

BRYN MAWR COLLEGE

Econ 105 SURVEY OF ECONOMICS

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EXAM I

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Part I. Please define or explain the following terms: (3 pts. each)

1.) Demand-Pull Inflation

Inflation caused by increased demand, especially near or above maximum output.

2.) Frictional Unemployment

Unemployment caused by workers voluntarily switching jobs.

3.) Das Kapital.

Das Kapital is the book written by Karl Marx, in which he introduces the concept of a command economy.

4.) Fallacy of Composition

What is the fallacy of composition?

5.) Law of Increasing Opportunity Costs

To produce more of a certain product, it is necessary to give up more and more other products. This happens because, as the production of a given product rises, it is needed to use resources that are not best suited for this product. (but are better suited for others)

6.) Changes in Quantity Supplied

Other things equal, whenever a price of a product changes, we observe a movement along the supply curve. This represents a change in quantity supplied.

7.) NRU

NRU stands for Natural Resource Union

8.) Core Inflation

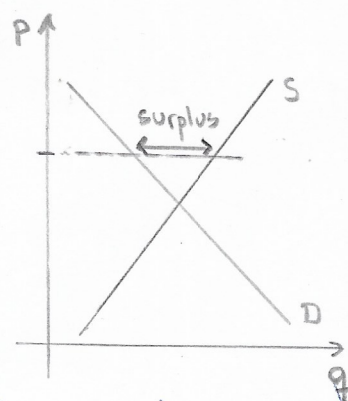
It is the inflation necessary for incentivizing the economy. If prices will rise, it's for the consumer's best interest to spend their money at the moment, not in the future.

9.) Business Cycle

It is the constant oscillation of the economy, divided into Peak, Recess, Through and Recovery, which may last from 2 to 15 years.

10.) Price Floor

It is when the government sets a minimum price for a given product. If this price is below the equilibrium price, there is no consequence; however, if this price floor is above minimum, it will cause a surplus of the given product.



Part II. Please answer the following questions in short essay form:

1.) What are the sources of shocks as to why $C+I+G+X_n$ are constantly changing? (10 pts.)

The oscillation from the business cycle causes the $GDP = C+I+G+X_n$ to fluctuate.

• Monetary policy

• Government

C = consumption, I = investments, G = government,
 X_n = net exports.

2.) What effect will each of the following have upon the supply of television sets in a competitive market? Explain your reasoning in each case. (8 pts.)

- (a) an increase in the price of electronic equipment used in producing television sets
- (b) a decline in the number of firms producing television sets
- (c) a large new tariff on imported TV sets
- (d) new inexpensive satellite dishes which make televisions more popular among consumers

(a) Because the production costs ^(resource costs) for television increased, suppliers will be less willing to produce. Thus, the supply curve will shift to the left.

(b) Because the number of suppliers dropped, the supply will decrease; which is represented by a shift of the supply curve to the left.

(c) Since the production costs (taxes) for televisions increased, the supply curve will shift to the left.

(d) No change on the supply curve, since this affects the demand.

3.) Someone says to you: "Inflation benefits the rich and hurts the poor" and asks for your assessment as an economist. What would be your response? (10 pts.)

Not necessarily. Anyone with income that indexed by the inflation index (e.g. CPI) will not be affected by the inflation, their purchasing power will remain constant. This is usually the case for social security.

On the other hand, if one's income is constant, their real income will drop because of inflation ^{or grows slower than inflation.}

People with debts will benefit from inflation. If their debt remain constant, the real value of the amount they will need to pay will decrease with time.

4.) Based on our discussion of The Wall Street Journal article entitled "Full Inflation Isn't So Pretty," what is holding down consumer prices in U.S. and why? (6 pts.)

Consumer price index is based on a "typical basket" of items that represent the average consumer.

Some significant portion of this basket consists of products that the modern American consumer buys from imported products, which may bias the consumer price index.

Also, more and more Americans are buying assets, which are not accounted in the consumer price.

Part III. Please answer the following (show all work where applicable). (12 pts.)

1.) Answer the next three questions on the basis of the following information :

| <u>Year</u> | <u>Nominal GDP</u> | <u>Price Index</u> |
|-------------|------------------------|--------------------|
| 1 | \$ 456.8 | 29.7 |
| 2 | \$ 649.8 | 32.9 |
| 3 | \$ 892.7 | 37.7 |

Base Year:
Year 10 = 100

Calculate Real GDP for years 1, 2, 3.

a.) Year 1:

$$\text{Real GDP} = \frac{456.8}{29.7\%} \approx 1,538.0$$

b.) Year 2:

$$\text{Real GDP} = \frac{649.8}{32.9\%} \approx 1,975.1$$

c.) Year 3:

$$\text{Real GDP} = \frac{892.7}{37.7\%} \approx 2,367.9$$

- 2) Answer the next two questions based on the following information: (12 pts.)

| Quantity Demanded per month | Price | Quantity Supplied per month |
|--------------------------------|-------|--------------------------------|
| 44 | \$16 | 75 |
| 38 | 15 | 40 |
| 30 | 14 | 25 |
| 20 | 13 | 10 |

- a) Find the Elasticity of Demand (E_d) for the \$16-\$15 price range. What does your answer mean?

$$E_d = \frac{\% \Delta Q_d}{\% \Delta P} = \frac{\frac{6}{41}}{\frac{1}{15.5}} \approx 2.27, \text{ which is}$$

greater than 1. Thus, it is elastic, i.e., a moderate change in price reflects a substantial change in quantity demanded

- b) Find the Elasticity of Supply (E_s) for the \$14-\$13 price range. What does your answer mean?

$$E_s = \frac{\% \Delta Q_s}{\% \Delta P} = \frac{\frac{15}{17.5}}{\frac{1}{13.5}} \approx 11.57$$

The supply is highly elastic; a small change in price results in a huge change in quantity supplied.

3.) The following is a list of figures for a given year in billions of dollars. Using this data, compute: (a) GDP; (b) NDP; (c) NI; (d) PI; (e) DI; (f) Net exports. (12 pts.)

| | Billions of dollars |
|-----------------------------------|------------------------|
| Transfer payments | \$ 16 |
| Government purchases | 80 |
| Personal taxes | 38 |
| Corporate income taxes | 28 |
| Taxes on production and imports | 15 |
| Social Security contributions | 8 |
| Undistributed corporate profits | 19 |
| Proprietors' income | 25 |
| Compensation of employees | 258 |
| Personal consumption expenditures | 322 |
| Consumption of fixed capital | 4 |
| Rents | 10 |
| U.S. Exports | 14 |
| Corporate profits | 70 |
| Interest | 12 |
| Dividends | 23 |
| Imports to U.S. | 17 |
| Gross private domestic investment | 63 |
| Net foreign factor income | 10 |
| Statistical discrepancy | 15 |

(c) By the Expenditures approach:

$$\begin{aligned} \text{GDP} &= C + I_g + G + X_n \\ &= 322 + 63 + 80 + (14 - 17) \\ &= 462 \end{aligned}$$

By the Income approach

$$\begin{aligned} \text{GDP} &= W + I + \text{Rent} + \text{Profit} + T \\ &\quad - \text{NFFI} + \text{SD} + \text{Consumption} \\ &= 258 + 12 + 10 + (25 + 70) + 15 \\ &= 419 \neq 462. \end{aligned}$$

strange. I will use GDP = 419 in the following

$$\begin{aligned} \text{(b) NDP} &= \text{GDP} - \text{consumption} \\ &= 419 \end{aligned}$$

$$\begin{aligned} \text{(c) NI} &= \text{NDP} + \text{NFFI} - \text{SD} \\ &= 390 \end{aligned}$$

$$\begin{aligned} \text{(d) PI} &= \text{NI} - \text{transfer payments} \end{aligned}$$

$$\text{(e) DI} = \text{PI} - \text{personal taxes} (= C + S)$$

$$\text{(f) } X_n = 14 - 17 = -3$$