Economics 2 Professor Emmanuel Saez
Fall 2024

PROBLEM SET 4

DUE ON GRADESCOPE BY 11:59PM ON MONDAY, NOVEMBER 25

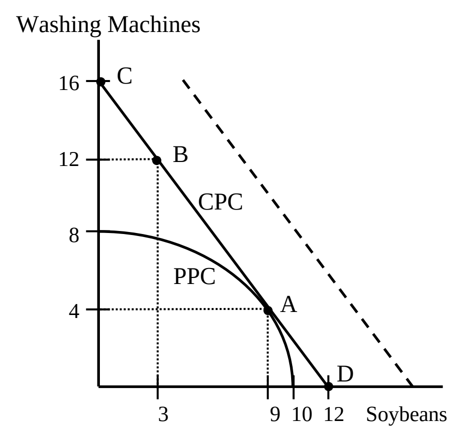
Student name:

Student ID:

You may work together on the problems, but your answers must be ***in your own words*** and ***handwritten***. You also must ***list the other students with whom you worked*** here:

For all questions be sure to explain your answers and to use graphs whenever asked to. Write your answers in the spaces below.

1. Consider the example from lecture where the U.S. produces two goods, soybeans and washing machines; where U.S. workers differ in their opportunity costs of producing the two goods; and where the prices in world markets are \$300 for a washing machine and \$400 for a ton of soybeans. The diagram to the right is a PPC-CPC diagram depicting such a case.



a. What is the total value (at world prices) of what the U.S. produces if it produces at Point A?

b. What is the total value of what the U.S. consumes if it consumes at Point A? Point B? Point C? Point D?

c. What is the total value of what the U.S. produces if it only produces soybeans? Why would the U.S. not want to do this?

d. Why can't the U.S. consume a combination of soybeans and washing machines that is on the dashed line?

e. In the absence of trade, could the U.S. consume at point B?

2. The first Trump administration imposed a tariff on imports of aluminum. (Aluminum is a good where the world price is below the level where the quantity demanded and the quantity supplied in the U.S. are equal. The tariffs were not large enough to completely eliminate our imports of aluminum.) This problem asks you to analyze the effects of ending the tariff.

a. How would ending the tariff affect the quantity of aluminum produced in the U.S., the quantity purchased in the U.S., and our aluminum imports?

b. How would ending the tariff affect employment and the prevailing wage in the U.S. aluminum industry?

3. Answer the following short questions about macroeconomic data.

a. The average price of a gallon of gasoline in the United States today is \$3.10. In 1981, the average price of a gallon of gasoline was \$1.31. The consumer price index was 91 in 1981 and is 315.3 now. What is the 1981 price of a gallon of gasoline expressed in today's dollars? How does the 1981 price of gasoline in today's dollars compare with the price of gasoline today?

b. If inflation is falling but still positive, does this imply: (i) that prices are on average falling; (ii) that prices are on average rising but at a slower rate than before; or (iii) because this is only information about inflation and not prices, it does not tell us anything about the behavior of prices? (As always, be sure to explain your answer.)

c. The Consumer Price Index was 307.8 a year ago and is now 315.3. To within rounding, 315.3/307.8 equals 1.024. Which of the following possible newspaper headlines is correct: "Inflation Rose by 2.4% over the Past Year", "Inflation over Past Year was 2.4%", "Inflation Accelerated by 2.4% over the Past Year"?

4. Suppose that the components of planned aggregate expenditure (PAE) take the following specification:

$$C = 600 + 0.6Y$$
$$I^p = 600$$
$$G = 600$$
$$NX = 200$$

a. Graph the expenditure line corresponding to this specification, the 45-degree line, and the equilibrium level of total output in the short run and solve the example algebraically to determine the equilibrium level of total output in the short run.

b. Suppose that government purchases (G) decrease to 200. Show what will happen to total output in the short run both graphically and algebraically.

5. Read the following recent article in the WaPo on the consequences of the proposed Trump tariffs:

https://www.washingtonpost.com/business/2024/10/16/trump-tariffs-impact-economy/

Article also posted at https://eml.berkeley.edu/~saez/econ2/trump-tariffs2024.pdf

Are the statements consistent with the trade and tariffs model of supply and demand model we saw in class? Discuss also whether the textbook model misses key relevant factors to judge the proposed tariffs. Write your answer clearly and concisely in 10-15 lines below.