

Elements of Macroeconomics Spring 2024

Week 2

Recap: Vocabulary:

- Rational
- *At the margin*
- Opportunity cost
- Decreasing returns to scale

Exercise: After studying for 5 hours for elements of macro. Should you study one more hour or relax? Use the learned vocabulary.

3 Production Possibility Frontier and Gains from Trade

3.1 Cook - book recipe

If you have two countries (A, B) and two goods (Cheese and Wine) and you want to know who should specialize in which good, do the following:

1. Draw the PPF: One good on X-axis (cheese) and the other on Y-axis (wine)
2. Calculate Opportunity Costs for each good:

$$\text{Opportunity Costs} = \frac{\text{Loss}}{\text{Gain}} = \text{Slope of PPF} = \frac{\Delta Y}{\Delta X}$$

For wine start at allocation for only cheese: ask yourself: how much cheese do you have to give up to produce wine?

3. Repeat the same for country B
- You should have four opportunity costs! For each country and each good
4. Absolute advantage: A country has an absolute advantage in producing one good if it can produce more than the other!
 5. Comparative advantage: A country has a comparative advantage in producing one good if its opportunity cost is lower!
- Each country should specialize in the good where it has comparative advantage.

6. Combine the PPF:

- Maximum amount of cheese: Both countries produce only cheese
- Maximum amount of wine: Both countries produce only wine
- 'Kink-Point(s)': You will have $N - 1$ kinks
 - (a) Start at one maximum (say wine)
 - (b) Among the wine producing countries, decide who is best in producing cheese (relatively)
 - (c) Find the allocation in which that country switches to producing cheese while everyone else remains unchanged.
 - (d) If you have more than 2 countries; repeat steps b-d until you are at the maximum of cheese.
- Connect the points!

7. Trade: Split the resources using relative prices

3.2 Exercises

There are two countries (A,B) which can produce cheese and wine. Possible allocations are shown in table 1. Go over the steps in the cook-book recipe.

Country A		Country B	
Cheese	Wine	Cheese	Wine
0	10	0	12
1	8	2	9
2	6	4	6
3	4	6	3
5	0	9	0

Table 1: Possible Allocation of Cheese and Wine