A FRAMEWORK FOR TEACHING BASIC ECONOMIC CONCEPTS

with
Scope and Sequence Guidelines, K-12

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Basic Concepts

Economic concepts are the bases of economic understanding and reasoned decision making. Economic concepts provide the analytical tools needed to understand and make reasoned decisions about economic issues—both personal and social. These concepts also constitute the basic vocabulary of economics.

The list of concepts discussed below focuses on what many economists consider the most basic among the many concepts in economics. Some measurement concepts and methods that are helpful in understanding and explaining economic performance are included, and the broad social goals most often used to evaluate economic performance and policies are also discussed. Exhibit 3, on the next page, lists the basic concepts discussed in this chapter. (The table of contents, at the beginning of this book, also lists subsidiary concepts that fall under the basic concepts.)

Although the concepts listed in Exhibit 3 are basic to the attainment of economic understanding, they cannot all be treated alike in the K-12 curriculum. Some are easier to learn because teachers can find a greater variety of concrete examples to illustrate them. Some concepts are easier to understand because their definitions do not require prior knowledge of other concepts. Consequently, these concepts can be taught—with varying complexity as well as late in the K-12 curriculum. The reverse is also true. Certain concepts are complex and therefore cannot be taught with all their ramifications at all grade levels. Some are relatively difficult to learn because they involve grasping relationships among several concepts. For these reasons, statements on the suitable grade placement of the concepts are included in chapters V, VI, and VII.

Fundamental Economic Concepts

The basic economic problem confronting individuals, groups of individuals, and entire societies is that productive resources are limited relative to people’s wants. Thus arises the basic condition of scarcity. Scarcity requires people to make choices about how to utilize available resources most effectively in order to satisfy their wants. Since most major economic problems arise from the fact of scarcity, an understanding of this concept is the starting point for an understanding of economics.

1. SCARCITY AND CHOICE

Scarcity is the condition that results from the imbalance between relatively unlimited wants and the relatively limited resources available for satisfying those wants. No society has ever had enough resources to produce the full amount and variety of goods and services its members wanted.
Scarcity necessitates choice. If we can’t have everything we would like, we must choose those things we want most. Thus, both individuals and societies must continuously make choices about how to use the scarce resources available to them. The concept of scarcity can be understood more clearly by examining the sub-concepts of economic wants and productive resources.
Economic Wants

In modern societies, people have a wide variety of wants. Some, such as those for love and affection, cannot easily be classified as economic in nature. Others, such as food, clothing, shelter, medical care, entertainment, and even leisure time, are wants with major economic implications. Some wants are individual, whereas others, such as a family’s desire for a home or a club’s desire for a recreation center, are group wants. Many wants—such as the foregoing—are private, but others are public—such as society’s wants for highways, education, and national defense.

For simplicity, we can say that economic wants are those that can be satisfied by the consumption of a good or service. We include the desire for leisure as an economic want because consumers need leisure time in which to enjoy the consumption of certain goods and services. Goods are physically tangible things such as food, shoes, cars, and houses. Services are physically intangible things such as medical care, haircuts, and education. One fact that emerges clearly in the study of economics: people’s wants for goods and services exceed society’s capacity to produce them.

Productive Resources

Productive resources (sometimes called factors of production) consist of what is required to produce the goods and services that people want. There are three basic categories of productive resources.

Human Resources—The health, strength, education, and skills of people. The number of people available for work and the hours they work constitute only one dimension of human resources. Another dimension is the level of ability of people and their motivation. The quality of human resources reflects past efforts to improve skills, knowledge, and motivation through education and training. The ability of some people to organize economic activity by taking the risks associated with starting a new business or introducing a new good or service into the market-place in hopes of earning a profit is given a special name, “entrepreneurship,” which comes from a French word meaning “to undertake.”

Natural Resources—The gifts of nature that are used to produce goods and services. They include land, timber, fish, oil and mineral deposits, the fertility of the soil, climatic conditions suitable for growing crops, and so on. Some of these resources are used up in the process of production, others renew themselves, while still others can be renewed through the conscious efforts of people.

Capital Goods—The buildings, equipment, machinery, ports, roads, dams, and other manufactured and constructed things needed to produce or provide access to other goods and to supply services. The variety of capital goods available and the ways they are used reflect the state of technology, which in turn reflects existing scientific and technical knowledge and the resources devoted to developing such knowledge.

A list of 17 content statements dealing with the concept of Scarcity and Choice, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

2. OPPORTUNITY COST AND TRADE-OFFS

Opportunity cost is the forgone benefit of the next best alternative when scarce resources are used for one purpose rather than another. If we use some of our limited resources for one purpose, we must give up the opportunity to use these resources for other purposes. Thus, the term “opportunity cost” refers to the most desirable of the alternatives not chosen. If, for example, a piece of land could be used for an office building, a sports stadium, a department store, or a parking garage, the opportunity cost of using the land for a department store is the loss of only the most desirable of the forgone alternatives. It is either the loss of the office building or of the sports stadium or of the parking garage—not all three; which of these is the most desirable can be determined only by more careful investigation. If a young college graduate chooses to become an accountant rather than a lawyer or an architect or an engineer, oppor-
tunity cost refers only to the loss of the most important of the forgone alternatives.

Trade-offs involve accepting or choosing less of one thing to get more of something else. Individuals who choose one good or service instead of another, or more of one thing and less of another, are making a trade-off. Society also makes trade-offs, e.g., between its need for more energy and its desire to preserve the environment. Evaluating trade-offs, when done carefully and systematically, involves comparing the costs and benefits of each of the available alternatives. Trade-offs made by society also require determining how the costs and benefits of decisions affect different groups within the economy, e.g., the rich vis-à-vis the poor, city residents vis-à-vis rural residents, etc.

Most choices and trade-offs are not all-or-nothing propositions; instead, they typically involve small changes at the margin—a little more of this for a little less of that. Decisions about small changes at the margin are made more often than decisions about big changes, and the former are usually easier to assess than the latter.

Consumers continuously practice marginalism as they consider whether to buy one unit more or one unit less of a good or service in an effort to obtain the mix of goods and services that will provide them with the greatest satisfaction for their available buying power. Similarly, producers must decide whether to produce one unit less of output or to hire or lay off an additional worker in order to make the best use of their resources.

A list of five content statements dealing with the concept of Opportunity Cost and Trade-offs, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

3. PRODUCTIVITY

Productivity is the amount of output (goods and services) produced per unit of input (productive resources) used. An increase in productivity means producing more goods and services with the same amount of resources, producing the same amount of goods and services with fewer resources, or a combination of these two possibilities. A dramatic example of increased productivity occurred in U.S. agriculture in the half century between 1939 and 1980, when output doubled while the number of persons working directly in agriculture dropped from 12 million to 3 million.

While productivity is often measured or referred to only in terms of the productivity of labor, a proper view of the sources of productivity incorporates the effects of all inputs to production. The three principal means of increasing productivity are: (1) specialization and the division of labor; (2) investment in capital goods; and (3) investment in human capital. All three of these means often involve a process of technological change that leads to more efficient production techniques and the creation of more goods and services. Sometimes productivity can be increased by other means, such as reorganizing the work process or relocating the production site.

Increases in productivity help reduce scarcity, but do not eliminate it entirely. Moreover, productivity increases themselves entail opportunity costs since the resources used to enhance productivity in one endeavor cannot be employed in another. Thus, there are both costs and benefits when productivity is increased.

Specialization and the Division of Labor

Specialization occurs when an economic unit produces a narrower range of goods and services than it consumes. Specialization can be practiced by individuals, business firms, cities, regions, or countries. Regions of countries, for example, normally specialize in the production of those goods and services they are best fitted to produce, given their particular endowment of productive resources. They then sell most of what they produce to people living elsewhere, and buy whatever else they need from other regions. What they buy may include the raw materials needed to produce the goods and services in which they specialize. Specialization is the basis of trade and exchange among individuals, businesses, cities, regions, and countries. Within
the United States, for example, consumers in its various regions buy and use products originating in other regions—Idaho potatoes, Florida orange juice, Iowa corn, California vegetables. Hartford insurance, etc.,—plus products originating abroad such as coffee, bananas, tea, clothing, and cameras. Industries do the same for the raw materials, components, and certain finished products they need.

The concept of division of labor is closely related to specialization, but usually refers to the process whereby workers perform only a single or a very few steps of a major production task, as when working on an assembly line. As applied to labor, the concept of specialization usually refers to a person's occupation and the special training it requires, e.g., carpenter, electrician, computer programmer, mathematics teacher, landscape architect, eye surgeon.

On the one hand, specialization in all of its forms and the division of labor usually increase productivity. On the other hand, they also reduce self-sufficiency and increase economic interdependence, thereby creating a greater need for the exchange of goods and services. The concepts of interdependence and exchange are discussed in more detail later.

Investment in capital goods

Investment in capital goods occurs when savings are used to increase the economy's productive capacity by financing the construction of new factories, machines, means of communication, and the like. Saving occurs when individuals, businesses, and the economy as a whole do not consume all of current income (or output). From an individual standpoint, saving represents income not spent. Much unspent income may be placed in financial institutions such as banks and saving and loan associations, which in turn make loans to those who wish to buy capital goods or other resources. Individuals may also place their savings more directly, by purchasing newly issued shares of corporate stock, bonds, and similar financial instruments or by buying instruments already issued from others, who may use the funds they receive to buy new issues. Individuals may also contribute to pension funds or purchase mutual funds and the like. Such funds also typically buy financial instruments.

To a large extent, the process of saving and investment represents a diversion of productive resources from the output of goods and services for current consumption to the creation of up-to-date, technologically advanced capital goods that can expand production and increase the productivity of human and natural resources. Workers using modern logging and transportation equipment, for example, can cut more trees and deliver more lumber than they can produce with hand saws and horse-drawn wagons. An office worker using a word processor can produce more letters than one using a typewriter, who in turn, can produce more than someone using a quill pen. A pilot can fly more passengers more miles faster with a jet plane than with a propeller-driven aircraft, and so on.

Capital goods often cost a great deal of money and last for a long time. Investing in capital goods, therefore, carries the opportunity cost of other uses to which the money could be put, and it also usually involves taking a risk. For example, if still newer technology emerges quickly or if market conditions change, a machine may become obsolete before it has generated enough income to pay back those who invested in it. Businesses that invest in capital goods, therefore, must anticipate that they will receive enough income to make it worthwhile to accept the possible risks.

Investment in Human Capital

Investment in human capital occurs when the health, education, and training of the population are increased through the efforts of individuals, businesses, or governments. Good health, education, and relevant training all contribute to workers' productivity. However, investment in human capital, like investment in capital goods, also involves an element of risk. Individuals who invest time or money in more education and training usually become more productive, get better jobs, increase their incomes,
and find greater satisfaction in their work and leisure, but these benefits are not guaranteed. Investing in education and training also carries opportunity costs because it employs resources that could be put to other uses. The cost of a college education, for example, includes not only direct payments for tuition, books, and fees, but also the loss of the output and income that could have become available if the student had been working full time instead of going to school.

Technological Change

Technological change can be defined as the incorporation into production of new knowledge and processes that result in (1) a different organization of the production process, (2) improvements or the introduction of innovation is capital goods, or (3) modifications of the goods and services currently being produced or the invention and introduction of new goods and services. The computer, the jet plane, and the fax machine are but a few relatively recent and striking examples of technological change. Such improvements depend heavily on basic and applied research, assessments of the probable success of a new technology, gifted and knowledgeable experimenters and inventors, and the amount of savings available to underwrite the costs of developing and introducing new technology.

Effects of Government

In addition to the effects on productivity of individual and business decisions about saving and investing, government actions and policies also play a role. Historically, governments have encouraged increases in productivity by actions such as providing transportation facilities, providing education, and underwriting or performing agricultural research. Governments also establish a framework of law and political stability that makes long-term private commitments feasible and profitable. However, governments can hamper productivity increases if their laws or regulations serve particular groups rather than the general welfare, if their tax policies adversely affect saving and investment, or if they enact price regulations and trade restrictions that prevent resources from moving to their most productive uses. The role of government in the U.S. economy is discussed in more detail later.

A list of 13 content statements dealing with the concept of Productivity, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

4. ECONOMIC SYSTEMS

People and societies organize economic life to deal with the basic problems raised by scarcity and opportunity costs through economic systems. An economic system can be described as the collection of institutions, laws, activities, controlling values, and human motivations that collectively provide a framework for economic decision-making.

In a world of scarcity and opportunity cost, all societies must make the basic economic decisions of what goods and services to produce, which ones to forgo or postpone, and when and how to transfer productive resources from one use to another. Decisions must also be made about how much effort to devote to increasing total output as well as how to divide the total output of society among its members—that is, how to distribute the total real income* an economic system generates. These decisions all hinge on how economic resources are allocated.

There are three basic approaches to economic decisions about resource allocation. One is based on tradition—that is, people generally repeat the decisions made at an earlier time or by an earlier generation. A second is based on command—that is, decisions are made largely by an authority such as a feudal lord or a government planning agency. Authority in a command economy can be exercised in a democratic fashion or it can be imposed from above by people whose power is not subject to the outcome of

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* See section on Real vs. Nominal Values on p.43 for a fuller discussion of “real income.”
** We chose not to use the terms such as “feudalism,” “socialism,” “communism,” or capitalism” to describe economic systems because they mean different things to different people, and they carry emotional overtones in the minds of
free elections. The third is based on market prices.**

A market economy is a system of decentralized decision making in which individuals and business firms, in their various capacities as consumers, producers, workers, savers, and investors, participate in the market through decisions that are reflected in the supply and demand for various good and services. The market “adds up” these millions of decisions about supply and demand and forges out of them an interrelated network of market prices that reflect the preferences of all the participants. Market prices—and the changes in them—act as signals to producers, telling them what buyers want. Market prices also act as rationing devices by allocating productive resources and finished goods and services among members of society according to what buyers are willing and able to pay.

No recent real-world economy is or has been a pure form of a traditional, a command, or a decentralized market economy. Every existing economy uses a different “mix” of allocating mechanisms to respond to the basic economic decisions, and each has somewhat different institutions, controlling values, and motivating forces at work that affect the operation of the economy. And many real-world economic systems have been undergoing fundamental changes during the last decades of the twentieth century. The element of tradition has been, for example, most evident in the rural areas of the developing countries of Asia and Africa, yet even those rural areas have participated in elements of a market economy and/or a command economy. The element of command had been most evident in the former Soviet Union until that country collapsed and was replaced by fifteen independent countries. China, which describes itself as a command economy, has many elements of traditional and market-price economies. Decentralized or market decision making has been most evident in the United States, Australia, Canada, and most countries of the European Community, but even among these countries considerable diversity continues to exist in the proportions of government planning and in the variety of economic institutions.

Understanding how economic decisions are made in a particular economy requires careful attention to questions such as the following:

– What is the actual “mix” of allocating mechanisms? That is, how many economic decisions are tradition oriented? How many are made by central command? How many are left to decentralized market forces?
– What are the most important economic institutions of the society and what role do they play in shaping economic decisions?
– What are the controlling values and motivating forces that condition economic behavior in the society?
– What, if any, significant changes appear to be taking place in the economic system?

Finally, it should be noted that people of all societies, regardless of the type of economic system, engage in certain basic economic activities. These include producing, exchanging, and consuming goods and services, as well as saving and investing so that capital goods and human capital can be accumulated to increase output and productivity. The distinguishing characteristics of an economic system thus are not the economic activities that are carried on, but the kinds of economic institutions that exist and the way they influence decision making.

A list of nine content statements dealing with the concept of Economic Systems, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

5. ECONOMIC INSTITUTIONS AND INCENTIVES

Economic institutions are of several kinds. In addition to households and families, there are formal organizations, such as corporations, government agencies, banks, labor unions, and cooperatives. There are also customary ways of doing things, such as the use of money, collective bargaining, the dominance of men or women in certain occupations, and the observance of various holidays. There are also different control-
ling values and beliefs that pervade different economic systems. (Some beliefs may be common to most systems.)

In the United States, the household is the typical unit of consumption. Households differ in size, composition, and the manner in which members make decisions. The private firm (which can take various legal forms, such as an individual proprietorship, partnership, or corporation) is the typical unit of production. These firms may participate in trade associations or employer organizations in seeking to promote their own industry interests and to influence legislatures and government administrative agencies. Workers may organize into labor unions to further their interests through collective bargaining and political action. Government agencies play an important regulatory role in the economy, and some governmental enterprises (such as the Tennessee Valley Authority, the federal mint, and municipal bus lines) produce goods or provide services directly. Other economic systems use different institutions. China, for example, carries on agricultural production through collective farms. In Sweden and Finland, cooperatives are more important than in most other European countries. By law, worker representatives serve on the boards of directors of large German corporations. Banks exist in almost every country, and virtually all societies use some form of money as a medium of exchange and a measure of value.

All societies have some system of property ownership. In the United States, for example, private ownership of property is emphasized. In others, such as China, government ownership is the rule except for some small enterprises and personal or household goods. Government planning had been highly centralized and comprehensive in the former Soviet Union, more decentralized in Hungary, and suggestive—"indicative"—in France. Some institutions exist only in certain types of economic systems, for example, collective bargaining about wages and working conditions takes place only in democratic industrial countries.

Cultural traditions of societies also influence the pattern of economic behavior. Examples range from the much-discussed "work ethic" of the Japanese, to the non-materialistic philosophy of certain Buddhist countries, and to the seasonal patterns of retail sales that are evident in most countries due to the occurrence of religious or secular holidays.

**Incentives** are factors that motivate and influence human behavior. Economic incentives work by offering larger or smaller claims to goods and services in order to influence people’s behavior, usually through financial rewards and penalties. Not all human behavior is motivated by economic incentives. Sometimes people turn down higher-paying jobs because of unwillingness to move to a different geographic area. In some countries women leave the labor force for considerable periods of time in order to raise children despite the financial sacrifices involved. Because people want to preserve existing arrangements, or perhaps do someone a favor, business and government contracts are not always awarded to the lowest bidder. The most productive job applicants are not always hired because employers may want either to preserve or to change customary employment patterns. But when all is said and done, economic incentives, the desire to achieve financial or material gain and to avoid financial or material loss, are powerful motivating forces.

The pursuit of economic self-interest is the main motivating force in market economies. Consumers seek to allocate their incomes to obtain the greatest amount of satisfaction. Producers seek to maximize their profits, and this objective impels them to use the most efficient combinations of productive resources to produce the goods and services that consumers want to buy. Workers seek to sell their labor for the best return in money wages and working conditions. Savers seek high interest rates to earn the greatest income on their funds. In all these instances, economic self-interest is the motivation.

Profits are a particularly important incentive in a market economy. Profit is what remains after all costs of production have been deducted from the revenue derived from the sale of goods or services. It is the desire for profit that persuades entrepreneurs to establish new businesses, expand existing ones, and change the kinds of
goods and services produced (e.g., from big automobiles to small ones or vice versa). The profit motive stimulates owners and managers to make businesses more efficient, to introduce cost-cutting technologies in production, and to compete more vigorously with other businesses for consumers’ dollars. Previously earned profits provide an important source of funds for new investment and thereby stimulate economic growth. Similarly, losses (negative profits) are a signal to move resources elsewhere. Thus, in a competitive market economy, profits and losses spur efficiency, growth, and change. In situations where competition is lacking, however, the profit motive can lead to restrictions of output. (See the discussion of market failures—concept 11.)

In other economic systems, nonmarket incentives or forces are sometimes more evident. In command economies, for example, the authorities emphasize the contribution individuals and groups can make to the welfare of the state rather than to their own personal interests. In some earlier societies, a major motivation was to glorify the ruler (e.g., building pyramids in Pharaoh’s Egypt) or a superior being (e.g., building cathedrals in medieval Europe). More recently, in Hitler’s Germany and the Republic of South Africa, “race” determined the extent to which individuals could participate in the economy. Whatever the major incentives or force may be, they influence the structure of an economic system and how it functions.

Because economic institutions and economic incentives play such a central role in every economic system, an understanding of how they work is essential to understanding the U.S. economy. Not all economic decisions in that economy are left to individuals. As we have indicated, individuals and businesses form themselves into organized self-interest groups and use group pressure, both in the market and through political processes, to achieve their goals. Since some economic units or groups possess greater power than others, they can have greater influence on changes in the institutional framework within which economic activity occurs.

A list of 14 content statements dealing with the concept of Economic Institutions and Incentives, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

6. EXCHANGE, MONEY, AND INTERDEPENDENCE

As indicated above, individuals, groups, regions, and countries often specialize in the production of particular goods and in the performance of particular services. This leads to the output of more goods or services than the producers themselves wish to consume. In such situations, producers exchange their surpluses for other goods and services produced by people located elsewhere, and everyone is better off as a result. Indeed, the principle of voluntary exchange is based on the fact that both sides expect to gain from trade. If they did not, they would not trade.

The simplest form of exchange is barter, or the direct trading of goods or services between people. Since barter is usually inconvenient, money was developed to facilitate exchange. A wide variety of items has been used as money throughout history, and almost anything can serve as money so long as people are willing to accept it in exchange for goods and services. Money need not have any intrinsic value to serve as a medium of exchange. It is people’s willingness to accept it in payment that gives money its value in the exchange process. In the United States today, people are willing to accept both currency (metal coins and paper bills) and checks in exchange for goods and services. Until recently, commercial banks were the only financial institutions permitted to establish checking accounts, and the standard definition of the money supply in the United States used to be that it consisted of currency in circulation and checking deposits at commercial banks. Money held in these forms did not earn interest, and it was convenient to separate “money” from other interest-paying assets such as savings accounts and other forms of so-called time deposits.

Our financial system is constantly evolving, however, and in the 1970s savings and loan associations, mutual savings banks, credit unions, and similar “thrift institutions” began offering accounts with names like “automatic transfer savings” (ATS), “nego-
tiable orders of withdrawal" (NOW), and "share drafts." All these accounts consisted of interest-paying deposits against which the depositor could write checks. Beginning in 1982, U.S. banking regulations also allowed commercial banks to pay interest on checkable deposits. Indeed, so many changes have occurred in the U.S. financial system in recent years that several differently defined measures of the money supply are now published regularly by the Federal Reserve System, which is discussed in more detail later.

Specialization and exchange reduce self-sufficiency, and thus they increase interdependence. **Interdependence** means that decisions or events in one part of the world or in one sector of the economy affect decisions and events in other parts of the world and other sectors of the economy. Bad weather in Eastern Europe can affect sugar prices in the United States, and sugar prices can affect the sales of candy, soft drinks, and even the sales of machinery used to harvest sugar beets and sugar cane in various parts of the world. Wage increases in the steel industry can affect retail sales in Pittsburgh, the cost of producing automobiles in Detroit, and economic conditions in many other industries and places as well.

A list of 17 content statements dealing with the concept of *Exchange, Money, and Interdependence*, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

**Microeconomic Concepts**

**Microeconomics** is the study of the behavior of individual households, firms, and markets, of how prices and outputs are determined in those markets, and of how the price mechanism allocates resources and distributes income. To understand the kinds and amounts of goods and services an economy will produce requires that we know how the prices of goods and services are determined, how these prices determine the pattern of production, and how this pattern is influenced both by the structure of markets and by government actions.

**7. MARKETS AND PRICES**

**Markets** are institutional arrangements that enable buyers and sellers to exchange goods and services. A market does not need to have a single physical location. Some markets, such as the New York Stock Exchange or the Chicago Board of Trade, do have a physical location that people can see or visit. Other markets, such as the market for high school teachers or the market for new homes, however, do not have a specific location. Such markets function through advertisements, letters, telephone calls, computer networks, personal relationships, and face-to-face discussions in various places. A “market” can be said to exist so long as there are some arrangements that enable potential buyers and sellers to communicate about the exchange of goods and services.

**Prices** are the amounts of money that people pay in exchange for a unit of particular good or service, e.g., $2.00 per pound, $12.00 per hour, $0.50 per quart, $6.00 per dozen, etc. **Relative prices** refer to one price compared to another, that is, to the ratio between them. In an actual market, the collection of relative prices constitutes the **price structure** of that market. The collection of price relationships in an entire economy constitutes its total price structure.

Doubling all prices, or cutting all prices in half, for example would not change the price structure (or the relative price ratios) in a market. If the price of apples rises form $1.00 per dozen to $2.00 per dozen, and the price of oranges rises from $2.00 per dozen to $4.00 per dozen, the apple-to-orange price ratio is till 1 to 2 even though the **absolute prices** of both items have changed. A change in relative prices occurs only when the **exchange ratio** between items is altered. If the price of apples rises from $1.00 per dozen to $2.00 per dozen, and the price of oranges remains the same, there will be a change in the apple-to-orange price ratio, and this change in relative prices
will lead people to want to buy fewer apples and more oranges than before these relative prices changed.

By comparing the relative prices of various products, consumers can determine which particular combination of goods and services would be most advantageous for them to buy. By comparing the relative prices of various resources as well as the relative prices of various goods and services, business firms can determine which combination of resources they can most advantageously employ to produce particular goods and services. By comparing relative prices in different markets, owners of resources can determine where they can most advantageously sell their resources or the services their resources can supply.

Relative prices and how they affect people’s decisions are the means by which a market system provides answers to the basic economic questions: What goods and services will be produced? How will they be produced? Who will get them?

*What to produce?* The goods and services that are the most profitable.

*How to produce them?* At the lowest cost possible.

*Who will get them?* Whoever is willing and able to pay the market price.

It is important to understand how a system of interdependent market prices can, without central planning or direct control over the decisions of individual producers or consumers, enable countless goods and services to be produced and delivered in the quantities desired, at the desired places, and at the desired times. This occurs because relative prices perform three principal function in a market system. These are: (1) an **information** function, (2) an **incentive** function, and (3) a **rationing** function.

**Information**

Relative prices and the ratios among them provide the essential information consumers, producers, and resource owners in a market system need in order to decide whether, what, and how much to buy. To grasp fully the importance of the information function provided by prices, imagine shopping in a supermarket in which no prices are shown for the items on the shelves. Or imagine choosing between two job opportunities without knowing the salaries offered by each. Or imagine trying to decide whether to hire a painter to paint your house or to do it yourself when you lack information about how much painters charge or about the prices of paint, brushes, and other materials.

**Incentives**

Changes in relative price ratios create incentives for resources to move or be reallocated in a market economy. An increase in the price of soybeans relative to the price of corn encourages farmers to plant more soybeans and less corn. A decline in the salaries of lawyers relative to those of accountants is an incentive for fewer people to go into law and more into accounting. Increased profits attract resources in free markets, while increased losses produce opposite effects. Profits are the green lights of economic life; losses are the red lights. Just as a well-functioning traffic control system requires both green lights and red lights, so a well-functioning market system requires both profits and losses to help channel its scarce resources into their most valuable uses.

**Rationing**

The higher the price of anything, other things being equal, the less of it people will be willing and able to buy. Conversely, the lower the price, the more of it people will be willing and able to buy. Prices are the market’s way of rationing limited resources, goods, and services to those most willing and able to pay for them. If the owner of a lot on a downtown street corner can receive a higher rent by leasing the land for an office building instead of for a parking garage or a warehouse, the land will be used for an office building, and the parking garage and the warehouse will be “rationed out” of this location. If 50,000 people would like to see a rock concert scheduled for a hall that can accommodate only 5,000 people, the price of tickets can be increased until only
5,000 are willing to pay that price; the other 45,000 people will be “rationed out” by the high price.

The Circular Flow of Resources, Goods, Services, and Money Payments

One way of illustrating the overall operation of a market economy is through a circular flow diagram such as the one in Exhibit 4. This exhibit presents a highly simplified overview of how a market economy operates. Owners of resources (families and individuals*) supply the services of their land, labor, and capital to business firms in exchange for money income payments in the form of wages, salaries, rents, interest, and profits. Owners of the resources in turn use these income payments to purchase the finished goods and services supplied by the business firms. Business firms then use the proceeds from these sales to pay the resource owners for the services the firms receive by employing the resources. This is how the circular flow of resources, goods and services, and money income payments is established and maintained.

Payments in the lower loop (sometimes called the factor market) appear as income to the resource owners who sell productive services, but these same payments appear as costs to the business firms that buy productive services. Likewise, payments in the upper loop (sometimes called the product market) appear as costs to the resource owners who buy goods and services, but these same payments appear as income to the business firms that sell goods and services.

An important point to emphasize is that all of the money payments shown in Exhibit 4 are determined by an interdependent set of market prices. In a system of interdependent market prices, every price depends to some extent on every other price. The prices resource owners are willing to pay for finished goods and services depend on the prices (income) they receive for the use of their resources. The prices of resources, in turn, depend on how much business firms are willing to pay for the services the resources provide. The amount that business firms are willing to pay for resources depends on the prices they receive for the finished goods and services they sell, but the prices business firms receive depend on what resource owners are willing to pay for goods and services. And so, round and round, the process continues.

Both resource owners and business firms would like to receive higher prices for what they sell, and lower prices for what they buy, but the market forces determine the ultimate outcome.

EXHIBIT 4
The Circular Flow of Resources, Goods, Services, and Money Payments

* corporations are also owners of resources, but the owners of a corporation—that is, its stockholders—are families and individuals or their representatives.
they sell and to pay lower prices for what they buy, but these objectives are not easy to attain when the prices that buyers pay are also the prices the sellers receive. As explained in greater detail in the next section, a market system relies on the interaction between sellers (supply) and buyers (demand) to reconcile these conflicting objectives and to establish prices in particular markets. Competition among sellers give buyers a choice in deciding from whom (if anyone) to buy, and competition among buyers gives sellers a choice in deciding to whom (if anyone) to sell.

A list of seven content statements dealing with the concept of Markets and Prices, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

8. SUPPLY AND DEMAND

Supply is a relationship between quantity and price. **Supply** is defined as the different quantities of a resource, good, or service that will be offered for sale at various possible prices during a specific time period. Generally, the higher the price of something, the more of it will be offered for sale—and vice versa.

Demand is, too, a relationship between quantity and price. **Demand** is defined as the different quantities of a resource, good, or service that will be purchased at various possible prices during a specific time period. Generally, the lower the price of something, the more of it will be purchased—and vice versa.

In competitive markets, supply and demand constitute the sum of many individual decisions to sell and to buy. The interaction of supply and demand determines the prices and the quantities that will “clear” competitive markets. This is illustrated in Exhibit 5, where hypothetical data are provided for a hypothetical product. The data in the exhibit are presented in tabular form as supply and demand “schedules.” Columns 1 and 2 of the table constitute the supply schedule, while columns 2 and 3 constitute the demand schedule.

Exhibit 5 shows that the market-clearing price for this hypothetical product is $4.00 per unit. At any price below $4.00 per unit, the quantity demanded exceeds the quantity supplied, and competition among buyers will bid the price up to $4.00. At any price above $4.00 per unit, the quantity supplied exceeds the quantity demanded, and competition among sellers will cause the price to fall to $4.00. Only at a price of $4.00 a unit will the market “clear,” with both the quantity supplied and the quantity demanded equal to each other at the same price.

**EXHIBIT 5**

Hypothetical Supply and Demand Schedules for a Hypothetical Product

<table>
<thead>
<tr>
<th>(1) Quantity Supplied by Producers (millions of units)</th>
<th>(2) Price ($ per unit)</th>
<th>(3) Quantity Demanded by Consumers (millions of units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>$7.00</td>
<td>10</td>
</tr>
<tr>
<td>60</td>
<td>6.00</td>
<td>20</td>
</tr>
<tr>
<td>50</td>
<td>5.00</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>4.00</td>
<td>40</td>
</tr>
<tr>
<td>30</td>
<td>3.00</td>
<td>50</td>
</tr>
<tr>
<td>20</td>
<td>2.00</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>1.00</td>
<td>70</td>
</tr>
</tbody>
</table>

The schedules presented in Exhibit 5 can also be used to show that 40 million units is a market-clearing quantity. Only at a quantity of 40 million units will the market “clear,” with both the price that sellers are willing to accept and the price that buyers are willing to pay equal to each other at the same quantity.

The market-clearing price of $4.00 and the market-clearing quantity of 40 million units shown in Exhibit 5 will persist so long as other things remain constant. If there is
a change in supply, or if there is a change in demand—these changes are often described as “shifts” in supply or demand—there will be a change in the market-clearing price and the market-clearing quantity. An increase in supply, for example, would mean that sellers are willing to sell larger quantities at each and every price shown in Exhibit 5. This would result in a lower market-clearing price and a larger market-clearing quantity. A decrease in supply would have the opposite effect. Similarly, an increase in demand would mean that buyers are willing to buy larger quantities at each and every price shown in Exhibit 5. This would result in a higher market-clearing price and a larger market-clearing quantity. A decrease in demand would have the opposite effect. Furthermore, as mentioned earlier, changes in one market will affect relative price ratios and are thus likely to cause changes in other markets as well. A higher market-clearing price and a lower market-clearing quantity for coffee, for example, will tend to increase the demand for tea and to decrease the demand for the paper filters used in coffee makers.

The forces of supply and demand work most effectively in markets with large numbers of sellers and buyers, each with reasonably accurate information, who are competing to sell or buy a relatively homogeneous product. In markets that do not possess all of these characteristics, the forces of supply and demand are modified by the structures that prevail in those markets.

A list of 18 content statements dealing with the concept of Supply and Demand, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

9. COMPETITION AND MARKET STRUCTURE

The term market structure refers to the extent to which competition prevails in particular markets. The degree of competition is largely determined by the number of buyers and sellers participating in the market, the availability and accessibility of accurate information, the possibility of collusion among buyers and among sellers, the nature of the product, and the ease with which firms can enter and leave the market. The structure of markets may also be affected by various laws and government regulations, which are discussed later. In turn, market structure affects the level of prices, the amounts purchased, and the rate of profit earned by firms.

Some markets are highly competitive. They contain many producers or sellers, none of whom can independently dominate or affect the market price appreciably; the possibility of effective collusion is small; accurate information is easily accessible; the products sold by different producers are homogeneous or so similar that it is difficult to distinguish the product of one seller from that of another; and firms can enter the market without difficulty. Many farm products like wheat and corn are examples. Markets that are less competitive are dominated by a smaller number of producers or sellers; individual sellers may be able to affect and sometimes control prices; the possibility of effective collusion may exist; accurate information is less easily accessible; the product of one seller can more frequently be distinguished from that of another; and entry into the market is usually somewhat difficult. The U.S. auto industry is an example.

The spectrum of market structures runs from highly competitive markets to those that contain only a single seller (called a monopoly) or a single buyer (called a monopsony). Unregulated monopolies tend to sell at higher prices and to produce smaller quantities than would a set of competitive suppliers with the same cost structure. Unregulated monopsonies tend to buy at lower prices and to purchase smaller quantities than would a set of competitive buyers.

Economists distinguish still other types of market structures that are not highly competitive. Firms in a market structure with few sellers are called oligopolies. Firms in a market structure with few buyers are called oligopsonies. The term monopolistic competition is used to refer to a market structure that may have a good many firms selling similar products, but the products can be differentiated from each other by the use of brand names or advertising and marketing strategies or by making relatively minor
variations in the product.

Collusion occurs when independent producers agree to coordinate their decisions in a manner that restricts competition. When collusion takes the form of an explicit agreement to fix prices and share markets among a group of producers that furnishes a large share of a particular product, the group is called a cartel.

We do not wish to encourage the memorization of terms for their own sake, nor do we think that it is necessary to introduce precollege students to the detailed analyses used by economists to distinguish between various market structures. The important thing for these students to realize is that the prices of goods and services as well as the quantities offered, which play such an important role in a market economy, are affected by the competitive structure of various markets. When confronted by particular market situations, students should be encouraged to try to identify the type of market structure that exists as reflected by characteristics such as the number of sellers (or buyers), possible barriers to entry into the industry, the accessibility of information, the possibility of collusive action, the degree of product differentiation, the role of government in the market, and the level of profits earned. An example of a modern cartel is OPEC, the Organization of Petroleum Exporting Countries.

A list of 14 content statements dealing with the concept of Competition and Market Structure, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

10. INCOME DISTRIBUTION

In a market economy, people’s incomes depend largely on the value of goods or services (including labor) they are able to sell in the marketplace. People who own larger amounts of scarce resources or possess rare talents that are in great demand receive higher incomes than those without such resources or talents. As explained earlier, wages and salaries are payments for the services of labor; rent is payment for the use of someone’s land or property; interest is payment for the use of borrowed money; and profit is the return to a business enterprise that results when the value of sales exceeds the cost of the goods or services sold.

The division of an economy’s total income into wages and salaries, rent, interest, and profit is called the functional distribution of income, since it shows the breakdown of income received by the individuals and businesses based on the type of resources provided to the productive process. A functional distribution of income, of course, does not tell us how many people receive incomes from more than one source. For information on the personal distribution of income, we typically classify different population groups by the number of them receiving different amounts of income, including transfer payments.

Transfer payments, which have grown rapidly in recent years, consist mostly of payments by government for which the recipients do not currently perform productive services, although in some cases these payments are related to productive activity that was performed in the past. The most important transfer payments in the United States today are Social Security benefits, government employee retirement benefits, unemployment compensation, and public assistance such as aid to the elderly, aid to families with dependent children, veterans benefits, and food stamps.

Exhibit 6, on the following page, shows the distribution of personal income by function and by income level. Many forces shape the personal distribution of income. Various farm, business, labor and other groups such as the poor, veterans, and the elderly, continuously seek to expand their share of total income. Inherited wealth and practices and customs such as racial and gender discrimination also help to shape the distribution of income. There is controversy about the distribution of income and the extent, if any, to which it should be redistributed from its original recipients to others who are less well off. Decisions about income distribution are made through the political process as well as by the operations of the market economy.

A list of eight content statements dealing with the concept of Income Distribution,
suggested for inclusion in the K-12 curriculum, is Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

**EXHIBIT 6**

Sources and Distribution of Personal Income in the United States

### Sources of Personal Income (Functional Distribution), 1993

<table>
<thead>
<tr>
<th>Type of Income</th>
<th>Amount of Income (billions of $)</th>
<th>Percent of Total Personal Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages, salaries, and other labor income</td>
<td>$3,166.8</td>
<td>58.8%</td>
</tr>
<tr>
<td>less contributions for social insurance</td>
<td>13.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Personal rental income</td>
<td>695.8</td>
<td>12.9</td>
</tr>
<tr>
<td>Personal interest income</td>
<td>158.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Net income of unincorporated business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(including farms)</td>
<td>442.1</td>
<td>8.2</td>
</tr>
<tr>
<td>Transfer payments</td>
<td>911.6</td>
<td>16.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$5,387.6</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

### Distribution of Personal Income, 1992

<table>
<thead>
<tr>
<th>Money Income Level</th>
<th>All families</th>
<th>Unrelated Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers in Millions</td>
<td>Percent of Total</td>
</tr>
<tr>
<td>Less than $5,000</td>
<td>2.3</td>
<td>3.4%</td>
</tr>
<tr>
<td>$5,000–$9,999</td>
<td>3.8</td>
<td>5.6%</td>
</tr>
<tr>
<td>10,000–14,999</td>
<td>4.9</td>
<td>7.2%</td>
</tr>
<tr>
<td>15,000–24,999</td>
<td>10.6</td>
<td>15.5%</td>
</tr>
<tr>
<td>25,000–34,999</td>
<td>10.2</td>
<td>15.0%</td>
</tr>
<tr>
<td>35,000–49,999</td>
<td>13.2</td>
<td>19.4%</td>
</tr>
<tr>
<td>50,000–74,999</td>
<td>13.5</td>
<td>19.8%</td>
</tr>
<tr>
<td>75,000 and up</td>
<td>9.6</td>
<td>14.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>68.1</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

**SOURCE:** Figures for sources of personal income are from Council of Economic Advisers, Economic Indicators, February 1994, p. 5; those for distribution of personal income are from Bureau of the Census, Current Population Reports, Series P-60, No. 184, September 1993, p. 5. Personal dividend income excludes the parts of corporate profits paid as corporate income tax or retained for use in corporate business.

* Figures do not sum to 100.0 percent because of rounding.

### 11. MARKET FAILURES

Markets work best when they are reasonably competitive, when buyers and sellers have access to sufficient reliable information, when resources are relatively mobile and free to move from one use to another in response to changing conditions, and when market prices reflect the full costs and benefits incurred in producing and exchanging goods and services. Market "failures" occur when there are significant deviations from these conditions. The main forms of market failure are inadequate competition, lack of access to reliable information, resource immobility, externalities, and the need for public goods (i.e., goods or services the government provides because the market either does not supply them or supplies them in insufficient amounts). We discuss each of these market failures in turn.

**Inadequate Competition**

A market system relies on competition to give both buyers and sellers a choice in deciding with whom to exchange and on what terms to make such exchanges. Without
competition there is no guarantee that scarce resources will be allocated to their most productive uses. Inadequate competition is, therefore, a serious problem in a market system. Yet maintaining competition is not always easy. In markets in which there are few buyers or few sellers, the buyers or the sellers may more easily collude to fix the prices at which they are willing to buy or sell. Even when a large number of sellers exists, a form of price fixing may occur, especially if the government helps, as it does in important segments of agriculture. Competition in some markets may be lessened through policies of price leadership exercised by one or a few firms or by "conscious parallelism" in price policy. In still other markets, in which it may not be efficient to have large numbers of producers of a particular good or service, we find natural monopolies such as various local water and gas companies.

**Inadequate Information**

Inadequate information about market conditions on the part of consumers, workers, and business managers can adversely affect the decisions they make and the efficiency with which the market mechanism allocates resources, goods, and services. Consumers, for example, may not be well-informed about the quality of product or of alternative products available. Unemployed workers may not know of job opportunities in unfamiliar labor markets. Business managers may not be aware of changing demographic patterns or changing economic conditions. Yet in many of these cases, it may be very difficult or extremely costly for individuals to seek out reliable information on their own. In such situations, public provision of information can lead to increased efficiency so long as the additional benefits to consumers, workers, or business managers exceed the government's additional costs or trouble of acquiring and disseminating the information.

**Resource Immobility**

Another condition that can impair the functioning of the market mechanism is resource immobility. Workers, for example, may not be able to move from declining to expanding industries because they lack the specialized skills required or the money needed to relocate themselves. Business firms may have investment funds tied up in obsolete equipment and machinery and be unable to take advantage of new investment opportunities until the old equipment is paid off.

**Externalities**

Externalities are the positive or negative side effects that result when the production or consumption of a good or service affects the welfare of people who are not the parties directly involved in a market exchange. A positive externality in consumption, for example, may result from the acquisition of additional education by an individual; when put to proper use, additional education increases the productivity of that individual, and society as a whole thereby benefits. A negative externality in consumption occurs, for example, when cigarette smoking by one individual has detrimental effects on non-smokers. A positive externality in production occurs, for example, when a dam constructed to generate electric power provides flood control for downstream residents and/or creates an attractive lake for scenic and recreational purposes. A negative externality in production occurs, for example, when a factory discharges smoke or other pollutants into the air or into rivers and streams.

Positive externalities are sometimes called “third-party benefits,” and negative externalities are sometimes called “third-party costs.” Since external benefits and external cost are not reflected in the market prices paid by buyers and received by sellers, an unregulated market system underproduces goods and services that yield external benefits and overproduces goods and services that impose external costs.

**Public Goods**

Most goods and services produced and exchanged in the market are “private
goods," which producers can withhold from would-be consumers who refuse to pay (that is, people who do not buy are excluded), and whose consumption by one person or family makes them unavailable to others (that is, consumption is not shared). Public goods are those the government supplies in situations involving nonexclusion and/or shared consumption.

A “pure” public good is a product or service producers cannot withhold from consumers who refuse to pay (nonexclusion), and the consumption of the product or service by one person does not reduce its usefulness to others (shared consumption). National defense, for example, cannot be provided exclusively to those who are willing to pay for it nor can it be withheld from those who are not able or not willing to pay. Likewise, in some situations, one person’s use or consumption of a good or service does not prevent its concurrent use by others. The illumination that one person receives from a street light, for example, is not diminished by other’s use of the same illumination.

Goods such as national defense, street lighting, and flood control are not adequately provided by the market system because private businesses will not produce things that people will not pay for and because individual consumers are reluctant to pay for goods and services that benefit nonpayers in the same way as those who pay.

Public Policy Responses to Market Failure

Governments have adopted various policies to deal with the several types of market failures described above. Antitrust laws and public regulatory agencies attempt to deal with inadequate competition. Public provision of information and statistical data when private provision would be prohibitively expensive can remedy inadequate knowledge; consumer protection laws can have a similar effect. Relocation allowances, favorable tax treatment, retraining programs, and the like, can lessen resource immobility. Taxation often discourages the production of goods and services that impose external costs, and subsidies often encourage the production of goods and services that provide external benefits.

Public policies aimed at correcting market failures do not always work out as intended, however, and under certain circumstances efforts to correct market failures can themselves become sources of inefficiency. When this happens, “Government Failures” may be said to occur. Government Failures can occur when special-interest groups exert undue influence on the political process and secure advantages for themselves that they cannot obtain in the marketplace. Government agencies often develop an internal dynamic of their own as they compete for additional staff and influence. Since they are not subject to the tests of monetary losses and bankruptcy that tend to eliminate inefficient operations in private-sector markets, inefficient government agencies may remain intact indefinitely. Managers in the public sector seldom gain from saving the taxpayers’ money. If an agency fails to spend all of one year’s appropriation, its case for a larger budget or even the same budget next year may be weakened. Finally, there is an element of compulsion in the public sector that does not exist in competitive markets. If the majority—either directly or through the legislative process—decides to pursue a particular policy, the minority must acquiesce and help pay for its costs, even if the minority strongly disagrees. In a democracy, however, the minority can reverse the policy if it is able to convince enough legislators or if the minority becomes the majority.

A list of nine content statements dealing with the concept of Market Failures, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

12. THE ROLE OF GOVERNMENT

All societies must establish some framework of law and order to safeguard their existence. A market economy could not function without some protection of property rights and enforcement of contracts. But, once this general point is made, there is room for debate about which laws and rules are necessary or desirable. In a market
economy, business firms and resource owners are encouraged to compete vigorously in pursuit of their own self-interests. But what if they do not compete fairly? What if they agree to fix prices and restrict output? What if they lie or cheat? What if they sell spoiled meat or impure and therefore dangerous drugs without informing buyers?

Some argue that in the long run the market itself punishes such practices. The liars and cheaters will find it increasingly difficult to find customers. As their tactics are found out and this information gets around, fewer people will do business with them, and they will be punished in the currency of the marketplace—by monetary losses. While such punishment may eventually take care of those who violate the principles of fair competition, this does little to redress the harm done to the victims of those practices. Few people take comfort in learning that a particular drug which impaired their health is losing sales or that news of illness caused by spoiled meat contributes to the economic demise of an unscrupulous competitor.

All but the advocates of a completely unrestricted market system admit that some ground rules are necessary to keep competition within acceptable limits. Yet, when it comes to a specific issue, the matter becomes one of intense controversy. Should there be standards for weights and measures? Laws to forbid child labor? Health and safety regulations? Farm price supports? Zoning regulations? Minimum wage laws? Should the government enforce truth in advertising? Certify the purity of food and drugs?

Beyond establishing certain “rules of the game” in economic life, government activities in the U. S. economy today can be classified into several categories: preserving and fostering competition (antitrust laws), regulating natural monopolies, providing information and services to enable the market to work better, regulating externalities, providing certain public goods, offering some measure of economic security and income redistribution to individuals, assuring a sound monetary system, and promoting overall economic stability and growth. All of these activities involve some element of controversy; all entail at least some expenditures; and, as mentioned in the previous section, all contain potentials for government failures that somewhat parallel private-market failures.

**Taxation**

Goods and services provided by governments (federal, state, and local) are paid for by taxes or by borrowing from the public. **Taxes** are mandatory payments to government. **Proportional taxes** take the same percentage of income from people in all income groups. **Progressive taxes** take a larger percentage of income from people in higher-income groups than from people in lower-income ones; the federal income tax in the United States is an example of a progressive tax. **Regressive taxes** take a larger percentage of income from people in lower-income groups than from higher-income ones. Sales taxes and most excise taxes are examples of regressive taxes. Since low-income groups tend to spend a larger percentage of their income on taxed items than do high-income groups, the latter tend to save a larger proportion of their incomes.

**Governments in the Circular Flow of Resources, Goods, Services, and Money Payments**

Exhibit 7, on the following page, presents a more complete diagrammatic overview of the circular flow of resources, goods, services, and money payments in the United States today than Exhibit 4 presented earlier. Governments have been added to the circular flow shown in Exhibit 7. This exhibit indicates that resource owners sell the services of some of their labor and other resources to governments as well as to business firms and that business firms sell some of their finished goods and services to governments as well as to individual resource owners. Exhibit 7 also shows that governments collect money payments, including transfer payments (see concept 10, on income distribution), to both of these groups. Even Exhibit 7, however, is a simplified overview of how our economy operates. It does not show the saving and borrowing in financial markets by individuals, businesses, and governments, and it does not show trade with foreign nations.
E X H I B I T 7
Governments in the Circular Flow of Resources, Goods, Services, and Money Payments

PRODUCT MARKETS

Money Payments (Sales Dollars)

Finished Goods and Services to Resource Owners

Money Payments (Taxes)

Government Services to Resource Owners

Money Payments (Purchases & Transfer Payments)

Finished Goods & Services to Governments

GOVERNMENTS

Money Income Payments (Wages, Rents, Interest, Profit, and Transfer Payments)

Government Services to Business Firms

PRODUCT MARKETS

Money Income Payments (Wages, Rents, Interest, Profit)

FACTOR MARKETS

Money Payments (Taxes)

Government Services to Business Firms

Money Payments (Taxes)

PRODUCT MARKETS

Finished Goods and Services to Resource Owners

Money Payments (Taxes)

Government Services to Resource Owners

Money Payments (Purchases & Transfer Payments)

Finished Goods & Services to Governments

GOVERNMENTS

Money Income Payments (Wages, Rents, Interest, Profit, and Transfer Payments)

Government Services to Business Firms

PRODUCT MARKETS

Money Income Payments (Wages, Rents, Interest, Profit)

FACTOR MARKETS

Money Payments (Taxes)

Government Services to Business Firms

Money Payments (Taxes)

PRODUCT MARKETS

Finished Goods and Services to Resource Owners

Money Payments (Taxes)

Government Services to Resource Owners

Money Payments (Purchases & Transfer Payments)

Finished Goods & Services to Governments

GOVERNMENTS

Money Income Payments (Wages, Rents, Interest, Profit, and Transfer Payments)

Government Services to Business Firms

PRODUCT MARKETS

Money Income Payments (Wages, Rents, Interest, Profit)

FACTOR MARKETS

Money Payments (Taxes)

Government Services to Business Firms

Money Payments (Taxes)

PRODUCT MARKETS

Finished Goods and Services to Resource Owners

Money Payments (Taxes)

Government Services to Resource Owners

Money Payments (Purchases & Transfer Payments)

Finished Goods & Services to Governments

GOVERNMENTS

Money Income Payments (Wages, Rents, Interest, Profit, and Transfer Payments)

Government Services to Business Firms

PRODUCT MARKETS

Money Income Payments (Wages, Rents, Interest, Profit)

FACTOR MARKETS

Money Payments (Taxes)

Government Services to Business Firms

Money Payments (Taxes)

PRODUCT MARKETS

Finished Goods and Services to Resource Owners

Money Payments (Taxes)

Government Services to Resource Owners

Money Payments (Purchases & Transfer Payments)

Finished Goods & Services to Governments

GOVERNMENTS

Money Income Payments (Wages, Rents, Interest, Profit, and Transfer Payments)

Government Services to Business Firms

PRODUCT MARKETS

Money Income Payments (Wages, Rents, Interest, Profit)

FACTOR MARKETS

Money Payments (Taxes)

Government Services to Business Firms

Money Payments (Taxes)

PRODUCT MARKETS

Finished Goods and Services to Resource Owners

Money Payments (Taxes)

Government Services to Resource Owners

Money Payments (Purchases & Transfer Payments)

Finished Goods & Services to Governments

GOVERNMENTS

Money Income Payments (Wages, Rents, Interest, Profit, and Transfer Payments)

Government Services to Business Firms

PRODUCT MARKETS

Money Income Payments (Wages, Rents, Interest, Profit)

FACTOR MARKETS

Money Payments (Taxes)

Government Services to Business Firms

Money Payments (Taxes)
Macroeconomic Concepts

Macroeconomics is the study of the functioning of the economy as a whole, and it deals mainly with the total output and income of the economy, the total level of employment, and movements in the average level of all prices. The heart of macroeconomics consists of analyzing the determinants of aggregate supply (the total productive capacity of an economic system) and of aggregate demand (the total spending by economic units on the goods and services produced). In the short run, the main problem in macroeconomics is why aggregate demand sometimes exceeds aggregate supply, thereby bringing on inflation, and why aggregate demand sometimes falls short of aggregate supply, thereby bringing on unemployment and deflation—or at least less inflation. Over the long run, macroeconomics is concerned primarily with economic growth—increases in the productive capacity of the economy and in average real income per person.

13. GROSS DOMESTIC PRODUCT

Gross Domestic Product (GDP) is the most inclusive measure of an economy’s output. GDP is defined as the market value of the total output of final goods and services produced in one year.* If periods shorter than a year are used to measure output, the results are usually converted to an annual rate. It is important to recognize that GDP measures the flow of output and not the stock of wealth. (The stock of wealth consists of the assets that are capable of producing output in the economy at any given time.) It is also important to know that GDP counts only final goods and services produced for the market. Most nonmarket production, such as the unpaid work of homemakers, is not counted in GDP. Intermediate sales of goods and services among different firms are excluded from GDP in order to avoid “double counting.” If a farmer grows wheat and sells it to a miller, who grinds it into flour and sells the flour to a baker, who then bakes the flour into bread and sells the bread to a consumer, how much has the economy produced? It has produced one loaf of bread, which is all that is counted in GDP because the bread is the final product of the foregoing chain of economic activity. The wheat and the flour are intermediate products. It would be a mistake to count the wheat and the flour and the bread in GDP, since the value (price) of the bread already includes the value (price) of the flour and the value (price) of the wheat as well as the value of the farmer’s and the miller’s and the baker’s services. When calculating GDP, the value of all goods and services purchased from other producers is subtracted from the sales figures of each producer, and thus only the value added at each stage of production is counted. The sum of the values added at each stage of production is equal to the price at which a unit of the final product is sold to its ultimate user.

“Nominal” or “money” GDP measures the output of goods and services in terms of the current prices paid to buy the output. “Real” GDP measures the output of goods and services in constant prices, that is, in the prices prevailing in a particular year. (See the discussion of real vs. nominal on p. 43). Comparing GDP in both constant and current prices enables us to distinguish between changes in nominal GDP that are caused by actual changes in output and changes in nominal GDP that are simply the result of changes in prices.

Real GDP is the most comprehensive measure of an economy’s output of goods and services in one period compared to another period. Economic growth is usually defined as an increase in real GDP or, more meaningfully, in order to take account of population growth, as an increase in real GDP per capita, that is, in the amount of

* The U.S. GDP includes profits earned by foreign-owned businesses and income earned by foreigners in the U.S., but it excludes profits earned by U.S. companies overseas and by U.S. residents working abroad.
goods and services produced per person.

A list of 12 content statements dealing with the concept of *Gross Domestic Product*, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

14. AGGREGATE SUPPLY AND AGGREGATE DEMAND

**Aggregate supply** is the total amount of goods and services (real GDP) produced by the economy during some stated period of time. The upper limit on aggregate supply is set by the productive capacity of the economy when all its resources are fully employed. While the economy’s full-employment productive capacity is substantially fixed at any moment in time, past experience suggests that it normally grows as time goes on because of increases in the labor force, improved education and training of workers, more saving and capital investment, discovery of new resources, and technological advances.

Since the economy does not always operate at full employment, estimating its full-employment productive capacity is difficult. Some individuals have stronger attachments to the labor force than others, some machines can be operated profitably when their products command certain prices and not at lower ones, and individuals and businesses can change the number of hours they work in response to changing incentives. Some economists, therefore, have developed the concept of an aggregate supply “curve,” which relates the total amount of goods and services produced to other variables in the economy such as the average price level or the actual or expected real incomes of suppliers of resources. Not all economists agree with this approach to aggregate supply, however, and much of the discussion and debate in macroeconomics at this writing is over the existence, shape, and behavior of an aggregate supply curve for the U.S. economy.

As indicated earlier, an increase in productive capacity often requires giving up some current consumption in exchange for future increases in output and income. This is true for individuals (who can postpone entering the labor force in order to obtain education, skill, and training that will make them more productive in the future); for businesses (which can retain part of their after-tax profits to buy new machinery rather than paying out all of their after-tax profit to their owners); and for governments (which can raise personal taxes to cut consumption and use the money to finance basic research and development projects, new highways, public training and retraining programs for individuals, etc., or can encourage the enhancement of productivity by granting tax reductions to business firms that buy new plants and equipment). A persistent question in macroeconomics is: How much of our resources should be devoted to increasing our productive capacity as opposed to how much should be spent on current consumption?

**Aggregate demand** is the total amount of spending on goods and services in the economy during some stated period of time. There are two basic approaches to examining aggregate demand. One is to view aggregate demand as the sum of total consumer spending by individuals and households (C), investment spending by businesses for new plants and equipment and for additions to inventory (I), and spending for goods and services by government (G). In this approach, aggregate demand is expressed as $C + I + G$. A second approach is to view aggregate demand as reflecting the stock of money (M) multiplied by the velocity of circulation (V). The velocity of circulation is defined as the number of times the average dollar (consisting of checkable deposits as well as currency) is spent on final goods and services. Velocity can be calculated by dividing GDP by the average stock of money during the time period covered by GDP. In this approach, aggregate demand is expressed as $M \times V$.

It is important to note that the $C + I + G$ and the $M \times V$ approaches to aggregate demand simply express two different ways of looking at the same thing. Since, by definition, both $C + I + G$ and $M \times V$ are equal to aggregate demand, this identity can be

*As explained, net exports (exports minus imports) is also a component of this approach to total spending and aggregate demand.
expressed symbolically as: \( C + I + G = M \times V \). As we explain later, government fiscal policy (concept 18) influences aggregate demand by working on \( C, I, \) and \( G \), the variables on the left-handed side of this identity, and government monetary policy (concept 17) influences aggregate demand by working on \( M \) and \( V \), the variables on the right-hand side of this identity.

A list of nine content statements dealing with the concept of \textit{Aggregate Supply and Aggregate Demand}, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

**15. UNEMPLOYMENT**

Unemployment is defined in U.S. statistics as the number of people without jobs who are actively seeking work. The \textit{unemployment rate} is the number of people who are unemployed expressed as percentage of the number of people who are in the labor force. The \textit{labor force} consists of people at least 16 years who are employed or actively looking for work. A high unemployment rate usually means that there are also idle machines and other unused means of production in the economy. The existence of unemployment does not imply that the basic problem of scarcity has disappeared. Rather, it implies that the nation is not using its scarce resources as effectively as possible. This is reflected in the opportunity cost of unemployed resources, which is the loss of all of the goods and services that these resources could be producing if they were employed. Moreover, unemployed workers lose the income, respect, and self-esteem they would enjoy if they were working. At the same time, the rest of society is confronted with the problem of what, if anything, to do about providing support to workers who are not earning any income of their own.

Not all people who are unemployed have lost their jobs. Some voluntarily left their previous positions and have not yet found new ones, others are looking for work for the first time, still others previously left the labor force and are now returning to it. Likewise, not all people who have lost a job are counted as unemployed. Job-seekers who become discouraged and quit looking for work, for example, are considered to have left the labor force and therefore are not counted as unemployed.

Wide differences exist in the unemployment rates of different groups in the U.S. labor force. The unemployment rate for teenagers 16-19, for example, is usually about three times as high as that for the labor force as a whole. An increase in the percent of the labor force that is under 20 years of age, therefore, might be expected to result in an increase in the overall unemployment rate, and vice versa.

Since the absolute size and composition of the labor force can change in response to different economic and social conditions, many economists have begun to emphasize the employment rate as well as the unemployment rate. The \textit{employment rate} is defined as the percent of the \textit{entire population} age 16 or over that is employed. The U.S. Bureau of Labor Statistics, which issues the nation’s employment data, now publishes this measure as well as the more familiar unemployment rate described above.

Because people can become unemployed for different reasons, economists sometimes distinguish between frictional unemployment, structural unemployment, and cyclical unemployment.

\textbf{Frictional unemployment} is the more or less unavoidable unemployment that occurs in a market economy as people change jobs, new entrants into the labor force seek their first job, and people are temporarily laid off from seasonal jobs.

\textbf{Structural unemployment} refers to the situation of people who are unemployed because their present ability, skills, training, and location do not “match up” with available job openings that reflect the basic structure of the economy. Change in consumer preferences, changes in technology, the expansion of new industries and the decline of old ones, and shifts in the economic roles of different geographic regions, all influence the economy’s structure and, hence, the types and locations of available jobs. If new jobs require different skills and training than did old ones, and if the new jobs are located in different parts of the country, structural unemployment may result.
Cyclical unemployment is unemployment associated with changes in the overall rate of economic activity. As the economy contracts, the total demand for goods and services falls, and the falling demand causes unemployment to rise. Contrariwise, during economic expansions, the total demand for goods and services rises, and the rising demand causes unemployment to fall.

Cyclical unemployment explains major fluctuations in the economy's overall unemployment rate, but the changing size and composition of the labor force and the existence of frictional unemployment and structural unemployment have made it difficult to get agreement on a specific numerical target for "full employment" in the U.S. economy.

During the late 1970s and early 1980s the U.S. economy was plagued with both high unemployment and rapid inflation at the same time. This caused many economists to re-evaluate traditional economic policies that have been used to deal with such problems.

Considered alone, a low rate of unemployment is desirable, but some economists now argue that there is a "natural rate of unemployment" that is consistent with a stable rate of inflation. In this view, attempts to reduce the unemployment rate below the so-called "natural rate" will cause inflation to accelerate. This theory, however, remains controversial, and attempts to reach agreement on a specific figure for the natural rate of unemployment have not been successful.

A list of 14 content statements dealing with the concept of Unemployment, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

16. INFLATION AND DEFLATION

Inflation is a sustained increase in the average price level of the entire economy; deflation is a sustained decrease in the average price level of the entire economy. Prices in some markets (e.g., pocket calculators) can fall even in times of inflation, and prices in some markets (e.g., medical care) can rise even in times of deflation. But it is not the change in individual prices that determines the extent to which an economy is experiencing inflation or deflation; it is the upward or downward movement in the average prices of all goods and services combined that determines the extent of inflation or deflation.

As the price level rises during an inflation, a dollar buys fewer goods and services than before. Hence, inflation reduces the dollar's real purchasing power. As the price level falls during deflation, a dollar buys more goods and services than before. Hence, deflation increases the dollar's real purchasing power. Because money is used as a unit of account and as a medium of exchange in most economies, changes in the purchasing power of money generally have several adverse consequences. Since inflation has been a more serious problem than deflation in recent years, some of the adverse consequences of inflation deserve mention.

Inflation can produce misleading information in business accounting. Since business is conducted in money terms, figures using changing prices can give deceptive signals. If goods and materials that firms bought at lower prices must be replaced at higher prices, profit figures are often overstated if the profits are calculated on the basis of the lower prices. Such a calculation implicitly assumes that goods and materials can continue to be purchased (replaced) at lower prices when, in fact, they cannot. Depreciation charges based on the original cost of equipment may not provide sufficient funds to replace this equipment after it wears out if inflation has caused equipment prices to rise. Firms that do not or cannot increase their depreciation charges will find it difficult to maintain, let alone expand, their investment in capital goods.

Inflation hurts people living on fixed money incomes and people who have saved fixed amounts of money for specific purposes such as financing their children's college education or their own retirement. Inflation hurts people who have lent out money at a rate of interest that did not include an allowance for an increase in the average price level. Lenders in that situation are without protection against a decline in the purchas-
ing power of the loan when it is repaid. People who borrowed money under the condi-
tions just mentioned will benefit, since the borrowers will repay their loans in dollars
that have less purchasing power than the dollars originally borrowed. In general, if
long-term contracts are negotiated in fixed dollar terms, buyers tend to gain and sell-
ers tend to lose during periods of unanticipated inflation.

In large part, as suggested above, the adverse effects of inflation depend on the
extent to which inflation is correctly anticipated and the extent to which it is unantici-
pated. If inflation is correctly anticipated, contracts can be negotiated to include “infla-
tion premiums.” Such premiums are designed to protect lenders and other recipients
of future money payments from declines in the purchasing power of the money to be
repaid to them. Lenders, for example, will insist on higher interest rates if they antici-
pate inflation, and the greater the inflation they anticipate the higher the rate of inter-
est they will ask. Borrowers who agree to the lender’s terms presumably share similar
anticipations of inflation. However, it is often difficult to anticipate a future rate of infla-
tion correctly, and if a mistake is made, there can be an unintended gain to either the
lender or the borrower, depending on the direction of the mistake.

In addition to increasing the possibility of misleading accounting statements in busi-
ness reports and of capricious windfall gains or losses of real income, inflation also
encourages “shortsightedness.” Under inflationary conditions, predicting future costs and
profits of a major investment that will take a long time to pay off, such as an electronics
plant or an oil refinery, becomes an even riskier process than it might otherwise be. In
general, the increased risks and the higher interest rates that accompany inflation tend
to discourage long-range planning as well as investment in long-term projects. These
effects, in turn, hinder the expansion of the economy's total productive capacity.

Inflation can occur for several reasons, and economists sometimes distinguish
between demand-pull inflation and cost-push inflation. People’s expectations and the
way their expectations are formed also may influence the occurrence and rate of infla-
tion in the economy.

Demand-pull inflation occurs when aggregate demand in the economy increases
faster than the economy’s productive capacity at full employment. If aggregate
demand exceeds aggregate supply, the average prices of goods and services are
pulled up by the “excess” demand. Demand-pull inflation is generally associated with
rapid increases in a nation’s money supply and is often described as “too much money
chasing too few goods.”

Cost-push inflation occurs when higher prices for the factors of production increase
costs. Most sellers try to push these higher costs on into higher prices even if there is
no change in aggregate demand in the economy. Supply shocks, such as widespread
and severe crop failure or the sharp increases in the price of oil instituted by a cartel
that were experienced in the 1970s, can be sources of cost-push inflation if these
shocks lead to reduced supply and higher prices throughout the economy.

Price expectations and changes in them can also influence the rate of inflation. If con-
sumers, investors, and businesses begin to anticipate more inflation than currently
exists, that expectation can make the anticipated increase in inflation a self-fulfilling
prophecy. If consumers think that prices are going to increase, for example, they may
rush out to buy before the prices go up. This surge in buying increases demand and
speeds an inflationary spiral of prices. Or if businesses, workers, and lenders raise
prices, wages, and interest rates to match the anticipated inflation, other sellers will in
turn try to protect themselves by raising their prices. Inflationary expectations can play
a key role in generating and maintaining inflation.

We still have much to learn about the process of inflation, as well as about its rela-
tion to other macroeconomic problems such as economic growth and unemployment.
When conflicts occur, dilemmas in economic policy arise. Should policy, for example,
be aimed primarily at achieving long-run price stability or high employment? Primary
focus on avoiding inflation may mean higher employment. Primary focus on reducing
unemployment may generate increasing inflation. Such dilemmas are especially hard
to deal with because of their political implications: high and rising rates of unemploy-
ment or inflation, or both, are likely to adversely affect the party in power.

A list of 11 content statements dealing with the concept of *Inflation and Deflation*, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8 and 9-12.

17. **MONETARY POLICY**

**Monetary policy** seeks to affect the amount of money available in the economy and its cost (interest rates). Monetary policy in the United States is the responsibility of the Federal Reserve System, a quasi-independent agency of the federal government.

As we have indicated, exactly how “money” should be defined in the U.S. economy today is uncertain. The narrowest definition of money (known as M-1) is the sum of currency (cash), checkable deposits in banks and other financial institutions, and traveler’s checks. Currency is printed or coined by the federal government, but the bulk of the nation’s money supply, checkable deposits, is created by the lending activities of banks and certain other financial institutions (see next paragraph). In addition to checkable deposits, however, other financial assets, such as money market mutual funds and savings accounts are easily convertible into cash or checking accounts. Figures for broader definitions of money (known as M-2, M-3, etc.), therefore, are published in addition to those for M-1.

The financial system increases the money supply by making loans to individuals, businesses, and governments. These loans appear as new, additional checkable deposits in the borrowers’ checking accounts and thus increase the spending power—or aggregate demand—of the nation’s economic units. All institutions that take checkable deposits are required to keep reserves—in the form of vault cash or deposits at a Federal Reserve Bank—behind a stipulated portion of the checkable deposits they hold. Control over the size of these reserves is the principal but not the only means by which the Federal Reserve carries out the nation’s monetary policy. If the Federal Reserve provides financial institutions with more reserves, their ability to lend to the public is increased, thus making possible growth in the money supply and in aggregate demand. Conversely, if the Federal Reserve holds down the amount of reserves or lowers its additions to them, the size of the money supply and of aggregate demand are restrained.

Monetary policy today is a subject of considerable controversy. Economists are divided on what Federal Reserve policy ought to be and how it should be executed. Conventional wisdom once said that the Fed should “lean against the wind”—that is, increase the money supply when aggregate demand falls and the economy needs stimulation, and hold the money supply down when aggregate demand rises and inflation threatens. Such a policy, it was felt, would enable the Federal Reserve to keep aggregate demand at a level that would promote price stability and encourage a more stable and desirable level of economic growth. More recently, however, economists who believe in the theory of “rational expectations,” and another group of economists known as “monetarists,” have argued that it is not possible for the Federal Reserve to be effective by following a “lean against the wind” policy. The rational expectationists argue that whenever consumers, investors, and businesses correctly anticipate shifts in economic policy, they will act in ways that will offset the effects of such shifts. Monetarists believe that the Federal Reserve should take a long-run view and steadily increase the money supply at approximately the same rate as the growth of the nation’s productive capacity. They believe the Federal Reserve should not attempt to make frequent short-term changes in the money supply in response to changing economic conditions. The monetarists feel that changes in monetary policy create more economic instability than would a fixed policy of steady monetary expansion. These differences of opinion, plus current problems with defining and controlling the money supply, have been making the task of conducting effective monetary management a difficult one.

A list of 13 content statements dealing with the concept of *Monetary Policy*, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indi-
18. FISCAL POLICY

Fiscal policy consists of changes in taxes, in government expenditures on goods and services, and in transfer payments that are designed to affect the level of aggregate demand in the economy. Fiscal policy can also be used to provide incentives for increasing aggregate supply, such as providing special tax concessions to firms that invest in new plant and equipment, or offering low-cost student loan in order to encourage people to pursue a college education. Although the president makes proposals regarding fiscal policy in annual budget messages, the Congress of the United States is largely responsible for ultimate decisions on fiscal policy.

When the government increases spending on goods and services or on transfer payments but does not increase tax receipts correspondingly—and if no other significant changes occur—total aggregate demand will rise and the economy will experience more employment of its resources or more inflation or both. Conversely, when government reduces expenditures without reducing tax receipts, aggregate demand will decline and the economy will experience less employment of its resources or less inflation or both. Similar effects can be obtained by reducing or increasing tax receipts while holding government expenditures constant. A reduction in tax receipts will raise people’s disposable income and thus increase aggregate demand in the economy. An increase in tax receipts will reduce people’s disposable income and thus lower aggregate demand. But those who emphasize rational expectations (mentioned in the previous section) argue that to the extent that people recognize what these policies are intended to accomplish, fiscal policy can not work effectively in the manner just described. The monetarists (also mentioned in the previous section) argue that fiscal policy will not be effective unless it is accompanied by appropriate changes in the money supply.

Apart from the theoretical differences among some economists, the actual task of altering government expenditures and tax receipts to promote overall economic stability and growth has proven difficult to carry out in practice. It usually takes a long time to get legislation through Congress and signed by the president, and changes in taxes and spending often become entangled with questions of income distribution and political expediency as well as with questions of macroeconomic stability and growth. The large federal deficits of recent years also make it increasingly difficult to coordinate monetary and fiscal policy for the purpose of stabilizing the economy. Thus, as with monetary policy, we still have much to learn about fiscal policy and how it can be best used to achieve macroeconomic objectives.

A list of 10 content statements dealing with the concept of Fiscal Policy, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

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International Economic Concepts

International economics is the study of economic relationships among nations, including international trade and investment and international monetary relations. In general, economists use the same tools of analysis to understand the world economy as they do to understand a national economy. These include opportunity cost, specialization and exchange, markets and prices, supply and demand, and competition and market structure. The principles underlying trade between countries are the same as those underlying trade between regions within a country. Capital and labor move between countries for the same reasons they move from one part of a country to another. Inflation and unemployment may spread around the world just as they do around one country—and for similar reasons. Special problems, however, which do not exist within a country, arise in international economic relationships because the world is divided into more than 180 political units. Most of these political units place
restrictions on international trade that they do not place on domestic trade. Since almost every country has its own monetary system, there must be a “linkage mechanism” permitting people and businesses in one country to change their money into the currencies of other countries with which they wish to carry out economic transactions. This “linkage mechanism” is the network of foreign exchange markets in which different currencies are bought and sold at a “price” called the foreign exchange rate.

19. ABSOLUTE AND COMPARATIVE ADVANTAGE AND BARRIERS TO TRADE

Economists use the concepts of absolute advantage and comparative advantage to explain why trade takes place between countries (and between different regions in the same country). These concepts are based on the difference between the opportunity costs of producing goods and services in different areas.

Productive resources are distributed unevenly around the world just as they are within a country. These differences in resource distribution give rise to differences in opportunity costs which make it desirable to specialize and exchange. For example, Wyoming has open spaces suited to cattle-raising but has few people whereas Rhode Island has little space but many skilled workers, a situation that makes it worthwhile to develop industry. Thus, Wyoming has an absolute advantage over Rhode Island in cattle raising while Rhode Island has an absolute advantage over Wyoming in industry.

If necessary, Rhode Island probably could raise cattle and Wyoming could develop industry. But the opportunity cost of raising cattle in Rhode Island would be the loss of a large amount of industrial output, and the opportunity cost of Wyoming’s using its existing resources to develop industry would be the loss of a large amount of cattle production. Each state would be worse off than if each specialized and traded with the other.

The concept of absolute advantage explains why trade takes place between countries with very different economies, such as raw material producers like Indonesia, which produces coffee, sugar, and minerals, and industrialized nations like Japan, which produces machinery. But the greatest volume of international trade today is actually between countries with rather similar economies—that is, between the industrialized nations of North America, Western Europe, and Japan. To explain the basis of this trade we must use the more sophisticated concept of comparative advantage. This can best be understood by considering it first in the context of individual specialization.

Sharon Smith is a top-flight advertising executive. It happens that she can also type faster than any of the secretaries in her offices. Yet, even though she is superior in both skills, it would still pay Ms. Smith to concentrate on her advertising work and let a secretary type her letters. An hour spent typing is an hour not spent on advertising work, and the opportunity cost of this for Ms. Smith would be very high. So she will concentrate on the skill in which her comparative advantage is the greatest and let the secretary specialize in the work in which her disadvantage is the least. In this way the total output of advertising work and typing will be greater than if each person tried to do both jobs.

Applying comparative advantage to countries, it will pay the United States, for example, to specialize in producing jet aircraft and leave the manufacture of lace to Belgium, even if the United States can make both products more cheaply than Belgium. The United States has a greater margin of efficiency over Belgium in jet aircraft than in lace, so the opportunity cost of diverting productive resources away from aircraft and into lace would be very high.

Among nations, as among individuals and regions, the concept of comparative advantage relates to the opportunity cost involved in producing more of one good or service and less of another. If each nation specializes in the production and export of those goods and services in which it has a comparative advantage and imports from other nations those goods and services in which it has a comparative disadvantage, several important consequences follow. World production, world economic growth, and efficiency in the use of limited resources will all be maximized. As a result, consumers

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everywhere will have access to a greater amount of goods and services at lower prices.

In principle, internationally traded goods and services should be sold in competitive markets at prices determined by supply and demand. Just as they do in a domestic economy, prices in international markets "tell" producers what it is profitable to produce and "tell" consumers on what it is advantageous to spend their money. The changing pattern of prices in international trade should thus determine what will be produced, how it will be produced, and to whom it will be distributed as these prices interact with the mechanisms that perform these same functions within different countries.

In fact, however, international markets are beset by more complexities than domestic markets. One reason is that most governments erect artificial barriers to the free flow of goods and services and productive resources. These barriers to trade include tariffs or special taxes on imported goods, quotas, import licenses, export subsidies, state trading, the formation of cartels, controls on the freedom to exchange currencies, and restrictions on immigration. Such obstacles distort the pattern of prices, production, consumption, and the distribution of income in international markets. If the United States restricts the importation of Japanese cars and Philippine sugar, for example, the production of American automobiles and sugar will be encouraged. American workers and sugar growers will have more jobs and higher incomes, but American consumers will pay higher prices for cars and sugar, and American exporters of aircraft and cotton, for example, may suffer reduced sales to Japan and the Philippines. Patterns of production in all three countries may change in an undesirable way, with productive resources moving from more efficient into less efficient uses.

Monopoly also may affect international markets. The government of the former Soviet Union, for example, had a monopoly on its foreign trade. As a result, foreign private businesses that engaged in trade with the Soviet Union found themselves dealing with one seller (a monopoly) or one buyer (a monopsony). After 15 independent countries emerged from the Soviet Union, each of them had to develop new ways of dealing with international buyers and sellers, and foreign governments and private businesses had to offer assistance to help them adapt to a non-monopoly, non-monopsony way of engaging in foreign trade.

Sometimes international prices are rigged by international agreement among governments, as is done with tin through the International Tin agreement and with oil through the organization of Petroleum Exporting Countries (OPEC).

A list of 10 content statements dealing with the concept of Absolute and Comparative Advantage and Barriers to Trade, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

20. EXCHANGE RATES AND THE BALANCE OF PAYMENTS

An exchange rate is the price of one nation's currency in terms of another nation's currency. (The British pound may be worth $1.80 in U.S. dollars, while the Canadian dollar may be worth $0.85, etc.). When exchange rates change, both the level of domestic economic activity and the international flow of goods, services, and productive resources are affected.

Some foreign exchange markets are completely free, which means that exchange rates are determined by the forces of supply and demand emanating from many buyers and sellers. In other foreign exchange markets, governments intervene to influence exchange rates. A government may actually fix the rates for its own currency by requiring all those who earn foreign currencies to surrender them to a government authority at a government-determined exchange rate. The government then rations or sells the currencies taken in at fixed prices to those who wish to make payments abroad. Other governments may "peg" their exchange rates by buying or selling their own currencies in foreign exchange markets in sufficient quantities to maintain a given set of rates.

From 1946 to 1973, under the Bretton Woods agreement, which was signed by most
of the world’s countries, governments did intervene continuously in foreign exchange markets in order to maintain a world-wide system of fixed exchange rates. Since 1973, rates have been more or less flexible. Governments have been intervening in foreign exchange markets periodically or sporadically rather than continuously. Because rates neither float freely in response to supply and demand at all times nor are fixed, this practice has been called a “managed float.”

An alteration in exchange rates can have a significant effect on the flow of world trade as well as on the domestic economy of a country. If, for example, the U.S. dollar strengthens in terms of the German mark (DM), with the exchange rate moving from say $1.00 equals DM 2.00 (DM equals $0.50) to $1.00 equals DM 2.50 (DM equals $0.40), German goods will become cheaper for Americans. They can now obtain DM 2.50 for $1.00 instead of DM 2.00. This will cause German imports into the United States to increase. Meanwhile, U.S. exports to Germany will fall because the change in exchange rates has made the U.S. dollar more expensive in terms of German marks, causing imports from the United States to become more expensive to Germans. These changes in exports and imports will stimulate employment in Germany and may reduce employment in the United States. But the greater supply of German goods will help hold down inflationary pressures in the United States. (If the U.S. dollar weakens in terms of the German mark, the effects in each country will be reversed.)

The balance of payments (B/P) of a country is a statistical accounting which records, for a given period, all the payments that the residents, businesses, and government of one country make to the rest of the world as well as all the receipts which they receive from the rest of the world. Just as the GDP accounts provide information on the functioning of a national economy, so the B/P helps a nation to understand the state of its economic relationships with the rest of the world. It also helps nations to make appropriate decisions about their policies concerning world trade and finance.

The transactions recorded in the B/P are commonly separated into two portions: the current account and the capital account. The current account includes exports and imports of merchandise, receipts and payments relating to services such as tourism, shipping, banking, and insurance, income received from investments abroad, investment income transferred abroad to foreigners, payments and receipts in the form of royalties, government foreign aid given or received, military pension payments as well as charitable contributions. The capital account consists of movements of long-term capital between countries, such as business investments and purchases of stocks and bonds, as well as of short-term capital movements—which often consist mainly of banking transactions.

The terms “deficit” or “surplus” commonly used in reference to a country’s B/P usually designate the relationship between current account receipts and payments. If receipts are less than expenditures, the country is running a deficit on current account. If receipts are greater than expenditures, the country is running a surplus. Deficits or surpluses in the current account may be offset in the capital account. A surplus or deficit on the entire B/P is recorded as, and results in, a gain or loss in official government reserves—chiefly gold and holdings of foreign exchange.

A study of the B/P reveals much information on the state of the demand for and supply of currencies in foreign exchange markets which, in turn, as we have seen, determine exchange rates. U.S. imports, investments abroad, foreign travel, and military spending for troops stationed in foreign countries, for example, all add to the supply of dollars in foreign exchange markets. These dollars constitute part of the demand for other currencies, say, Japanese yen. When foreigners buy our exports, visit our country, or invest in the United States, or when foreign businesses, banks or governments repay loans to Americans, then foreign currencies are being supplied and dollars are being demanded in foreign exchange markets. In a free market, the dollar’s rate of exchange for foreign currencies depends on the relationship of both sets of demands and supplies just described. In this regard it is important to emphasize that it is the B/P as a whole, and not any one item taken separately that is important. The state of the balance of trade (exports-imports) alone, for example, does not determine a country’s
supply of and demand for foreign exchange. That is determined by all payments and all receipts taken together.

A list of 10 content statements dealing with the concept of *Exchange Rates and the Balance of Payment*, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate placement in grades K-4, 5-8, and 9-12.

**21. INTERNATIONAL ASPECTS OF GROWTH AND STABILITY**

The international economic concepts of comparative advantage, barriers to trade, exchange rates, and balance of payments are more important today than in the past because all nations are now so much more interdependent. The international transfer of investment capital and technology from rich and developed countries to poor and developing countries where capital and modern technology are scarce is vital to both the developing countries and the entire world economy. International investment takes place through both private and public channels. Private investments are made by businesses, particularly large multinational corporations, as well as by private purchases of foreign stocks and bonds. Public transfers of capital are made by governments through foreign-aid programs and by official lending by international organizations, of which the World Bank is the largest.

In some cases the flow of labor across international borders can also promote economic growth. This was true during the years of unlimited immigration into the United States in the nineteenth century. More recent examples are Australia after World War II and the flow of Italian and Turkish workers into West Germany in the 1960s. The large volume of Mexican immigration into the United States, both legal and illegal, in recent years reflects the working of the market mechanism. Labor is flowing from an area where wages are relatively low and job opportunities relatively limited to an area where wages are relatively high and job opportunities relatively plentiful.

A war can change economic opportunities in a very short time. After the brief Persian Gulf War, fought in early 1991, millions of workers from many countries lost their jobs in the countries around the Persian Gulf area and beyond. Some workers lost their jobs because their work could not be carried on during the war, but enormous numbers of people were expelled from the countries in which they worked because they were foreign nationals and therefore were considered to be untrustworthy. Repercussions of the displacement of people were felt in these workers’ countries of origin, where their incomes made a great difference in their nations’ economies.

Like economic growth, both inflation and unemployment—so important in Western industrial nations—are no longer purely domestic phenomena. They can be—and are—transmitted from one country to another through flows of trade and money. If the United States and other Western industrialized nations go into recession, as they did in 1974-75 and 1981-82, for example, the incomes of their citizens and the output of their industries drop. Their imports decline. This decline hits many less developed countries hard, for they depend heavily on sales of their primary products (copper, bauxite, sugar, wool, and the like) to the industrialized countries. Falling sales and prices bring the recession to the developing countries. Their foreign exchange earnings fall; they are unable to pay for needed imports; and they may become unable to repay their debts—or even the interest on them. Thus, worldwide recession tends to become a cumulative process. Conversely, if the economics of industrial countries are all booming, the demand for primary products increases in world markets, and the product prices rise. Such booms also tend to cumulate.

In theory, the major industrial powers acting in concert could use monetary and fiscal policies to maintain high-level output and employment without inflation. That would help achieve world economic stability at high levels of output. In practice, countries usually follow somewhat different—and sometimes incompatible—monetary and fiscal policies that frequently result in different rates of growth and inflation (or deflation) and thereby produce fluctuations in foreign exchange rates.
In sum, the complex world economy can be understood by using much the same concepts of economic analysis as for a domestic economy. The special problems of the world economy arise because the world is divided into numerous countries. Each has sovereign powers over the flow of goods, services, capital, and people across its borders, and each has its own monetary and fiscal policies which influence exchange rates and the balances of payments among nations.

A list of six content statements dealing with the concept of International Aspects of Growth and Stability, suggested for inclusion in the K-12 curriculum, is in Chapter IV. Chapters V, VI, and VII indicate the placement in grades K-4, 5-8, and 9-12.

**Measurement Concepts and Methods**

Economists and other analysts use a number of measurement concepts and methods to explain economic developments and to assess economic performance. Many of these are included in the mathematics curriculum, though in some cases they are described there using somewhat different terminology. The same concepts and methods can be taught with an emphasis on their applicability and usefulness in understanding economics rather than by following the more traditional approach of drawing examples almost exclusively from the physical sciences and engineering.

Several examples of the application of measurement concepts in economics are provided in Chapters V, VI, and VII in the activities shown under the heading “Evidence of Student Learning.”

**TABLES**

Tables are used to present numbers in a concise fashion and to reveal particular relationships among sets of numerical data. Exhibit 8 illustrates two common forms of presentation. The title of each table provides a general indication of its subject and/or purpose. The source note below the table states where the data come from; lettered footnotes present qualifications or more detailed explanations as needed.

**EXHIBIT 8**

TABLE 1
( thousands of persons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>117,914</td>
<td>6,874</td>
<td>124,788</td>
</tr>
<tr>
<td>1991</td>
<td>116,877</td>
<td>8,426</td>
<td>125,303</td>
</tr>
<tr>
<td>1992</td>
<td>117,598</td>
<td>9,384</td>
<td>126,982</td>
</tr>
<tr>
<td>1993</td>
<td>119,306</td>
<td>8,734</td>
<td>128,040</td>
</tr>
</tbody>
</table>


TABLE 2
Employment and Unemployment of the Civilian Labor Force in the United States, 1993

<table>
<thead>
<tr>
<th>Thousands of Persons</th>
<th>Percentage of Total Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>128,040</td>
</tr>
<tr>
<td>Employed</td>
<td>119,306</td>
</tr>
<tr>
<td>Unemployed</td>
<td>8,734</td>
</tr>
</tbody>
</table>


Table 1 is a *times series*. Tables of this kind show data by time period—day, month, quar-
ter, year—for a number of periods. The information in the first column gives the time period; in this case, the period is yearly, beginning with 1990. The labels at the tops of the next three columns describe what sort of data are given for each time period; in this example, employment, unemployment, and total civilian labor force in the United States. The numerical data themselves are then presented in the rows and columns of the table.

Table 2 shows a cross section of some of the data in Table 1, i.e., a snapshot of the information in one particular time period. As before, the labels in the first column and at the tops of the second and third columns describe the data provided. Exhibit 6 on page 24 provides other examples of cross-section tables. The two tables in that exhibit present data on income distribution in the United States in 1992 and 1993.

Tables can also be used to show relationships between economic variables. Exhibit 5 on page 21, for example, presents supply and demand data in the form of a table or “schedule.”

**CHARTS AND GRAPHS**

Charts are used to present relationships among quantitative data in pictorial form. Exhibit 9 illustrates some common types. Chart 1 on page 42 pictures the data that appear in Table 1. This is a line chart, in this case showing time along the horizontal axis and employment along the vertical axis. The title and footnotes serve the same purposes as their counterparts in Table 1. Line charts are often called graphs. Chart 2 depicts the same data as Chart 1, but in the form of a bar chart: differently marked or differently colored bars replace the simple lines used in Chart 1. Chart 3 pictures the data in Table 2 in the form of a pie chart. It answers the question: What percentage of the total civilian labor force was employed in 1993?

There are other ways of picturing economic relationships apart from those illustrated here. Exhibits 4 and 7 on pages 20 and 28, for example, show flow charts to illustrate the interrelationships of market exchanges in the U.S. economy.

**RATIOS AND PERCENTAGES**

Ratios express the relationship of one numerical value to another. The data in Table 2, for example, indicate that the ratio of civilian employment to the total civilian labor force in 1993 was 119,306/128,040. A ratio can also be expressed as a decimal fraction, i.e., 119,306/128,040 = .932. Multiplying a decimal fraction by 100 restates it as a percentage, i.e., .932 x 100 = 93.2%. The latter tells us that 93.2% of the total civilian labor force was employed in 1993.

Percentages (often represented by the symbol %), therefore, are a simple way of expressing ratios or proportions between numbers in terms of hundredth parts. What proportion of $100 is $50? It is 50/100 = 0.5 x 100 = 50%.

**PERCENTAGE CHANGES**

Percentage changes are used to measure the relative change in economic variables from one time period to another. Thus, the percentage change in teachers’ average salary during the period 1970 to 1992, displayed in Table 3, on the following page, is 450 percent. This number is calculated by dividing the change in average salary during the period ($34,100 - $6,200, or $27,900) by the average salary in 1970: $27,900/6,200 = 4.50; multiplying by 100 yields 450 percent.

Percentages can be useful aids in making comparisons. At the same time, however, one must pay careful attention to the base numbers—the denominators—used in calculating percentage changes. Equal percentage changes do not imply equal changes in the underlying absolute numbers, unless all the comparisons use the same base number. For example, a 10 percent increase from 100 is a change of 10 (from 100 to 110), but a 10 percent increase from 1,000 is a change of 100 (from 1,000 to 1,100). Likewise, equal changes in absolute numbers do not signify equal percentage changes unless, as noted before, all the comparisons use the same base number. For example, an increase of 10 from 10 to 20 is
EXHIBIT 3

Chart 1
Line Chart

Employment and Unemployment in the U.S. Civilian Labor Force, 1990-93


Chart 2
Bar Chart

Employment and unemployment in the U.S. Civilian Labor Force, 1990-93


Chart 3
Pie Chart

Employment and Unemployment in the U.S. Civilian Labor Force, 1999

Unemployed, 5.6%

Employed, 93.2%

a 100 percent increase, but an increase of 10 from 20 to 30 is a 50 percent increase. These cautions about making comparisons when the percentage changes consist of increases also apply when the percentage changes consist of decreases. There is no limit to how large a percentage increase can be, but a percentage decrease can never be larger than 100 percent.

INDEX NUMBERS

Index numbers measure changes in economic variables using a fixed base value for comparisons. The base value can be for a single year, or it can be an average of several years. With rare exceptions, the base index number is set at a value of 100, and all other numbers are expressed as a percentage of the base period value. We can construct an index of the teachers’ salaries shown in Table 3 (Exhibit 10), for example, by setting the 1970 value equal to 100 and expressing the 1980, 1990, and 1992 values as percentages of the 1970 value. As shown in Table 3, the index of teachers’ salaries in 1980 is 258, in 1990 it is 503, and in 1992 it is 550 when 1970 is given the base year value of 100.

Calculating percentage changes from the base year is easier using index numbers than using the standard percentage change formula explained earlier. The percentage change in average teachers’ salaries from 1970 to 1992, which we calculated earlier as 450 percent, for example, can be read directly from Table 3 by subtracting the 1970 index number of 100 from the 1992 index number of 550. To calculate percentage changes from years other than the base year, however, use the procedure explained in the first paragraph under “percentage changes” above.

REAL VS. NOMINAL VALUES

Monetary variables in economics can be expressed in “nominal” values or in “real” values. Nominal monetary values are measured in current prices, that is, in the prices prevailing in the period represented by the variable. Real monetary values are measured in constant prices, that is, in prices of a given—or base—period. When the level of any set of prices changes, the difference between nominal values and real values (or the difference between current prices and constant prices) can be substantial.

Real (or constant) monetary values are obtained by adjusting or “deflating” nominal monetary values with an appropriate index of prices. (See Table 4, which shows the average teachers’ salaries presented earlier along with figures for the Consumer Price Index.) The Consumer Price Index (CPI) measures the change from some base period in the average level of prices for a fixed collection of goods and services bought by urban families and individuals. For ease of comparison, we use 1970 as the base year for the CPI data shown in Table 4.

The real value of teachers’ salaries (in constant 1970 prices) is obtained by dividing the nominal salary values by the Consumer Price Index and multiplying the result by 100 to get the decimal in the right place, that is, to convert the figure back to a dollar amount. For 1970 the calculation is $6,200/100 = 62.00; 62.00 x 100 = $6,200. For 1980 the calculation is $16,000/213 = 75.12; 75.12 x 100 = $7,512. For 1990 the calculation is $31,000/337 x 100 = $9,258. For 1992 the calculation is $34,100/362 x 100 = $9,420.

The resulting figures for the real value of teachers’ salaries indicate that the increase between 1970 and 1992 was much less that the increase shown by the nominal values. The average salary increase in nominal terms was 450 percent. The average salary increase in real terms was 52 percent ($3,220/6,200 = .52; .52 x 100 = 52 percent).

AVERAGES AND DISTRIBUTIONS AROUND THE AVERAGE

“Average” is a general term for a single number that is used to summarize the mean-
ing of a large amount of numerical data. The two most common measures of averages used in economics are the median and the arithmetic mean.

The median is the middle-most value when the individual values in a set of data are arranged by magnitude from the lowest value to the highest value. Such an arrangement is called an "array." Half the values in the array are above the median; half are below. The arithmetic mean (sometimes called the "mean" or simply the "average") is the sum of all values in a set of data divided by the number of values included. Table 5 shows an array of the 1993 sales receipts of the top 25 corporations in Fortune magazine's list of the 500 largest U. S. industrial corporations. The median sales figure for this array of 25 values is the thirteenth, the $25,336 million shown for Amoco. The arithmetic mean for these 25 sales figures is $40,285 million.

Extreme values in a set of data have a stronger influence on the arithmetic mean than on the median. That is why there is a big difference between the mean and the median values in the data just cited. Therefore, careful interpretation of any average value usually requires some knowledge of the distribution of values around the average.

**EXHIBIT 10**
**TABLE 5**
The 25 Largest U.S. Industrial Corporations, Ranked by Sales, 1993

<table>
<thead>
<tr>
<th>Sales (millions of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Motors $133,622</td>
</tr>
<tr>
<td>Ford Motor 108,521</td>
</tr>
<tr>
<td>Exxon 97,825</td>
</tr>
<tr>
<td>International Business Machines 62,716</td>
</tr>
<tr>
<td>General Electric 60,823</td>
</tr>
<tr>
<td>Mobil 56,576</td>
</tr>
<tr>
<td>Philip Morris 50,621</td>
</tr>
<tr>
<td>Chrysler 43,600</td>
</tr>
<tr>
<td>Texaco 34,359</td>
</tr>
<tr>
<td>E.I. du Pont de Nemours 32,621</td>
</tr>
<tr>
<td>Chevron 32,123</td>
</tr>
<tr>
<td>Procter &amp; Gamble 30,433</td>
</tr>
<tr>
<td>Amoco 25,336</td>
</tr>
<tr>
<td>Boeing 25,285</td>
</tr>
<tr>
<td>Pepsico 25,021</td>
</tr>
<tr>
<td>Conagra 21,519</td>
</tr>
<tr>
<td>Shell Oil 20,853</td>
</tr>
<tr>
<td>United Technologies 20,736</td>
</tr>
<tr>
<td>Hewlett-Packard 20,317</td>
</tr>
<tr>
<td>Eastman Kodak 20,059</td>
</tr>
<tr>
<td>Dow Chemical 18,060</td>
</tr>
<tr>
<td>Atlantic Richfield 17,189</td>
</tr>
<tr>
<td>Motorola 16,963</td>
</tr>
<tr>
<td>USX 16,844</td>
</tr>
<tr>
<td>RJR Nabisco Holdings 15,104</td>
</tr>
</tbody>
</table>

SOURCE: Fortune, April 18, 1994, p. 220

**Broad Social Goals**

The broad social goals that relate to economics and that are given considerable importance in American society today are economic freedom, economic efficiency, economic equity, economic security, economic stability (full employment and the absence of inflation), and economic growth. These goals, and the importance attached to each of them, guide individuals and society in the making of decisions. The goals provide
targets and a sense of direction in formulating the means for reaching these targets.

These goals can also be thought of as criteria for evaluating the performance of the economic system (or parts of the system) and for examining the usefulness of new as well as existing programs. Some of the goals, such as freedom or equity, are difficult to state in quantitative form. Others, such as full employment or price stability, can be articulated as numerical targets. Indeed, in 1978 Congress for the first time established specific numerical goals for unemployment and inflation. The 1978 legislation, popularly known as the Humphrey-Hawkins Act, had set the target for the unemployment rate at 4 percent, to be achieved by 1983. The rate of inflation, as measured by the consumer price index, was to be reduced to 3 percent by 1983 and to zero by 1988.

A comparison of the goals of the Humphrey-Hawkins Act with what has happened since 1978 makes it clear that economic goals are rarely if ever fully attained; if they are, it is usually for short periods of time only. Nevertheless, the results point up the conclusion that only by attempting to set clear, specific goals is it possible to measure the progress made in attaining them.

Examples of the use of broad social goals to evaluate the performance of an economy are in Chapter III and in several activities in Chapter VII under “Evidence of Student Learning.”

**ECONOMIC FREEDOM**

Freedom as an economic goal concerns the freedoms of the marketplace—the freedom of consumers to decide how they wish to allocate their spending among various goods and services, the freedom of workers to choose to change jobs, join unions, and go on strike, the freedom of individuals to establish new businesses and to decide what to produce and when to change the pattern of production, the freedom of savers to decide how much to save and where to invest their savings. Of particular interest is the effect of actions by individuals, groups, or governments to enhance or restrict freedom in the marketplace and thereby affect the possible attainment of the other goals of efficiency, equity, security, stability, and growth. A number of people argue that government regulation limits the freedom of some people to make their own choices. Others argue that government policies may free some people to take greater advantage of the opportunities provided in a market economy. Given the differences in viewpoint, it is essential to define the kinds of freedom under discussion and whose behavior is most likely to be affected.

**ECONOMIC EFFICIENCY**

Efficiency can have two meanings. The term can refer to technical efficiency, which focuses on using the smallest input of resources to obtain some stated level of output, or obtaining the highest level of output using fixed inputs of specified resources. Since technical efficiency does not take into account the different costs of various inputs or the different benefits of various outputs, considerations of technical efficiency alone cannot indicate the most appropriate decision to make. An economy might be technically efficient in producing good A, for example, but if consumers do not want good A and prefer good B instead, then it would not be economically efficient to produce good A.

Economic efficiency is a broader concept than technical efficiency. Economic efficiency goes beyond technical efficiency and takes into account the costs and benefits associated with various market preferences and decisions. In order to obtain maximum benefits from using our limited resources, we should undertake only those economic actions which result in additional benefits that exceed the additional costs. By this standard, economic actions should not be undertaken if the additional costs exceed the additional benefits. The concept of economic efficiency is central in economics, and it should receive heavy emphasis in both individual and social decision making.

**ECONOMIC EQUITY**
Equity, which deals with what is “fair” and what is “unfair,” or what is “right” and what is “wrong,” is difficult to define precisely. **Economic equity** can be described as the application of our concepts of what is fair and what is unfair—or of what “ought to be” and “ought not to be”—to economic policy. To be sure, people differ in their conception of what represents equity or fairness. However, in evaluating economic performance, the concept serves as a reminder to investigate which or what kinds of people are made better or worse off as a result of, for example, a change in prices or the introduction of a new government program. Though two actions may appear to be equally efficient from an economic standpoint, one could benefit the old and another the young, one might benefit consumers and another producers, and so on. Many people would not be indifferent to who benefits from a policy, because they harbor some general idea of what is equitable. From the viewpoint of economics, equity ultimately deals with the distribution of income and wealth. One way of dealing with this question is simply to examine the effects of economic actions on the distribution of income and wealth: Who gains and who loses? The distinction between equality of opportunity and the equality of results is also important when economic equity is addressed.

**ECONOMIC SECURITY**

The goal of economic security concerns the desire of people to be protected against economic risks over which they may have little or no control. Such risks include accidents on their jobs, unemployment, destitution in old age, business failures, bank failures, precipitous price declines for one’s product, as well as disasters caused by natural or human agency. Economic security is enhanced by individual efforts, such as savings and the purchase of insurance, as well as by the growth of the economy, through which the mass of people receive more material well-being. Various government programs such as worker’s compensation, unemployment compensation, social security, aid to families with dependent children, federal insurance of bank deposits, and farm price supports are also aimed at increasing economic security in the United States. Nations also engage in the quest for economic security by seeking international agreements which assure them of access to key resources or of adequate prices for their exports. In the last analysis, it is the possession of real goods and access to services or assured claims to goods and services that provides economic security.

**FULL EMPLOYMENT**

**Full employment** prevails when all of an economy’s resources are utilized to capacity, but most discussion turns on the employment or unemployment of people. In practice, an unemployment rate for people that reflects normal frictional unemployment—unemployment that occurs as workers change jobs or enter the labor force—has come to be viewed as full employment. Debate continues as to what unemployment rate—at present suggestions range from 5 to 7 percent of the labor force—constitutes full employment. But keeping the goal of full employment in mind helps to remind us of the costs in lost output to the economy and in economic hardship to individuals that result from rates of unemployment that are too high.

**PRICE STABILITY**

As we have indicated, overall **price stability** means the absence of inflation or deflation, not the absence of changes in relative prices in particular markets. In reality, overall price-level changes are not often likely to be zero. Not only do our price indexes fail to reflect some improvements in product quality that in effect lower certain prices, but more important, price changes reflect the push and pull of market forces as changes occur in supply and demand. What constitutes “reasonable” price stability is the subject of much discussion. Nonetheless, this goal recognizes that sharp price changes necessitate costly adjustments in the behavior of individuals and businesses in order to cope with the effects that such changes produce.
ECONOMIC GROWTH

Economic growth means producing increasing amounts of goods and services over the long term. If the people of a society want to raise their level of living, they must produce more goods and services. If the population is growing, the amount produced must be still greater to provide for the additional people. This is why changes in total GDP per capita (that is, per person) are usually more meaningful than changes in total GDP as a measure of growth.

Economic growth is an important goal in virtually all countries, and it is closely related to several of the other goals discussed above. Both individuals and nations try to increase their economic security and well-being by expanding output. Individuals seek ways to enhance their earning ability while nations seek to stimulate the growth of per capita output and income. Economic growth helps provide jobs for a growing labor force, and economic growth also makes it easier for a society to devote some of its output to promoting greater economic equity and greater economic security by assisting the disadvantaged, the disabled, or other groups that need help. If output does not grow, one person or one group can obtain more goods and services only if another person or group receives less. But, to revert to an often-used metaphor, when a larger economic pie is baked, everyone can have a larger slice.

On the supply side, the upper limit to economic growth is determined by the availability of productive resources, the efficiency with which these resources are used, and the economic, social, and political factors that either encourage or discourage an increase in productive capacity. These latter factors include the size of the market, the value system of the people, and the degree of political stability or instability. Once the productive capacity of an economy is established, the actual rate of growth in a market economy will be determined by the level of aggregate demand. If an economy is in a recession and aggregate demand is too low to employ existing resources fully, there will be little market incentive to increase productive capacity. Thus, there is a close relationship between the short-run goal of full employment and the long-run goal of economic growth. As we have indicated, the existence of rapid inflation also hinders the long-run expansion of a nation’s total productive capacity.

OTHER GOALS

The foregoing broad social goals are not immutable. As economic conditions change and as social patterns shift, goals are constantly being rethought and sometimes redefined. From time to time other goals appear and take priority. In the early 1940’s, for example, the United States’ main objective was to mobilize the economy to win World War II. Strengthening our nation’s defenses also became an increasing concern in the early 1980’s, as did improving the quality of education. In the 1960s, President Kennedy committed the nation to putting a human on the moon, and President Johnson emphasized the need to build a “great society,” including improving the treatment of women and minorities in the marketplace. In the 1970s, environmental concerns received increasing attention, and the world’s attention was focused on energy supplies.

Not only do broad social goals change, but the relative importance attached to these goals also shifts from time to time. When inflation is rampant, for example, concern about unemployment tends to decline; when equity considerations become uppermost in people’s minds, concern about economic efficiency lessens; when environmental concerns increase, the emphasis on economic growth tends to diminish. Moreover, we constantly face the problem of trade-offs among our broad social goals.

Trade-offs among Goals

The pursuit of any goal requires calculating the costs of achieving it versus the value of the expected benefits. In this way economic analysis enables us to make clear-minded decisions about goals that reflect our individual as well as our national values.
and objectives. Since many of our broad social goals conflict, difficult trade-offs frequently have to be made in making specific policy decisions. Some examples: farm price supports, which promote security for some farmers but may reduce efficiency in agriculture and raise prices for consumers; minimum wage laws, which are an attempt to increase equity (by trying to raise the wages of lower-paid workers) but may do so at the cost of increased unemployment; and wage-price controls in order to restrain inflation, which do so only temporarily and reduce economic efficiency and freedom.

Economic growth also involves costs and trade-offs as well as benefits. Protection of the environment seems almost always to involve a trade-off. If we wish to preserve or clean up the environment, we may have to pay the price of having less—for example, going without the coal we would have if strip-mining were permitted. If the government requires automobile manufacturers to install anti-pollution devices, the car costs the consumer more. If a city builds a water purification plant, citizens may have to pay higher taxes to finance it. In general, cleaning up and preserving the environment is likely to divert resources into environmental protection and away from growth, and this will affect our measurements of the GDP. Spending on growth, e. g., for an additional factory, will have the consequence of increasing future GDP through the inclusion of the future output of the new factory. Spending on a cleaner environment, e. g., for the reduction of air pollution, will improve the quality of life, but since the cleaner air is not sold in the market, it will not be included as an addition to GDP. Thus, society’s choice of trade-offs has different effects on the statistics we conventionally use to measure economic growth.

We may conclude that any particular economic goal must be viewed as one of several goals that individuals and societies try to reach and recognize that trade-offs are inherent in pursuing multiple goals. Economic analysis seeks to inform people about what they must give up with respect to one goal as they consider the gains from attaining another. Such analysis helps people make more intelligent decisions by clarifying the nature of the trade-offs among various goals.

Self-Interest and Personal Values

The idea of self-interest differs from the goals discussed above. Self-interest reflects the concern of individuals for their own well-being and personal values, whereas the other goals we have noted reflect broader social concerns. The achievement of social goals often comes at the expense of particular individuals or groups. The individuals or groups adversely affected may well oppose steps to achieve the goals. This means that the positions people ultimately take on economic issues will be affected by their own self-interest as well as by the weight they put on broad social goals. It is important to try to separate these two types of goals in order to understand why people ultimately reach the decisions they do on economic issues.