Elements of Microeconomics: Discussion Section 4

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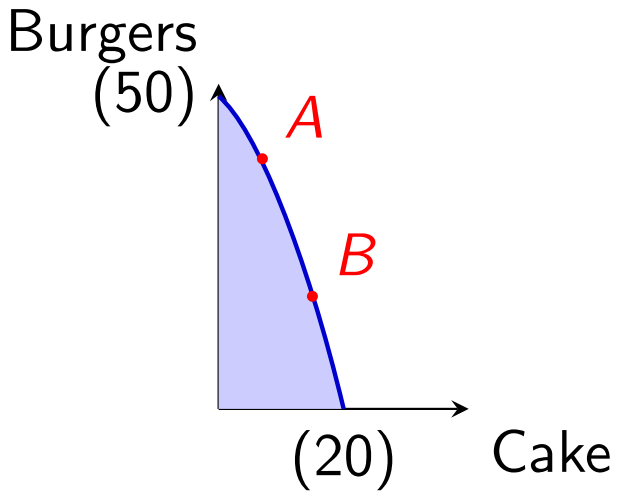
An opening question:



A restaurant produces burgers and cake, and needs to split their resources/inputs among production of the two goods...

Points A and B on the graph represent the production quantities:

- A: 7 cakes and 40 burgers
- B: 15 cakes and 16 burgers

What is the opportunity cost of moving from point A to point B in terms of cake? *(ie for each 1 additional burger how much cake must we give up)*

Outline - CH 3: "Interdependence and the Gains from Trade"

The main takeaways from this chapter are on **advantage** — both *absolute and comparative* — and the benefits of specialization and trade.

Thinking at the margin

Something we glossed over in last week's discussion:

Economists think at the margin.

More importantly, we believe that **firms and individuals do the same.**

This means when evaluating a decision, we think about what a small change in behavior will do to an outcome.

Absolute advantage

Absolute advantage describes the ability to produce more of a good given a fixed quantity of inputs.

Let's consider two restaurants: Muffin's Steakhouse and Sandy's Salads. Both of them can produce two dishes: salads and steaks. Given 1000 minutes of labor time, they can produce the following amounts of each dish:

Restaurant	**Steaks**	**Salads**
Muffin's Steakhouse	100	20
Sandy's Salads	200	100

Table 1: Muffin vs. Sandy

What is their cost, in minutes, to produce steak and salads?

Absolute advantage

Assume that there is a *constant transferability* from one dish to the other:

1. Draw the production possibility frontiers for the two restaurants.
2. Who has the absolute advantage in producing steaks?
3. Who has the absolute advantage in producing salads?

Comparative advantage

Before we discuss comparative advantage, let's think about the opportunity cost of each firm for each dish:

1. What are the slopes of the two PPFs?
2. What is Muffin's opportunity cost for producing steaks and salads?
3. What is Sandy's opportunity cost for producing steaks and salads?

In other words: what is the *trade-off* that each restaurant faces as they change their production from one dish to another?

Comparative advantage

The *opportunity cost* of producing salads is the amount of steaks they could have produced with the same input. In our example, this is constant.

A restaurant has a *comparative advantage* in producing steaks compared to their competitor if their opportunity cost is lower.

1. Can a firm have an absolute advantage in both goods?
2. Can a firm have a comparative advantage in both goods?
3. What is the relationship between the comparative advantage in good A and good B?

Comparative advantage

- The comparative advantage in producing good A is the *inverse* of the comparative advantage in producing good B.
- If the comparative advantage in good A is high, the comparative advantage for good B must be low.

Comparative advantage depends on the *opportunity cost*: these concepts are linked.

Comparative advantage

Since most customers like to order a salad with their steak, Sandy and Muffin both want to offer both salads and steaks (not necessarily in equal quantities).

If both spend half their resources on each dish, what is their output?

Comparative advantage

When they both split their 1000 minutes 50/50 between the two dishes, their output is:

Restaurant	Steaks	Salads
Muffin's Steakhouse	50	10
Sandy's Salads	100	50
Total output	150	60

Table 2: 50/50 split

Now suppose the two restaurants can trade with each other. What is one set of productions, and one possible trade, which would leave them both better off?

Possible trade

There are many possible answers to this last question, but let's go back to our principle at the beginning of the discussion, and *think at the margin*.

- Muffin produces 1 fewer salads and 5 more steaks
- Sandy produces 2 fewer steaks, and 1 more salad

Then their production is:

Restaurant	Steaks	Salads
Muffin's Steakhouse	55	9
Sandy's Salads	98	51
Total output	153	60

Table 3: Possible trade

Total production has gone up!

Possible trade

Which trade would leave them both better off?

Say Muffin trades 3 steaks to Sandy in exchange for one salad:

Restaurant	Steaks	Salads
Muffin's Steakhouse	52	10
Sandy's Salads	101	50

Table 4: Gains of trade

They both have the same amount of salads as before, but more steaks! So we can say that they are each better off.

Should they continue to specialize?

Price of trade

Here we just asserted a trade that would make both parties better off in terms of the amount of each dish. But how can we know both parties will agree to the trade?

This is determined by the price of each good. In the example we gave, the "price" of one salad was 3 steaks.

1. What if the price of 1 salad was 3.5 steaks?
2. What if the price of 1 salad was 1 steak?
3. What if the price of 1 salad was 6 steaks?

Price of trade

The first example would still leave both parties better off, but the second two would not.

We are not ready yet to discuss where prices come from, but we do have a general rule:

For trade to make both parties better off, the price must lie between the two opportunity costs.

Discussion questions

1. Should Kevin Durant wash his own car?
2. Should the U.S. trade with other countries?
3. Should a chef build his own house?
4. Should I make my own clothes?
5. Should you be teaching this class?

The main takeaway from this chapter:

Due to comparative advantage, specialization and trade can leave everyone participating better off.