Economics 2 Professor Emmanuel Saez
Fall 2024

PROBLEM SET 1

DUE ON GRADESCOPE BY 11:59PM ON MONDAY, SEPTEMBER 23

Student name:

Student ID:

You may work together on the problems, but your answers must be ***in your own words*** and ***handwritten/typed by you***. 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. This problem asks about opportunity costs in various situations.

a. You have an afternoon off and can either put together two new bookcases or watch three TV shows. What is the opportunity cost of watching a TV show?

b. In lecture, when we discussed the opportunity cost of going to college instead of taking a job, we listed the explicit costs of college (such as tuition and books) and the earnings that you would forgo. But we did not list your living expenses, such as food and rent, while you were in graduate school. Should those be included as part of the opportunity cost?

2. Consider the example from lecture with Chris and Bill. Suppose a third person—Robinson—arrives on the island. In an hour, Robinson can catch 2 fish or gather 2 coconuts.

a. If production is organized according to comparative advantage, in what order will the three inhabitants collect coconuts? (That is, if only one of the three collects coconuts, who will it be? And if two of them collect coconuts, which two will it be?)

b. Draw the production possibilities curve (PPC) when there is no specialization—that is, when each worker divides their time between fish and coconuts in the same way as the other two workers. Identify and explain the vertical intercept, the slope, and the horizontal intercept of the PPC in this case.

c. On the graph above, add the PPC when the three workers specialize according to comparative advantage. Again, identify and explain the vertical intercept, the slope(s), and the horizontal intercept of the PPC in this case. Also, give the quantities of fish and coconuts that correspond to any kinks in the PPC.

3. Describe and show on a separate graph how each of the following developments would affect the rental price charged by landlords and the quantity of apartments rented in a city where rents are not regulated.

a. Climate change causes many people to move away from the city.

b. The opening of a new downtown light-rail system makes it cheaper to travel within the city.

c. The city departs from its policy of not regulating the rental apartment market by placing a binding price ceiling on rents.

4. Read the following recent article on anti-price gouging laws that exist in many US states and that the Kamala Harris campaign proposes to apply to the entire US. https://www.axios.com/2024/08/20/price-gouging-kamala-harris-communism-kamunism

Comment on this policy in light of the textbook supply and demand model we saw in class. Discuss also whether the textbook model misses key relevant factors to judge the policy. Write your answer clearly and concisely in 10-15 lines below.

5. Empirical data analysis on the impact of gasoline taxes on gasoline prices (this is true empirical project much closer to actual research done by economists than previous exercises)

Taking the maps of gasoline prices and gasoline taxes in European countries that we discussed in class as data, depict the data on a graph with x-axis being gasoline taxes and y-axis being gasoline prices with each dot representing a country. Do the dots align in a way that suggest that gas taxes increase gas prices one-for-one?