Chapter 3: Interdependence and Gains from Trade

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Discussion Section 4

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Outline

These slides will cover chapter 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

First, something we glossed over in last week's discussion:

Economists think at the margin.

More importantly, we believe that profit-maximizing firms and utility-maximizing 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 means the ability to produce more of a good given a fixed quantity of inputs.

Today, let's work with two restaurants, Stu's Steakhouse and Sandie'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
Stu's Steakhouse	100	20
Sandie's Salads	200	100

Table: Stu vs. Sandie

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 Stu's opportunity cost for producing steaks and salads?
3. What is Sandie'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 goos?
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, Sandie and Stu both want to offer both salads and steaks (not necessarily 1-to-1).

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

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?

Comparative advantage

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

Restaurant	Steaks	Salads
Stu's Steakhouse	50	10
Sandie's Salads	100	50
Total output	150	60

Table: 50/50 split

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*.

- Stu produces 1 fewer salads and 5 more steaks
- Sandie produces 2 fewer steaks, and 1 more salad

Then their production is:

Restaurant	Steaks	Salads
Stu's Steakhouse	55	9
Sandie's Salads	98	51
Total output	153	60

Table: Possible trade

Total production has gone up!

Possible trade

Which trade would leave them both better off?

Say Stu trades 3 steaks to Sandie in exchange for one salad:

Restaurant	Steaks	Salads
Stu's Steakhouse	52	10
Sandie's Salads	101	50

Table: 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

Should Kevin Durant wash his car?

Should the United States trade with other countries?

The main takeaway from this chapter:

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

Another example

Joseph can peel a pound of potatoes in 10 minutes and wash a load of dishes in 15. Mary can do both of these tasks twice as fast.

Which person should do more of which task?

A final example

Joseph can peel a pound of potatoes in 10 minutes and wash a load of dishes in 15. Mary can also wash the dishes in 15 minutes, but it takes here only 5 minutes to peel the potatoes.

1. What is each person's opportunity cost of peeling potatoes?
2. Who has an absolute advantage in washing the dishes?
3. Who has a comparative advantage in washing the dishes?
4. If the two workers try and split up the tasks in an advantageous way, who will do more of which job?

A final example (cont.)

Joseph can peel a pound of potatoes in 10 minutes and wash a load of dishes in 15. Mary can also wash the dishes in 15 minutes, but it takes here only 5 minutes to peel the potatoes.

Think about the price of peeling potatoes in terms of washing dishes. What is the maximum price at which a trade could leave both workers better off? What is the minimum price?

Textbook

Read the textbook, in particular the highlighted vocab and the key concepts! (use Anki or other flashcard app to drill)

Do extra practice problems

No tricks — the practice problems from the book will be excellent preparation for the exams, quizes, and homeworks