Chapter 2

The Economic Problem and Related Concepts

- Scarcity and the Science of Economics
- Basic Economic Concepts
- Economic Choices and Decision Making

First — Scarcity and the Science of Economics

Economics is the study of how people try to satisfy seemingly **unlimited** and competing **wants** through the careful use of **relatively scarce resources**.

1 Scarcity

Scarcity is the condition that results from ***society not having enough resources to produce all the things people would like to have***.

Lecture Notes

2 Needs and Wants

A Needs

A need is **a basic requirement for survival**, such as food, clothing, and shelter.

B Wants

A want is simply something we would like to have but is **not necessary for survival**.

3 Three Basic Questions

Because we live in a world of relatively scarce resources, we have to make careful economic choices about the way we use these resources.

Scarcity forces every society to answer the basic questions of **WHAT**, **HOW**, and **FOR WHOM** to produce.

A **WHAT to Produce**

The first question is **WHAT** to produce. For example, should a society ***direct most of its resources to the production of military equipment or to other items such as food, clothing, or housing***?

B **HOW to Produce**

A second question is **HOW** to produce. Should factory owners use automated production methods that require ***more machines and fewer workers***, or should they use ***fewer machines and more workers?***

If a community has many unemployed people, using more workers might be better. On the other hand, in countries where machinery is widely available, automation can often lower production costs.

C **FOR WHOM to Produce**

The third question is **<u>FOR WHOM</u>** to produce. After a society decides WHAT and HOW to produce, it must decide ***who will receive the things produced***.

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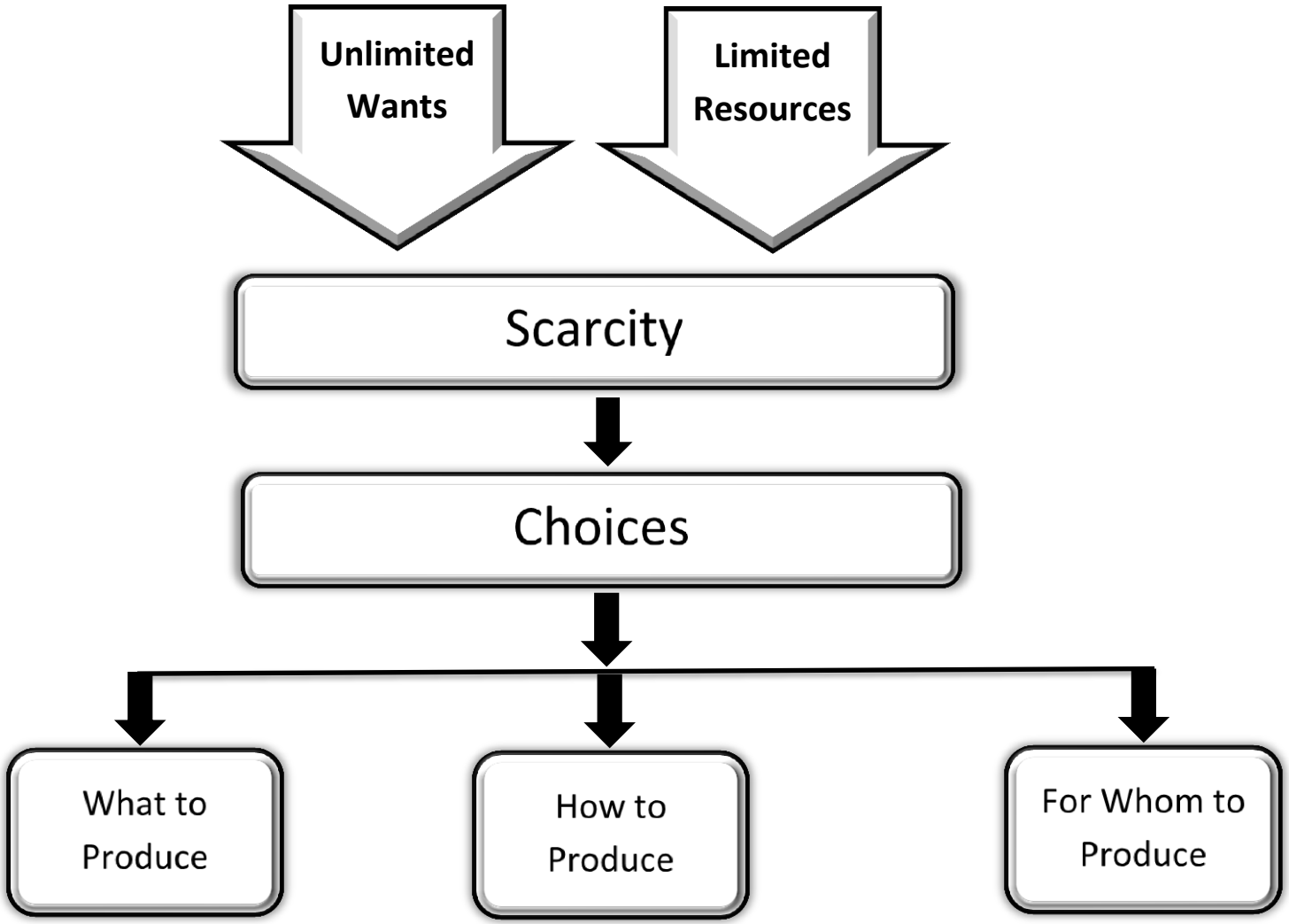

Figure (1): Scarcity & choices

4 The Factors of Production

People cannot satisfy all their wants and needs because productive resources are scarce. The factors of production, or resources required to produce the things we would like to have, are **land**, **capital**, **labor**, and **entrepreneurs**.

A Land

In economics, land refers to the **"gifts of nature," or natural resources not created by people**. "Land" includes deserts, fertile fields, forests, mineral deposits, livestock, sunshine, and the climate necessary to grow crops.

B **Capital**

Capital, sometimes called capital goods, the **tools**, **equipment**, **machinery**, and **factories** used in the production of goods and services.

C **Labor**

people with all their **efforts**, **abilities**, and **skills**. This category includes all people except a unique group of individuals called entrepreneurs, whom we single out because of their special role in the economy.

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D Entrepreneurs

An entrepreneur, **a risk-taker** in search of profits who does something new with existing resources. Entrepreneurs are often thought of as being the **driving force** in an economy because they are the people who start new businesses or bring new products to market.

Note

Everything we make requires the four factors of production. The **desks and lab equipment** used in schools are **capital goods**. **Teachers** and other **employees** provide the **labor**. **Land** includes the **property** where the school is located as well as the **iron** and **timber** used to make the building. Finally, **entrepreneurs** are needed to organize the other three factors and make sure that everything gets done.

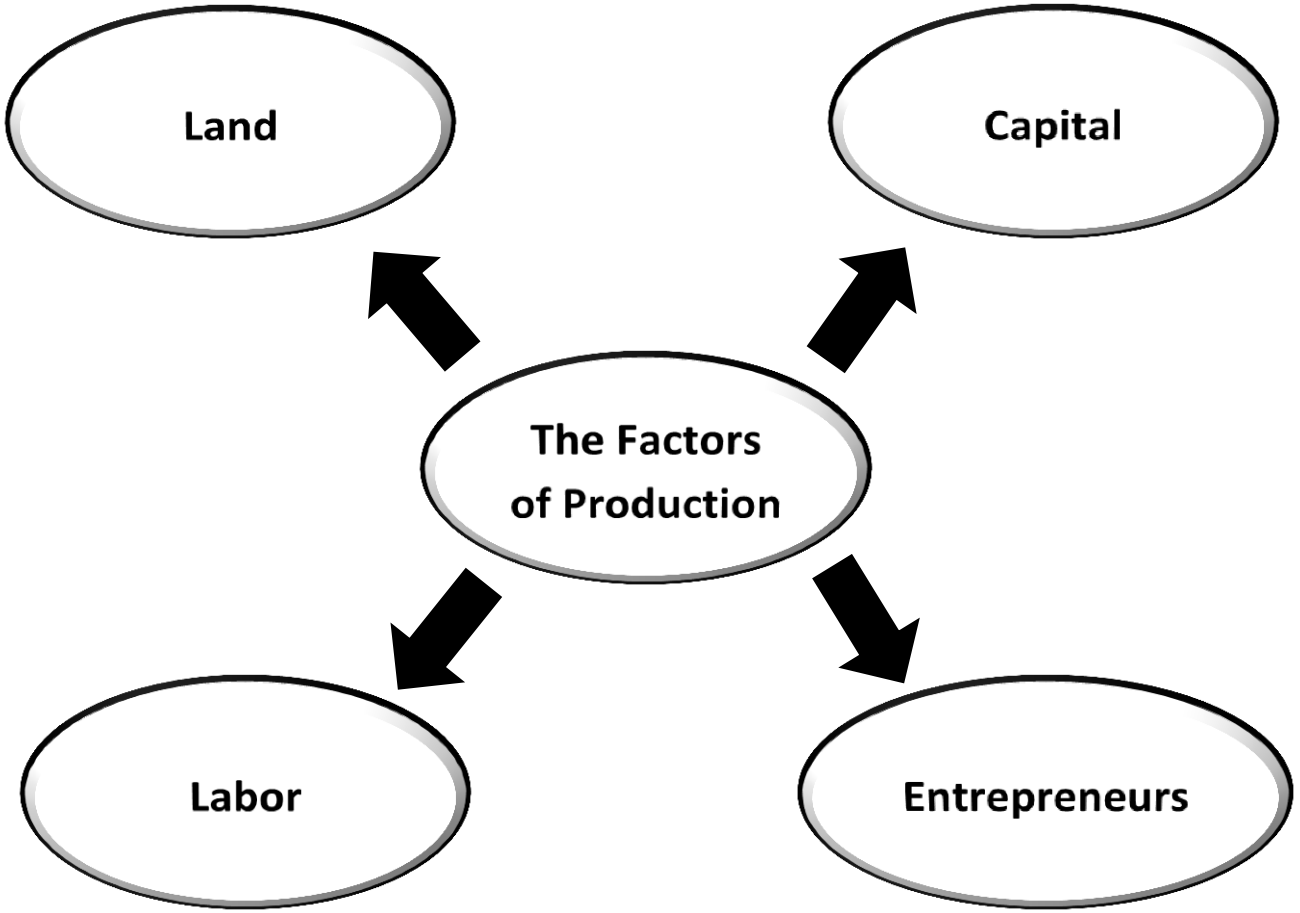

Figure (2): Factors of production

5 The Scope of Economics

Economics is the ***study of human efforts to satisfy seemingly unlimited and competing wants through the careful use of relatively scarce resources***. Economics is also a **social science** because it deals with the behavior of people as they deal with this basic issue. The four key elements to this study are description, analysis, explanation, and prediction.

A Description

One part of economics **describes economic activity**. For example, gross domestic product (GDP)—the dollar value of all final goods and services produced within a country's borders in a 12-month period. Economics also **describes jobs, prices, trade, taxes, and government spending**.

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B Analysis

Economics **<u>analyzes the economic activity that it describes</u>**. Why, for example, are the prices of some items higher than others? Why do some people earn higher incomes than others? How do taxes affect people's desire to work and save?

C Explanation

After economists analyze a problem and understand why and how things work, they need to communicate this knowledge to others. ***If we all have a common understanding of the way our economy works, some economic problems will be easier to address or even fix in the future***. When it comes to GDP, you will soon discover that economists spend much of their time explaining why the measure is, or is not, performing in the manner that is expected.

D Prediction

Finally, **economics is concerned with prediction**. For example, we may want to know whether our incomes will rise or fall in the near future. Because economics is the study of both what is happening and what tends to happen, it can help predict what may happen in the future, including the

Second Basic Economic Concepts

1 Goods, Services, and Consumers

A Goods

a good—a useful, **<u>tangible item</u>**, such as a book, car, or compact disc player, that satisfies a want.

When ***manufactured goods are used to produce other goods and services***, they are called **<u>capital goods</u>**.

Goods intended for final use by individuals are **<u>consumer goods</u>**.

Any good that lasts three years or more when used on a regular basis is called a **durable good**. Durable goods include both capital goods, such as robot welders, and consumer goods, such as automobiles.

Any good that lasts for fewer than three years when used on a regular basis is called a **nondurable good** . Food, writing paper, and most clothing items are examples of nondurable goods.

B **Services**

Work that is performed for someone. Services include **haircuts**, **home repairs**, and forms of entertainment such as **concerts**. They also include the work that **doctors**, **lawyers**, and **teachers** perform.

Note

The difference between a good and a service is that a **good is tangible**, or something that can be touched, while **a service is not**.

C **Consumers**

Consumers are the ***people who use goods and services to satisfy their wants and needs***.

Lecture Notes

2 Value, Utility, and Wealth

A Value

Value refers to ***monetary worth of a good or service*** as determined by the market.

The Paradox of Value

Adam Smith observed that some necessities, such as water, had a very low monetary value. On the other hand, some non-necessities, such as diamonds, had a very high value. Smith called this contradiction the paradox of value.

Scarcity is necessary for something to have value. Still, scarcity by itself could not fully explain how value is determined.

Lecture Notes

B **Utility**

Utility is ***ability or capacity of a good or service to be useful and give satisfaction to someone***.

Note

For something to have monetary value, economists decided, it must be **scarce and have utility**. This is the solution to the paradox of value. Diamonds are scarce and have utility, thus they possess a value that can be stated in monetary terms. Water has utility but is not scarce enough in most places to give it much value.

C **Wealth**

Wealth is ***sum of tangible economic goods*** that are scarce, useful, and transferable from one person to another. ***A nation's wealth includes Natural resources, factories, stores, houses, motels, theaters, furniture, clothing, books, highways***,

3 The Circular Flow of Economic Activity

The wealth that an economy generates is made possible by the circular flow of economic activity. The key feature of this circular flow is the ***market***.

A Market

***a location or other mechanism that allows buyers and sellers to exchange a specific product*.** Markets may be local, national, or global—and they can even exist in cyberspace.

B **Factor Markets**

Market where the ***factors of production*** are bought and sold.

Entrepreneurs hire labor for **wages and salaries**, acquire land in return for **rent**, and borrow money in return for **interest**.

C **Product markets**

Market where ***goods and services*** are bought and sold

The wages and salaries that individuals receive from businesses in the factor markets returns to businesses in the product markets.

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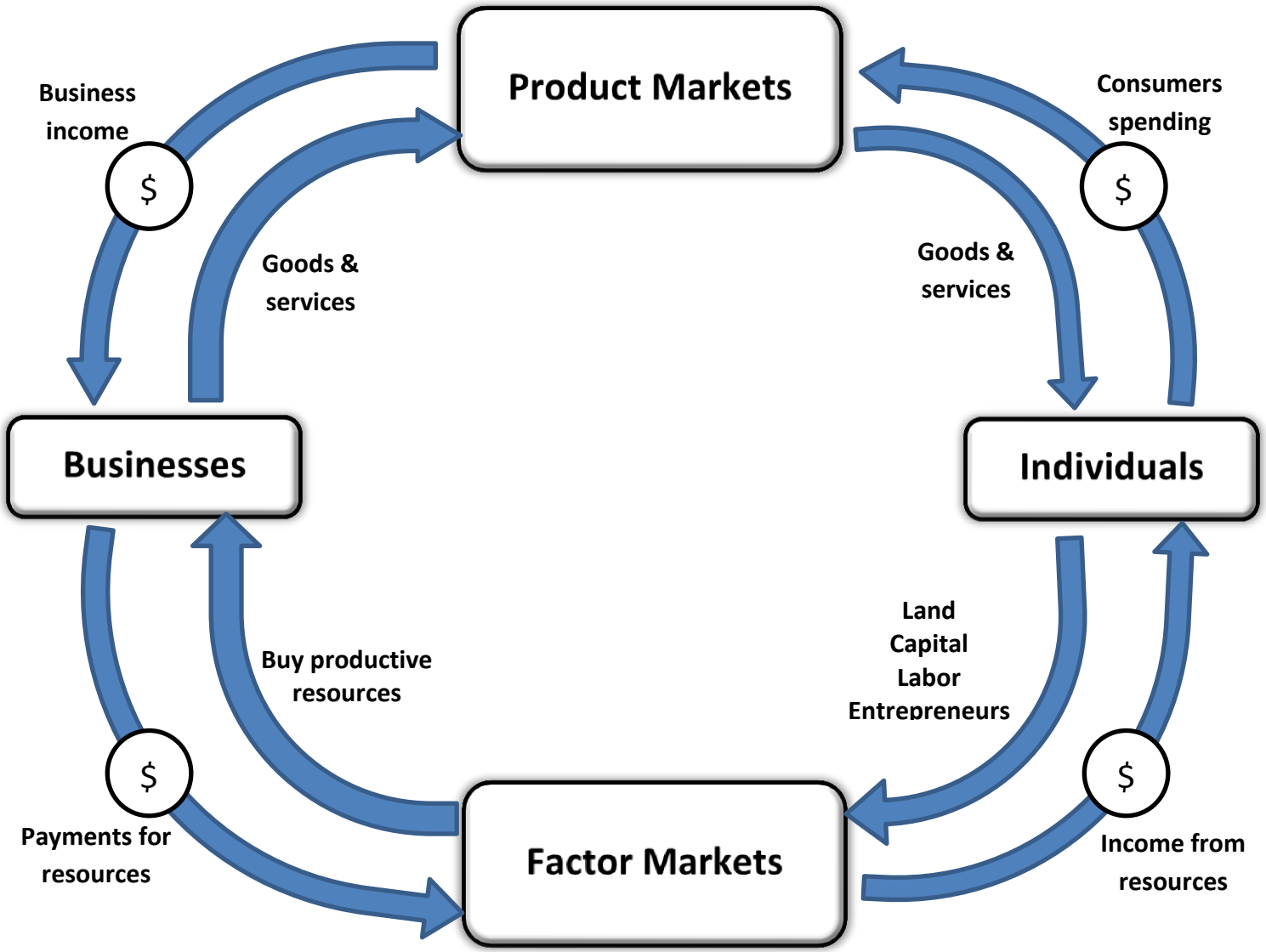


Figure (3): The circular flow model

Lecture Notes

4 Productivity and Economic Growth

A Economic Growth

<u>Economic growth occurs when a nation's total output of goods and services increases over time</u>. This means that the circular flow becomes larger, with more factors of production, goods, and services flowing in one direction and more payments in the opposite direction.

Productivity is the most important factor contributing to economic growth.

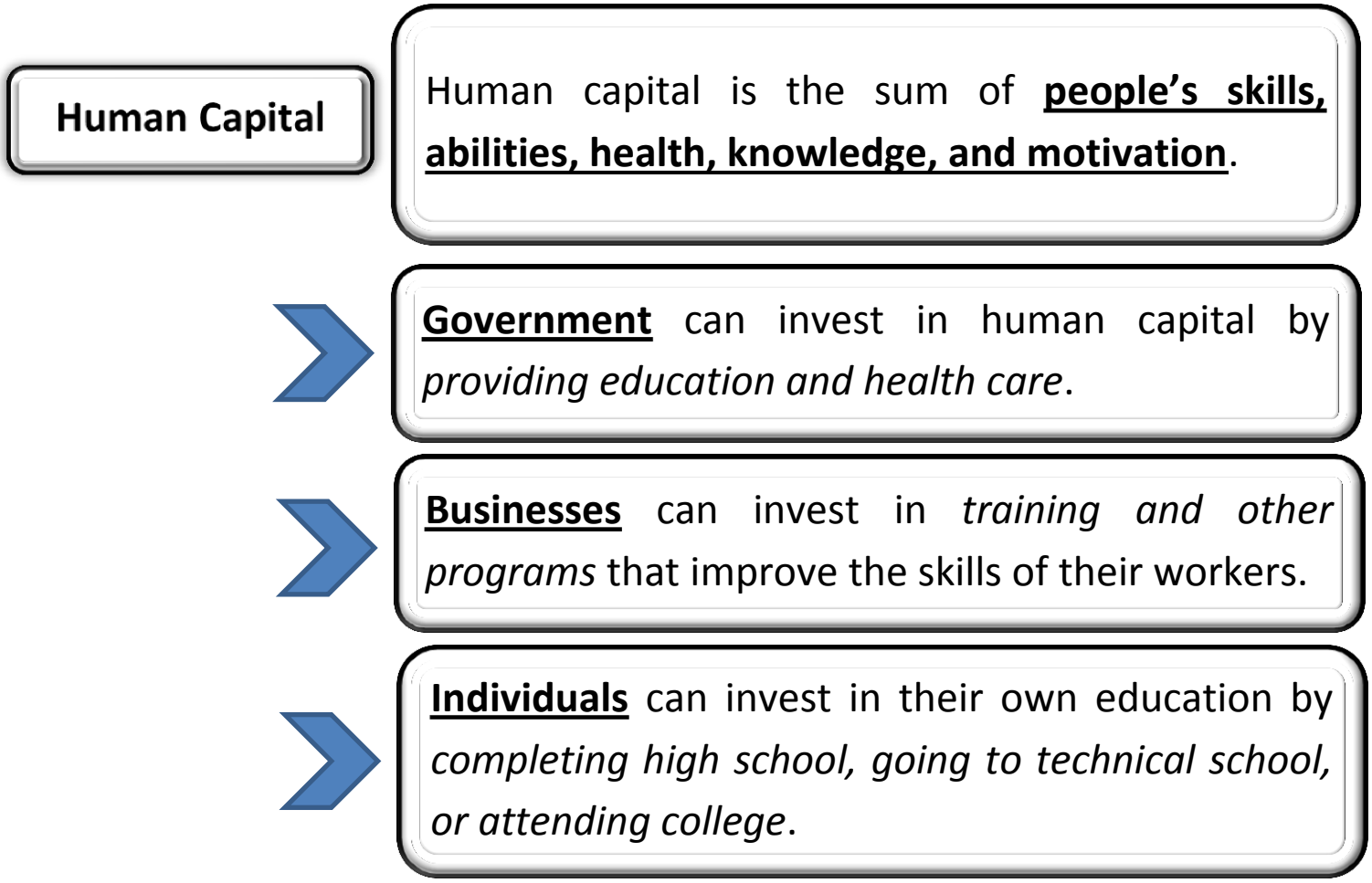
B Productivity

Productivity is a measure of the amount of goods and services produced with a given amount of resources in a specific period of time.

Productivity goes up whenever more can be produced with the same amount of resources.

C Investing in Human Capital

A major contribution to productivity comes from investments in **human capital**.


Human Capital
Human capital is the sum of people's skills, abilities, health, knowledge, and motivation.
Government can invest in human capital by providing education and health care.
Businesses can invest in training and other programs that improve the skills of their workers.
Individuals can invest in their own education by completing high school, going to technical school, or attending college.

Lecture Notes

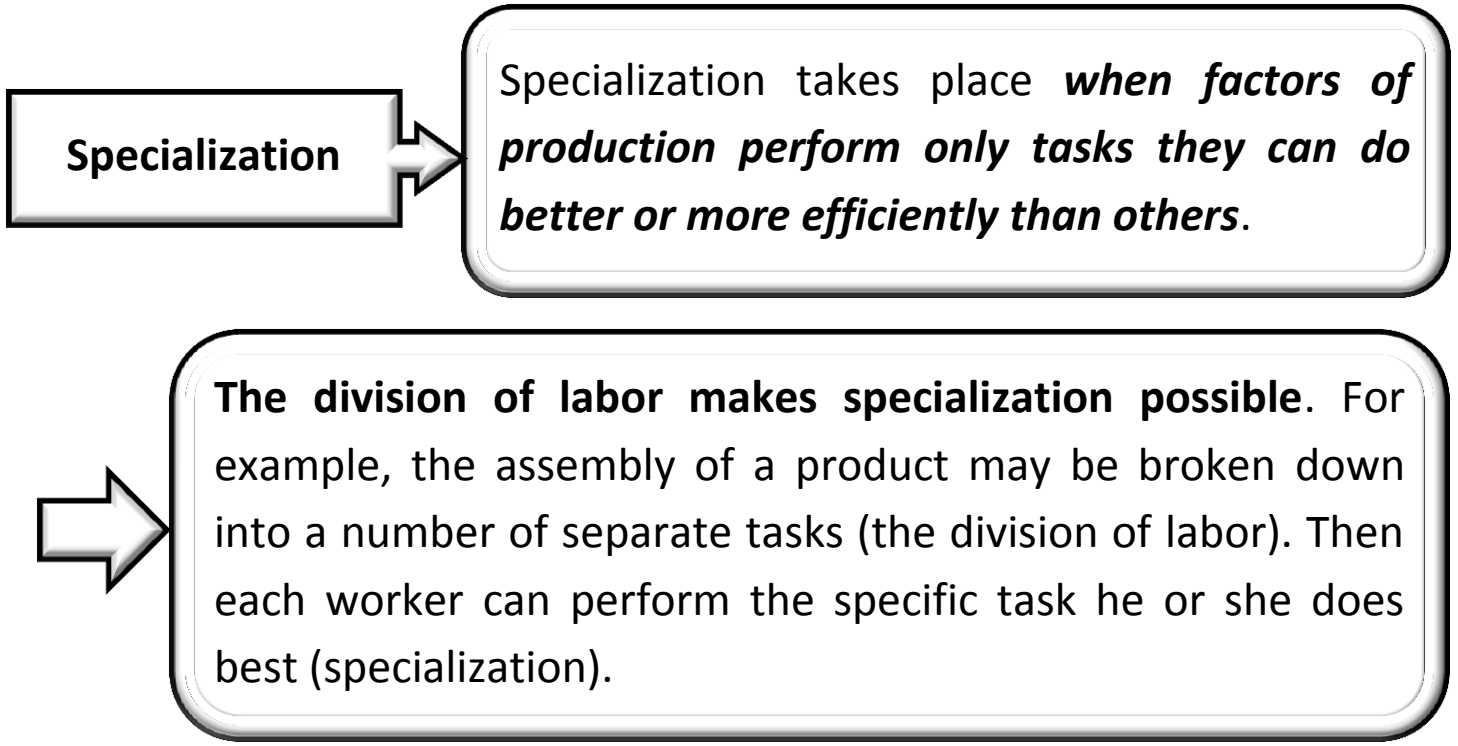
D Division of Labor and Specialization

Division of labor and specialization can **improve productivity.**

Division of Labor

Division of labor is **a way of organizing work** so that each individual worker completes a separate part of the work.

In most cases, a worker who performs a few tasks many times a day is likely to be more proficient than a worker who performs many tasks in the same period.


Specialization
Specialization takes place *when factors of production perform only tasks they can do better or more efficiently than others*.
The division of labor makes specialization possible. For example, the assembly of a product may be broken down into a number of separate tasks (the division of labor). Then each worker can perform the specific task he or she does best (specialization).

E Economic Interdependence

Economic interdependence is ***mutual dependency of one person's, firm's, or region's economic activities on another's.***

This means that **we rely on others, and others rely on us**, to provide most of the goods and services we consume. As a result, events in one part of the world often have a dramatic impact elsewhere.

Lecture Notes

Third — Economic Choices and Decision Making

1 Trade-Offs and Opportunity Cost

Economic choices involve ***trade-offs*** and the careful evaluation of ***opportunity costs***.

A Trade-Offs

Every decision we make has its trade-offs, or alternative choices. Trade-off is ***alternative that is available whenever a choice is to be made***.

Lecture Notes

B Opportunity Cost

People often think of cost in terms of **dollars and cents**. To an economist, however, cost means more than the price tag on a good or service. Instead, **economists** think broadly in terms of **opportunity cost**.

opportunity cost is the cost of the next-best alternative use of money, time, or resources when making a choice.

opportunity cost is amount of good or goods that we must sacrificed to get a unit of another good.

Lecture Notes

2 Production Possibilities

To illustrate trade-off and opportunity cost, economists use the **production possibilities frontier.**

Production possibilities frontier is a diagram representing the maximum combinations of goods and/or services an economy can produce when all productive resources are fully employed.

Suppose society produces just two goods (DVDs and Cell phones). All the land, labor, capital, and entrepreneurship available gets used to produces these two goods. Then, **production possibilities frontier** represented in figure (4).

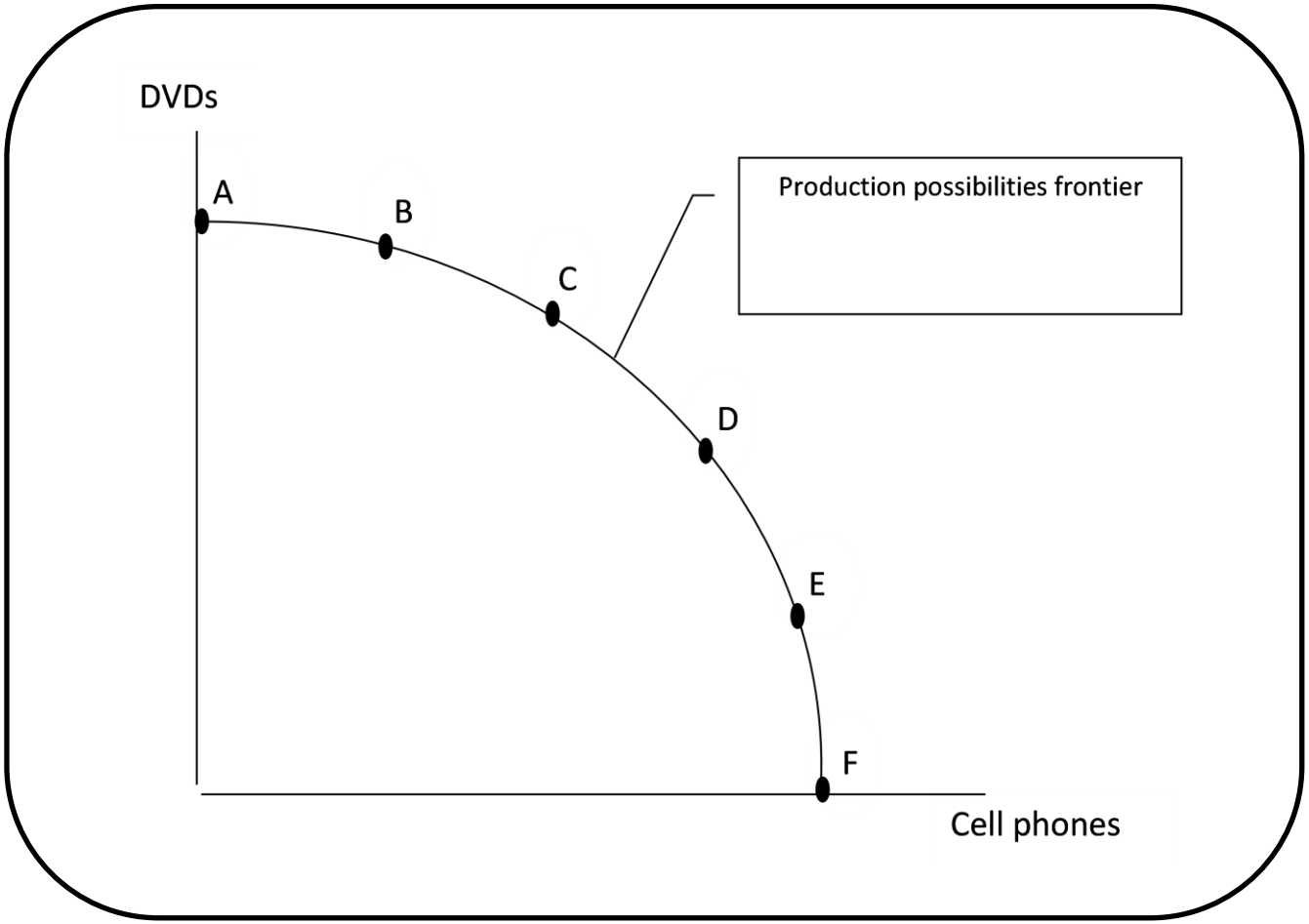
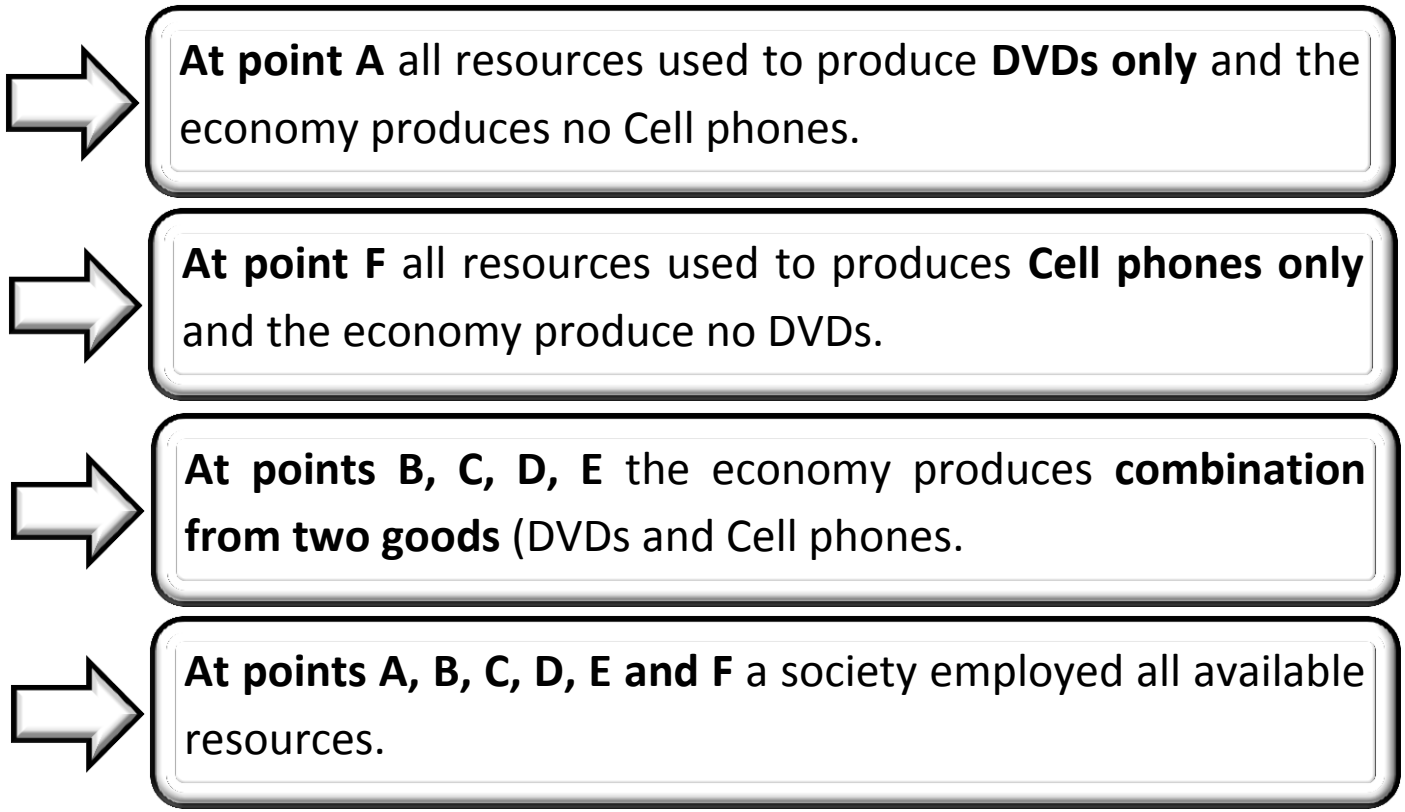


Figure (4)

Production possibilities frontier


At point A all resources used to produce **DVDs only** and the economy produces no Cell phones.
At point F all resources used to produces **Cell phones only** and the economy produce no DVDs.
At points B, C, D, E the economy produces **combination from two goods** (DVDs and Cell phones.
At points A, B, C, D, E and F a society employed all available resources.

Lecture Notes

Note

The PPF puts three features of production possibilities in sharp focus:

- Attainable and unattainable combinations.
- Efficient and inefficient production
- Tradeoff and free lunches

A **Attainable and unattainable combinations**

PPF separates attainable combinations from unattainable ones. The economy can produce at any point inside the PPF or at any point on the frontier. Any point outside the production possibilities frontier, such as point G is unattainable because there is not enough resources to produce it. (look at figure 5)

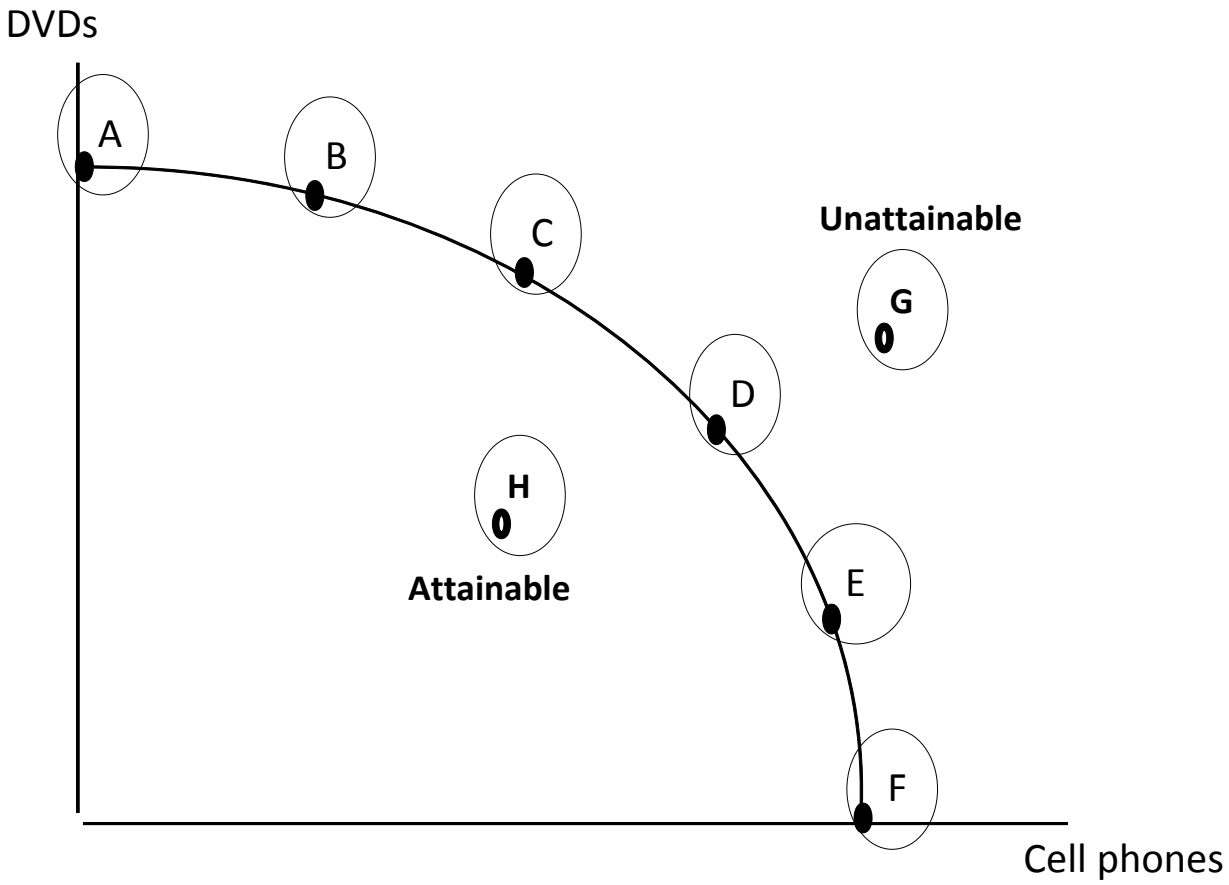


Figure (5)

Attainable and unattainable combinations

B Efficient and inefficient production

Production efficiency is a situation in which we cannot produce more of one good or service without producing less of something else. All resources full employed. From previous figures (4, 5), A, B, C, D, E, and F are efficient production, and H is inefficient production.

C Tradeoff and free lunches

Trade-off is an exchange-giving up one thing to get something else. In the following figure, if the economy produce at point E and people want to produce more DVDs, they must forgo some Cell phones. In the move from point E to point D, people tradeoff cell phones for DVDs. Free lunch is a gift-getting something without giving up something else. Look at figure (6).

Lecture Notes

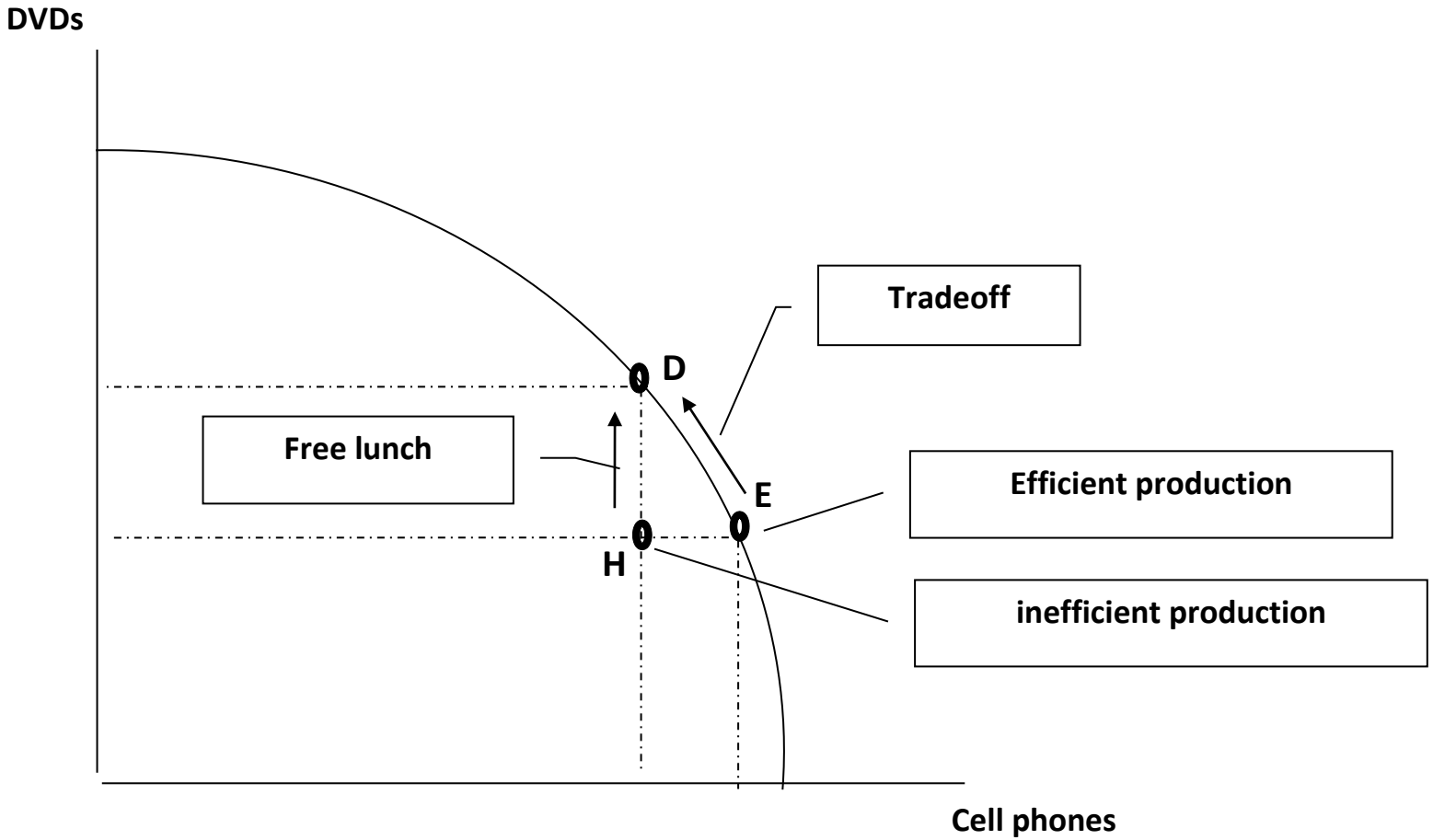


Figure (6)

Tradeoff and free lunches & Efficient and inefficient production

Lecture Notes

From figure (3)

When production is efficient (on the PPF) the economy faces a tradeoff. To move from point E to point D requires that some cell phones be given up for more DVDs.

When production is inefficient (inside the PPF) there is a free lunch. To move from point H to point D does not involve a tradeoff.

Note

Because we are rational, we might sometimes get a free lunch, but we almost always face a tradeoff.

Opportunity cost from PPF

Opportunity cost is amount of item units that must be forgone to obtain an additional unit from another item. In our previous example (DVDS and Cell phones), opportunity cost of cell phone is the number of DVDs forgone to get an additional cell phone. It is calculated as the number of DVDs forgone divided by the number of cell phones gained.

Example:

Cell phones (millions)	0	1	2	3	4	5
DVDs (millions)	15	14	12	9	5	0
possibilities	A	B	C	D	E	F

Movement along PPF	Decrease in quantity of DVDs	Increase in quantity of cell phones	Decrease in DVDs/increase in cell phones
A to B	1 million	1 million	1 DVD per phone
B to C	2 million	1 million	2 DVD per phone
C to D	3 million	1 million	3 DVD per phone
D to E	4 million	1 million	4 DVD per phone
E to F	5 million	1 million	5 DVD per phone

Table (1)
Opportunity cost

The previous table and the next figure show increasing opportunity cost. The opportunity cost of cell phones increase as the quantity of cell phones produced increase.

Lecture Notes

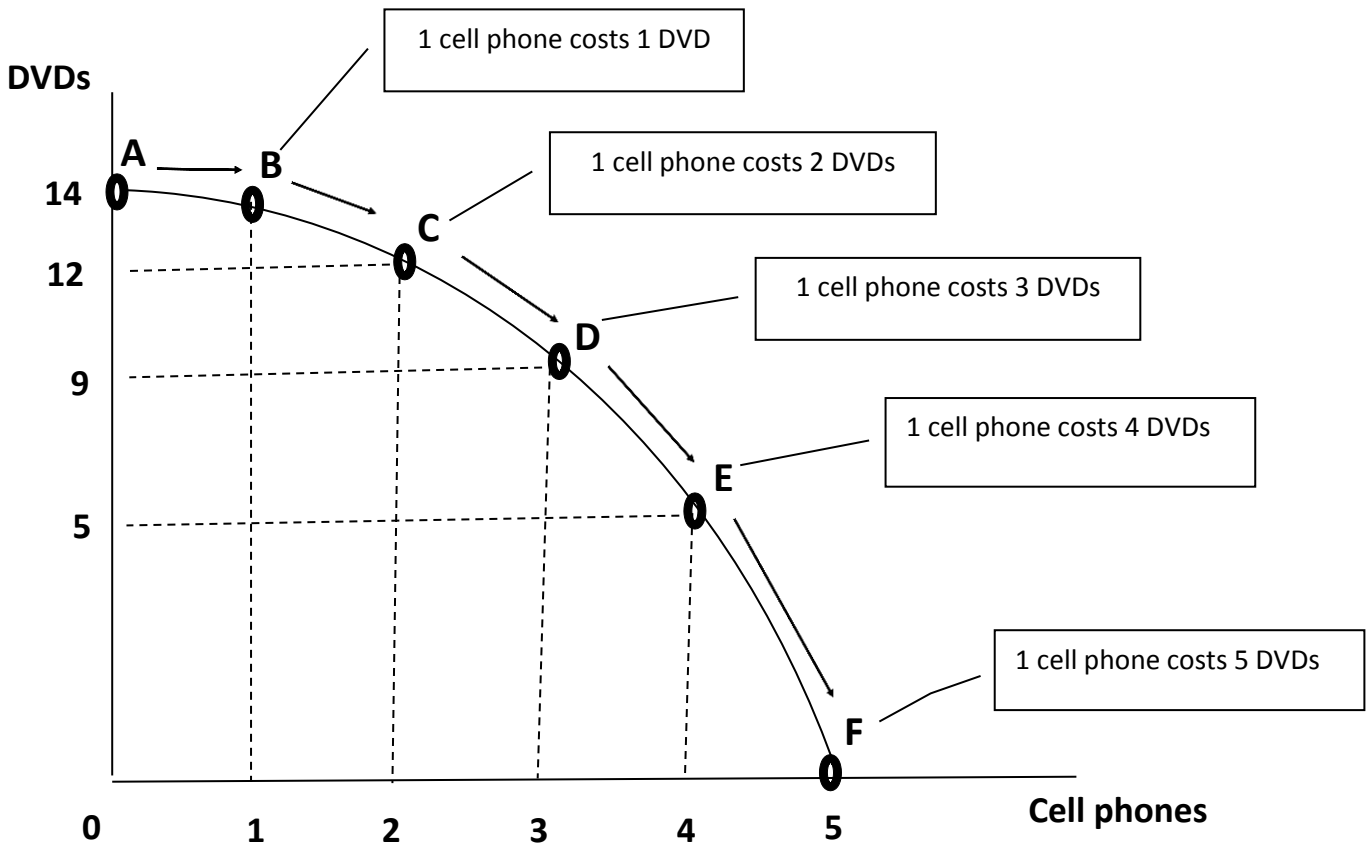


Figure (7)

Opportunity Cost

Lecture Notes

Economic growth from PPF

Economic growth is the sustained expansion of production possibilities. Our economy grows when we **develop better technologies** for producing goods and services; **improve the quality of labor** by **education**, on-the-job **training**, and work **experience**; and **get more machines** to help us produce.

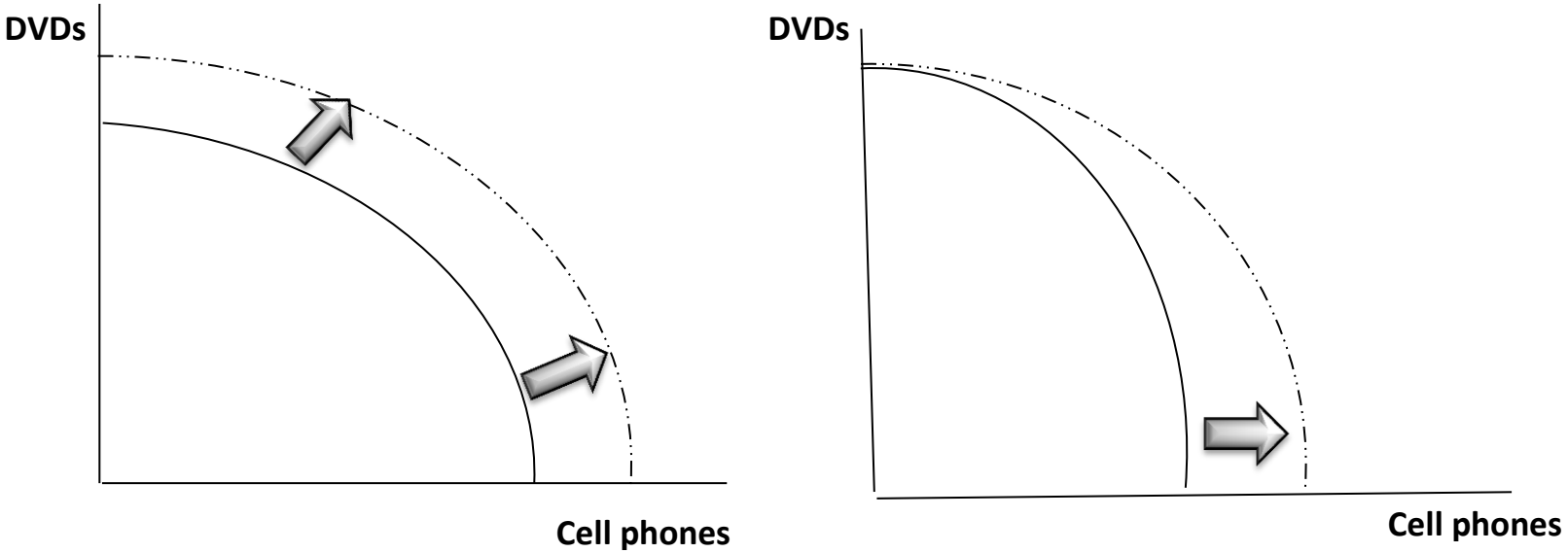


Figure (8): Economic growth using PPF

Lecture Notes