

CHAPTER 2: FOUNDATIONS OF ECONOMIC ANALYSIS

This chapter presents a number of important concepts that are useful in understanding how the economy works and in thinking about how we might make it work better as citizens and through government action. We start by describing different ways to investigate economic phenomena. This is followed by an examination of two models that offer different approaches to understanding the economy. The final section provides an introduction to the nature of markets. The concepts discussed in this chapter provide much of the foundational knowledge for later chapters.

1. OUR TOOLS FOR UNDERSTANDING

Explanations of economic phenomena draw on two main approaches of investigation: empirical and theoretical. An **empirical investigation** refers to analysis based on observations and recordings of specific events, that are then represented in words, images, or numerical data. Empirical investigation is often useful in studying relationships between economic variables. The time-series and cross-sectional data for various economic indicators, presented in Chapter 0, are a good example of empirical investigation. The online appendix to this chapter will help you refresh your skills in working with data and graphs to examine relationships between economic variables.

empirical investigation: analysis based on observation and recording of specific events, represented in words, images, or numerical data

Historical investigation, which involves using knowledge of historical events to help explain economic phenomena, is also empirical. The Great Depression of the 1930s, major wars, changing roles of women in the workforce, the invention of computers, and the financial crash of 2007–2008—all are examples of historical events that have had a significant economic impact.

historical investigation: study of past events

While empirical investigation helps describe economic phenomena, more tools are needed for economists to sift through empirical evidence and *explain* economic processes. **Theoretical investigation** involves formulating abstract thoughts based on assumptions and logical deductions. In the physical sciences, such as chemistry or physics, much theorizing is based on controlled experiments in the laboratory. It is rarely possible for economists to perform such experiments as it is much harder to account for and control all the factors that affect economic phenomena. Consider, for example, the range of economic, social, political, cultural, and environmental factors that might affect the employment level in a community—it is impossible to conduct experiments controlling for all these aspects.

theoretical investigation: analysis based on abstract thought and the use of logic and reason

Economists therefore build theories by creating **models** that examine specific aspects of the economy by isolating these aspects from their larger historical, political, social, and environmental context. A model is an analytical tool that highlights some aspects of reality while ignoring others. It can take the form of a simplified story, an image, a graph, or a set of

equations, and it always involves simplifying assumptions. We look at examples of two basic economic models in Section 2.

model: an analytical tool that highlights some aspects of reality while ignoring others

An important part of many models is the assumption of **ceteris paribus**, a Latin phrase that means “other things equal” or “all else constant.” In order to focus on one or two variables, we assume that no other variables change. Of course, in the real world, many things are usually changing at the same time. Often, after a basic model is constructed, we can vary the *ceteris paribus* assumption to see how changes in other variables will affect the model’s conclusions.

ceteris paribus: a Latin phrase meaning “other things equal” or “all else constant”

Theories and models essentially simplify reality. Is this justifiable? It is if it gives us greater insight into how things actually work. A model plane, for example, cannot carry passengers or freight, but it can give aerodynamic engineers insights into how a real plane works and help them to design better features for real aircraft. In the same way, simplified models can help economists to understand the working of very complex real-world economies. The question is not whether simplification should occur but whether a particular model’s simplifications are reasonable. For example, if the assumptions made to develop a simple model are inaccurate, then the conclusions might be misleading.

Finally, it should be stressed that a theory can never be as complex as the reality it seeks to explain, and the arguments made by a theory depends on the assumptions on which it is based. What assumptions to make is a somewhat difficult task, influenced by the beliefs and biases of the theorist. Hence, there may be disagreements between different theories in economics. It is important to assess the strengths and weaknesses of particular theories and to be open to consider alternative theories.

Discussion Questions

1. Consider the following examples of investigation. For each one, indicate which mode of investigation it most closely matches, empirical or theoretical.
 - a) A biologist tries to determine the number of different species of plants found on a plot of rainforest.
 - b) Albert Einstein develops his theory of relativity.
 - c) A sociologist examines the impact of movements for equal pay for women on women’s social and economic status.
 - d) An economist states that a rise in investment will lead to a fall in unemployment.
2. Model building is sometimes compared to map making. If someone asks you how to get to your house, what will you put on the map you draw for them? What if the question asked has to do with the location of the highest point in town, the town’s political boundaries, the public transit system, or how your dwelling links up to the local sewer system? Is it possible for a single, readable map to answer every possible question? Does the goal you have in mind for the map affect what you put on it?

2. DIFFERENT ECONOMIC THEORIES: EXAMPLES OF TWO BASIC MODELS

Like most other areas of academic discussion, economics has a history of varying approaches, beliefs, and conclusions. We will discuss these different approaches in later chapters, but here we present two theoretical models for understanding the economy: the neoclassical model, which has dominated much of standard economics, and the contextual model, which is the approach taken in this text. These two approaches have some overlap, but they have several important differences that are detailed below.

2.1 THE BASIC NEOCLASSICAL MODEL

The **basic neoclassical model** is a model of market exchange that portrays the economy as a collection of profit-maximizing firms and utility-maximizing households interacting in markets through the forces of supply and demand.

basic neoclassical model: a model that portrays the economy as a collection of profit-maximizing firms and utility-maximizing households interacting in markets

This model is illustrated by the **circular-flow diagram** shown in Figure 2.1. In this model, the world is simplified to two kinds of economic actors: households and firms, represented by two rectangles. The activity of exchange between the two actors is illustrated using the blue arrows. Households are assumed to consume goods and services with the goal of maximizing their **utility** (or satisfaction)¹. Firms are assumed to produce output with the goal of maximizing profits.

circular-flow diagram: a graphical representation of the traditional view of an economy consisting of households and firms engaging in market exchange

utility: the level of usefulness or satisfaction gained from a particular activity, such as consumption of a good or service

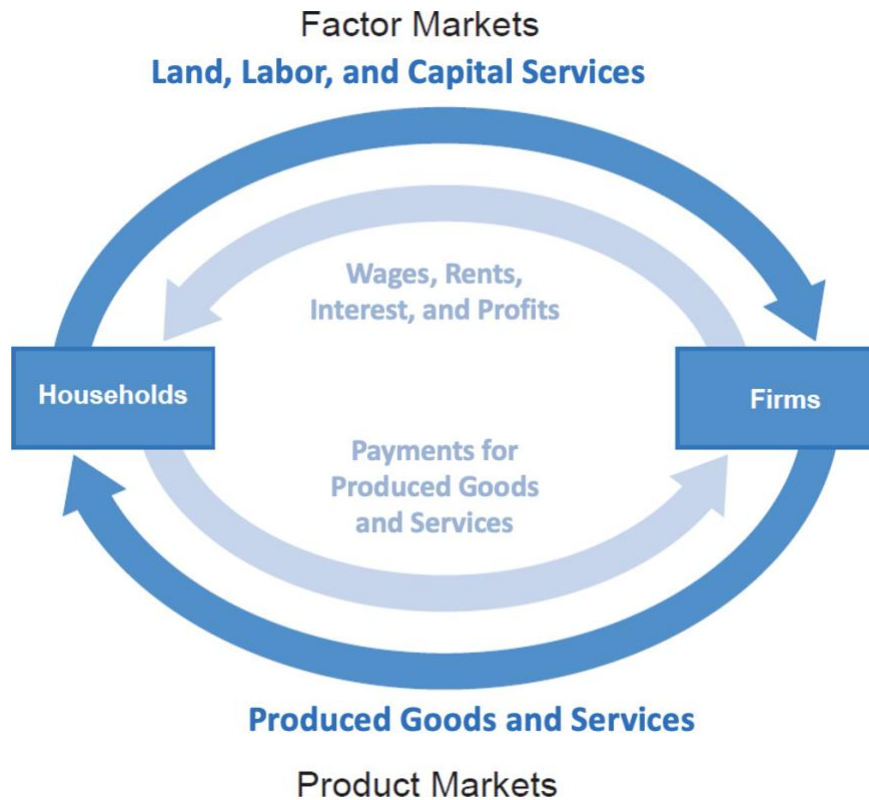
In this model, households are presented as the ultimate owners of all resources of land, labor, and capital, called “factors of production”. Households rent or sell these productive factors to firms through **factor markets**, (dark blue arrow from households to firms), receiving monetary payments in the form of wages, rents, interests, and profits (light blue arrow from the firms to households). Firms produce goods and services, which they sell to households in **product markets** (dark blue arrow from firms to households) in return for monetary payments (light blue arrow from households to firms). The model further assumes that prices in these markets are determined by forces of supply and demand.

factor markets: markets for the services of land, labor, and capital

product markets: markets for newly produced goods and services

The circular flow diagram is useful in portraying, in a very simplified way, two of the major actors (households and firms) and three of the major activities (production, exchange, and consumption) involved in economic life. However, the model leaves out some key actors and activities. For example, while “land” is included as a factor of production, the fact that natural resources can be used up or polluted is not shown. Because of this, the circular flow diagram is like a “perpetual motion machine”—the economy can apparently keep on generating products forever without any inputs of materials or energy. The necessity of resource management activities is not included.

Figure 2.1 The Circular Flow Diagram for the Basic Neoclassical Model



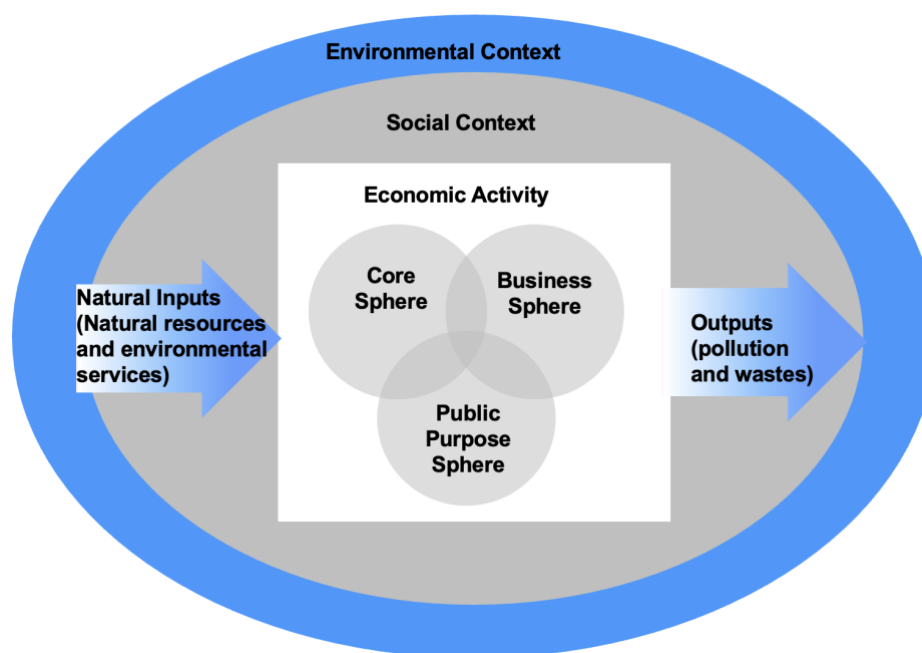
Also, the diagram only takes into account flows of goods or resources that are paid for through the market. This ignores unpaid work and free use of natural resources, among other things. The roles of sociocultural norms and historical factors in influencing economic behavior are also neglected, and there is no role for government in this basic model (although more complex versions of the neoclassical model include a limited role for government). While these over-simplifications have some value in allowing us to focus only on the workings of specific markets, it limits our ability to present a broader picture that considers the *social and environmental* contexts in which economic activities occur.

2.2 THE CONTEXTUAL MODEL

We present a more inclusive, and more realistic, model in Figure 2.2. Because all economic production requires the input of natural resources and generates some wastes, the economy operates in an *environmental context*. Water supplies, for example, are essential to economic activity, as are energy supplies. If we overburden a river with toxic chemicals, the water may not be usable for drinking supplies. And if we rely heavily on fossil fuel energy, we damage the atmospheric balance that governs climate. Sometimes economic activity can also generate positive environmental effects, such as restorative care for soils that make them more fertile or sustainable forestry that improves ecosystem health.

The economy also operates in a *social context* created and maintained by human beings; this includes history, politics, culture, ethics, and other human motivations. The social context determines what constitutes acceptable economic activity, and it determines the relative weight that a society attaches to the different goals discussed in Chapter 1, such as improved living standards, social equity, security, and stability.

Figure 2.2 Social and Environmental Contexts of Economic Activity



Much economic activity would become impossible without aspects of the social context such as laws, norms, trust, and honesty. Like the environment, society is also the recipient of both positive and negative outputs from the economy, such as inventions, products, services, and perceptions about what is a “good life.” Advertising, for example, provides consumers with information, but may also shape their preferences in ways that may not be in their best interests.

In Figure 2.2, we show the social context as existing inside the environmental context because all human activities—not only those of the economic system—are ultimately dependent on the environmental context. A useful understanding of economics must consider the most critical interactions between the economy and its contexts, showing how the economy is in various ways enabled and constrained by these contexts, and how these contexts are in turn affected *by* the economy.

The contextual model presents economic activity as occurring within three spheres: core, public purpose, and business. The core sphere includes households, families, and small community institutions. The public purpose sphere includes government and other local, national, and international organizations, and the business sphere includes firms producing goods and services for profitable sale. Individuals may move among these three spheres—a woman may be a mother in the core sphere, a volunteer for an environmental group in the public purpose sphere, and a business executive in the business sphere. Thus, Figure 2.2 shows the three spheres as overlapping. We discuss economic activities in these three spheres next.

Core Sphere

The **core sphere** includes households, families, and community institutions that undertake economic activities, usually on a small scale and largely without the use of money. We use the term “core,” instead of the commonly used term “households,” to emphasize the importance of communities, in addition to households, in the “core” activities. Critical economic activity that occurs within the core sphere includes raising children, preparing meals, maintaining homes, organizing leisure time, and caring for individuals who are sick, elderly, or needy but not in institutions such as hospitals.

core sphere: households, families, and informal community groups

Many economic activities are conducted outside formal markets through organization of human societies along kinship and community. For example, conversion of many goods and services into forms suitable for final use, such as cooking pasta or planting grass seeds for a home garden, occurs within the core sphere. Good social relations are also developed in the core sphere through child-rearing and other family and community interactions. Decisions on how to allocate income among consumption, savings, or financial investments are made within the core sphere. So are decisions on allocating time between labor and leisure, or allocating income among various consumption goods. As we will see in later chapters, such decisions play an important role in determining economic outcomes.

One distinguishing characteristic of the core sphere is that economic activities are rewarded by what it produces instead of by money. For example, work in a home garden is rewarded with tomatoes, and the reward from good childcare is a happy and healthy child. Activities in the core sphere respond not only to *wants* but also to *needs*—unlike market activities, which respond to what people are able and willing to pay for. The core sphere is critical for subsistence economies, where societies may produce for themselves most of what they consume, with little outside trading.

Core sphere activities are sometimes described as non-economic or non-productive because they generally do not produce goods and services for trade through a market. But this can be misleading. Consider the activity of providing care to family members. A recent estimate puts the economic value of this unpaid labor in the United States in 2021 at \$600 billion.²

While activities in the core sphere are essential to support human well-being, there are limits to what can be accomplished within small-scale, largely informal networks of personal relations. For example, impoverished communities may not have sufficient resources to give to children, or to the sick and elderly an adequate level of care. One extreme case is the situation of communities in sub-Saharan Africa trying to care for the large number of children orphaned by HIV/AIDS or by war, without adequate resources to feed and clothe the children, let alone provide for their education and safety. In such cases, more formal and larger-scale organizations are needed. The public purpose sphere is often required to support human well-being in situations where the needs are beyond what is possible for the core sphere.

The Public Purpose Sphere

The **public purpose sphere** includes government agencies, as well as nonprofit organizations such as charities, religious organizations, professional associations, and international institutions such as the World Bank and the United Nations. They may be as large as a national government or an international scientific organization or as small as a local soup kitchen. The distinguishing characteristic of these institutions is that they exist for an explicit purpose related to the public good and they do not seek to make profits. Organizations in the public purpose sphere tend to be larger and more formally structured than those in the core sphere, and they often rely on paid labor as well as on volunteers.

public purpose sphere: governments and other local, national, and international organizations established for a public purpose beyond individual or family self-interest and not operating with the goal of making a profit

We can break down the economic functions of public purpose organizations into two general categories: *regulation* and *direct provision*.

Regulation involves setting standards to create the legal, informational, and social infrastructure for economic activity. Government regulation of financial markets, for example, plays an important role in maintaining macroeconomic stability. Though regulations are mostly carried out by the government, many non-profit groups also participate in regulating economic activity, particularly in the area of standard setting. For example, standardized exams like the AP, SAT, or GRE are developed and administered by the Educational Testing Service, which is a large private nonprofit organization.

regulation: setting standards or laws to govern behavior

Direct public provision is often used to supply goods or services that cannot be supplied equitably or efficiently by core sphere institutions and businesses alone. Some of the goods and services provided by the public purpose sphere are what economists call public goods. A **public good** (or service) is a good whose benefits are freely available to all (**non-excludable**), and whose use by some does not reduce the quantity available to others (**non-rival**).

direct public provision: the supply of goods or services from government or nonprofit institutions

public good: a good whose benefits are freely available to anyone and whose use by one person does not diminish its usefulness to others

non-excludable good: a good whose benefits are freely available to all

non-rival good: a good whose use by one person does not reduce the quantity or quality available to others

For example, when a local fire department provides firefighting services, all the residents benefit. Public roads (at least those that are not congested and have no tolls) are also public goods, as is national defense. Some of the larger public purpose organizations, often associated with some level of government, are charged with purposes such as relieving poverty, providing formal health care and education, protecting the natural environment, and stabilizing global financial markets. Religious organizations, as well as non-profits that promote various causes, ranging from protecting natural resources to lobbying for equality based on race and sexual orientation are also public purpose organizations. Some things are provided by the public purpose sphere because, as a society, we believe that everyone should have access to them, regardless of their ability to pay. Public schooling from kindergarten through high school is a primary example.

In some instances, public purpose organizations offer goods and services for sale as businesses do, but this is generally not their primary focus. They usually raise much of their support by soliciting monetary contributions or, in the case of governments, requiring such contributions in the form of taxes or fees. Your college or university, if it is operated by a nonprofit or government entity, would be part of the public purpose sphere. For-profit universities, however, would fall in the business sphere.

The main strength of public purpose institutions is that (like core institutions) they provide goods and services of high intrinsic value, but (unlike core institutions) they are big enough, or sufficiently well-organized, to take on jobs that require broader social coordination. Unlike in the business sphere, the provision of goods and services itself, and not the financial results of these activities, remains the primary intended focus of public purpose organizations.

The public purpose sphere has its weaknesses, of course. Institutions in the public purpose sphere are sometimes accused of being rigid, slow to adapt, and inefficient because of excessive regulation and bloated bureaucracy. Organizations can lose sight of the intrinsic,

common-good goal of providing “public service” and may focus more on increasing their organizational budget. Many current debates about reforms in governments and nonprofits concern how incentives for efficiency can be improved without eroding these organizations’ orientation toward providing goods and services of high intrinsic value.

The Business Sphere

The **business sphere** is made up of firms that buy and manage resources in such a way that, after their product is sold, the owners of the firm will earn profits. Whereas the core sphere responds to direct needs, and the public purpose sphere responds to its constituents, business firms are responsive to demands for goods and services, as expressed through markets by people who have the resources to buy the firms’ products.

business sphere: firms that produce goods and services for profitable sale

It is sometimes thought that maximizing profits is the *only* goal of businesses. While businesses do need to make profits to stay afloat, they may also pursue social and ethical goals and make decisions with regard to the well-being of their workers, communities, or the environment. Additionally, the activities of “the firm” are made up of the activities of many people, including its stockholders, board of directors, mid- and top-level managers, and employees. The interests of these individuals may be in conflict. Sometimes, top managers may act, for example, not in the profit-making interest of the owners but according to their *personal* self-interest, seeking to maximize their own prestige and income.

One strength of businesses is that because they have a clear goal of profit-making, they are likely to be efficient at achieving this goal. Market forces are likely to drive firms to produce the most economically valuable output with the least possible cost. The profit motive of businesses also encourages *innovation*—people are motivated to come up with clever new ideas when they know that they may reap financial rewards. We all benefit from innovations when they bring us improved products at lower prices. We should note, however, that the public purpose sphere has also often played a critical role in innovation (see Box 2.1).

The relative weakness of the business sphere comes from the fact that business interests do not necessarily coincide with overall social well-being. Firms *may* act to enhance social well-being—for example, by making decisions that consider the needs of their customers and their workers, as well as taking into account environmental impacts—but business sphere production has no *built-in* correction for adverse social and environment impacts. A more detailed discussion on some of the key limitations of the business sphere can be found in Section 3.4.

BOX 2.1 THE GOVERNMENT’S ROLE IN INNOVATION

Much economic analysis focuses on entrepreneurship and innovations in the business sector as the key drivers of the economy. The proponents of the free market argue that private enterprises—motivated by the profit-maximizing goal—are more efficient and more innovative than the public sector. They therefore advocate for an expansion of the private sector into sectors like education and health care. Others argue that these activities are normally better undertaken in the public sector, as universal access to education and health care are essential for a healthy society.

Evidence indicates that many of the inventions in the private sector have only been possible due to investments and innovation by the public sector. Take, for example, the case of iPhone. The success of iPhone has been largely attributed to Apple—a private corporation.

However, each of its core technologies, including capacitive sensors, solid-state memory, GPS, internet, cellular communications, Siri, microchips, and touchscreen, are innovations that came from research supported by the U.S. government and military. Economist Mariana Mazzucato argues that long-term and steady government funding in technological research has been a nearly invariable prerequisite for breakthrough innovations. She points out that the public sector is, in fact, often more innovative than the private sector, as the government is more willing to make riskier investments.³

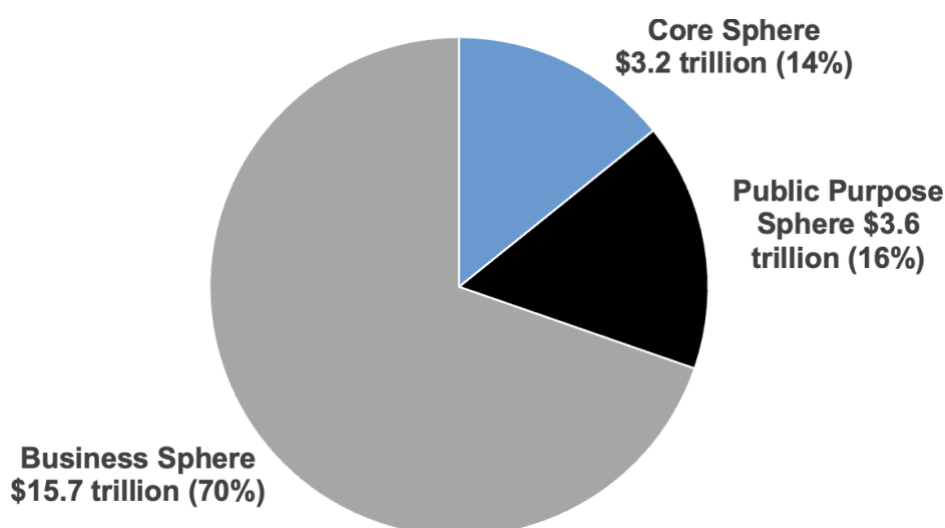
In the U.S., the government has also taken a lead in research and innovations in the health care sector, with almost 75 percent of all revolutionary new drugs coming from funding through the National Institutes of Health. Major pharmaceutical companies do develop innovative drugs, but they also invest heavily in advertising and in developing “me-too” drugs to try to undercut their competitors. A 2021 study finds that seven out of the top ten pharmaceutical companies spent more on advertising than on research.⁴

The Size of the Three Spheres

Figure 2.3 presents estimates of the monetary value of the annual production of goods and services in the United States by the three spheres in 2020 in dollar and percentage terms. The business sphere contributed 70 percent of production, the core sphere 14 percent, and the public purpose sphere 16 percent. The dollar figures add up to \$22.6 trillion, which is more than the GDP in that year (\$20.9 trillion) because an estimate of the value of unpaid household labor as equal to 8 percent of GDP has been included.⁵ This differs from government estimates of GDP in the United States, which do not currently include the value of household production.

While the business sphere comprises the majority of economic activity in the United States, that is not the case in all countries. For example, some rough estimates indicate that in France the largest sphere is the public purpose sphere, at about 40 percent of the overall economy. Also, the value of unpaid labor in the United Kingdom is officially estimated to be equivalent to 63 percent of GDP, suggesting a relatively large core sphere.⁶

Figure 2.3 Estimates of the Size of the Three Spheres in the United States, 2020



Sources: U.S. Bureau of Economic Analysis, National Income and Products Account database, Hess et al., 2020; and authors' calculations.

In addition to the three spheres discussed so far, all countries have, to some extent, an informal sphere. The **informal sphere** is composed of market enterprises, normally small in

scale, operating outside government oversight. Although this sphere could be classified as “business” because it involves private production for sale, it is also similar to the core sphere in that the activities are very small scale and often depend on family and community connections. Economic activities in the informal sphere may be illegal, as in the case of illicit drugs or prostitution. Other informal sphere activities are legal but do not appear in GDP statistics, such as housecleaning services provided “off the books” and barter transactions.

informal sphere: businesses, usually small in scale, operating outside government oversight and regulation

Though accurate data on the size of the informal sphere are difficult to obtain, it is estimated that the informal sector is around 15 percent or less of the economy among OECD countries, but over 30 percent in less developed countries in Latin America and Sub-Saharan Africa. A 2018 study suggests an even larger informal sphere in lower-income countries—about 89 percent of employment in Africa, and 68 percent in Asia and the Pacific.⁷ Informal workers are more likely to be in vulnerable forms of employment—the COVID-19 pandemic was particularly damaging to informal workers with lack access to social safety nets.⁸

Discussion Questions

1. Education is sometimes provided within the core sphere (at-home preschool activities and home schooling), often provided by the public purpose sphere (public and nonprofit schools), and sometimes provided by for-profit firms (“charter schools” or firms offering specific training programs). Can you think of some possible advantages and disadvantages of each of these three ways of providing education?
2. Describe some situations in which economic activities could affect their environmental context and some ways in which economic activities could affect their social context. How might these influences that the economy exerts on its contexts result in changing how the contexts, in turn, affect (either support or constrain) economic activity?

3. THE ROLE OF MARKETS

We now take up the issue of how markets work, defining precisely what we mean by “markets” and looking at ways to make markets work smoothly. We will also consider the various advantages and limitations of markets as a way to conduct economic activities.

3.1 THE MEANING OF MARKETS

In economics, the word “market” has at least three different meanings, ranging from very concrete to very abstract. The appropriate meaning of market must be judged from the context in which it appears.

The most commonsense definition of a **market** is that it is a *place* where people interact physically or virtually to buy and sell things. Historically, markets have been physical locations such as the Grand Bazaar in Istanbul, African village produce stands, and shopping centers. In the electronic age, the market “location” may also be virtual, where buyers and sellers can come together on websites like Amazon or eBay.

market (first meaning): a physical place or web location where there is a reasonable expectation of finding both buyers and sellers for the same product or service

Economists also use the term “market” more generally to refer to *institutions* that bring buyers and sellers together. **Institutions** are ways of structuring the interactions between individuals and groups. Institutions can be embodied in the customs, laws, habits, and norms of a society. For example, the institutional structure of healthcare in the U.S. is based on private care for working adults, Medicare for the elderly, and Medicaid for low-income families, along with federal and state laws governing and sometimes subsidizing private healthcare policies. Laws, police forces, and cultural and social norms are institutions that structure the acceptable and unacceptable ways that individuals and groups interact.

institutions: ways of structuring interactions between individuals and groups, including patterns of organization embodied in customs, habits, and laws

Thinking of **markets** as institutions leads to various ways of discussing *particular* markets. For example, we can speak of the “real estate market” in a particular city, the market for used cars, or the market for wind turbines. Economists often study trends in specific markets, such as heating oil or AT&T bonds, to try to forecast what might happen in the future or advise on the specifics of market structures.

market (second meaning): an institution that brings buyers and sellers into communication with each other, structuring and coordinating their actions

In the most abstract terms, people refer to “**the market**” as an economic system, for example, describing the United States as having a “market economy” or indicating a preference for “free markets.” In this sense, a market economy is one that relies heavily on markets (according to both our first and second definitions) to conduct economic activities.

market (third meaning): an economic system (a “market economy”) that relies on markets to conduct many economic activities

One alternative to a market economy is a system that relies on central planning to conduct economic activities, as was the case in the Soviet Union. China retains many elements of a central planning system, though the role of markets in China has expanded significantly in recent decades. But even in modern market economies, not all activities are structured by markets. For example, the distribution of resources within the core sphere is mainly based on social or family relationships, and decisions about resource management are often based on scientific evidence or political preferences rather than market forces.

Differing views on the role of markets within an economic system underlie many current debates in economics. Economists who have a “pro-market” view believe that market systems function fairly smoothly and are largely self-regulated and that a **laissez-faire economy** (one with very little government regulation) is most likely to lead to economic growth and prosperity. Other economists recognize the effectiveness of markets but believe that problems such as poverty, inequality, environmental degradation, and declining social ethics may be caused or exacerbated by unregulated markets. They therefore advocate for government policies and other forces of culture and ethics to ensure that markets serve the broader goals of human well-being. We will refer to these perspectives as we examine different economic issues throughout this book.

laissez-faire economy: an economy with little government regulation

3.2 THE INSTITUTIONAL REQUIREMENTS OF MARKETS

Contemporary markets do an amazing thing: They allow many separate decision-makers, acting on decentralized information, to coordinate their behavior, resulting in highly complex patterns of economic activity. To function smoothly markets rely on a number of basic institutions. For example, credit cards are an institution that facilitates purchases without the use of cash. Consumer protection laws are an institution that defines certain exploitative business practices as illegal. We classify institutions that facilitate market interactions into four broad groups:

1. institutions related to property and decision-making
2. social institutions of trust
3. infrastructure for the smooth flow of goods and services
4. money as a medium of exchange.

Institutions Related to Property and Decision-Making

For markets to work, people need to know what belongs to whom or at least who can or cannot have access and control over something. Ownership is usually defined through systems of property rights set out in law and enforced by courts and police. **Private property** is the ownership of physical or financial assets by nongovernment economic actors. **Common property** is ownership of physical or financial assets by the government or particular subsections of society.

private property: ownership of assets by nongovernment economic actors

common property: ownership of assets by government or particular subsections of society

Within a market economy, actors must be allowed to make their own decisions about how to allocate and exchange resources that belong to them. Prices, in particular, should be set by the interactions of market participants themselves and not controlled by the government. The institutions of private property and individual decision-making exist both formally, in codes of law, and informally, in social norms. Countries that have not historically had such norms, such as formerly communist countries, often take time to develop them, or continue with a mix of market and state institutions. Some traditional and indigenous societies reject market-oriented norms in favor of more social cooperation. In most modern economies, market-oriented norms dominate, though they may change over time, for example in people's attitudes towards health care and how it should be provided.

Social Institutions of Trust

A degree of trust must exist between buyers and sellers. When a buyer puts down her payment, she must trust that the seller will hand over the merchandise and that it will be of the expected quality, and a seller must be able to trust that the payment offered is valid. Cultural norms and ethical or religious codes can help to establish and maintain an atmosphere of trustworthiness. As businesses and customers engage in one-on-one exchanges, they build trust and make future transactions smoother. Consumers are likely to rely on reputation of firms, based on perceptions about quality and prices associated with brand names or online reviews, to make consumption decisions.

In some cases, the terms of trade between different parties may be established informally, based on verbal terms or cultural and social expectations. However, in cases where market transactions take place in large, complex, mobile societies where buyers and sellers may not know each other, a more formal, usually written, contract may be needed to legally

enforce the terms of exchange. Hence, legal institutions provide an important basis for many market transactions. Even with a system of formal contracts, social norms are still essential, as it is costly to write and enforce detailed formal contracts, and it is impossible to cover every conceivable contingency. The legal system can work smoothly in the presence of good informal institutions where most people willingly obey the laws.

In highly marketized economies, many other institutions have evolved to deal with the issue of trust. For example, credit bureaus keep track of consumer credit trustworthiness, Better Business Bureaus keep track of complaints against businesses, and money-back guarantees give consumers a chance to test the quality of a good before they commit to purchasing. Government agencies such as the U.S. Food and Drug Administration and local boards of health are charged with monitoring the quality and purity of many goods that are sold.

Infrastructure for the Smooth Flow of Goods and Information

Another requirement of markets is **physical infrastructure** that enables a smooth flow of goods, services, and information. Physical infrastructure includes such things as roads, ports, railroads, warehouses, utilities, and telecommunications.

physical infrastructure: the equipment, buildings, physical communication lines, roads, and other tangible structures that provide the foundation for economic activity

Infrastructure is also needed to facilitate the flow of information. Producers and sellers need information on what, and how much, their customers want to buy as this information indicates what, and how much, should be produced and offered for sale. At the same time, consumers need to know what is available, and how much they will have to pay, to get the products that are on the market. It seems unlikely that this ideal condition for perfect markets will ever be reached, but Web-based exchange systems such as Amazon and eBay have brought it much closer to realization.

Note that infrastructure can be provided by both private and government entities. While private companies normally own things like warehouses, delivery trucks, and computers, governments normally construct and maintain roads, ensure air traffic safety, and make bandwidth available on the internet. Even in an economic system that primarily relies on private markets, the role of government is critical in supporting market activity.

Money as a Medium of Exchange

The final basic institution required to facilitate the operation of markets is a generally accepted form of money. Coins made from gold, silver, and other metals were the most common type of money for many centuries; paper currency developed later. Today, the use of checks, credit cards, debit cards, and electronic payment systems further facilitates making payments for goods and services. Three criteria are necessary for something to be defined as **money** in a market economy:

1. Money must be widely accepted as *a medium of exchange*.
2. Money must provide *a durable store of value*. Imagine the problems that would occur if heads of lettuce, which rot within a week or two, were used as money. The value of money must be relatively stable over time, and money *must have minimal handling and storage costs*. By this criterion, paper currency is better than coins, and electronic transactions are better still.
3. Money must be accepted as a *unit of account*. When people say that something is worth \$1,000, that does not necessarily mean that they are proposing to buy or sell the

item. Money serves as a way of valuing things, even if no market exchange takes place.

money: a medium of exchange that is widely accepted, durable as a store of value, has minimal handling and storage costs, and serves as a unit of account

In most cases, money is created by the banking system, with oversight by national governments. However, this is not always the case. For example, cigarettes have been used as a form of money by prisoners of war. Also, communities smaller than national governments can create their own money. These local currencies are typically exchangeable for goods and services within the community by participating merchants and individuals. In recent years, local “time-banking” currencies have appeared in some communities in the United States and elsewhere (see Box 2.2). Many people think of Bitcoin or the numerous other cryptocurrencies as alternative forms of money. But these don’t count as money for two reasons. First, they are inadequate as a medium of exchange since only a few institutions accept them as payment. More importantly, cryptocurrencies are very unreliable as a store of value. Bitcoin, for example, lost close to 50 percent of its value from November 2021 to January 2022—this makes it more of a speculative asset than a stable representation of value. We will discuss the various forms of money further in Chapter 11.

BOX 2.2 TIME BANKING

Time banking is a system of exchange where time, not money, is the unit of value. Time banks bring together unused human resources with unmet human needs.⁹ When you join a time bank, you indicate what services you might be able to offer others: financial planning, computer debugging, handyman repairs, childcare, and so on. For each hour (or fraction of an hour) you spend helping others, you accrue “deposits” in the time bank. Then when you require services, you can “withdraw” accumulated time to request help from others.

Time banks differ from exchange through markets in several important ways. First, everybody’s time is considered equally valuable. Whether one is performing nursing services, tutoring immigrants in English, or driving someone on errands, all activities earn time credits at the same rate. Second, exchange through time banks helps build social relationships and community spirit. Many time bank members note that performing activities are often viewed as spending time with friends rather than work.¹⁰ Another interesting feature is that time banks can particularly flourish during economic downturns when traditional employment is difficult to find, but participants can still benefit from contributing to society and accruing credit for needed services.

According to the organization TimeBanks, there are about 1,000 time banks across more than 30 countries in the world, with about half of these being in the United States.¹¹ In 2017, a time bank was created in the United Kingdom, partially funded by the UK government, to provide care and companionship for elderly people. In this system, people contribute time helping others to eventually be redeemed when they themselves need assistance later in life.¹² Time banking has become popular in New Zealand, where businesses and organizations can also participate, offering goods and services in exchange for time credits rather than money.¹³

3.3 TYPES OF MARKETS

Markets take a wide variety of forms. The two basic market types—product and factor markets—that we defined in the neoclassical model can be further categorized into different groups based on what is sold, as described in Table 2.1.

Table 2.1 Different Types of Markets

| Market Type | Description |
|----------------------------|---|
| Retail markets | Markets where goods and services are purchased by consumers from businesses, generally in small quantities. Retail markets deal in tangible goods such as food, books, and clothes, as well as non-tangible objects, including services such as banking or a haircut. |
| Wholesale markets | Markets where final goods are purchased by retailers from suppliers, normally in large quantities. For example, Wal-Mart and most other retailers don't actually produce the goods they sell but purchase them in bulk from suppliers in wholesale markets. |
| Intermediate goods markets | Markets where unfinished products are exchanged between businesses, such as the purchase of sheet metal by an automobile company. |
| Resale markets | Product markets for items that have been previously owned, such as used-car markets and markets for antique furniture. |
| Commodities markets | Markets where raw materials such as agricultural products, minerals, or petroleum are bought and sold. |
| Labor markets | A type of factor market, defined as the set of institutions through which people who wish to work offer to sell their services to employers. Unlike a physical object, labor cannot be produced first and then handed to the buyer; rather, the worker promises to do something in return for a promised payment of wages. |
| Financial markets | Markets for loans, equity finance, and financial assets such as stocks and bonds. |
| Underground markets | Illegal markets, where either the good or service traded is illegal (such as heroin or smuggled antiquities) or the goods and services are legitimate but the trading occurs through illegal ways. For example, smugglers may sell cigarettes or imported perfume at prices that do not include payment of required taxes. |
| Auction markets | Markets in which an item is sold to the highest bidder. Auction markets are often used when the price for an item is relatively unknown and there are many possible buyers or sellers. Although auction markets were commonly limited to goods such as antiques and artwork in the past, the advent of online auction sites such as eBay have made auction markets much more prevalent. |

Markets can also be categorized based on how prices are determined. In an open-air bazaar or flea market, buyers and sellers may haggle about prices. But in a typical retail setting

in an industrialized society, you do not “interact” directly with the retailer. The price is listed on the shelf and you either pay the **posted price** set by the seller, or do not buy the item. In this case, it might seem as if buyers are not involved in the setting of prices, but the fact that you *can* decide whether to buy is itself a form of interaction that influences posted prices. Over time, retailers will take note of what moves off the shelf most quickly and order more of it and may also raise its price. They will also take note of what does not sell so quickly and reduce their order from wholesalers or mark the items down. The retailers’ purchases from the wholesalers, in turn, give the suppliers information that they can use in deciding how much to order or produce and how to set *their* prices.

posted prices: prices set by a seller

So while you may not be able to bargain directly, your actions, in combination with the actions of other customers, ultimately affect the prices and quantities offered in the market. These adjustments should tend, at least in theory, to lead posted prices to reflect what economists call the **market price** of the item. Market price, discussed in detail in Chapter 3, is the prevailing price for a specific good or service at a particular time in a given market. The posted price will normally reflect the market price if markets are competitive, the flow of information is good, the adjustment process is given enough time, and no big changes in market conditions occur in the meantime.

market price: the prevailing price for a specific good or service at a particular time in a given market

In some cases, a single buyer and a single seller negotiate the price of an item through **bargaining**. Residential real estate, for example, is generally sold by using such negotiated agreements, as are used cars. (Usually there is also a posted price, but both parties understand that it is merely a starting point for negotiation.) Salaries of high-level managers, professionals, and unionized employees—and, notably, of sports and entertainment stars—are commonly set by bargaining. The presence of *potential* other buyers and sellers, however, is obviously important in determining the relative bargaining strength of the two parties. A seller who knows that he or she can easily find other eager buyers, for example, will quickly walk away from an unfavorable deal. A seller with fewer options will have less ability to hold out for good terms.

bargaining: an activity in which a single buyer and a single seller negotiate the terms of their exchange

3.4 THE ADVANTAGES AND LIMITATIONS OF MARKETS

Markets clearly have many advantages. Competition among sellers in markets means that goods and services can often be provided to people at affordable prices. Markets often encourage innovation, continually leading to new products such as iPhones, electric cars, and streaming video. Of course, many workers have jobs producing goods and services for sale in markets.

Markets also foster a steady flow of information, in terms of prices and volumes of sales, that encourages producers to respond flexibly to consumer desires. Profits provide feedback to sellers about whether resources are being used in ways that individuals are willing (and able) to pay for. Markets also give people a considerable amount of freedom in deciding which activities to engage in, although this freedom may be severely constrained by the

resources to which people have access. Markets promote economic efficiency and encourage technological innovation and entrepreneurship.

Against these advantages, markets have a number of limitations. As we have noted, no society relies exclusively on markets to meet all its economic goals. Actual market-oriented economies always include a mixture of decentralized private decision-making and more public-oriented decision-making. Social and environmental issues, often neglected in the neoclassical model, are central to understanding real-world economies. We will briefly discuss some of these issues here and will expand on them more fully in later chapters.

Public Goods

Recall from our discussion above that a public good (or service) is one whose use by one person does not diminish the ability of another person to benefit from it (non-rival) and whose benefit it would be difficult to keep any individuals from enjoying (non-excludable). Examples of public goods include public roads, parks, libraries, schools, clean air and water, other environmental goods and services, police protection, and the national defense system.

Because it is difficult to exclude anyone from benefiting from public goods, they are generally not offered through markets. Even if individual actors would be willing to pay for them if necessary, they have little incentive to pay because they cannot be excluded from the benefit. Economists call people who seek to enjoy a benefit without paying for it **free riders**. Because of the problem of free riders, it often makes sense to provide public goods through government agencies, supported by taxes, so that the cost of the public benefit is also borne by the public at large.

free riders: people who seek to enjoy the benefit of a good without paying for it

Externalities

Some market activities create **externalities**—spillover effects on parties that are not directly participating in the market exchange. These effects can be either beneficial (“positive externalities” or “external benefits”) or harmful (“negative externalities” or “external costs”). Externalities are one of the primary reasons the true *social* value of a good or service can differ from its *market* value.

externalities: spillover effects of market activities on parties who are not directly participating in the activity

Examples of negative externalities include a situation of a manufacturing firm that dumps pollutants in a river, degrading water quality downstream, or a bar that plays loud music that annoys its neighbors. Examples of activities that have positive externalities include child rearing by parents who, out of love for their children, raise them to become law-abiding citizens, thereby creating benefits for society at large; and providing habitats for beneficial insects (such as bees and other pollinators), which then provide services to neighboring landowners. In both these cases, individual actions have social benefits.

Some of the most important externalities relate to environmental impacts of economic activities. Relying on unregulated markets alone to coordinate economic activities may allow activities that deplete the natural environment to take place, because the cost of pollution may not be felt by the economic actor that created it. Environmental regulations attempt to counteract this, using fines or other disincentives to allocate the true social cost to the economic agents creating those costs.

If decisions are left purely to individual self-interest, then from a societal point of view, too many negative externalities and too few positive externalities will be created as individuals prioritize their own benefit over social good. Market values and human or social values do not always coincide.

Transaction Costs

Transaction costs are the costs of arranging economic activities. The neoclassical model normally assumes that transaction costs are zero. If a firm wants to hire a worker, for example, it is assumed that the only cost involved is the wage paid. In the real world, however, the process of hiring may involve other costs, such as costs related to placing an ad or using the services of a recruiting company to search for workers. The prospective worker may need to pay for résumé preparation or transportation to an interview. Because of the existence of such costs, some economic interactions that might lead to greater efficiency in an idealized, transaction cost-free world, may not happen in the real world.

transaction costs: the costs of arranging economic activities

Market Power

In the basic neoclassical model, sometimes all markets are assumed to be “perfectly competitive,” such that no one buyer or seller has the power to influence the prices or other market conditions that they face. In the real world, however, we see that many firms have **market power**. For example, when there is only one firm (a monopolist) or a few firms selling a good, they may be able to increase their prices and their profits, squelch innovations by competing firms, and harm the natural environment, thus creating inefficient allocations of resources. Workers may also be able to gain a degree of market power by joining together to negotiate as a **labor union**. A government, too, can have market power, for example, when the Department of Defense is the sole purchaser of military equipment from private firms.

market power: the ability to control, or at least affect, the terms and conditions of a market exchange

labor union: legally recognized organizations that collectively bargain for their members (workers) regarding wages, benefits, and working conditions

Businesses may also gain power by their sheer size. The decisions of individual large corporations can have substantial effects on the employment levels, living standards, economic growth, and stability of regions and countries. Hence, governments may need to factor in the responses of powerful businesses in making their policy decisions. National leaders may fear, for example, that raising business tax rates or the national minimum wage may cause companies to leave their country and go elsewhere. Corporations frequently also try to influence government policies directly, through lobbying, campaign contributions, and other methods. We explore the implications of corporate size at more length in Chapter 6.

Information and Expectations

In the neoclassical model, in which decentralized decisions lead to efficient outcomes, people are assumed to have “perfect information” needed to make choices. In practice, this means people will acquire information as long as the benefits from the new information is greater than the additional cost (time and other resources) of acquiring that information. However, there is no way to know when additional efforts will yield valuable information. In the real world,

obtaining good information and dealing with future uncertainties may make economic decision-making difficult.

A manufacturing business, for example, might be considering whether to borrow funds to build an additional factory. If the company's managers were able to know exactly what the future demand for its products will be along with information about the future interest rates, wages, energy costs, and returns on alternative investments, the decision would be a simple matter of mathematical calculation. But the managers will have to guess at most of these things based on their expectations about the future, which may turn out to be incorrect. If their expectations are optimistic, they will tend to make the new investment and hire new workers. Often optimism is "contagious," and if a lot of *other* business leaders become optimistic, too, then the economy will boom.

If, however, people share an attitude of pessimism, they may all tend to cut back on spending and hiring, thus precipitating the very downturn they feared. Because no one business wants to take the risk of jumping the gun by expanding too soon, it can be very difficult to get a decentralized market economy out of a slump. How people get their information, how they time their actions, and how they form their expectations of the future are all important topics that are not addressed in the basic neoclassical model. Taking these factors into account suggests why markets sometimes do not work as smoothly as that model suggests.

Human Needs and Equity

Another important issue concerns distribution of income and the ability to pay for goods and services. In the neoclassical model, the only consumer demands for goods and services that can affect the market are those that are backed up by a consumer's ability to pay. This has several implications.

First, there is nothing in the model that ensures that resources are distributed in such a way that people can meet their basic human needs. Markets essentially ration resources. Specifically, markets allow anyone who is both willing and able to purchase something at the prevailing prices to do so. As such, one can argue that markets produce about the "right" amount of many goods and services, such as televisions, backpacks, haircuts, and pencils. However, if a few rich people have a lot of money to spend on diamonds, for example, while a great number of poor people lack the money to pay for basic health care, "free markets" will motivate producers to respond to the demand for diamonds but not to the need for basic health care. For this reason, governments often adopt more deliberate policies of government provision, subsidies, or income redistribution to try to ensure that decent living standards become more widespread.

Second, the model does not take into account nonmarketed production, such as the care given to children, the sick, and the elderly by family and friends. There is nothing in the neoclassical model that ensures that these sorts of production will be supplied in adequate quantities and quality. The market model also does not recognize ways in which caring activities may be disadvantaged by a market culture that considers non-market unpaid work as inferior to formal employment.

Last, it is also the case that problems such as unemployment and inflation tend to affect some people more than others, so how a country deals with these problems also has distributional consequences.

Clearly, although market systems have strong advantages in some areas, they cannot solve all economic problems. Economists sometimes use the term **market failure** to refer to a situation in which a markets lead to inefficient or harmful results. Because of the existence of market failures, economic systems cannot rely on "free markets" alone if they are to contribute effectively to present and future human well-being.

market failure: situations in which markets yield inefficient or inappropriate outcomes

To some extent, *private* nonmarket institutions may help remedy “market failure.” For example, a group of privately-owned factories located around a lake may voluntarily decide to restrict their waste emissions, because too much deterioration in water quality hurts them all. Likewise, a widespread custom of private charitable giving may help alleviate poverty. But sometimes the problems are so large or widespread that only government, *public* actions at the national or international levels seem to offer a solution. Exactly how much government action is required, and exactly what governments should do, has been a much-debated question within contemporary economics.

3.5 ASSESSING MARKET OUTCOMES

Unfortunately, too often the debate about markets comes down to either being “pro-market” or being “anti-market.” In this text, we seek to avoid such a polarizing and simplistic distinction as such broad generalizations reflect a lack of understanding about when markets do, and do not, work effectively at enhancing well-being.

So rather than trying to decide whether you are “pro-market” or “anti-market,” we encourage you to think of the following three broad categories of market outcomes:

1. Situations in which market outcomes are reasonably efficient, fair, and sustainable, with only limited government involvement required. The market for T-shirts in the United States, for example, would fall into this category. Significant competition among many producers means that T-shirt prices are low and virtually anyone can afford them. Though there are some environmental impacts of producing and transporting T-shirts, and labor standards need to be upheld, there is limited government involvement in the T-shirt market.
2. Situations in which market outcomes are reasonably efficient, fair, and sustainable only with significant government involvement. The market for gasoline in Europe is a good example in this category. While gasoline is provided by private companies in European markets, it is heavily taxed (typically \$3–\$4 per gallon) to account for its negative externality of environmental pollution.¹⁴ An unregulated gasoline market outcomes is both inefficient and unsustainable.
3. Situations in which market outcomes are not efficient, fair, and/or sustainable, necessitating provision through non-market institutions (such as government). Goods such as national defense and major highways—which are nearly always provided by governments rather than private markets—fall in this category. In many countries, services such as education or health care are provided by the government and funded by taxes. In the United States, health care in particular is often provided by private markets, but whether these markets are efficient and fair is a subject of debate.

In short, we need to assess markets contextually. We need to understand the contexts in which markets work well, the contexts in which government regulation of markets is needed, and the contexts in which markets do not result in acceptable outcomes. Economies today face a major conundrum: How can societies continue to benefit from the strengths of market system while ensuring that markets support the kind of world that will sustain the well-being of future generations? This question suggests that it is necessary to think both about the degree of business sphere regulation and about what goods and services should be provided by the business sphere and which ones should instead be provided by either the core or public purpose spheres.

Discussion Questions

1. When you shop online, how do you know that you can trust the seller to deliver the goods as promised? What is necessary for the social institution of trust to work, and how might it break down, in online transactions?
2. On a sheet of paper, draw two columns. In one column, list some historical and contemporary advantages of market exchanges, and in the other, list some disadvantages. Can you give examples beyond those listed in the text?

REVIEW QUESTIONS

1. What are the two main modes of economic investigation? Describe each.
2. What is a model? How does the *ceteris paribus* assumption simplify the creation of a model?
3. What are some of the assumptions of the basic neoclassical model? Why are markets said to be efficient according to this model?
4. What are some of the shortcomings of the neoclassical model? In what ways does the contextual model overcome these shortcomings?
5. What are the three spheres of economic activity?
6. What are some major characteristics and functions of the core sphere?
7. What are some major characteristics and functions of the public purpose sphere?
8. What are some major characteristics, and strengths and weaknesses, of the business sphere?
9. What is the informal sphere? Where is it most significant?
10. What are the three different meanings of the term “markets”?
11. What are the four institutional requirements of markets?
12. What is a public good? Why will private markets generally undersupply public goods?
13. What are negative and positive externalities? Give examples of each.
14. Besides public goods and externalities, describe four real-world factors that can cause market outcomes to be less than ideal.

EXERCISES

1. Identify the sphere in which each of the following activities takes place. Could some involve more than one sphere?
 - a. Recycling is picked up at curbside in a community
 - b. Tomatoes are grown in a home garden
 - c. A fire department answers an emergency call
 - d. People purchase groceries at a supermarket
 - e. An environmental protection group lobbies for stronger pollution control laws
2. Match each concept in Column A with an example in Column B.

| Column A | Column B |
|------------------------------|--|
| a. Theoretical investigation | 1. The apple tree that you plant for your own enjoyment also pleases people passing by |
| b. A core sphere activity | 2. Perfectly competitive markets |

| | |
|--|--|
| c. A positive externality | 3. The production of apple pie creates water pollution that harms downstream communities |
| d. A public purpose sphere activity | 4. Einstein develops the theory of relativity |
| e. A public good | 5. Police services |
| f. An assumption of the basic neoclassical model | 6. There is only one apple producer, who is able to make very high profits |
| g. <i>Ceteris paribus</i> | 7. Home care for the elderly |
| h. Historical investigation | 8. All variables except one are held constant |
| i. Negative externality | 9. An economist studies the Great Depression |
| j. Market power | 10. A city park |

¹ The neoclassical model does not provide a specific definition for utility or a precise way to measure it. Utility is vaguely defined as satisfaction gained from consuming goods, services, or experiences and values of utility are inferred based on consumer behavior in the market. This is different from the notion of well-being, which is a much broader concept used to describe a good quality of life, as discussed in Chapter 1.

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³ Mazzucato, Mariana. 2018. *The Entrepreneurial State: Debunking Private Sector versus Public Sector Myths*. Penguin, London.

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⁷ International Labor Organization, 2018.

⁸ World Bank Group, 2021.

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