- Name: _____

- Date: _____

- Section: _____

BUS 201: Principles of Global Economics

Problem Set #7: Suggested Solutions

Fall 2025

INSTRUCTIONS:

- Write your full name, date, and section clearly at the top of the first page.

- This problem set is designed as a check-in assignment to help you practice the core ideas. It is not intended to be difficult, but you are expected to think carefully about your answers.

- For multiple-choice problems, circle the best answer.

- For short-answer problems, limit your response to no more than 4 sentences. Be concise but complete, and use economic reasoning in your answers.

- You may use your textbook, lecture slides, and personal notes.

Problem 1. Multiple Choice

1.A. The Lorenz Curve displays:

    a) The relationship between GDP and life expectancy.

    b) The cumulative distribution of income across the population.

    c) Income differences across countries of different sizes.

    d) Changes in poverty rates over time.

1.B. Which of the following best describes recent trends in income inequality in the United States?

    a) Both the top and bottom quintiles have gained equal income shares.

    b) The bottom 20 percent's income share has risen substantially.

    c) The top 20 percent's income share has fallen since the 1970s.

    d) The top 20 percent's income share has risen while the bottom 20 percent's share has fallen.

1.C. Under utilitarianism, income redistribution is often justified because:

    a) Equalizing income always maximizes total output.

    b) High tax rates never affect work incentives.

    c) The marginal utility of income decreases as income rises.

    d) Inequality is assumed to have no effect on well-being.

1.D. Liberal contractarianism (Rawls) suggests that policies should be chosen:

    a) Behind a veil of ignorance, focusing on improving the well-being of the worst-off.

    b) To maximize total GDP, regardless of distribution.

    c) To ensure complete equality of income for everyone.

    d) Only if they leave market outcomes completely unchanged.

1.E. A poorly designed welfare program that sharply cuts off benefits once income exceeds a threshold may:

    a) Eliminate all poverty instantly.

    b) Have no effect on work incentives.

    c) Discourage recipients from increasing their earnings.

    d) Automatically equalize income across all households.

Problem 1. Multiple Choice (continued)

1.F. Which component of GDP is typically the largest in the United States?

  a) Consumption (C).

  b) Investment (I).

  c) Government expenditure (G).

  d) Net exports (NX).

1.G. Which of the following transactions is counted directly in a country's GDP?

  a) The purchase of a used car from a friend.

  b) A firm's purchase of newly produced machinery for its factory.

  c) A retiree's Social Security payment.

  d) The purchase of shares of stock in a technology company.

1.H. Nominal GDP can increase while real GDP stays the same if:

  a) The quantity of goods and services produced rises while prices fall.

  b) Both the price level and real output fall.

  c) The price level and real output are both constant.

  d) The price level rises while the quantity of goods and services produced is unchanged.

1.I. Compared with the GDP deflator, the CPI:

  a) Excludes imported goods and services.

  b) Uses a fixed basket of consumer goods and services.

  c) Measures the prices of all domestically produced goods and services.

  d) Cannot be used to calculate inflation rates.

1.J. Substitution bias in the CPI arises because:

  a) It causes the CPI to overstate increases in the cost of living.

  b) It causes the CPI to understate increases in the cost of living.

  c) The CPI basket is continuously updated to reflect new consumption patterns.

  d) The CPI ignores changes in prices altogether.

Problem 2. True / False

Determine whether each statement is TRUE or FALSE. If you deem that the statement is FALSE, you <u>MUST</u> justify your verdict by providing a brief explanation.

2.A. A Gini coefficient closer to 1 indicates a more unequal distribution of income within a society.

- TRUE

2.B. Because the CPI measures only domestically produced goods and services, it always gives a lower estimate of inflation than the GDP deflator.

- FALSE
- The CPI includes imported goods, while the GDP deflator excludes imports and includes only domestically produced goods. Because of this difference in coverage, neither index is guaranteed to be consistently higher or lower than the other.

2.C. Transfer payments such as Social Security are excluded from GDP because they do not correspond to any new production of goods or services.

- TRUE

2.D. Nominal GDP can only increase when the economy produces more goods and services; changes in prices alone cannot raise nominal GDP.

- FALSE
- Nominal GDP can rise solely because prices increase, even if real output does not change. If the price level increases enough, nominal GDP will rise even when the quantity of goods and services produced is unchanged.

Problem 3. Short Answer

3.A. Explain why the CPI may overstate increases in the cost of living. In your answer, refer to at least one source of measurement bias discussed in class.

- The CPI uses a fixed basket, so it cannot capture consumers' ability to substitute toward goods whose prices rise less, creating substitution bias.
- When new goods enter the market, consumers have more choices, effectively increasing purchasing power, but the CPI does not adjust immediately for this increased variety.
- Quality improvements raise the value of many goods (e.g., smartphones, medical care), but the CPI often cannot fully adjust prices for quality change.
- Because of these issues, most economists agree the CPI overstates inflation by about 0.5–1.0% per year.

3.B. Consider the distinction between nominal GDP and real GDP. Briefly describe a scenario in which nominal GDP increases while real GDP remains unchanged. What does this tell us about the economic conditions?

- Nominal GDP increases whenever prices or quantities rise, while real GDP increases only when the quantity of goods and services rises.
- If the economy produces the same amount of output but the overall price level increases, nominal GDP will rise even though real GDP stays constant.
- This tells us that the apparent growth in nominal GDP is coming from higher prices rather than increased production.
- In this situation, the purchasing power of income may not be improving despite higher nominal figures.

Problem 3. Short Answer

3.C. Policymakers often argue that antipoverty programs should include gradual benefit phase-outs rather than sharp eligibility cutoffs. Using economic reasoning, explain why gradual phase-outs may improve work incentives.

- A sharp cutoff creates a benefits cliff, meaning that earning just a little more income can cause a household to lose all assistance at once.
- This makes additional work or higher wages unattractive because families could end up with little or no net gain.
- Gradual benefit reductions allow households to keep part of each additional dollar they earn, which strengthens the incentive to work.
- This approach preserves support for low-income households while encouraging upward mobility in the labor market.

3.D. The Gini coefficient is widely used to compare income inequality across countries. Briefly discuss one advantage and one limitation of using the Gini coefficient as a measure of inequality.

- Advantage: The Gini coefficient condenses the entire income distribution into one number, making comparisons across countries and across time straightforward and intuitive.
- Disadvantage: Countries with very different patterns of income distribution can share the same Gini value, so the measure does not reveal where inequality is concentrated in the population. It also excludes non-income dimensions of well-being, such as wealth, access to public goods, or economic mobility, which limits its ability to capture the full picture of inequality.

- Original Score: _____
- Original Date: _____

- Recovered Score: _____
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