GDP	Real GDP	GDP Deflator (Year 3 is base year)	Inflation rate
1	10	$4				
2	10	$5				
3* Base year	15	$6				
4	20	$8				
5	25	$4				

41. The consumer price index (CPI) is designed to measure changes in the

(A) spending patterns of urban consumers only
(B) spending patterns of all consumers
(C) wholesale price of manufactured goods
(D) prices of all goods and services produced in an economy
(E) cost of a select market basket of goods and services

7. Hyperinflation is typically caused by

(A) high tax rates that discourage work effort
(B) continuous expansion of the money supply to finance government budget deficits
(C) trade surpluses that are caused by strong protectionist policies
(D) bad harvests that lead to widespread shortages
(E) a large decline in corporate profits that leads to a decrease in production

The costs of unanticipated inflation

Is Inflation Good or Bad?

1. If a high inflation rate is predicted, how would different groups of people react?
2. What do you think would happen to people's willingness to lend money?
3. What do you think would happen to people's willingness to save?

What if prices are expected to drop?

B. Effects of inflation:

Identify which people are helped and which are hurt by inflation.

1. A man who lent out $500 to his friend in 1960 and gets paid back in 2018.
2. A tenant who is charged $850 rent each year.
3. An elderly couple living off fixed retirement payments of $2000 a month.
4. A man that borrowed $1,000 in 1995 and paid it back in 2014.
5. A woman who saved $500 in 1950 by putting it under her mattress.

2. Which of the following groups would most likely gain from unanticipated inflation?

(A) Landlords who own apartments in cities with rent controls
(B) Individuals who have fixed retirement incomes
(C) Individuals who earn high incomes
(D) Individuals who have borrowed money at fixed interest rates
(E) Banks that have loaned all excess reserves at a fixed interest rate

34. Which of the following statements is true of unanticipated inflation?

(A) It decreases the economic well-being of all members of society proportionately.
(B) It decreases the economic well-being of all members of society equally.
(C) It increases the economic well-being of net creditors.
(D) It increases the economic well-being of net debtors.
(E) It increases the economic well-being of workers with long-term labor contracts.

	2009 Quantity	2009 Price (base year)	2010 Quantity	2010 Price
Food	6	$2.5	8	$ 2.5
Clothes	5	$6	10	$10
Entertainment	2	$4	5	$ 5

3. (a) The outputs and prices of goods and services in Country X are shown in the table above. Assuming that 2009 is the base year, calculate each of the following.

   (i) The nominal gross domestic product (GDP) in 2010

   (ii) The real GDP in 2010

   (b) If in one year the price index is 50 and in the next year the price index is 55, what is the rate of inflation from one year to the next?

   (c) Assume that next year's wage rate will be 3 percent higher than this year's because of inflationary expectations. The actual inflation rate is 4 percent. At the beginning of next year, will the real wage be higher, lower, or the same as today?

   (d) Assume that Sara gets a fixed-rate loan from a bank when the expected inflation rate is 3 percent. If the actual inflation rate turns out to be 4 percent, who benefits from the unexpected inflation: Sara, the bank, neither, or both? Explain.

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2011 SCORING GUIDELINES (Form B)

Question 3

5 points (2 + 1 + 1+ 1)

(a) 2 points:

- One point is earned for calculating the nominal GDP for 2010 as $145 (= 20 + 100 + 25).
- One point is earned for calculating the real GDP in 2010 as $100 (= 20 + 60 + 20).

(b) 1 point:

- One point is earned for calculating the inflation rate as 10 percent (= 5/50).

(c) 1 point:

- One point is earned for stating that the real wage will be lower.

(d) 1 point:

- One point is earned for stating that Sara will benefit from the unexpected inflation because her fixed loan payments have less value.

Additional examples of nominal and real variables

Nominal variables

- Have NOT been adjusted for inflation
- For example:
  - Nominal GDP: the value of an economy's output in current dollars
  - Nominal income (wages): the amount of money you earn in wages or salary
  - Nominal interest rate: the stated interest rate on your loan contract

Real variables

- HAVE been adjusted for inflation
- For example:
  - Real GDP: the value of an economy's output in inflation-adjusted dollars
  - Real income (wages): the purchasing power of a given wages or salary
  - Real interest rate: the inflation-adjusted cost of borrowed money

I can calculate the effects of inflation on nominal wages using CPI.

How does inflation affect nominal wages?

	1990	2000	Percent change
Nominal salary	$35,000	$45,000	
CPI	130.7	172.2	

1. What happened to the nominal wages?
2. What happened to the real wages?
3. Does this person have more, less or the same purchasing power in 2000 than they did in 1990?

I can calculate deflate a nominal value using a price index.

How can we convert nominal wages to real wages?

	1990	2000
Nominal salary	$35,000	$45,000
CPI	130.7	172.2
Real salary		

1. Real value = $\frac{\text{nominal value}}{\text{price index}} \times 100$

If a worker's nominal wage rate increases from $10 to $12 per hour and at the same time the general price level increases by 10 percent, the worker's real wage has

A. Approximately decreased by 10%

B. Approximately decreased by 20%

C. Approximately increased by 10%

D. Approximately increased by 20%

E. Not changed

Suppose that the consumer price index rises from 100 to 200. From this information we may conclude that

A. Each person's real income is cut in half
B. Consumer incomes are doubled
C. The prices in an average consumer's market basket are doubled
D. All consumer goods prices are doubled
E. All prices in the economy are doubled

Year	CPI
2019	100
2020	110

Joaquin's annual salary in 2019 was $50,000. After calculating the inflation rate using the CPI information in the table above, Joaquin realized that the salary increase he experienced in 2020 resulted in no change in his real income. In order for this to be true, Joaquin's salary in 2020 must be

A. $50,000
B. $52,500
C. $55,000
D. $57,500
E. $60,000

Achieving the Three Goals

The government's role is to prevent unemployment and prevent inflation at the same time.

- **If the government focuses too much on preventing inflation and slows down the economy, we will have unemployment.**
- **If the government focuses too much on limiting unemployment and overheats the economy, we will have inflation.**

	Unemployment	Inflation	GDP Growth
Good	6% or less	1%-4%	2.5%-5%
Worry	6.5%-8%	5%-8%	1%-2%
Bad	8.5 % or more	9% or more	.5% or less