

CHAPTER 2 LECTURE – THE ECONOMIC PROBLEM

ECONOMIC CHOICES ARE NECESSARY BECAUSE RESOURCES ARE SCARCE: THEY ARE NOT FREELY AVAILABLE IN UNLIMITED QUANTITIES

Production Possibilities Frontiers (some texts use the term *Production Possibilities Curve*) is a graphical representation of the alternative combinations of the amounts of two goods or services that an economy can produce by transferring resources from one good or service to the other.

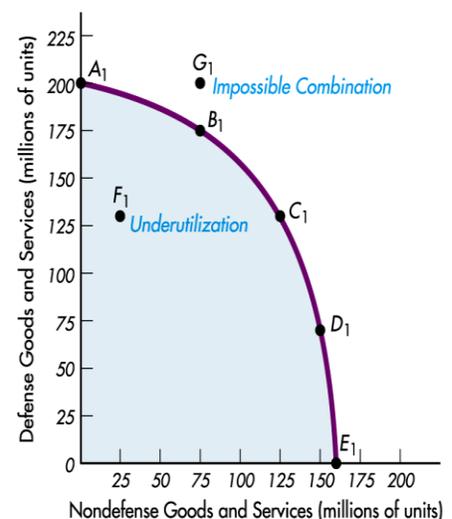
PPCs can be constructed for any productive entity, including an entire industry or national economy. We can imagine an agricultural area of fixed size that produces only rice and coffee. We could also consider defense and non-defense goods (often referred to as guns versus butter) such as that below.

We will assume that:

1. Resources are fixed
2. Fully Employed Resources
3. Given Technology.

GUNS VERSUS BUTTER

Combination	Defense Goods and Services (millions of units)	Nondefense Goods and Services (millions of units)
A ₁	200	0
B ₁	175	75
C ₁	130	125
D ₁	70	150
E ₁	0	160
F ₁	130	25
G ₁	200	75



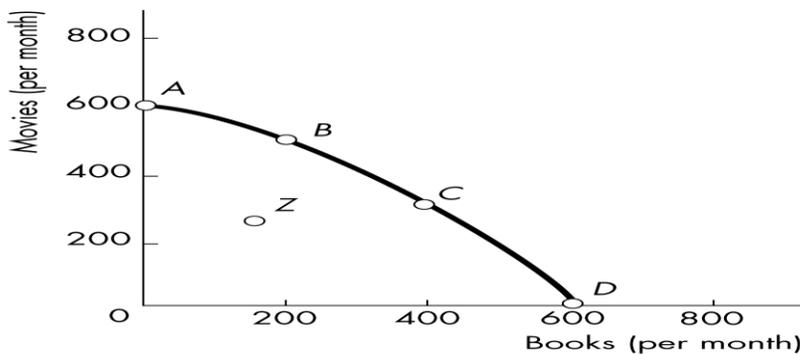
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We are looking **AGAIN** at the concept of **Opportunity Cost** and examine **why is the curve shaped the way it is (Concave to the origin)?**

Law of Increasing Opportunity Cost (or relative costs) - The opportunity cost of additional units of a good increases as society attempts to produce more and more of that good. Why is this happening? The law of increasing costs is based on the fact that resources tend to be specialized so that some of their productivity is lost when they are transferred from what they are relatively good at to other activities which they may not be relatively so good at producing.

ANOTHER EXAMPLE

	Books	Movies
A	0	600
B	200	500
C	400	300
D	600	0

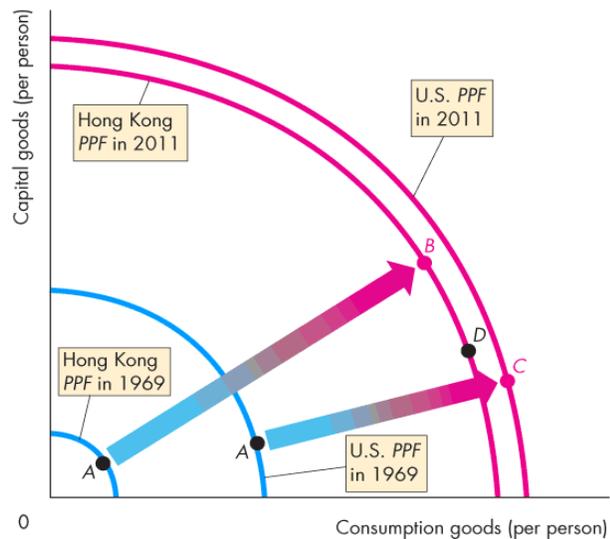
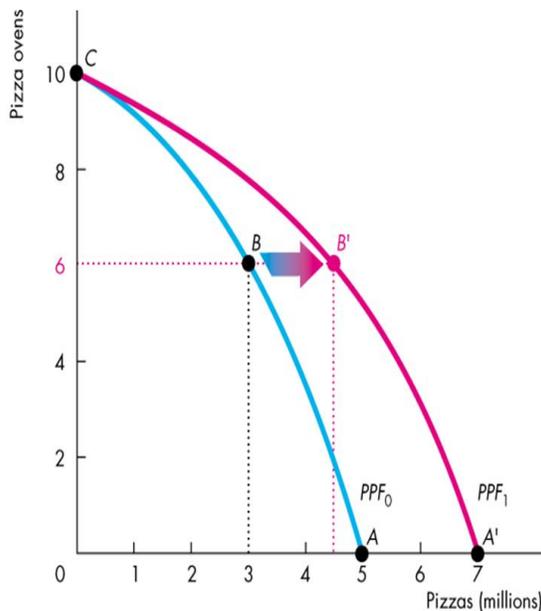


This analysis with the PPC summarizes what economics is about: Individuals and nations are continuously faced with the following:

1. Scarcity constraint,
2. Trade-offs, and
3. Increasing relative cost

Production Possibility Curves can be also used to illustrate economic growth and the dilemma that faces poor countries.

Sources of growth: growing labor force, larger capital stock and new technology.



Economic Growth in the United States and Hong Kong

Sources of growth: growing labor force, larger capital stock and new technology.

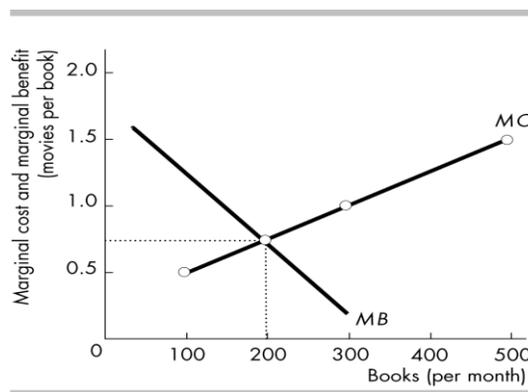
Using Resources Efficiently

Which point on the *PPF* best serves the public interest? To answer this question, we must measure and compare costs and benefits of different points.

The *PPF* and Marginal Cost

- Marginal cost is the opportunity cost of producing one more unit of a good.
- As more books are produced, the marginal cost of a book increases. The table shows the marginal cost of producing books from the *PPF* data presented before and the figure shows the upward sloping marginal cost curve.

	Books	Marginal cost of a book (movies per book)
A	0	0.5
B	200	1.0
C	400	1.5
D	600	



Preferences and Marginal Benefit

- Preferences are a description of a person's likes and dislikes.
- The marginal benefit of a good or services is the benefit received from consuming one more unit of it.
- The *principle of decreasing marginal benefits* is why the marginal benefit curve in the figure above slopes downward.

Allocative Efficiency only occurs with a balance between benefits and costs, *at the margin*.

Allocative efficiency occurs only when marginal benefit equal marginal cost.

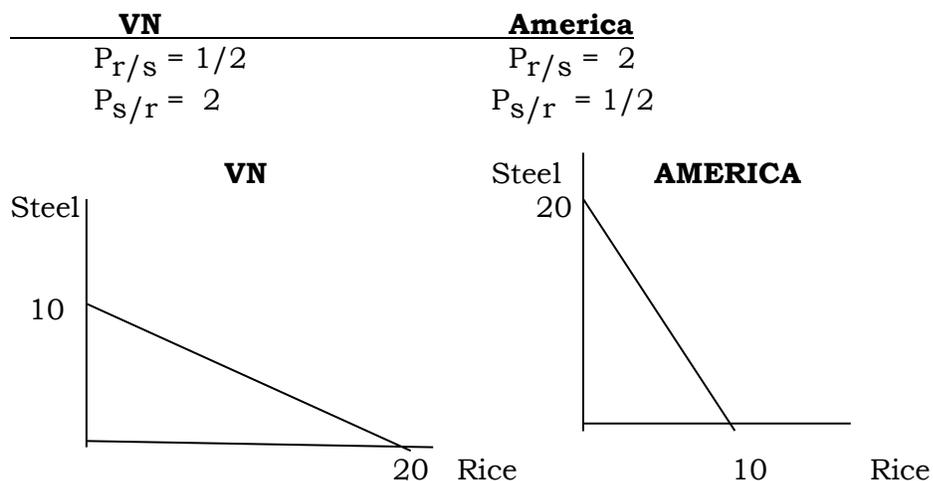
- In the figure, when 100 books per month are produced, the marginal benefit from another book exceeds its marginal cost, which means that people prefer another book more than the movies they must give up.
- When the allocatively efficient number of books, 200 per month, is produced, the *PPF* in the previous figure shows that the allocatively efficient number of movies is 500 movies per month.
- When marginal cost equals marginal benefit it is impossible to make people better off by reallocating resources.

ABSOLUTE AND COMPARATIVE ADVANTAGE

Principle of Absolute Advantage

Suppose we have two countries: Viet Nam and America
Two commodities: Rice and Steel

We assume both countries have same initial endowment of resources.



If VN produces only rice it can produce a maximum of 20 units of rice.

If VN produces only steel it can produce a maximum of 10 units of steel.

If America produces only rice it can produce a maximum of 10 units of rice.

If America produces only steel it can produce a maximum of 20 units of steel.

In the above case it is said that the VN has an absolute advantage in rice - with given endowment it can produce more rice than America.

In the above case it is said that the America has an absolute advantage in steel - with given endowment it can produce more steel than VN.

However, look at the cost of steel in terms of rice for both VN and America

For Viet Nam:

$P_{s/r} = 2$ VN must give up 2 units of rice for 1 unit of steel.

$P_{r/s} = 1/2$ VN must give up 1 unit of steel for 2 units of rice or $\frac{1}{2}$ units of steel for one rice.

For America:

$P_{r/s} = 2$ America must give up 2 units of steel for 1 unit of rice.

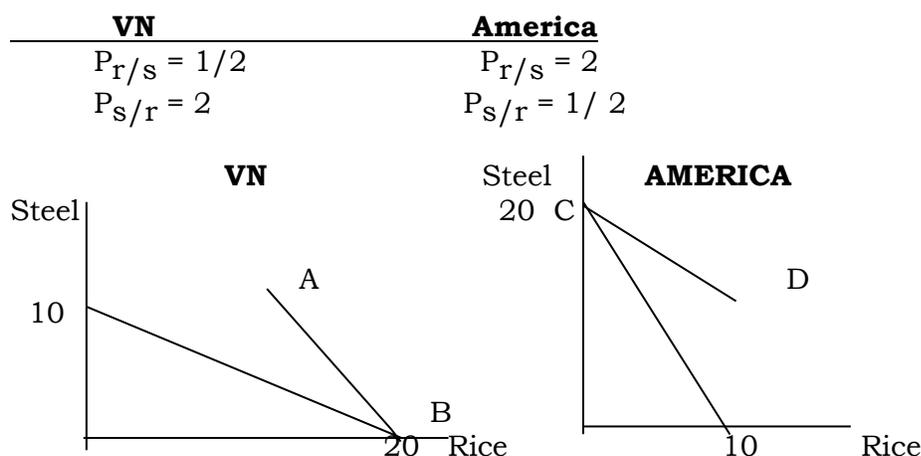
$P_{s/r} = 1/2$ America must give up 1 units of rice for two units of steel or $\frac{1}{2}$ unit of rice for one steel.

Terms of Trade

Looking at example above you can see that VN would be willing to trade steel for rice if it can receive 1 unit of steel for less than 2 units of rice. Remember that if it produces both commodities the price of steel in terms of rice is 2.

Again, looking at example above you can see that America would be willing to trade rice for steel if it can receive 1 unit of rice for less than 2 units of steel. Remember that if it produces both commodities the Price of rice in terms of steel is 2.

Look at diagram again.



Suppose both countries face a price ratio of $P_{s/r} = P_{r/s} = 1$.

VN would specialize in rice. It would then be willing to trade along line AB assuming $P_{r/s} = 1$. America would specialize in steel. It would then be willing to trade along line CD assuming $P_{s/r} = 1$. Thus, the terms of trade would be $P_{s/r} = P_{r/s} = 1$.

America	Terms of Trade	Viet Nam
$P_{r/s} = 2$	$P_{r/s} = 1$	$P_{r/s} = 1/2$
$P_{s/r} = 1/2$	$P_{s/r} = 1$	$P_{s/r} = 2$

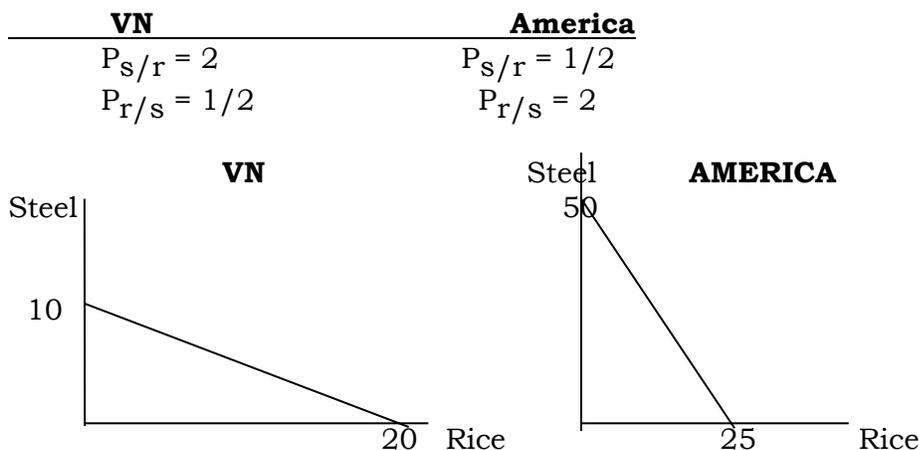
In this case both countries would gain from trade.

If relative commodity prices differ between countries in the absence of trade both countries can gain by exchanging commodities at any intermediate price ratio. Each country should specialize in that which it has an absolute advantage.

Principle of Comparative Advantage

Now suppose we have two countries: Viet Nam and America
two commodities: Rice and Steel

We assume both countries have same initial endowment of resources.
However, one country has an absolute advantage in both commodities.



If VN produces only rice it can produce a maximum of 20 units of rice.
If VN produces only steel it can produce a maximum of 10 units of steel.
If America produces only rice it can produce a maximum of 25 units of rice.
If America produces only steel it can produce a maximum of 50 units of steel.

In the above case it is said that the America has an absolute advantage in both commodities. However, look at the cost of steel in terms of rice for both VN and America

For Viet Nam:

$P_{S/r} = 2$ VN must give up 2 units of rice for 1 unit of steel.
 $P_{r/s} = 1/2$ VN must give up 1 unit of steel for 2 units of rice or $1/2$ steel for one rice.

For America:

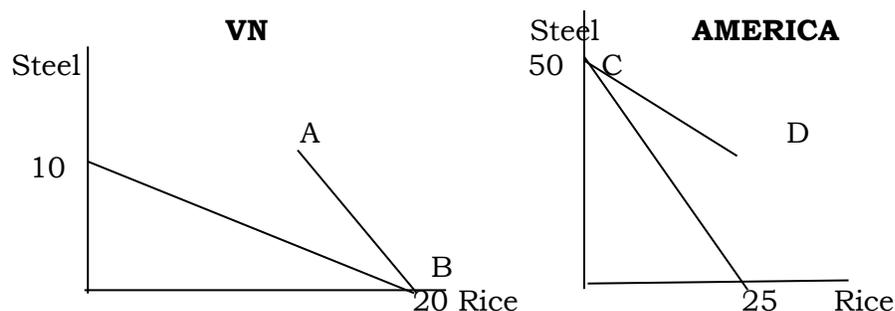
$P_{r/s} = 2$ America must give up 2 units of steel for 1 unit of rice.
 $P_{S/r} = 1/2$ America must give up 1 unit of rice for 2 units of steel or $1/2$ rice for 1 unit of steel.

Terms of Trade

Looking at example above you can see that VN would be willing to trade steel for rice if it can receive 1 unit of steel for less than 2 units of rice. Remember that if it produces both commodities the price of steel in terms of rice is 2.

Again, looking at example above you can see that America would be willing to trade rice for steel if it can receive 1 unit of rice for less than 2 units of steel. Remember that if it produces both commodities the Price of rice in terms of steel is 2.

Look at diagram again.



Suppose both countries face a price ratio of $P_{S/R} = P_{R/S} = 1$. VN would specialize in rice. It would then be willing to trade along line AB assuming $P_{R/S} = 1$. America would specialize in steel. It would then be willing to trade along line CD assuming $P_{S/R} = 1$. Thus, the term of trade would be $P_{S/R} = P_{R/S} = 1$.

<u>America</u>	<u>Terms of Trade</u>	<u>Viet Nam</u>
$P_{R/S} = 2$	$P_{R/S} = 1$	$P_{R/S} = 1/2$
$P_{S/R} = 1/2$	$P_{S/R} = 1$	$P_{S/R} = 2$

In this case both countries would gain from trade.

In this case it is said that the VN has a comparative advantage in rice and America has a comparative advantage in steel. This is known as the **Law of Comparative Advantage** and it claims that the total world output of both commodities will rise if each country should specialize (or tend to specialize) in that good for which it has a comparative advantage.

Trade is generally better than not trading or Autarky - closed economy.

Although the models show that there are gains to trade, quite often governments intervene in markets to change trade patterns. This is based on the concept that even though the overall world economy gains from trade, there may be some losers.

Economic Coordination

Firms and Markets

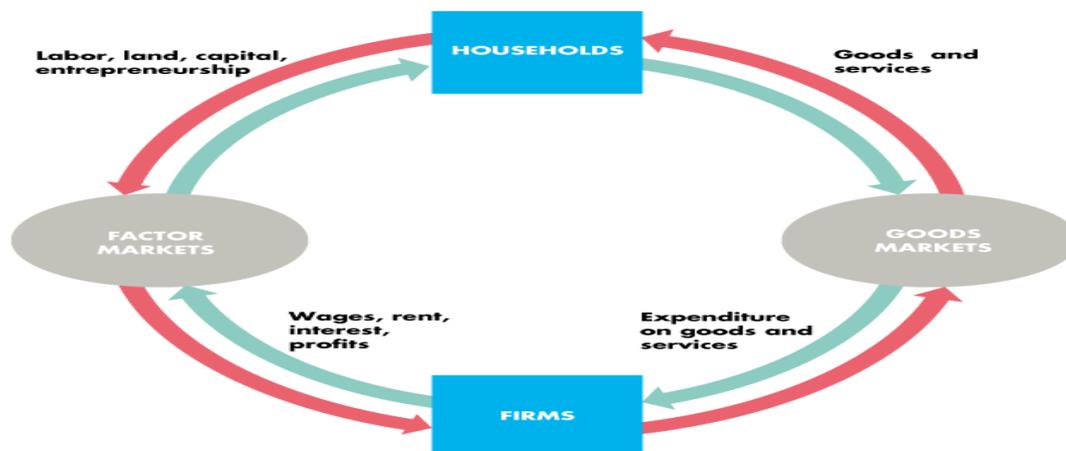
- A **firm** is an economic unit that hires factors of production and organizes those factors to produce and sell goods and services.
- A **market** is any arrangement that enables buyers and sellers to get information and to do business with each other.

Property Rights and Money

- The social arrangements that govern the ownership, use, and disposal of resources, goods, and services are called **property rights**. Types of property include real (buildings), financial (stocks) and intellectual (ideas).
- **Money** is anything generally accepted as a means of payment. Money's main purpose is to facilitate trade.

The key features of the market system help explain how market economies respond to five fundamental questions:

- What goods and services will be produced?
- How will the goods and services be produced?
- Who will get the goods and services?
- How will the system accommodate change?
- How will the system promote progress?



The market system is characterized by private ownership. If not, we have a command economy which was found in China and USSR during the last half of the 20th century.

Market System Versus Centrally Planned Economy

In market economies people can own businesses, own land, purchase what they want as long as they can pay the price, and take business risks and reap rewards if these risks pay off.

Under centrally planned systems people cannot own land, cannot start a business--they work as employees of the state, cannot be fired regardless of their employers' or their own job performance, may not be able to buy things they want--product availability depends on government regulations and may be subject to a quantity limit.

We will emphasize a model called the "**Perfectly Competitive Market Model.**" This model achieves "**allocative efficiency,**" that is, it allocates scarce resources in such a way that social welfare is maximized. We have to admit, however, that "social welfare" is very narrowly defined, and that the perfectly competitive market model does not assure equity in the distribution of goods and services.

This model is based on Adam Smith and the Invisible Hand.

- Everyone—consumers, firms, resource suppliers—attempts to get the most benefits for the least cost.
- As Adam Smith noted in 1776, self-interested individuals, wholly unaware of the effects of their actions, act as if driven by an *invisible hand* to produce the greatest social good.
- *Laizze - faire*: an economic doctrine that opposes governmental regulation of or interference in commerce beyond the minimum necessary for a free-enterprise system to operate according to its own economic laws.