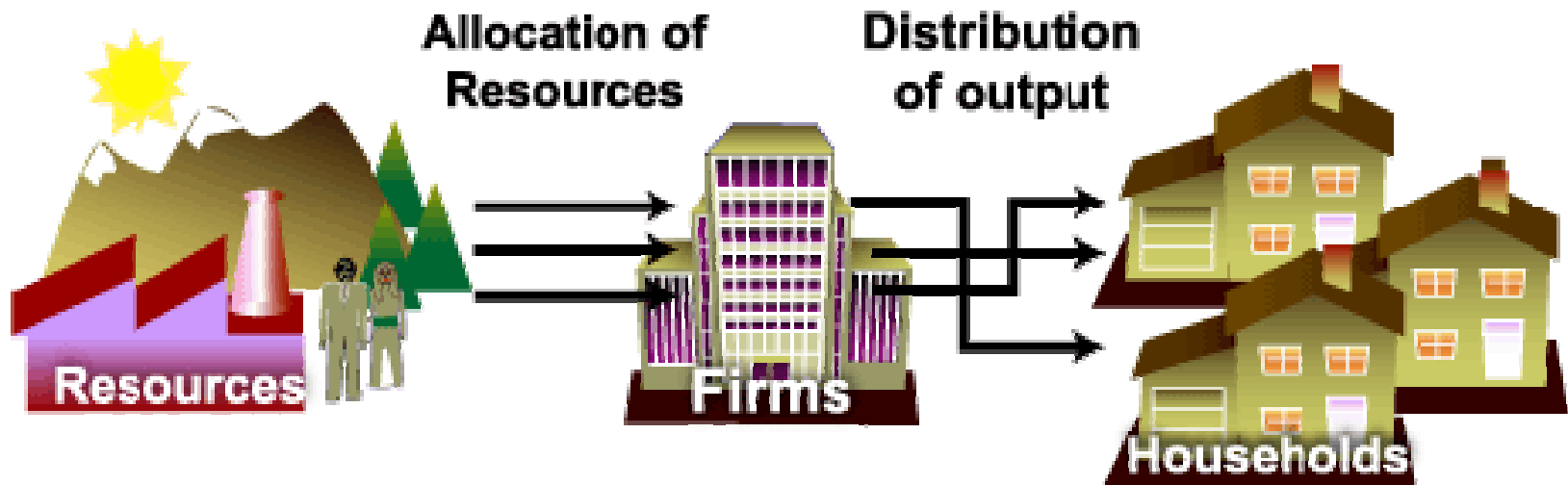


The Economic Problem: Scarcity and Choice

What is Production?

- ***Production*** is the process by which resources are transformed into useful forms.
- ***Resources***, or ***inputs***, refer to anything provided by nature or previous generations that can be used directly or indirectly to satisfy human wants.
 - ***Capital resources***
 - ***Human resources***
 - ***Natural resources***

Three Basic Questions



Every society has some system or mechanism that transforms that society's scarce resources into useful goods and services.

Three Basic Questions

- The mechanics of decision making in a larger economy are complex, but the type of decisions that must be made are nearly identical...
- All societies must decide:
 - *What* will be produced?
 - *How* will it be produced?
 - *Who* will get what is produced?

Specialization, Exchange and Comparative Advantage

#4

David Ricardo developed the *theory of comparative advantage* to explain the benefits of specialization and free trade. The theory is based on the concept of opportunity cost:

- *Opportunity cost* is that which we give up or forgo, when we make a decision or a choice.

According to the *theory of competitive advantage*, specialization and free trade will benefit all trading parties, even those that may be absolutely more efficient producers.

Absolute Versus Comparative Advantage

	Output per Day of Work	
	Logs	Food
Colleen	10	10
Bill	4	8

- Colleen has an *absolute advantage* in logs and in food because she can produce more logs and more clothing in one day than Bill can.
- Use the idea of *Opportunity Cost* to determine who has a *comparative advantage* in logs and in food.

		Output per Day of Work	
		Logs	Food
Colleen	10	10	
	4	8	

- The opportunity costs can be summarized as follows:
- **For logs:**
 - Colleen: 10 logs costs 10 Food \rightarrow 1 Log cost 1 Food
 - Bill: 4 logs costs 8 Food \rightarrow 1 Log cost $8/4 = 2$ Foods
- **For Food:**
 - Colleen: 10 Food costs 10 Logs \rightarrow 1 Food cost 1 Log
 - Bill: 8 Food costs 4 Logs \rightarrow 1 Food cost $4/8 = 1/2$ Logs

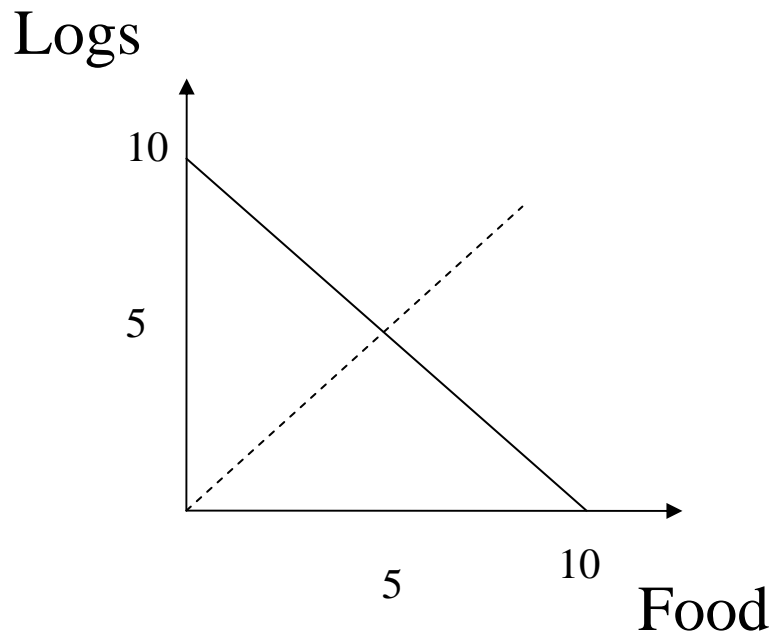
Conclusion:

Comparative Advantage and the Gains From Trade

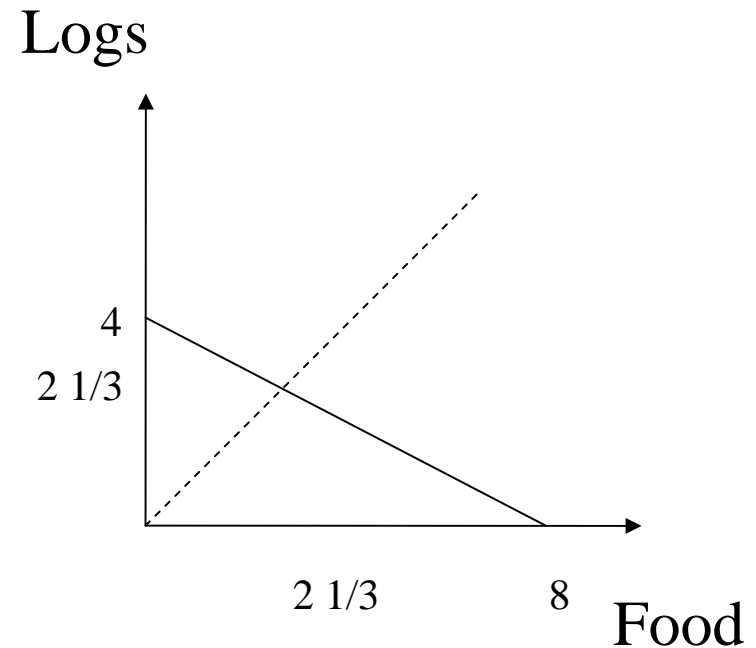
#7

Suppose Bill and Colleen want to consume equal amounts of food and logs. If they were NOT to specialize, in a day each would produce:

Colleen's Daily Possibilities



Bills's Daily Possibilities



Comparative Advantage and the Gains From Trade

#8

In a 30-day month they (each separately) could produce:

	Monthly Production (and Consumption) with No Trade	
	Wood (logs)	Food (bushels)
Colleen	150	150
Bill	80	80
Total	230	230

Comparative Advantage and the Gains From Trade

#9

By specializing on the basis of comparative advantage, Colleen and Bill can produce more of both goods.

	Monthly Production with No Trade	
	Wood (logs)	Food (bushels)
Colleen	150	150
Bill	80	80
Total	230	230



	Monthly Production with Specialization	
	Wood (logs)	Food (bushels)
Colleen	270	30
Bill	0	240
Total	270	270

Comparative Advantage and the Gains From Trade

To end up with equal amounts of wood and food after trade, Colleen could trade 100 logs for 140 bushels of food. Then:

	Monthly Production with Specialization	
	Wood (logs)	Food (bushels)
Colleen	270	30
Bill	0	240
Total	270	270



	Monthly <u>Consumption</u> after Specialization	
	Wood (logs)	Food (bushels)
Colleen	170	170
Bill	100	100
Total	270	270

Recap: Comparative Advantage and the Gains From Trade

#11

According to the *theory of competitive advantage*, specialization and free trade will benefit all trading parties, even those that may be absolutely more efficient producers.

Is Colleen better off ?

Is Bill better off ?

Weighing Present and Expected Future Costs and Benefits: Capital Goods and Consumption Goods

#12

- Consumer goods are goods produced for present consumption.
- Capital goods are goods used to produce other goods or services over time.
- *Investment* is the process of using resources to produce new capital. Capital is the accumulation of previous investment.
- Because resources are scarce, the opportunity cost of every investment in capital is forgone present consumption.

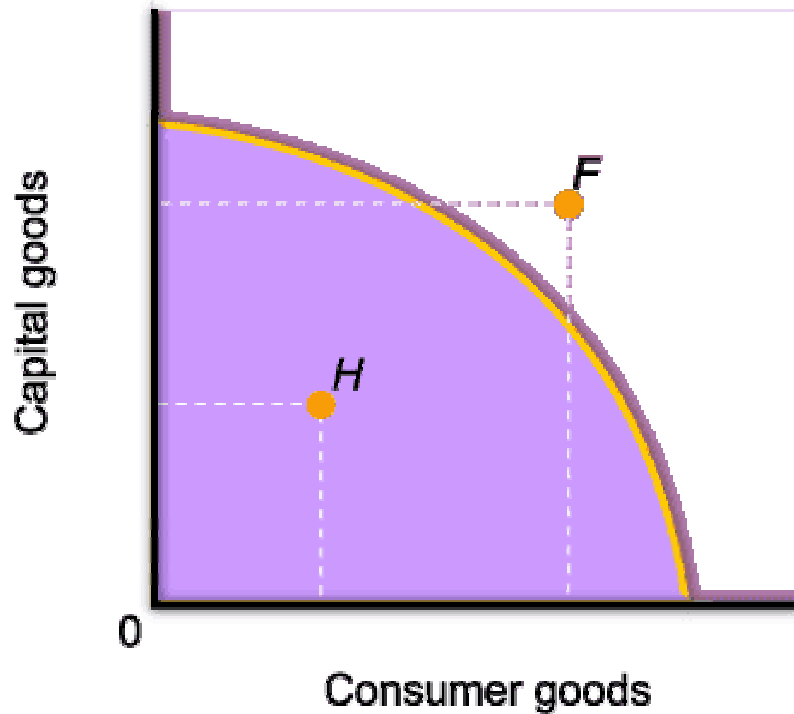
The Production Possibility Frontier

The *production possibility frontier (PPF)* is a graph that shows all of the combinations of goods and services that can be produced if all of society's resources are used efficiently



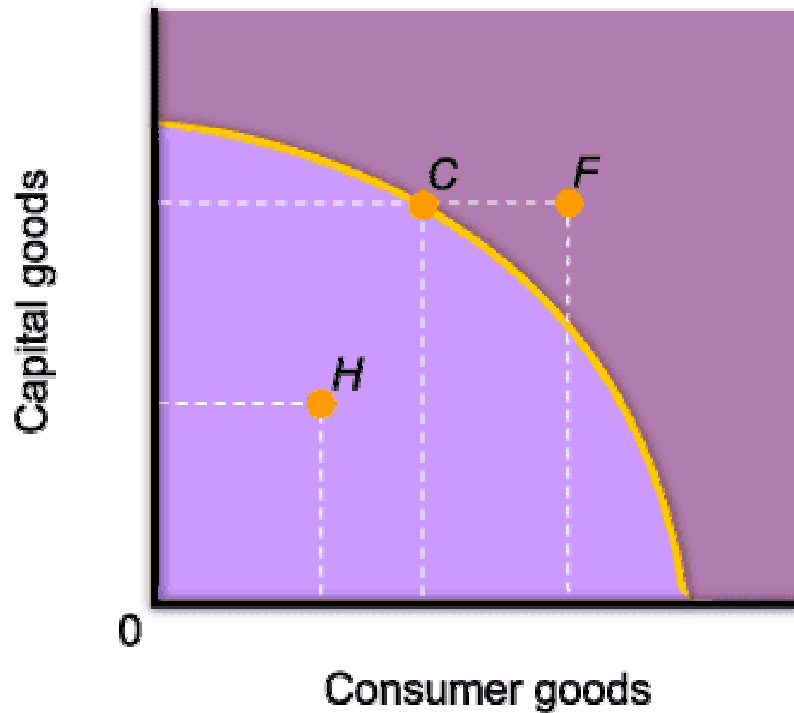
- The production possibility frontier curve has a negative slope that indicates the trade-off that a society faces between two goods.
- The slope of the ppf is also called the **marginal rate of transformation (MRT)**.

The Production Possibility Frontier



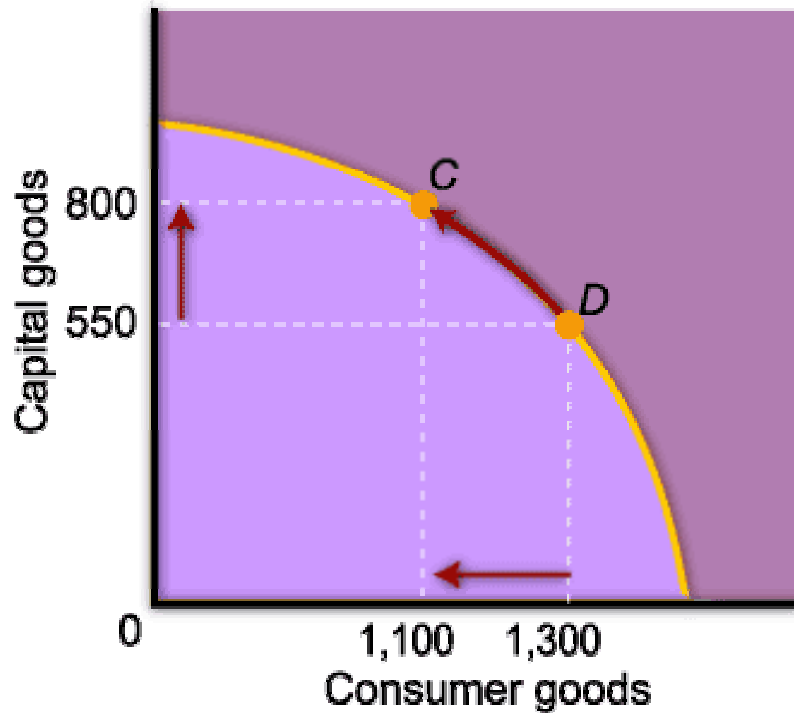
- Points inside of the curve are inefficient:
- Point H is inefficient: resources are either unemployed, or are used inefficiently.
- Point *F* is desirable because it yields more of both goods, but it is not attainable given the amount of resources available in the economy.

The Production Possibility Frontier



- Point C is one of the possible combinations of goods produced when resources are fully and efficiently employed.

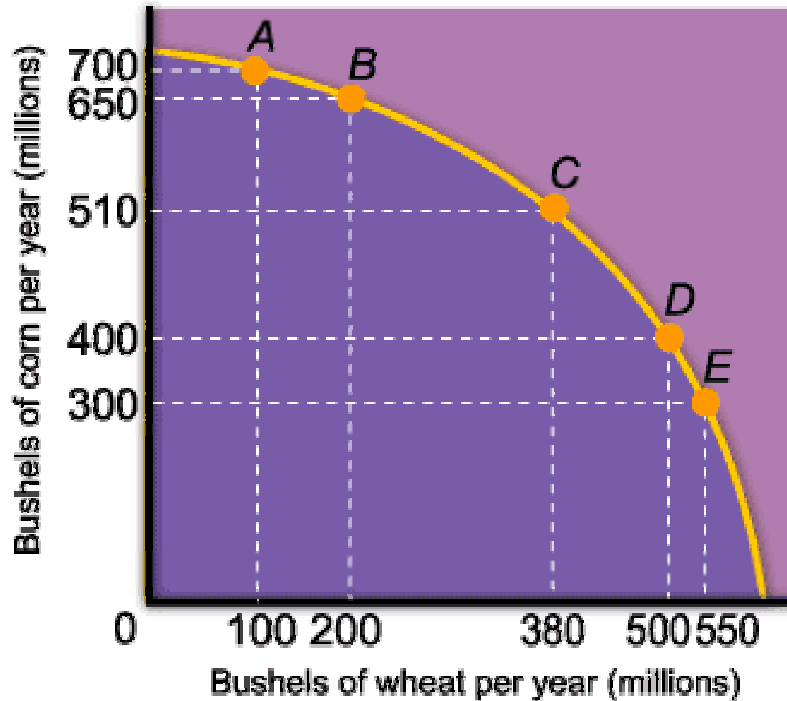
The Production Possibility Frontier



- A move along the curve illustrates the concept of opportunity cost:

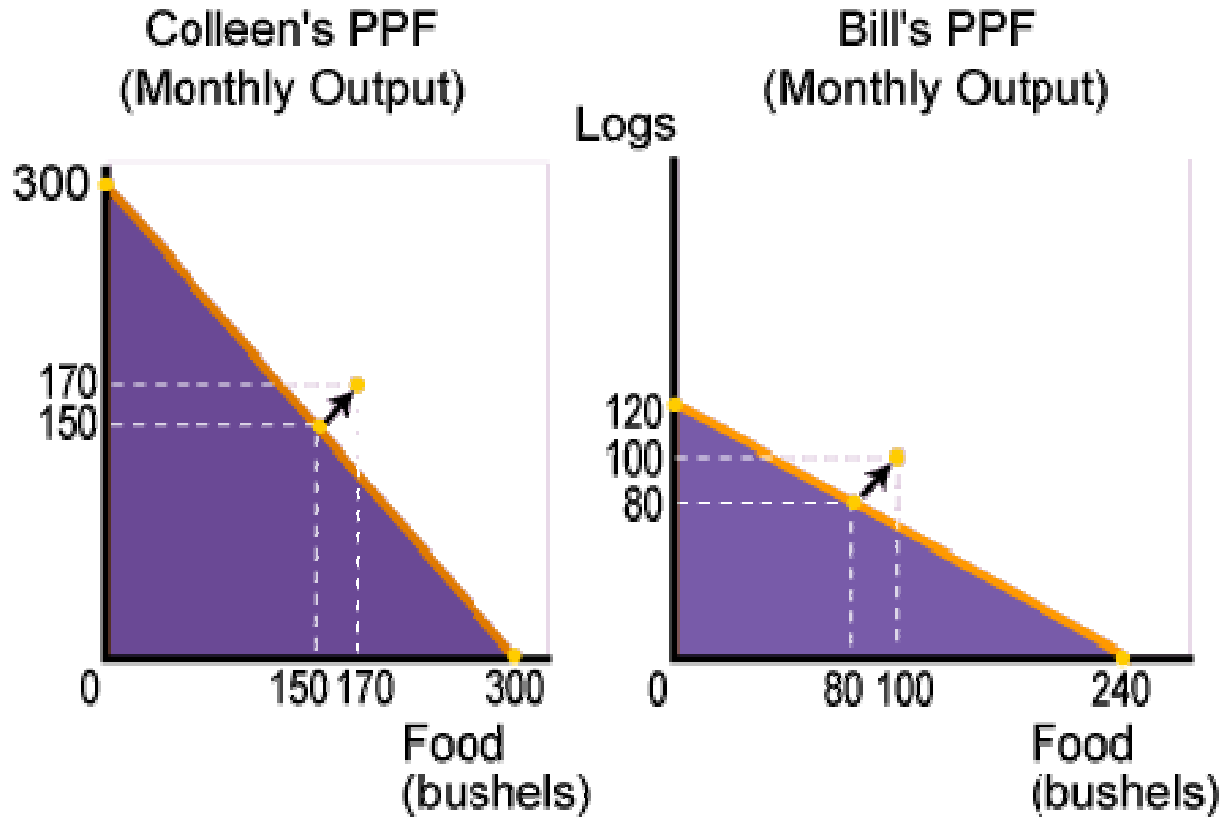
In order to increase the production of capital goods, the production of consumer goods will have to decrease.

The Law of Increasing Opportunity Cost



- The *concave* shape of the production possibility frontier curve reflects the *law of increasing opportunity cost*.
- As we increase the production of one good, we sacrifice progressively more of the other.

PPF's for Colleen and Bill



Note: remember that Colleen and Bill prefer to have equal quantities of Food and Logs.

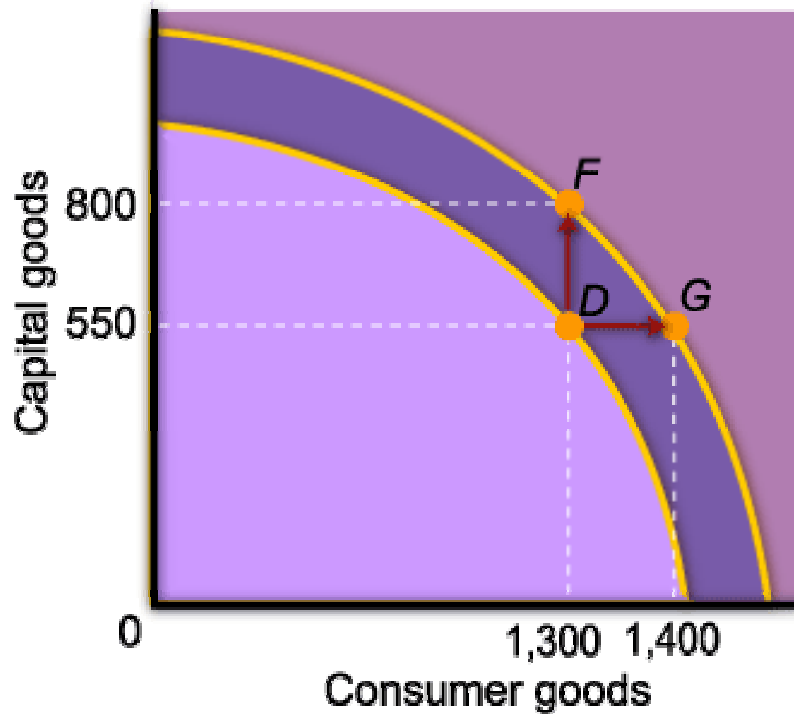
By specializing and trading, they can consume outside their PPF.

Note: when working with a PPF for an entire economy, that economy cannot consume outside its PPF. When we study trade among nations in Chapter 17, we will see how trade allows nations to consume beyond their PPF.

Economic Growth

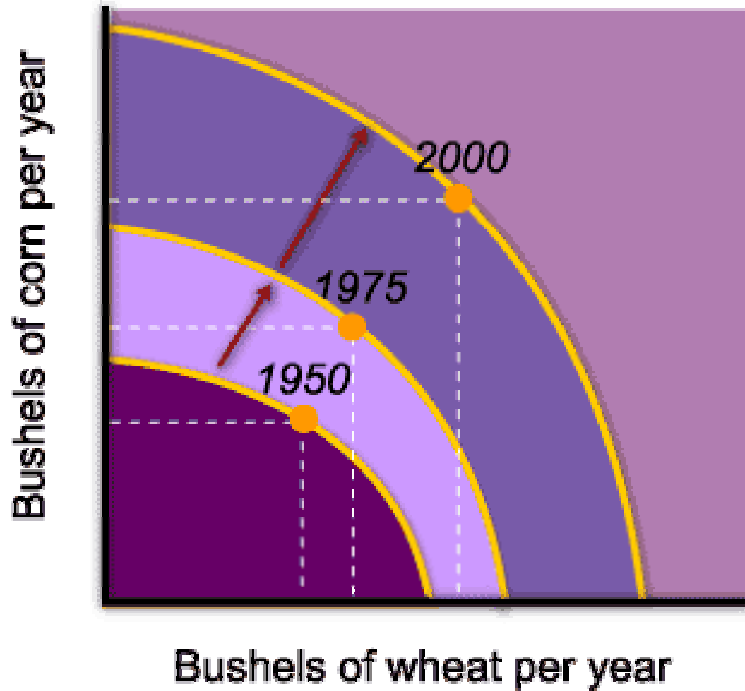
- *Economic growth* is an increase in the total output of the economy. It occurs when a society acquires new resources, or when it learns to produce more using existing resources.
- The main sources of economic growth are capital accumulation and technological advances.

Economic Growth



- Outward shifts of the curve represent *economic growth*.
- To increase the production of one good without decreasing the production of the other, the PPF curve must shift outward.
- From point D, the economy can choose any combination of output between F and G.

Economic Growth



- Not every sector of the economy grows at the same rate.
- In this historic example, productivity increases were more dramatic for corn than for wheat over the 50-year period.

The Economic Problem

- **The economic problem:** Given scarce resources, how, exactly, do large, complex societies go about answering the three basic economic questions?
- *Economic systems* are the basic arrangements made by societies to solve the economic problem. They include:
 - Command economies
 - Laissez-faire economies
 - Mixed systems

The Economic Problem

- In a *command economy*, a central government either directly or indirectly sets output targets, incomes, and prices.
- In a *laissez-faire economy*, literally from the French: “allow (them) to do,” individual people and firms pursue their own self-interests without any central direction or regulation. The central institution of a laissez-faire economy is the *free-market system*.
- A **market** is the institution through which buyers and sellers interact and engage in exchange.

Laissez-Faire Economies: The Free Market

#24

- ***Consumer sovereignty*** is the idea that consumers ultimately dictate what will be produced (or not produced) by choosing what to purchase (and what not to purchase).
- ***Free enterprise***: under a free market system, individual producers must figure out how to plan, organize, and coordinate the production of products and services.
- The ***distribution of output*** is also determined in a decentralized way. The amount that any one household gets depends on its income and wealth.
- The basic coordinating mechanism in a free market system is ***price***. Price is the amount that a product sells for per unit. It reflects what society is willing to pay.

Mixed Systems, Markets, and Governments

Markets are not perfect, and governments play a major role in all economic systems in order to:

- Minimize market inefficiencies
- Provide public goods
- Redistribute income
- Stabilize the macroeconomy
 - Promote low levels of unemployment
 - Promote low levels of inflation