Monday, October 17(B) | Tuesday, October 18(A)

- **Fun Set 2.1 due now; please show me your work!**
- **Quiz this Wednesday/Thursday on circular flow, nominal and real GDP and GDP Deflator (Topics 2.1, 2.2 and 2.6)!**

Warm up: calculate nominal GDP for both years, real GDP for 2020 using 2019 as the base year, and GDP deflator:

Price and Quantity information for 2019 and 2020, 2019 is the base year

	2019 Price	2019 Quantity	2019 Market Basket	2020 Price	2020 Quantity	2020 Market Basket
Good 1	$2.00	20		$2.10	18	
Good 2	$4.00	10		$4.60	13	
Good 3	$3.00	40		$3.30	41	

Learning targets, agenda & vocabulary notes

- *Learning Targets: I can solve equations to calculate nominal GDP, real GDP and the GDP deflator. I can describe how the Consumer Price Index is measured and how it tracks inflation. I can explain who is helped and who is hurt by unanticipated inflation.*
- Agenda: Review Fun Set 2.1;
- Vocab notes:
  - Investment spending is also called **gross private domestic investment**
  - GDP Deflator is also referred to as "**implicit price deflator**" or "**aggregate price level**"

"A humane, measured book . . . . In its authentic humanity, it has lessons for a very wide audience indeed." —THE WASHINGTON POST
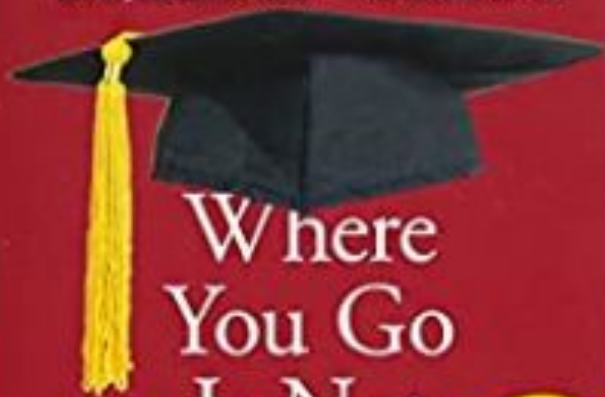
Where You Go Is Not Who You'll Be

UPDATED & EXPANDED, PLUS NEW AFTERWORD

AN ANTIDOTE TO THE COLLEGE ADMISSIONS MANIA

FRANK BRUNI

THE *NEW YORK TIMES* BESTSELLER

3

"[Delaware] offered me a good amount of scholarship and grant money. . . . My family was not affluent at all, and it made a huge difference. The second reason was, I went down there and visited--it's strange the way you make decisions when you're seventeen or eighteen--and everybody seemed happy and everybody seemed to be enjoying themselves. The campus was nice and it was relatively close to home. It wasn't a whole lot more complicated than that."
-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.

Fun Set 2.1

In each of the following cases, determine the effect on GDP and each of its components (if at all).
1.   Debbie spends $200 to buy her husband dinner at the finest restaurant in Boston.

2.   Sarah spends $1800 on a new laptop to use in her publishing business. The laptop was built in China.

3.   Jane spends $1200 on a computer to use in her editing business. She got last year's model on sale for a great price from a local manufacturer.

4.   General Motors builds $500 million worth of cars, but consumers only buy $470 million worth of them.

	Pizza		Latte	
Year	**P**	**Q**	**P**	**Q**
2002	$10	400	$2.00	1000
2003	$11	500	$2.50	1100
2004	$12	600	$3.00	1200

5.   Based on the data above, compute the nominal GDP for each year as well as the change in nominal GDP from 2002-2003 and 2003-2004.

6.   Based on the data above, use 2002 as the base year and compute the real GDP for each year as well as the change in real GDP from 2002-2003 and 2003-2004.

In each of the following cases, determine the effect on GDP and each of its components (if at all).

1. Debbie spends $200 to buy her husband dinner at the finest restaurant in Boston. **+ $200 C**

2. Sarah spends $1800 on a new laptop to use in her publishing business. The laptop was built in China.
   + $1800 I - $1800 M

3. Jane spends $1200 on a computer to use in her editing business. She got last year's model on sale for a great price from a local manufacturer. **+$1200 I - $1200 I(Inventories)**

4. General Motors builds $500 million worth of cars, but consumers only buy $470 million worth of them.
   + $470 C + $30 I(Inventories)

	Pizza		Latte	
Year	P	Q	P	Q
2002	$10	400	$2.00	1000
2003	$11	500	$2.50	1100
2004	$12	600	$3.00	1200

5. Based on the data above, compute the nominal GDP for each year as well as the change in nominal GDP from 2002-2003 and 2003-2004.

Nom GDP 2002: ($10 x 400) + ($2 x 1000) = $6000

Nom GDP 2003: ($11 x 500) + ($2.50 x 1100) = $8250

Nom GDP 2004: ($12 x 600) + ($3 x 1200) = $10,800

Change in nominal GDP from 2002 to 2003: 8250-6000   x 100 = 37.5%
**   6000**

Change in nominal GDP from 2003 to 2004: 10,800-8250   x 100 = 30.9%
**   8250**

6. Based on the data above, use 2002 as the base year and compute the real GDP for each year as well as the change in real GDP from 2002-2003 and 2003-2004.

Real GDP 2002: ($10 x 400) + ($2 x 1000) = $6000

Real GDP 2003: ($10 x 500) + ($2 x 1100) = $7200

Real GDP 2004: ($10 x 600) + ($2 x 1200) = $8,400

Change in real GDP from 2002 to 2003: $\frac{7200\text{-}6000}{6000}$ x 100 = 20%

Change in real GDP from 2003 to 2004: $\frac{8,400\text{-}7,200}{7,200}$ x 100 = 16.7%

2007 FRQ:

3. Indicate whether each of the following is counted in the United States gross domestic product for the year 2006. Explain each of your answers.

   (a) The value of a used textbook sold through an online auction in 2006

   (b) Rent paid in 2006 by residents in an apartment building built in 2000

   (c) Commissions earned in 2006 by a stockbroker

   (d) The value of automobiles produced in 2006 entirely in South Korea by a firm fully owned by United States citizens

8 points (2 + 2 + 2 + 2)

2007 Rubric

(a) 2 points:
- One point is earned for stating that the value of the textbook is not included.
- One point is earned for explaining that a used item has already been counted in a previous year, or is not part of 2006 production.

(b) 2 points:
- One point is earned for stating that the rent payment is included.
- One point is earned for explaining that the payment is for service provided in 2006.

(c) 2 points:
- One point is earned for stating that the commissions are included.
- One point is earned for explaining that the commissions represent income for providing service in 2006.

(d) 2 points:
- One point is earned for stating that the value is not included in the U.S. GDP.
- One point is earned for explaining that U.S. GDP does not include production outside of the U.S.

6. Which of the following best illustrates an improvement in a country's standard of living?

(A) An increase in real per capita gross domestic product

(B) An increase in nominal per capita gross domestic product

(C) Price stability

(D) A balanced budget

(E) An increase in the consumer price index

29. Which of the following will lead to an increase in the United States gross domestic product?

   (A) More individuals prepare their own personal income tax forms.
   (B) Some citizens begin working abroad as computer programmers.
   (C) The government prohibits the sale of alcoholic beverages.
   (D) Foreign companies build new assembly plants in the United States.
   (E) A million United States households sell their used cars to their children.

	National Economic Figures (billions of dollars)
Consumption	$ 3,000
Government purchases of goods and services	1,000
Gross private domestic investment	700
Depreciation	300
Exports	300
Imports	500
Indirect business taxes	0

32. Based on the economic figures in the table above, what is the value of gross domestic product, in billions of dollars?

(A) $4,500
(B) $4,700
(C) $4,900
(D) $5,150
(E) $5,950

56. Which of the following household purchases will be counted as part of gross private investment in a country's gross domestic product?

(A) Government bonds
(B) Shares of a company stock
(C) Corporate bonds
(D) A new car for personal use
(E) A newly constructed home

Year	Nominal GDP	Real GDP (in 1970 dollars)	Population	GDP Deflator	Real GDP per capita
1960	$526.40	$1,501.80	180		
1970	3,038.50	3,038.50	205		
1980	5,803.10	$3771.90	227		

Use the table above to answer these questions:

1. Calculate the GDP Deflator for each year and enter it in the table.
2. Which year is the base year? How do you know?
3. Calculate the Real GDP per capita for each year and enter it in the table.
4. In which year was the standard of living the best for this country? How do you know?
5. What is the GDP Growth Rate from 1960 to 1980?

Year	Nominal GDP	Real GDP (in 1970 dollars)	Population	GDP Deflator	Real GDP per capita
1960	$526.40	$1,501.80	180	35	8.34
1970	3,038.50	3,038.50	205	100	14.82
1980	5,803.10	$3771.90	227	153.8	16.61

Use the table above to answer these questions:

1. Calculate the GDP Deflator for each year and enter it in the table.

2. Which year is the base year? How do you know?   **1970 is base year b/c nominal GDP is equal to real GDP in that year.**

3. Calculate the Real GDP per capita for each year and enter it in the table.

4. In which year was the standard of living the best for this country? How do you know?   **In 1980 b/c the real GDP per capita was highest that year.**

5. What is the GDP Growth Rate from 1960 to 1980?   **$\dfrac{3,771.9 - 1,501.80}{1,501.80} \times 100 = 151.1\%$**

Year	Nominal GDP	Real GDP
2002	$6000	$6000
2003	$8250	$7200
2004	$10,800	$8400

7. Based on the data above, calculate the change in real and nominal GDP from 2002-2003 and 2003-2004.

8. Based on the data above, compute the GDP Deflator for each year as well as the change in the GDP Deflator from 2002-2003 and 2003-2004.

2008 Form B FRQ:

OUTPUTS AND PRICES IN GALA LAND

This Year's Output	This Year's Price
400 loaves of bread	$6 per loaf
1,000 gallons of water	$2 per gallon
800 pieces of fruit	$2 per piece

Gala Land produces three final goods: bread, water, and fruit. The table above shows this year's output and price for each good.

(a) Calculate this year's nominal gross domestic product (GDP).

(b) Assume that in Gala Land the GDP deflator (GDP price index) is 100 in the base year and 150 this year. Calculate each of the following.

　(i) The inflation rate, expressed as a percentage, between the base year and this year

　(ii) This year's real GDP

(c) Since the base year, workers have received a 20 percent increase in their nominal wages. If workers face the same inflation that you calculated in part (b)(i), what has happened to their real wages? Explain.

7 points $(1 + 2 + 2 + 2)$ # 2008 Rubric

(a) 1 point:
- One point is earned for calculating today's GDP = ($6 x 400) + ($2 x 1,000) + ($2 x 800) = $6,000.

(b) 2 points:
- One point is earned for stating that the inflation rate is 50 percent [(150-100)/100].
- One point is earned for calculating this year's real GDP = $6,000/1.5 = $4,000.

(c) 2 points:
- One point is earned for stating that real wages would fall.
- One point is earned for the explanation that the wages rose by only 20 percent as compared to the inflation rate of 50 percent, causing a 30 percent fall in real wages.

(d) 2 points:
- One point is earned for concluding that a borrower would be better off.
- One point is earned for the explanation that, due to the higher inflation, the borrower is paying back the loan using fewer real dollars.

More Practice Problems: Fun Set 2.2

GDP per capita: [Hans Rosling video](#)

REVIEW ACTIVITY

Name That Concept (7:09)

Rules:

1. Cannot use the word(s)
2. Focus on the concept not word

Ex: Demand

NAME THAT CONCEPT

1. GDP
2. Factor Market
3. Substitute goods (a demand shifter)
4. Justin Bieber
5. Opportunity cost
6. Production Possibilities Curve

NAME THAT CONCEPT

1. Comparative advantage
2. Law of supply
3. Atlanta Braves
4. Finished goods & services
5. GDP per Capita
6. Marginal benefit

Wicked Wed., Oct. 19 & Thrilling Thurs., Oct. 20

- Don't write on your scantron!
- HW 2c due Thursday (today) and Friday.
- *Learning targets. I can: define the consumer price index, inflation, deflation, disinflation, the inflation rate; explain how price indices can be used to calculate inflation rate.*
- *Warm up: TTYN re. Topics 2.1, 2.2 and 2.6 to prepare for today's quiz.*
- **Agenda: Quiz, notes, shopping!**

Fun Set 2.2 Practice Problems: What questions do you have?

If the nominal gross domestic product (GDP) of the nation of Hypothetica increased in 2007 relative to the previous year, it must be true that in Hypothetica in 2007

A. Both the price level and the real GDP have increased
B. Neither the price level nor the real GDP has increased
C. The price level increased by a larger percentage than did the real GDP
D. The price level increased by a smaller percentage than did the real GDP
E. The price level and/or the real GDP has increased

The main difference between real and nominal gross domestic product is that real GDP

A. Excludes government transfer payments

B. Excludes imports

C. Is adjusted for price-level changes using a price index

D. Measures only the value of final goods and services that are consumed

E. Measures the prices of a market basket of goods purchased by a typical urban consumer

If real gross domestic product is increasing at 3 percent per year and nominal gross domestic product is increasing at 7 percent per year, which of the following is necessarily true?

A. Unemployment is increasing

B. The price level is increasing

C. Exports exceed imports

D. The economy is in a recession

E. The government is running a budget deficit

Use the table below to answer the questions 1-6.

	Nominal GDP	GDP deflator	Population
Year 3	$5,000	125	11
Year 4	$6,600	150	12

1. What is the real GDP in Year 3?

2. What is the real GDP in Year 4?

3. What is the real GDP per capita in Year 3?

4. What is the real GDP per capita in Year 4?

5. What is the rate of real output growth between Years 3 and 4?

6. What is the rate of real output growth per capita between Years 3 and 4?

   (Hint: Use per capita data in the output growth rate formula.)

	Widgets		Gizmos		Thingamajigs	
Year	Price	Quantity	Price	Quantity	Price	Quantity
2006	$100	1	$10	8	$5	4
2007	$110	1	$12	10	$4	5

7. Calculate the nominal GDP for:

    a.   2006

    b.   2007

8. Compute the percentage of growth in nominal GDP from 2006 to 2007.

9. Using 2006 as the base year, calculate the real GDP for 2007.

10. What is the GDP deflator for 2007? What was the inflation rate between 2006 and 2007?

11. Compute the real rate of output growth from 2006 to 2007.

12. Which of the following is true of real GDP?
     I.   It is adjusted for changes in prices.
     II. It is always equal to nominal GDP.
     III. It increases whenever aggregate output increases.

     a. I only
     b. II only
     c. III only
     d. I and III
     e. I, II, and III

13. The best measure for comparing a country's aggregate output over time is
     a. Nominal GDP.
     b. Real GDP.
     c. Nominal GDP per capita.
     d. Real GDP per capita.
     e. Average GDP per capita.

For questions 14-15 use the information provided in the table below for an economy that produces only apples and oranges. Assume year 1 is the base year.

	Year 1	Year 2
Quantity of Apples	3,000	4,000
Price of Apples	$0.20	$0.30
Quantity of Oranges	2,000	3,000
Price of Oranges	$0.40	$0.50

14. What was the value of real GDP in each year?

	Year 1	Year 2
a.	$1,400	$2,700
b.	$1,900	$2,700
c.	$1,400	$2,000
d.	$1,900	$2,000
e.	$1,400	$1,900

15. What is the GDP Deflator for Year 2?
     a. 105
     b. 135
     c. 136
     d. 142
     e. 143
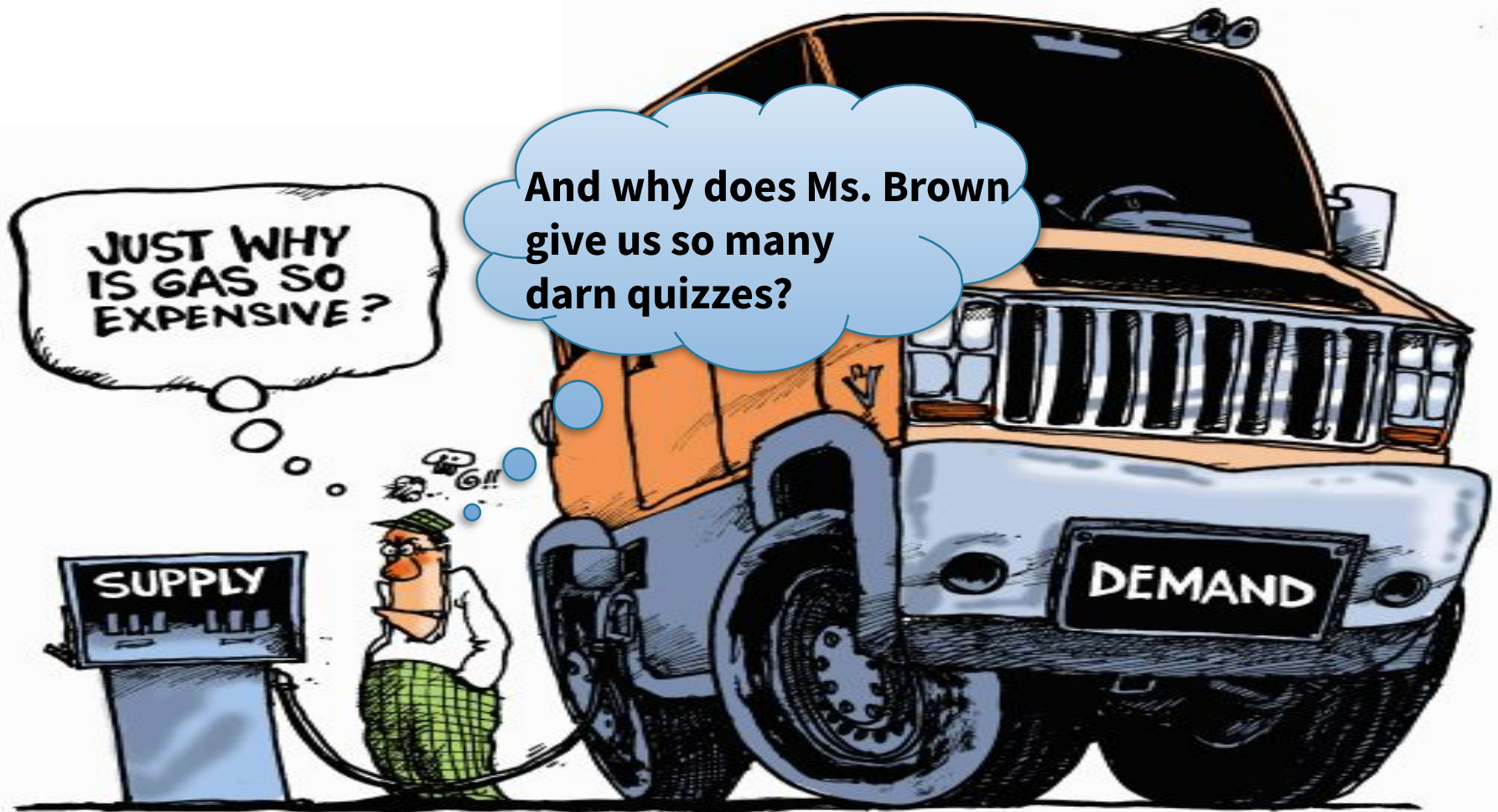
3 Macroeconomic Goals?

1. A growing economy -- measured by GDP
2. Low unemployment -- measured by the unemployment rate
3. ???

Unit 2: Macro Measures -- Price Stability

Inflation

Year-over-year change in the Consumer Price Index

+8.2% in Sept.

+6.6% excluding food and energy

Karl Russell
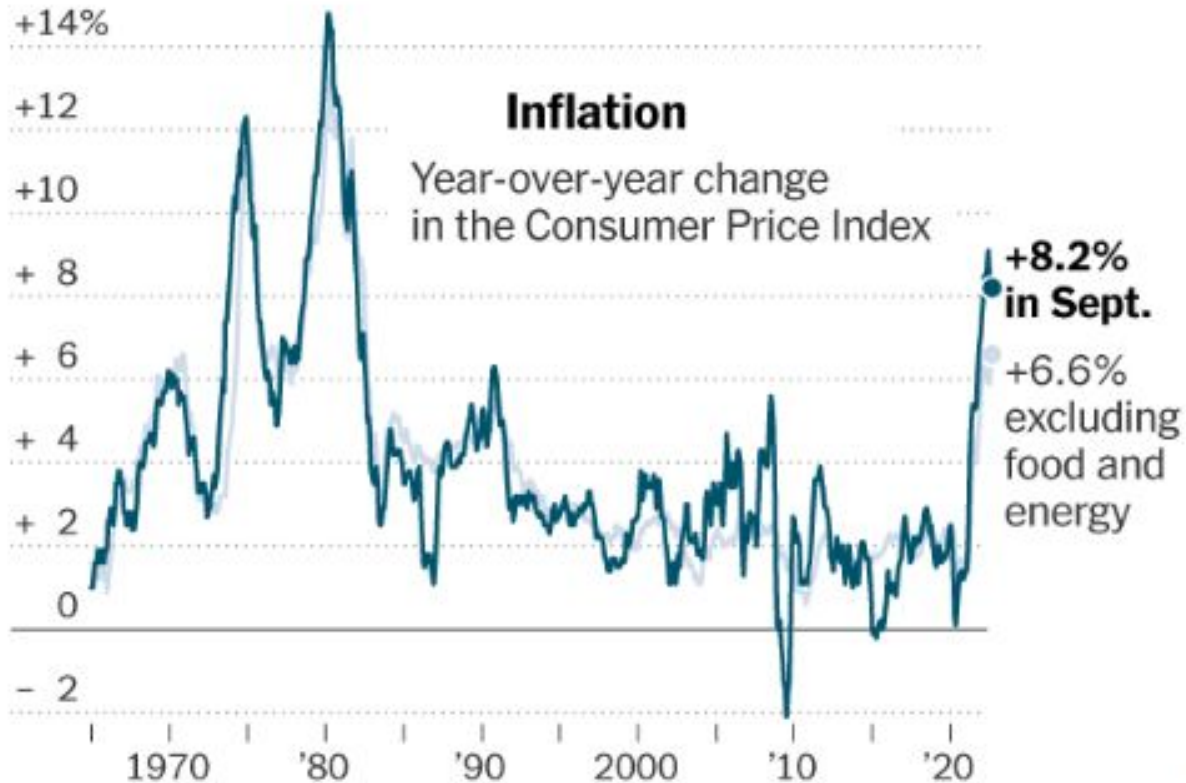
NYT 10/13/22

What is the most popular movie of all time?

What do you think are some of the <u>top money-making movies</u> of all time?

Nominal Box Office Receipts:

Data as of Sep 28, 1:40 PDT

Rank	Title	Lifetime Gross	Year
1	Star Wars: Episode VII - The Force Awakens	$936,662,225	2015
2	Avengers: Endgame	$858,373,000	2019
3	Spider-Man: No Way Home	$814,099,807	2021
4	Avatar	$772,010,731	2009
5	Top Gun: Maverick	$711,770,698	2022
6	Black Panther	$700,426,566	2018
7	Avengers: Infinity War	$678,815,482	2018
8	Titanic	$659,363,944	1997
9	Jurassic World	$653,406,625	2015
10	The Avengers	$623,357,910	2012
11	Star Wars: Episode VIII - The Last Jedi	$620,181,382	2017
12	Incredibles 2	$608,581,744	2018
13	The Lion King	$543,638,043	2019
14	The Dark Knight	$534,987,076	2008
15	Rogue One: A Star Wars Story	$533,539,991	2016

Rank	Title	Lifetime Gross	Year
16	Star Wars: Episode IX - The Rise of Skywalker	$515,202,542	2019
17	Beauty and the Beast	$504,481,165	2017
18	Finding Dory	$486,295,561	2016
19	Frozen II	$477,373,578	2019
20	Star Wars: Episode I - The Phantom Menace	$474,544,677	1999
21	Star Wars: Episode IV - A New Hope	$460,998,507	1977
22	Avengers: Age of Ultron	$459,005,868	2015
23	The Dark Knight Rises	$448,149,584	2012
24	Shrek 2	$441,226,247	2004
25	E.T. the Extra-Terrestrial	$437,141,279	1982
26	Toy Story 4	$434,038,008	2019
27	Captain Marvel	$426,829,839	2019
28	The Hunger Games: Catching Fire	$424,668,047	2013
29	Pirates of the Caribbean: Dead Man's Chest	$423,315,812	2006
30	The Lion King	$422,783,777	1994
31	Jurassic World: Fallen Kingdom	$417,719,760	2018
32	Toy Story 3	$415,004,880	2010

Is there a problem with these numbers?

Nominal Box Office Receipts:

From www.economicnoise.com

DOMESTIC GROSSES
Adjusted for Ticket Price Inflation*

CHART NOTES

* Adjusted to the estimated 2018 average ticket price of $9.14. Inflation-adjustment is mostly done by multiplying estimated admissions by the latest average ticket price. Where admissions are unavailable, adjustment is based on the average ticket price for when each movie was released (taking in to account re-releases where applicable).

^ Indicates documented multiple theatrical releases. Most of the pre-1980 movies listed on this chart had multiple undocumented releases over the years. The year shown is the first year of release.

Most pre-1980 pictures achieved their totals through multiple releases, especially Disney animated features which made much of their totals in the past few decades belying their original release dates in terms of adjustment. For example, **Snow White** has made $118,328,683 of its unadjusted $184,925,486 total since 1983. Click here for a full discussion of adjusting for movie ticket price inflation.

Rank	Title	Adj. Lifetime Gross	Lifetime Gross	Est. Num Tickets	Year
1	Gone with the Wind	$1,895,421,694	$200,882,193	202,286,200	1939
2	Star Wars: Episode IV - A New Hope	$1,668,979,715	$460,998,507	178,119,500	1977
3	The Sound of Music	$1,335,086,324	$159,287,539	142,485,200	1965
4	E.T. the Extra-Terrestrial	$1,329,174,791	$437,141,279	141,854,300	1982
5	Titanic	$1,270,101,626	$659,363,944	135,549,800	1997
6	The Ten Commandments	$1,227,470,000	$65,500,000	131,000,000	1956
7	Jaws	$1,200,856,389	$265,859,065	128,159,700	1975
8	Doctor Zhivago	$1,163,149,635	$111,721,910	124,135,500	1965
9	The Exorcist	$1,036,314,504	$233,005,644	110,599,200	1973
10	Snow White and the Seven Dwarfs	$1,021,330,000	$184,925,486	109,000,000	1937
11	Star Wars: Episode VII - The Force Awakens	$1,013,038,487	$936,662,225	108,115,100	2015
12	One Hundred and One Dalmatians	$936,225,101	$144,880,014	99,917,300	1961
13	Star Wars: Episode V - The Empire Strikes Back	$920,818,947	$292,753,960	98,273,100	1980

Rank	Title	Adj. Lifetime Gross	Lifetime Gross	Est. Num Tickets	Year
14	Ben-Hur	$918,699,453	$74,432,704	98,046,900	1959
15	Avatar	$911,790,952	$772,010,731	97,309,600	2009
16	Avengers: Endgame	$892,669,593	$858,373,000	95,268,900	2019
17	Star Wars: Episode VI - Return of the Jedi	$881,336,578	$309,306,177	94,059,400	1983
18	Jurassic Park	$860,163,189	$404,214,720	91,799,700	1993
19	Star Wars: Episode I - The Phantom Menace	$846,224,377	$474,544,677	90,312,100	1999
20	The Lion King	$835,301,768	$422,783,777	89,146,400	1994
21	The Sting	$835,268,973	$156,000,000	89,142,900	1973
22	Indiana Jones and the Raiders of the Lost Ark	$829,651,658	$248,159,971	88,543,400	1981
23	The Graduate	$801,854,616	$104,945,305	85,576,800	1967
24	Fantasia	$778,117,595	$76,408,097	83,043,500	1941
25	The Godfather	$739,503,825	$136,381,073	78,922,500	1972
26	Forrest Gump	$736,829,627	$330,455,270	78,637,100	1994
27	Mary Poppins	$732,563,466	$102,272,727	78,181,800	1964
28	Grease	$722,413,882	$190,071,103	77,098,600	1978
29	The Avengers	$720,376,844	$623,357,910	76,881,200	2012
30	Jurassic World	$719,633,803	$653,406,625	76,801,900	2015
31	Black Panther	$715,038,755	$700,426,566	76,311,500	2018

Goal #3
LIMIT INFLATION

Country and Time-
Zimbabwe, 2008
Annual Inflation Rate-
79,600,000,000%
Time for Prices to Double-
24.7 hours

What is Inflation?

Inflation is rising general (average) level of prices in an economy.

Inflation reduces the "purchasing power" of money; i.e., each dollar can buy fewer goods and services than before.

How much inflation?

- Our central bank (the Federal Reserve) typically sets a goal for annual inflation of 2%
- U.S. inflation rates

Variations on inflation:

- <u>Deflation</u> is when the general level of prices is falling. Deflation is bad because people will hoard money (financial assets).
    - This decreases consumer spending and GDP.
- <u>Hyperinflation</u> is unusually rapid/extreme inflation.
- <u>Disinflation</u>- Prices increasing at slower rates (i.e., inflation slows but price-level still increasing).

The amount of Venezuelan Bolivars (worth $1.45) needed to buy 1kg of meat.
https://www.bbc.com/news/business-45523636 photo credit: Reuters

Has this happened recently?

- Funny you should ask…
- Venezuela
- Zimbabwe

Monthly Inflation: 1872 to Present

Bureau of Labor Statistics Annualized Inflation Rate = **2.07%**

dshort.com
February 2018

ADVISOR PERSPECTIVES

- WWI Inflation
- WWII Inflation with price control Interlude
- Stagflation of the '70s and early '80s
- 10-Year Moving Average = 1.68%
- Post WWI Deflation
- Deflation of the Great Depression
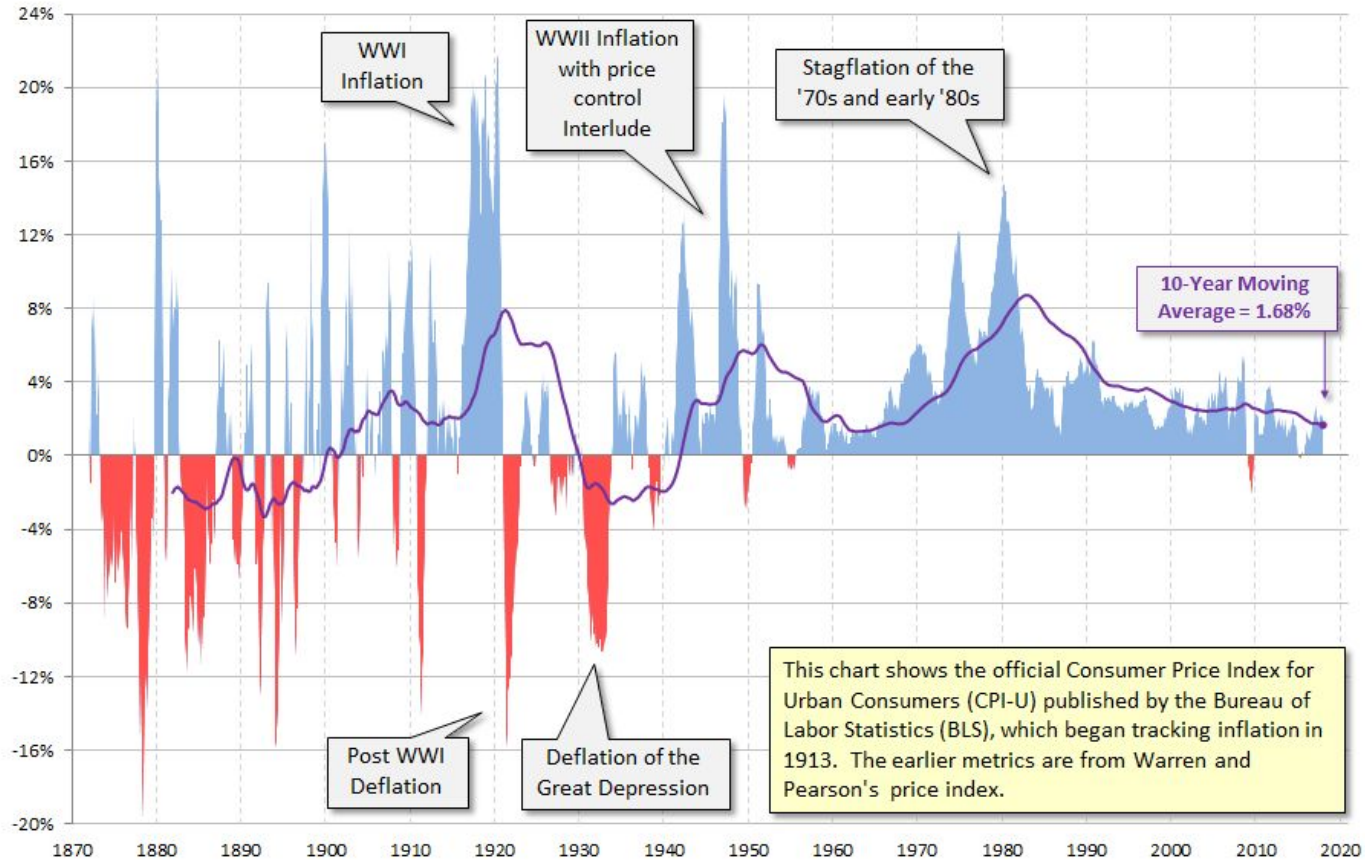
This chart shows the official Consumer Price Index for Urban Consumers (CPI-U) published by the Bureau of Labor Statistics (BLS), which began tracking inflation in 1913. The earlier metrics are from Warren and Pearson's price index.

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ACDC Leadership 2018

How do we measure inflation?

1. GDP Deflator -- inflation of all prices in the economy
2. CPI (Consumer Price Index) -- inflation of prices for goods and services that a typical consumer purchases.

Freetown Friday, Oct. 21 & Monserat Monday, Oct. 24

- These kiddos missed quiz; make-up Friday after school: Sarah, Tamar, Erin, Wheatley, Darion, Dawson, Isaiah, Ryan
- HW 2c due today.
- *Learning targets. I can explain how price indices can be used to calculate inflation rate. I can use data to calculate inflation.*
- *Warm up: TTYN re. Topics 2.1, 2.2 and 2.6 to prepare for today's quiz.*
- **Agenda: Notes, shopping, calculations!**

CPI Research and Activity

The Consumer Price Index (CPI) is a monthly measurement of U.S. prices for most household goods and services. Changes in the CPI over time show inflation (rising prices) or deflation (falling prices.)

- The change in CPI from year to year is the most common way to measure inflation.
  - The basis of cost of living adjustments (COLAs) in many contracts and in Social Security.

The Consumer Price Index (CPI)

- The Consumer Price Index (CPI) is a weighted measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

- The change in CPI from year to year is most common way to measure inflation.

  - The basis of cost of living adjustments (COLAs) in many contracts and in Social Security.

How the CPI Is Calculated

1. ***Fix the "basket."***
   The Bureau of Labor Statistics (BLS) surveys consumers to determine what's in the typical consumer's "shopping basket."

2. ***Find the prices.***
   The BLS collects data on the prices of all the goods in the basket.

3. ***Compute the basket's cost.***
   Use the prices to calculate the total cost of the basket.

How the CPI Is Calculated

4. ***Choose a base year and compute the index.***
   The CPI in any year equals:

$$100 \times \frac{\text{cost of basket in current year}}{\text{cost of basket in base year}}$$

5. ***Compute the inflation rate.***
   The percentage change in the CPI from the preceding period.

$$\text{Inflation Rate \%} = \frac{\text{CPI this yr (yr2)} - \text{CPI last yr (yr1)}}{\text{CPI last yr (yr1)}} \times 100$$

What do you think is in the Market Basket?

Consumer Price Index Components[*]

3.2%
6.7%
5.7%
8.7%
14.4%
16.5%
41.8%
3.0%

*Note: Offical weights are to 3 decimal place
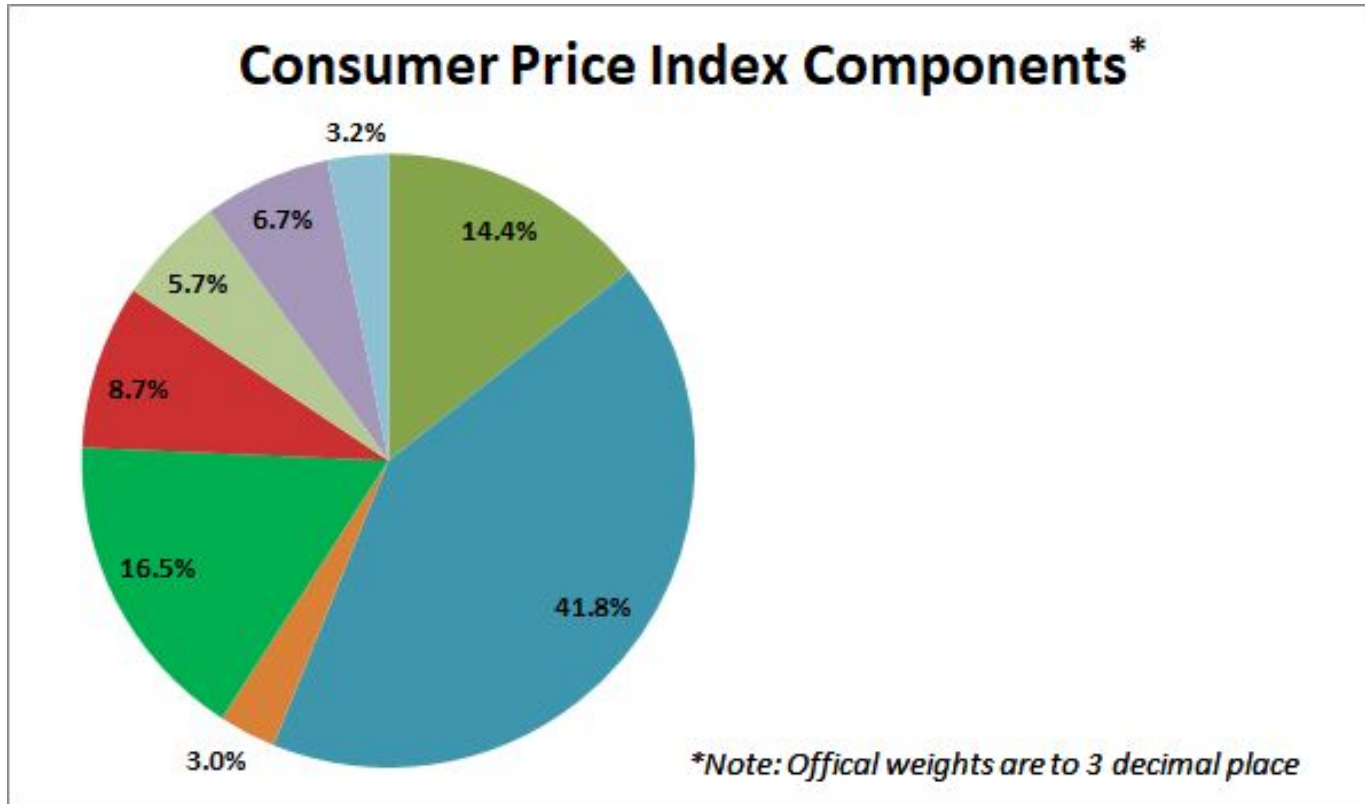
Source: BLS; The most recent reweighting was in December 2017.

What do you think is in the Market Basket?

Consumer Price Index Components*

- Food & Beverages (14.359%) — 14.4%
- Housing (41.772%) — 41.8%
- Apparel (3.018%) — 3.0%
- Transportation (16.537%) — 16.5%
- Medical Care (8.673%) — 8.7%
- Recreation (5.737%) — 5.7%
- Education & Communication (6.707%) — 6.7%
- Other Goods & Services (3.198%) — 3.2%

*Note: Offical weights are to 3 decimal place
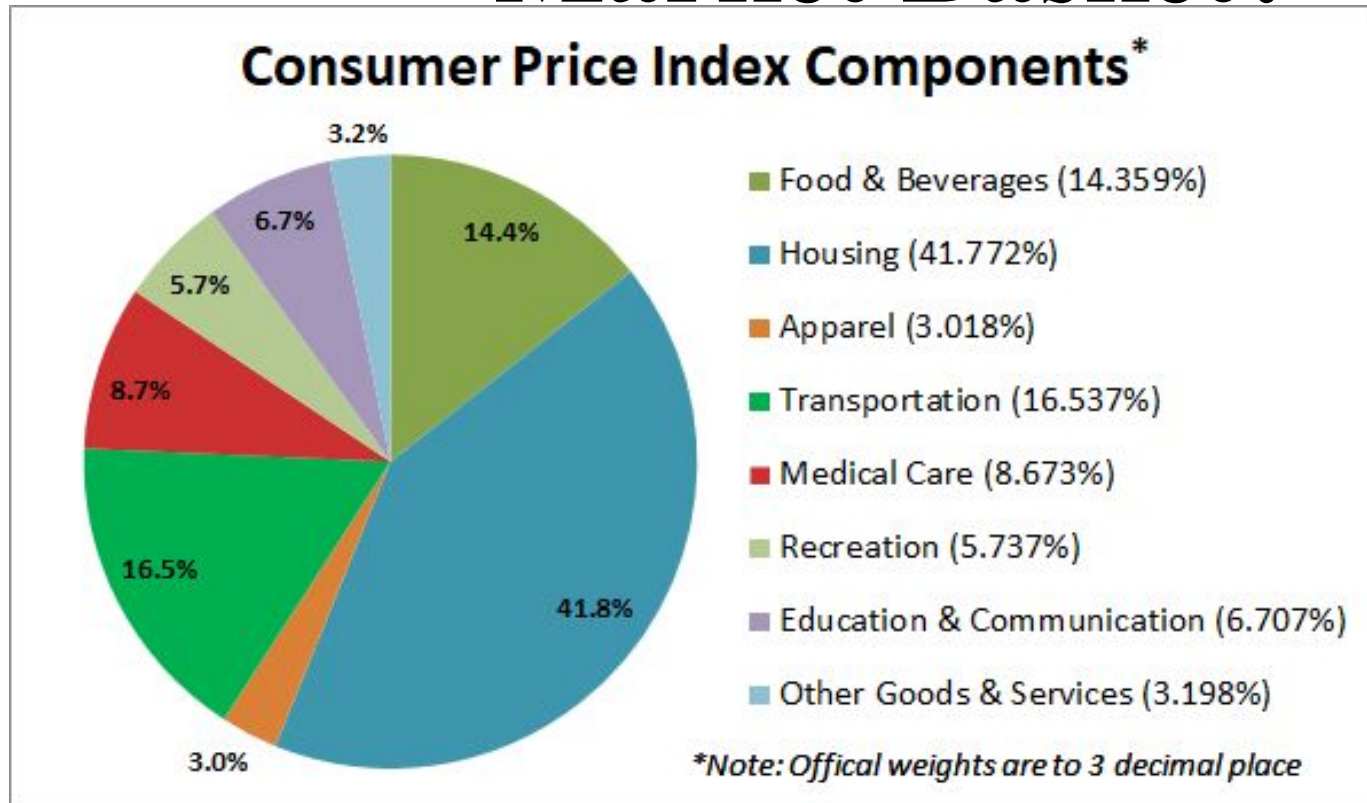
Source: BLS; The most recent reweighting was in December 2017.

Where do you think the goods/services below belong on the graph?

1. **TVs**
2. **College Tuition**
3. **New Cars**
4. **Hospital Services**
5. **Toys**

Price changes (Jan. 1997–Dec. 2017)
Selected US Consumer Goods and Services, and Wages

- 200%
- MORE EXPENSIVE
- 150%
- 100%
- Overall inflation (+55.6%)
- 50%
- 0%
- -50%
- MORE AFFORDABLE
- -100%
- 1997
- 2007
- 2017

Source: BLS

Carpe Diem AEI

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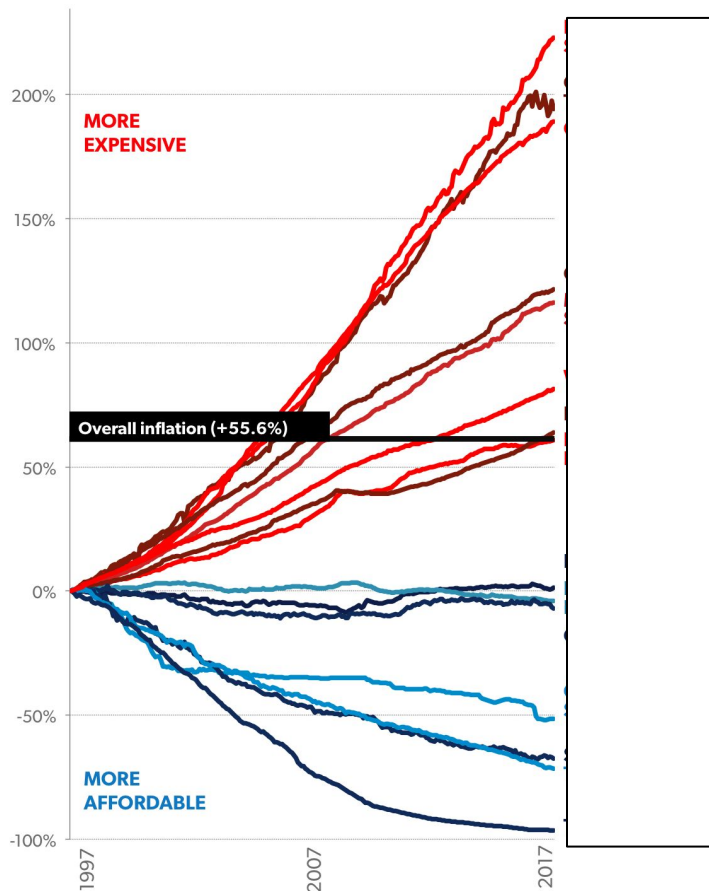
Inflation today

SPI Instructions

- With a partner, estimate the cost of each item on the list. **DO NOT look up exact prices on your phone.**
- If there is a good or service that you think <u>should</u> be in a particular category, you can add it in the "other" line item.
- If there is a quantity in the table, multiply that quantity by the price you came up with to get the total line item for that good or service.
- Calculate the subtotal for each category, then calculate the total value of your entire market basket.
- Answer the questions at the end.

Year	SPI: Total Market Basket	SPI (CPI)	Inflation rate from previous year
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Year	SPI: Total Market Basket	SPI (CPI)	Inflation rate from previous year
1			
2			
3			
4			
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7			
8			
9			
10			

Year	SPI: Total Market Basket	SPI (CPI)	Inflation rate from previous year
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

The CPI and the GDP Deflator are both price indexes used to measure inflation

CPI	GDP Deflator
• The CPI is used to determine how **purchasing power** has changed over time	• The GDP Deflator is used to determine how **output** has changed over time
• Based on changing prices of a fixed market basket (PΔ, $\overline{Q}$)	• Based on the goods and services produced in a given period ($\overline{P}$, Q Δ)
• Holds **quantity constant** and evaluates **changing prices**	• Holds **prices constant** and evaluates **changing output**
• Reflects the prices of goods and services bought by consumers	• Reflects all prices of all goods and services *produced domestically*
• *Meaning…C (includes imports)*	• *Meaning…C, I, G, X*