

Handout 1

(Chapters 1 & 2, CFO, 10th ed.)

We begin with a very broad definition of economics;

Economics is the social science that studies the production, distribution, and consumption of goods and services.

Or another definition

Economics is the study of how individuals and societies choose to use the scarce (limited) resources.

The key words in this definition are choice and scarcity.

The starting point is the assumption that *Human wants are unlimited, but resources are limited*

In large measure, economics is the study of how people make choices to satisfy their wants.

The Scope of Economics

There are two major divisions of economics:

Microeconomics

It studies how **individuals**, **households**, and **firms** make decisions to allocate limited resources, typically in markets where goods or services are being bought and sold.

It is trying to understand what determines the output of a single **firm** or **industry** or the consumption patterns of a single **household (HH)** or group of households,

Firms' choices about what to produce and how much to charge, and households' choices about what and how much to buy help to explain why the economy produces the things.

Another big question addressed by microeconomics is *who gets the things that are produced.*

Macroeconomics

It looks at the economy as a whole. It examines the factors that determine

- **national output,**
- **employment,**
- **income**
- **overall price level and**
- **national product on a national scale**

For example

Microeconomics is concerned with *household income*; macroeconomics deals with *national income*.

Whereas microeconomics focuses on individual product prices and relative prices, macroeconomics looks at the overall price level and how quickly (or slowly) it is rising (or falling).

Microeconomics questions how many people will be hired (or fired) this year in a particular industry or in a certain geographic area, and focuses on the factors that determine how much labor a firm or an industry will hire. Macroeconomics deals with *aggregate* employment and unemployment: how many jobs exist in the economy as a whole, and how many people who are willing to work are not able to find work.

To summarize:

Microeconomics looks at the individual unit- **the household, the firm, the industry**. It sees and examines the "**trees**." Macroeconomics looks at the whole, the aggregate. It sees and analyzes the "**forest**."

Economics asks and attempts to answer two kinds of questions, positive and normative.

For example

What is produced?	These questions are related to positive economics (PE)
How is it produced?	
Who gets what is produced?	

Is the result good or bad?	These are related to normative economics (NE)
Can it be improved?	

The purpose of economics is to find answers for these questions they are the subject matter of economics.

PE and NE are the branches of economics

PE attempts to understand behavior and the operation of economic systems *without making judgments* about whether the outcomes are good or bad. It works to describe what exists and how it works.

For example

- What determines the wage rate for unskilled workers?
- What would happen if we abolished the corporate income tax?

The answers to such questions are the subject of PE

In contrast, NE involves value judgments. NE looks at the outcomes of economic behavior and asks “**whether they are good or bad**” and “**whether they can be made better**”.

For example

- Should the government subsidize or regulate the cost of higher education?
- Should medical benefits to the elderly under Medicare be available only to those with incomes below some threshold?
- Should the Turkey allow importers to sell foreign-produced goods that compete with Turkey-produced products?
- Should we reduce or eliminate inheritance taxes?

Normative economics is often called *policy economics*.

PE is defined as the economics of “**what is**”, whereas NE discusses “**what ought to be**”.

Why Study Economics?

There are four main reasons to study economics:

- **to learn a way of thinking,**
- **to understand society,** (the study of economics is an essential part of the study of society)
- **to understand global affairs,** (An understanding of economics is essential to an understanding of global affairs)
- **and to be an informed voter** (when we participate in the political process, we are voting on issues that require a basic understanding of economics)

Probably the most important reason for studying economics is **to learn a way of thinking.**

A good way to approach economics is to understand three of its most fundamental concepts:

Opportunity cost

Marginalism

Efficient markets

after studying economics, you will use these concepts every day in making decisions.

Opportunity cost

The concepts of choice and scarcity are central to the discipline of economics.

Opportunity costs arise because resources are scarce. **Scarce** simply means "limited".

Consider one of our most important resources-time. There are only 24 hours in a day, and we must live our lives under this constraint

The best alternative that we give up, when we make a choice or a decision is called **the opportunity cost** of that decision. The full "cost" of making a specific choice includes what we give up by not making the alternative choice

This concept applies to individuals, businesses, and entire societies.

For example:

- The opportunity cost of going to a movie is the value of the other things you could have done with the same money and time.
- If you decide to take time off from work, the opportunity cost of your leisure is the pay that you would have earned had you worked.
- Part of the cost of a college education is the income you could have earned by working full-time instead of going to school.
- If a firm purchases a new piece of equipment for \$3,000, it does so because it expects that equipment to generate more profit. There is an opportunity cost, however, because that \$3,000 could have been deposited in an interest-earning account

It is the use of marginal concepts within economics. Marginalism is used in analyzing choices. The process of analyzing the additional costs or benefits arising from a choice or decision.

Marginal Cost (MC) and marginal Utility (MU) are central concepts of marginalism.

Technically, **MC is the cost of producing one more unit of output.** In economics and finance, **marginal cost** is the change in total cost that arises when the quantity produced changes by one unit. Mathematically, the marginal cost (MC) function is expressed as the derivative of the total cost (TC) function with respect to quantity (Q).

$$MC = \frac{dTC}{dQ}$$

MU is the additional satisfaction gained by the consumption or use of one more unit of something. It is important to distinguish MU from TU. TU is the total amount of satisfaction obtained from consumption of a good or service. MU comes only from the last unit consumed; TU comes from all units consumed.

For example, we eat chocolate bar. If we eat one ch bar it generates 10 “utils”, units of utility. The second ch bar yields 18 TU but additional 8 utils. And third ch bar provide 25 total utils but additional 4 utils.

	TU	MU
1	10	10
2	18	8
3	25	7

In weighing the costs and benefits of a decision, it is important to weigh only the costs and benefits that arise from the decision.

Efficient market

A market in which profit opportunities are eliminated almost instantaneously is said to be an efficient market. It is assumed that all firms are rational and they compete with each other. If there is excess profit in one sector, then there will be an entry of firms into that sector. So this excess profit will be eliminated by these entries. In the short run, there can be profit in one market, but in the long run, not. In contrast, if there are losses, then there will be a exit of firms from the sector.

To isolate the impact of one single factor, we use the device of ceteris paribus, or all else equal.

In formulating economic theory, the concept helps us to focus on the relationships that interest us.

For example, according to the law of demand, there is a negative relationship between price and quantity demanded.

If the price of beef decreases — ceteris paribus — the quantity of beef demanded by buyers will increase. With ceteris paribus we assume no simultaneous change in anything else—that is, assuming that income, number of children, population, the relative change in price of substitute goods and so on all remain constant.

THE PRODUCTION POSSIBILITIES FRONTIER (PPF)

• PPF is a graph that shows all the combinations of goods and services that can be produced if all of society's resources are used efficiently.

This graph also illustrates the principles of

- **constrained choice,**
- **opportunity cost and**
- **scarcity.**

SCARCITY, CHOICE, AND OPPORTUNITY COST

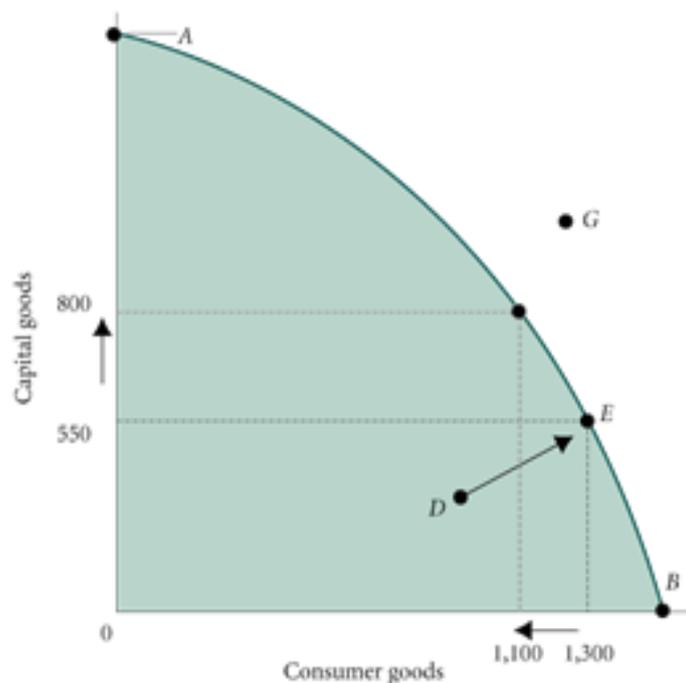
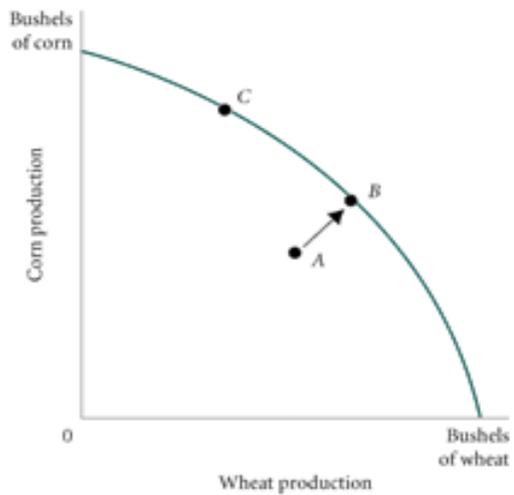


FIGURE 2.3 Production Possibility Frontier

SCARCITY, CHOICE, AND OPPORTUNITY COST

Negative Slope and Opportunity Cost



marginal rate of transformation (MRT)
The slope of the production possibility frontier (ppf).

FIGURE 2.4 Inefficiency from Misallocation of Land in Farming

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SCARCITY, CHOICE, AND OPPORTUNITY COST

The Law of Increasing Opportunity Cost

TABLE 2.1 Production Possibility Schedule for Total Corn and Wheat Production in Ohio and Kansas

POINT ON PPF	TOTAL CORN PRODUCTION (MILLIONS OF BUSHEL \$ PER YEAR)	TOTAL WHEAT PRODUCTION (MILLIONS OF BUSHEL \$ PER YEAR)
A	700	100
B	650	200
C	510	380
D	400	500
E	300	550

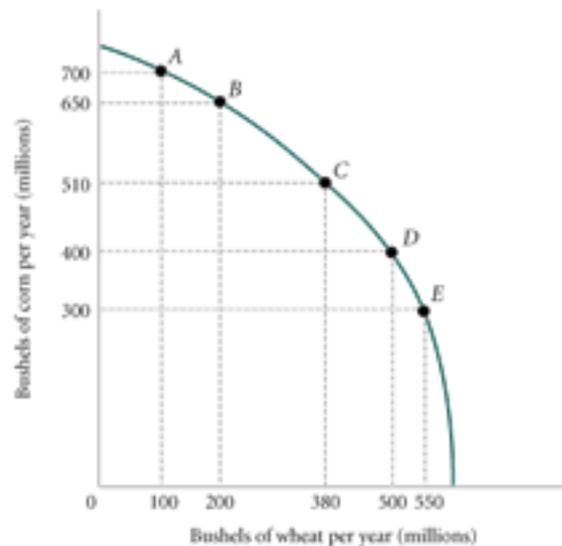


FIGURE 2.5 Corn and Wheat Production in Ohio and Kansas

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Suppose,

- there are two goods in the economy, x and y .
- Both x and y can be produced by labor alone
- Let total level of employment be L_1
- x^* is the amount of x that can be produced if all labor (L_1) is used in x production.
- y^* is the amount of y that can be produced if all labor (L_1) is used in y production.

$$Y=0 \text{ When } x= x^* \text{ and } X=0 \text{ when } y= y^*$$

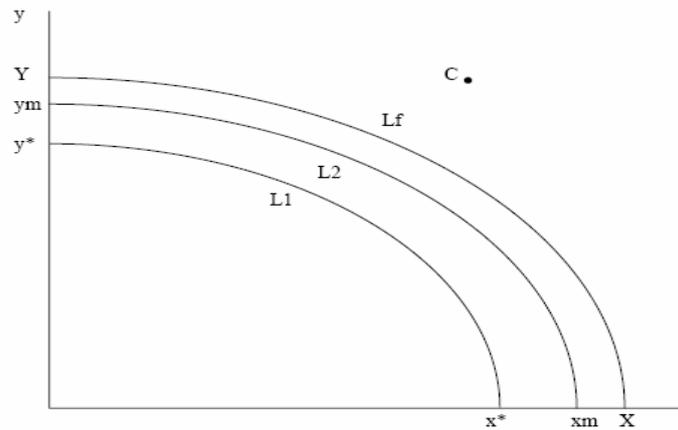


Figure 1: PPF

- In figure 1 PPF, a concave curve joining y^* and x^* , shows all possible combinations of y and x that can be produced by a total employment of $L1$

Concave:

To get equal units of one good (x) society must sacrifice increasing units of the other good (Y). As more x is produced, a higher amount of y must be given up to produce additional amounts of x (the law of increasing opportunity cost)

All points below and to the left of the curve (area of x^*y^*o) represent combinations of x and y goods that are possible for the society given **available resources** and **existing technology**. Points that lie within this area, but that are not on the frontier, represent either **unemployment of resources** or **production inefficiency** (a given mix of output is not produced at least cost)

Points above and to the right of the curve, such as point C, represent combinations that can not be reached (unattainable) given **available resources** and **existing technology** (scarcity).

Points that are actually on the PPF are points of both **full resource employment** and **production efficiency**. All resources are used, there is no waste.

- **Full capacity employment level (FCEL)** shows the combinations of y and x that can be produced if all the productive labor in the economy is employed. The frontier shown by the curve YX in the figure 1 correspond to FCEL. This means that a point like C in the figure is unattainable given **the existing technique of production** (Reflection of “Scarcity problem” in economics).

- In general the maximum attainable surplus is constrained by the availability of

- **capital,**
- **labor,**
- **natural resources and**
- **the technique of production.**

- Growth of the labor force, increased capital stock, and the improved techniques of production shifts the PPF curve rightwards (**Economic Growth**).

Economic Growth

CHAPTER 2: The Economic Problem:
Scarcity and Choice

SCARCITY, CHOICE, AND OPPORTUNITY COST

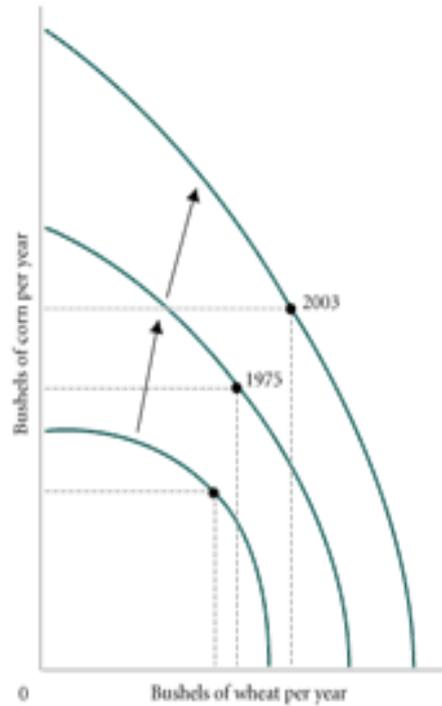


FIGURE 2.6 Economic Growth Shifts the ppf Up and to the Right

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SCARCITY, CHOICE, AND OPPORTUNITY COST

Sources of Growth and the Dilemma of the Poor Countries

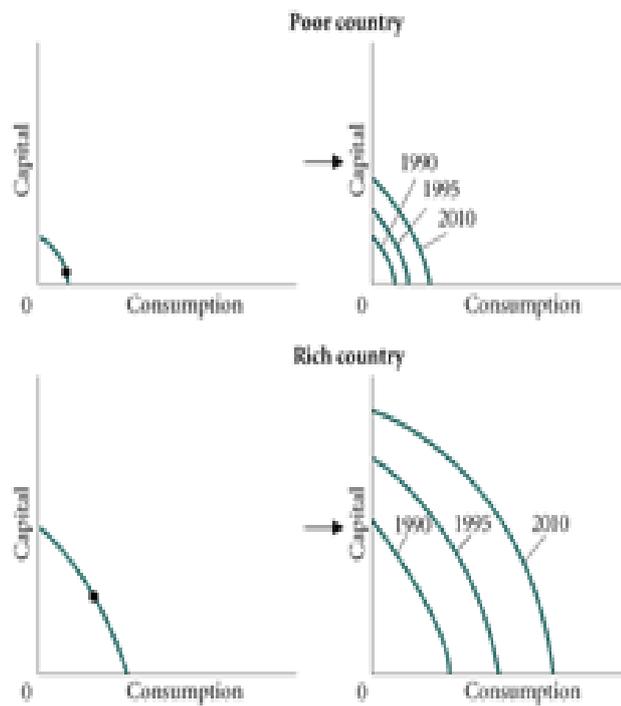


FIGURE 2.7 Capital Goods and Growth in Poor and Rich Countries

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Review Terms and Concepts

<i>ceteris paribus</i>	marginalism
descriptive economics	microeconomics
economic growth	model
economic theory	normative economics
economics	Ockham's razor
efficiency	opportunity cost
efficient market	positive economics
empirical economics	<i>post hoc, ergo propter hoc</i>
equity	scarce
fallacy of composition	stability
Industrial Revolution	sunk costs
macroeconomics	variable

REVIEW TERMS AND CONCEPTS

capital	investments
command economy	laissez-faire economy
consumer goods	marginal rate of transformation (MRT)
consumer sovereignty	market
economic growth	opportunity cost
factors of production (or factors)	outputs
free enterprise	production
inputs or resources	production possibility frontier (ppf)

Appendix

TIME SERIES GRAPH

A *time series graph* shows how a single variable changes over time.

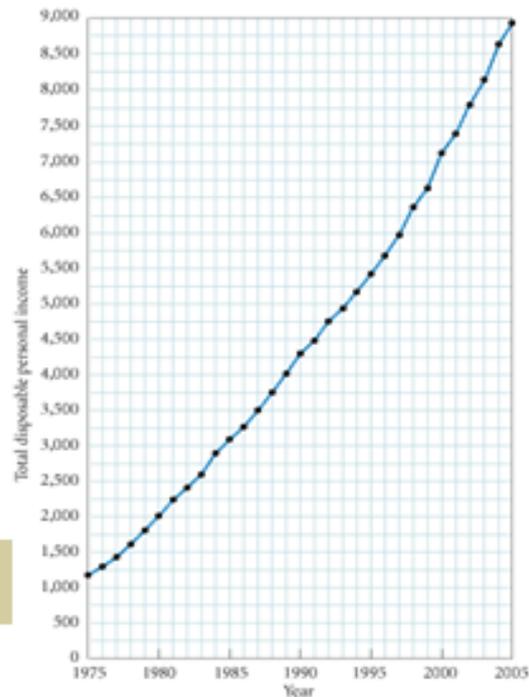


FIGURE 1A.1 Total Disposable Personal Income in the United States: 1975–2005 (in billions of dollars)

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Appendix

GRAPHING TWO VARIABLES ON A CARTESIAN COORDINATE SYSTEM

The **Cartesian coordinate system** is the most common method of graphing two variables. This system is constructed by simply drawing two perpendicular lines: a horizontal line, or **X-axis**, and a vertical line, or **Y-axis**. The axes contain measurement scales that intersect at 0 (zero). This point is called the **origin**.

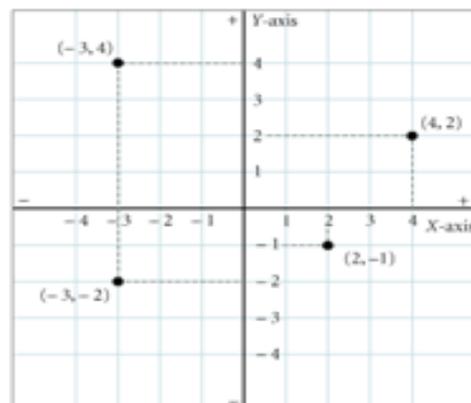


FIGURE 1A.2 A Cartesian Coordinate System

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Appendix

The **slope** of the line indicates whether the relationship between the variables is positive or negative.

The slope of the line is computed as follows:

$$\frac{\Delta Y}{\Delta X} = \frac{Y_2 - Y_1}{X_2 - X_1}$$

Appendix

TABLE 1A.2 Consumption Expenditures and Income, 2003

	AVERAGE INCOME BEFORE TAXES	AVERAGE CONSUMPTION EXPENDITURES
Bottom fifth	\$ 8,201	\$ 18,492
2nd fifth	21,478	26,729
3rd fifth	37,542	36,213
4th fifth	61,132	50,468
Top fifth	127,146	81,731

This line slopes upward, indicating that there seems to be a **positive relationship** between income and spending.

Points A and B, above the 45° line, show that consumption can be greater than income.

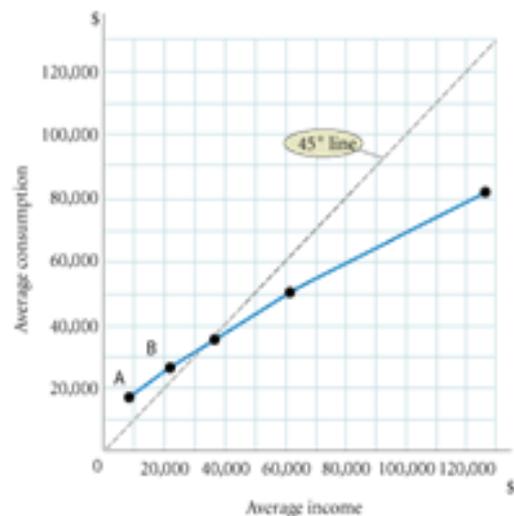


FIGURE 1A.3 Household Consumption and Income

Appendix

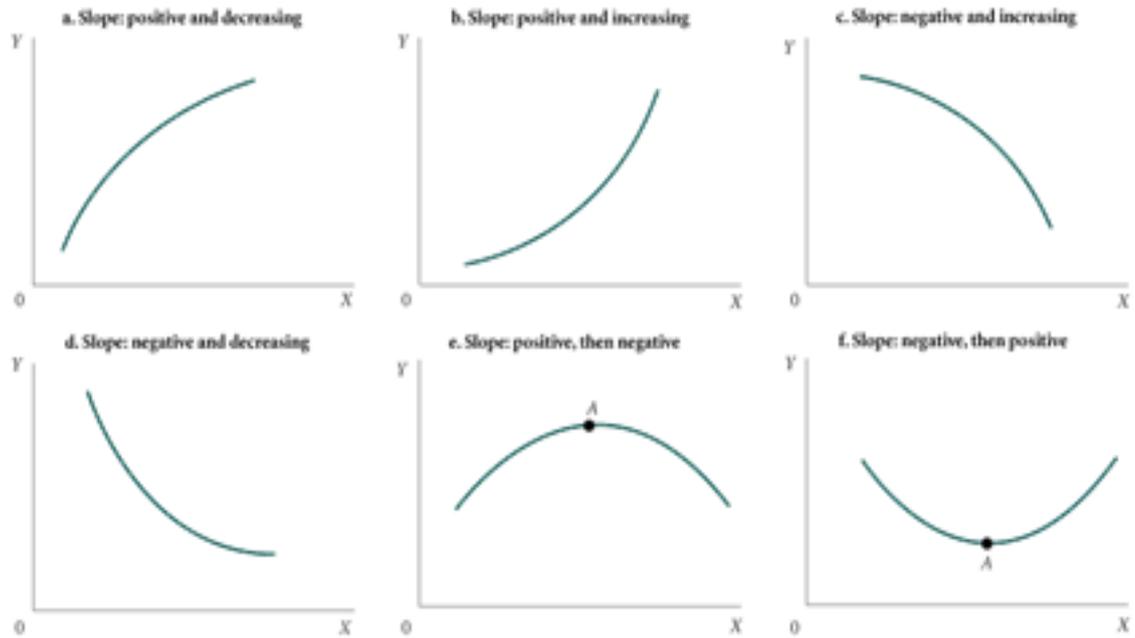


FIGURE 1A.5 Changing Slopes Along Curves

Appendix

An **upward-sloping** line describes a **positive relationship** between X and Y.

A **downward-sloping** line describes a **negative relationship** between X and Y.

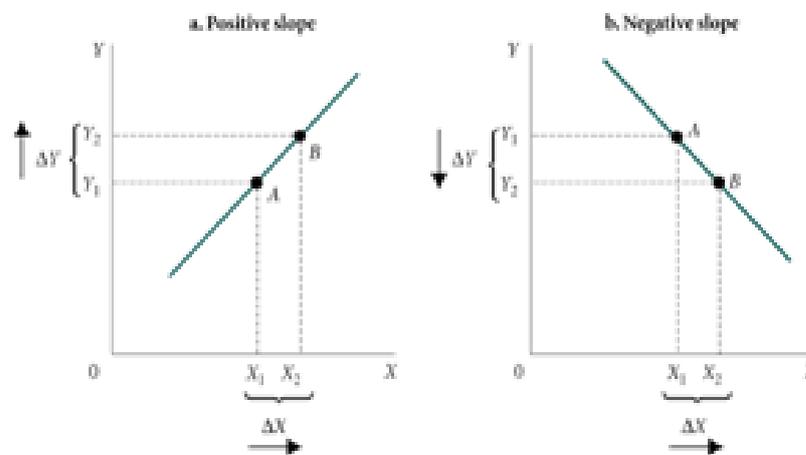


FIGURE 1A.4 A Curve with (a) Positive Slope and (b) Negative Slope

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