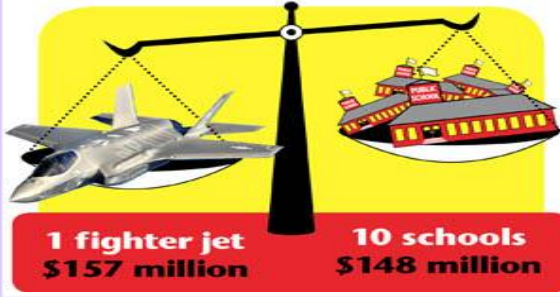


## Chapter 2 Lecture - Trade-offs, Comparative Advantage, and the Market System



## Scarcity and Trade-offs

Households, firms and governments continually face decisions about how best to use their scarce resources.

**Remember the definition of Scarcity:** a situation in which unlimited wants exceed the limited resources available to fulfill those wants.

Scarcity requires trade-offs. Economics teaches us tools to help make good trade-offs.

*Example: When deciding how to use its scarce workers and machinery, if Tesla wants to produce more Model X SUVs, those resources will not be available to produce Model S sedans.*

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## Production Possibilities Frontiers and Opportunity Costs

We use a production possibilities frontier to analyze opportunity costs and trade-offs.

A **production possibilities frontier or curve (PPF or PPC)** is a curve showing the maximum attainable combinations of two goods that can be produced with available resources and current technology.

Question: Is the PPF a positive or normative tool?

Answer: Positive; it shows "what is", not "what should be".

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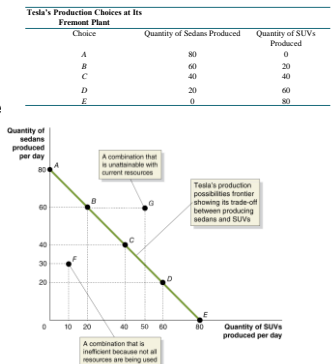
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## Figure 2.1 Tesla's Production Possibilities Frontier (1 of 2)

Tesla can produce sedans and/or SUVs.

If it wants to produce more sedans, it must reduce the number of SUVs.

- Points on the PPF are attainable for Tesla.
- Points below the curve are inefficient.
- Points above the curve are unattainable with current resources.



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# Chapter 2 Lecture - Trade-offs, Comparative Advantage, and the Market System

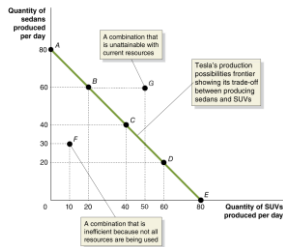
**Figure 2.1 Tesla's Production Possibilities Frontier (2 of 2)**

To produce 20 more SUVs (e.g. moving from A to B), Tesla must produce 20 fewer sedans.

- The 20 fewer sedans is the *opportunity cost* of producing 20 more SUVs.

**Opportunity cost:** The highest-valued alternative that must be given up to engage in an activity.

Choice	Quantity of Sedans Produced	Quantity of SUVs Produced
A	80	0
B	60	20
C	40	40
D	20	60
E	0	80



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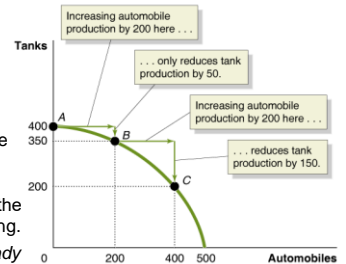
**Figure 2.2 Increasing Marginal Opportunity Costs**

On the previous slide, opportunity costs were constant.

But opportunity costs are often increasing.

Why? Some resources are better suited to one task than another. The first resources to "switch" are the one best suited to switching.

*The more resources already devoted to an activity, the smaller the payoff to devoting additional resources to that activity.*



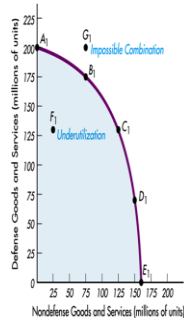
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## Guns versus Butter

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

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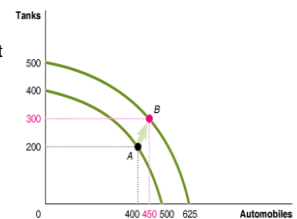
2-7

**Figure 2.3 Economic Growth (panel (a))**

As more economic resources become available, the economy can move from point A to point B, producing more tanks and more automobiles.

Shifts in the production possibilities frontier represent *economic growth*.

**Economic growth:** the ability of the economy to increase the production of goods and services.



(a) Shifting out the production possibilities frontier

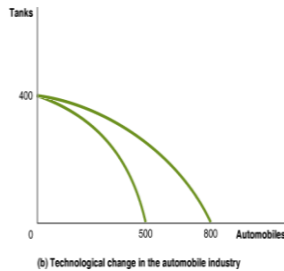
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# Chapter 2 Lecture - Trade-offs, Comparative Advantage, and the Market System

Figure 2.3 Economic Growth (panel (b))

This panel shows technological improvement in the automobile industry. The quantity of tanks that can be produced remains unchanged. As in the previous slide, many previously unattainable combinations are now attainable.



(b) Technological change in the automobile industry

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## The Market System

We explain the basics of how a market system works.

A **market** is a group of buyers and sellers of a good or service, and the institution or arrangement by which they come together to trade.

Two key groups participate in the modern economy:

**Households** consist of individuals who provide the **factors of production**: labor, capital, natural resources, and other inputs used to make goods and services.

- Households receive payments for these factors by selling them to firms in **factor markets**.

**Firms** supply goods and services to **product markets**; households buy these products from the firms.

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Figure 2.6 The Circular-Flow Diagram (1 of 2)

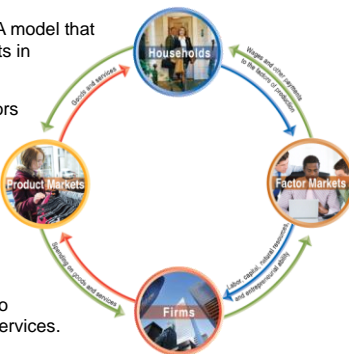
**Circular-flow diagram:** A model that illustrates how participants in markets are linked.

Households provide factors of production to firms.

Firms provide goods and services to households.

Firms pay money to households for the factors of production.

Households pay money to firms for the goods and services.



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Figure 2.6 The Circular-Flow Diagram (2 of 2)

Like all economic models, the circular flow diagram is a simplified version of reality:

- No government
- No financial system
- No foreign buyers and sellers of goods

We will explore these sectors in later chapters.



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# Chapter 2 Lecture - Trade-offs, Comparative Advantage, and the Market System

## The Role of the Entrepreneur Further Examined

An **entrepreneur** is someone who operates a business, bringing together the factors of production—labor, capital, and natural resources—to produce goods and services.

The best entrepreneurs create products that consumers never even knew they wanted.

*"If I had asked my customers what they wanted, they would have said a faster horse."*

- Henry Ford

Entrepreneurs make a vital contribution to economic growth, often with considerable personal risk and sacrifice.

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**Table 2.3 Important Products Introduced by Entrepreneurs at Small Firms**

Entrepreneurs make a vital contribution to economic growth by

- Responding to consumer demand
- Introducing new products

Government policies encouraging entrepreneurship are likely to increase economic growth and raise standards of living.

Product	Inventor
Air conditioning	William Haviland Carrier
Airplane	Orville and Wilbur Wright
Automobile, mass produced	Henry Ford
Automobile windshield wiper	Mary Anderson
Biomagnetic Imaging	Raymond Damadian
Biosynthetic insulin	Herbert Boyer
Vacuum tube (television)	Philo Farnsworth
Zipper	Gideon Sundback

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## The Legal Basis of a Successful Market System

In a free market, government does not restrict how firms produce and sell goods, or how they employ factors of production.

However governments must provide a sound *legal environment* that will allow the market system to succeed, including:

### Protection of private property

- When criminals can take your wages or profits, households and firms have little incentive to work hard.
- **Property rights:** the rights individuals or firms have to the exclusive use of their property, including the right to buy or sell it.

### Enforcement of contracts and property rights

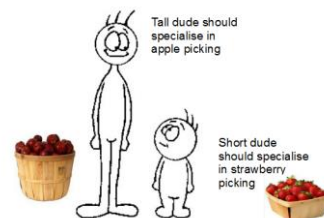
- Important for transactions across time to occur.
- An independent court system is critical for this.

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## Absolute and Comparative Advantage

**REFER TO CHAPTER 2 LECTURE B - ABSOLUTE AND COMPARATIVE ADVANTAGE**



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