

Problem 1: Nominal GDP Calculation

Nominal GDP is calculated by multiplying the quantity of each product by its market price and adding them up:

- 1 million automobiles $\times \$10,000 = \$10,000$
- 5 million clothing outfits $\times \$100 = \500
- 10 million pounds of food $\times \$2 = \20 million
- 2 million dwelling units $\times \$4,000 = \$8,000$
- 1 million hours of attorneys services $\times \$20 = \20 million
- 2 million hours of medical services $\times \$30 = \60 million

$$\text{Nominal GDP} = \$10,000 + \$500 + \$20 + \$8,000 + \$20 + \$60 = \$43,330 \text{ million}$$

Problem 2: Increase in Nominal GDP

No, an increase in nominal GDP doesn't necessarily mean production, income, and jobs increased. It could be due to inflation.

Problem 3: GDP Overestimation

GDP would be overstated if intermediate products are included because their value is already part of final products.

Problem 4: Value Added (GDP)

$$\text{Value added} = \$10,000 \text{ billion} - \$6,000 \text{ billion} = \$4,000 \text{ billion}$$

Problem 5: Gross Private Domestic Investment

Using $GDP = C + I + G + NX$:

$$\$4,500 \text{ billion} = \$3,000 \text{ billion} + I + \$1,000 \text{ billion} + 0$$

$$I = \$4,500 \text{ billion} - \$3,000 \text{ billion} - \$1,000 \text{ billion} = \$500 \text{ billion}$$

Problem 6: Government Purchases vs

Government purchases exclude transfer payments (e.g., social security benefits), which are part of total expenditures.