

ECO 182: Summer 2015 Scarcity, Opportunity Costs and Trade

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Why study Economics?

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Scarcity

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- ▶ Scarcity
- ▶ Allocation
- ▶ Analysis of the behaviour of people.

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- ▶ With every change in Government, a country decides how to maintain diplomatic relationships with every other countries. Who to align with, who to condemn. The diplomatic concessions and bargaining power is not unlimited...the payoffs/fallout of diplomatic relations can be significant for each policy choice.

Constraints

- ▶ Constraints are just limitations to your possible choices...of time, resource, money etc.
- ▶ Right now, you can either choose to fall asleep or pay attention or leave the class.
- ▶ Those are your possible choices.
- ▶ You might want to sing and dance on your chair...but that is a violation of classroom conduct and you will get into trouble...you can't do that.

AS YOU CAN SEE, YOUR CHOICES ARE CONSTRAINED.

- ▶ So, it seems almost everything is directed by scarcity.
- ▶ Just do what is best for you, under scarcity.
- ▶ But what is the "best" ? And who is this "you" ?

Simple Definition

Layman/Vague Definition: Cost of doing something.

Warning: NEVER USE THIS DEFINITION !

What can be something?

- ▶ An action: Sleep, Coming to class, getting drunk
- ▶ Buying something: coffee, lunch, "renting" a house on campus

Logically think like this:

You can choose to do either actions A or B. Each action gives you a payoff/happiness/"value".

You choose A.

By choosing A, you give up the value you could have got, if you chose B.

This value of B you just let go...that is the Opportunity Cost of doing A.

Examples

▶ Example 1:

Action	My Value
Buy 1 large, medium roast	\$ 3
OR	
Buy 1 cup of tea	\$2

So, when I buy a cup of coffee, I am sacrificing \$2 value of buying/drinking tea.

OC of buying coffee is \$2.

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▶ Example 2:

Action	My Value
Sleep	\$ 30
OR	
Come to class	\$1300

So, if I come to class, I am sacrificing \$30 value of sleeping.

OC of attending class is \$30.

Examples Continued

▶ Example 3:

Action	My Value
Work at Library	Earn \$ 500 per 2 week
OR	
Work at Student Union	Earn \$501 per 2 week

OC working at library is \$501 per 2 week.

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I am comparing values which have same units.

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▶ **What if I have more than two things to choose from ?**

Examples Continued

▶ Example 4:

Action	My Value
Sleep	\$ 30
OR	
Come to class	\$ 1300
OR	
Play Video Games	\$250
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What am I giving up?	My Value
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- ▶ Which alternate has the maximum value?
Playing Video Games

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▶ Calculating OC of Coming to Class:

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- ▶ What is the maximum value I am giving up?
\$250
- ▶ Which alternate has the maximum value?
Playing Video Games
- ▶ OC of coming to class :
\$250 (Value from playing video games)

Definition

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- ▶ In Examples 3,4: Resource is my time.
Note 1: For only two possible choice, the concept of best is trivial.
Example 4, shows when best is really important.
- ▶ How many choices and what choices I have, matter a lot.

Arbitrage

The concept of trade, in any form, is driven by the principle of **Arbitrage**

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- ▶ This basically translates into comparing individual values.

Example of Trade with OC

- ▶ In 1 hour, John can make either: **6** pizzas or **4** subs.
- ▶ In 1 hour, Ben can make either: **3** pizzas or **8** subs.
- ▶ John:
 - OC of making 1 pizza : $4/6 = \mathbf{0.66}$ Sub/Pizza
 - OC of making 1 sub : $6/4 = \mathbf{1.5}$ Pizza/Sub

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 - OC of making 1 sub : $6/4 = \mathbf{1.5}$ Pizza/Sub
- ▶ Ben:
 - OC of making 1 pizza : $8/3 = \mathbf{2.66}$ Sub/Pizza
 - OC of making 1 sub : $3/8 = \mathbf{0.375}$ Pizza/Sub

Example of Trade with OC continued

Curiously the following is true.

▶ **Pizza:** $OC_{(0.66)}^{John} < OC_{(2.66)}^{Ben}$

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- ▶ In the language of economics:
John has *Comparative Cost Advantage*(CCA) in making Pizza
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(0.66) (2.66)
- ▶ **Sub:** $OC_{John}^{Sub} > OC_{Ben}^{Sub}$
(1.5) (0.375)
- ▶ In the language of economics:
John has *Comparative Cost Advantage*(CCA) in making Pizza
Ben has *Comparative Cost Advantage*(CCA) in making Subs
- ▶ John is going to produce something(Pizza) Ben will never want to produce by himself...because it is too costly for Ben to do so.

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If he did not trade, he would exchange 6 pizza for 4 subs from himself or get $4/6 =$ **0.66** Subs/Pizza.

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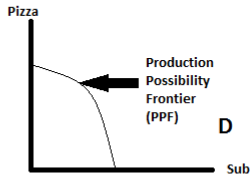
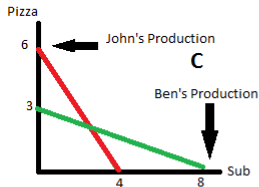
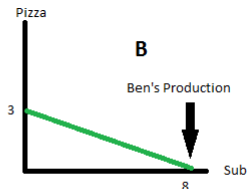
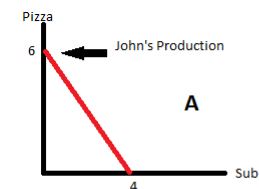
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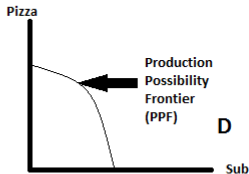
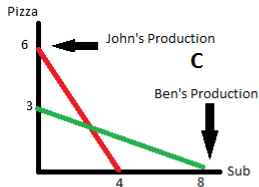
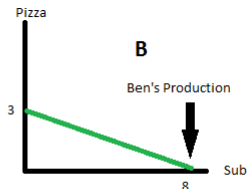
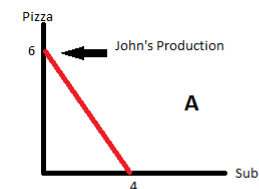
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- ▶ This type of trade is called **Bartering**.

Graphical Example



▶ Figures **A**, **B** shows the *Complete Specialization* for John and Ben.

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- ▶ Figures **A**, **B** shows the *Complete Specialization* for John and Ben.
- ▶ Figure **D** is the typical *downward sloping, curved* PPF that is common in economics.

Production Possibility Frontier

- ▶ The PPF and the region bounded by it, is the *Production Possibility Set*(PPS) for any individual/firm/country.
- ▶ The PPS shows the possible combination of the quantities of every good, an individual/firm/country can produce, given the technology available to it.
- ▶ In Figures **A**, **B**, **C**, the OC for any good is constant, along the PPF, moving in and from any direction.
Can you tell why ?

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- ▶ *Imperfections ??*

Neither John, nor Ben can force the other to buy/sell more/less than they want to. *You will see examples of imperfections in the market in later classes.*

Hint:

*Have you heard of **monopoly**?*

*Have you heard of **tariff**?*

*Have you heard of **excise taxes**?*