

## CHAPTER 2: MARKETS AND SOCIETY

### 1. THE THREE SPHERES OF ECONOMIC ACTIVITY

As mentioned in the previous chapter, economic activity takes place in three major spheres: the core, public purpose, and business spheres. In some economics texts, the terms used are “household,” “government,” and “business.” In this text, we use the term “core” instead of “household” to emphasize the importance of communities, in addition to households, in the “core” activities described below. (Think of the maxim “It takes a village to raise a child.”) We use the term “public purpose” instead of “government” to include both government organizations and the nongovernmental nonprofit organizations whose activities are of growing importance in modern societies. While many economic activities take place through markets, some activities, especially in the core sphere, take place outside of markets. In this chapter, we first give an overall view of the three spheres and then focus on the nature and workings of markets, which we will analyze formally in Chapter 3.

#### 1.1 THE CORE SPHERE

The **core sphere** is made up of households, families, and informal community groups that undertake economic activities, usually on a small scale, and largely without the use of money. The core sphere is the primary site for raising children, preparing meals, maintaining homes, taking care of the mildly ill, and organizing many activities among family members, friends, and neighbors.

**core sphere:** households, families, and informal community groups

One distinguishing characteristic of the core sphere is how work activities are rewarded: Instead of earning money, work tends to be rewarded directly by what it produces. For example, work in a home garden is rewarded with tomatoes, and the reward of good childcare is a happy and healthy child. People may volunteer their services to their community because they recognize that living in a healthy community is important. Activities in the core sphere are organized to respond not only to *wants* but also to *needs*—unlike market activities in the business sphere which respond only to what people are able and willing to pay for, regardless of need.

The core sphere is obviously critical for subsistence economies, where extended families and villages may grow or make for themselves most of what they consume, with little outside trading. Although reliance on the core sphere has been reduced in the United States and many other countries by the increasing use of prepared foods, childcare centers, restaurants, commercial forms of entertainment, nursing homes, housecleaning services, and the like, it remains of central importance for the flourishing of any economy.

Core sphere activities, however, are often described as noneconomic or nonproductive because they generally do not produce goods and services for trade through a market. However, consider just one activity that takes place in the core sphere: the help provided by partners, relatives, and friends for adults who need assistance in their daily activities, due to disability, age, or other factors. According to

a 2020 analysis, 53 million people in the United States provide unpaid “family caregiving” labor, over 60% of them female. The average amount of time spent on caregiving by each provider is over 1,200 hours per year.<sup>1</sup> For comparison, a full-time worker in the U.S. works an average of about 1,800 hours per year.<sup>2</sup> The estimated economic value of this unpaid labor in 2017 was \$470 billion, based on an average value of \$13.81 per hour.<sup>3</sup> This exceeds the value of out-of-pocket spending on health care in the U.S. and is nearly as much as the annual revenue of Walmart, the world’s largest company.

According to an analysis of 27 mostly high-income countries, the value of unpaid labor equates, on average, to more than 25 percent of GDP—sometimes much more.<sup>4</sup> The United Kingdom is one of the few countries that maintain government data on the value of unpaid work. The UK Office of National Statistics estimated that the value of unpaid labor in 2016 was equivalent to 63 percent of GDP, with the largest components of the value of unpaid work being childcare and transportation.<sup>5</sup>

Recognizing the value of unpaid work is important if we are to make a comprehensive assessment of well-being, especially as more unpaid labor is typically undertaken by women. To quote from a report published by the OECD<sup>1</sup>:

Unpaid work contributes not only to current household consumption (e.g., cooking) but also to future well-being (e.g., parental investments in raising children) and to community well-being (e.g., voluntary work). In all countries, women do more of such work than men, although to some degree balanced—by an amount varying across countries—by the fact that they do less paid work.<sup>6</sup>

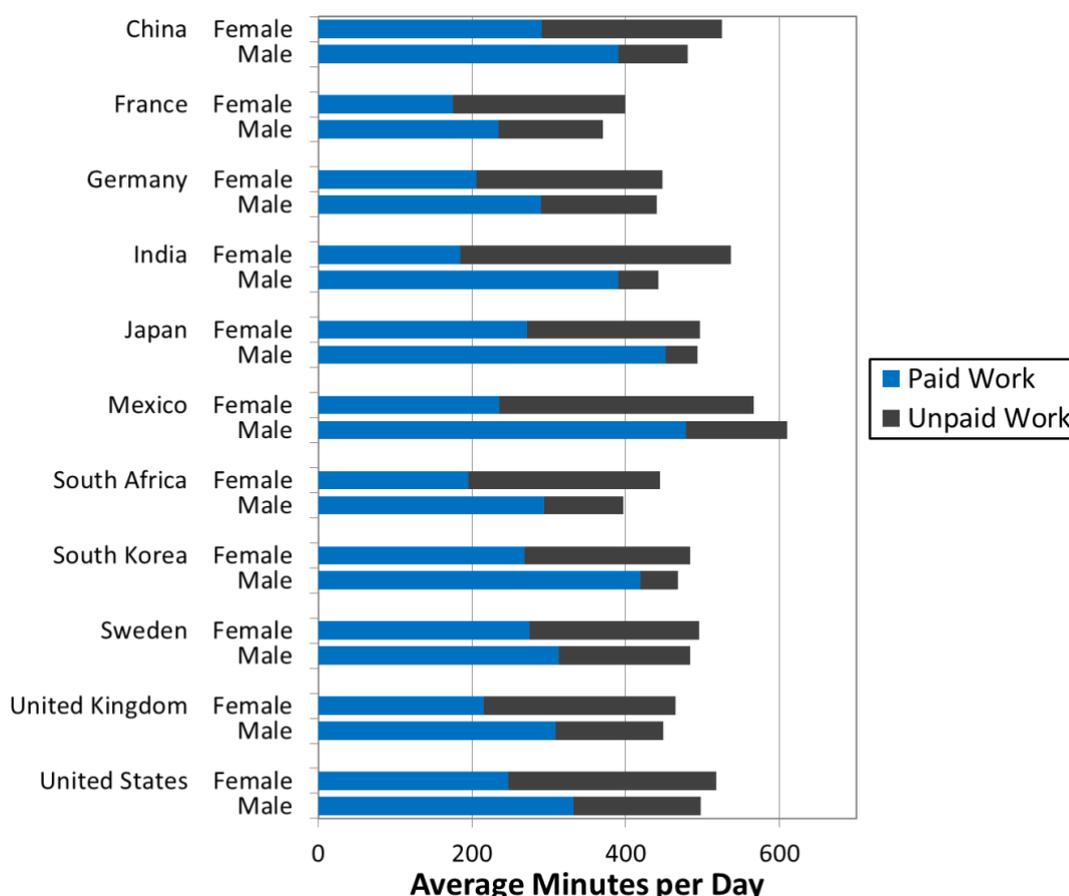
According to a study from the United States, 62% of female caregivers provide more than 20 hours of assistance per week, while only 38% of male caregivers do so.<sup>7</sup> The gender imbalance is even more significant in developing countries. Globally, the United Nations estimates that women do nearly 2.5 times the amount of unpaid care and domestic work than men.<sup>8</sup> We see in Figure 2.1 that when we add paid and unpaid labor, women almost always do more total work than men (Mexico is the only exception in the figure). The overall gender imbalance is greatest in India where women do 21 percent more total work than men, and in South Africa where women do 18 percent more total work than men. If we only consider paid work, we might reach the conclusion that men contribute more to the economy than women. But when we consider both paid and unpaid work, women generally contribute more time on economically productive activities overall.

The core sphere clearly provides important goods and services to many people, even if the scale of production in each specific case is quite small. But there are limits to what can be accomplished within small-scale, largely informal networks of personal relations. For many economic goals, more formal and larger-scale organizations are also needed. The public purpose sphere is uniquely capable of meeting these broader well-being needs.

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<sup>1</sup> The OECD, or Organisation for Economic Cooperation and Development, is an organization of 38 countries, primarily advanced and transitional economies, dedicated to research and collaboration on global issues.

Figure 2.1. Paid and Unpaid Work, Male and Female, Selected Countries



Source: OECD, OECD.Stat, Time Spent in Paid and Unpaid Work, by Sex.

## 1.2 THE PUBLIC PURPOSE SPHERE

The **public purpose sphere** includes governments and their 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 chapter of the Cub Scouts. 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 a profit. Some of the larger ones, often a government agency, are charged with purposes such as defending a country’s borders, relieving poverty, providing formal health care and education, protecting the natural environment, and stabilizing global financial markets. Religious organizations are other well-known public purpose organizations. Small and large nonprofits exist to promote various causes, ranging from protecting natural areas to ensuring voting rights to lobbying for equality based on race and sexual orientation. Goals of different nonprofit organizations may conflict with each other, but in general the opportunity for people to join or support such groups broadly serves the public purpose.

**public purpose sphere:** governments and other local, national, and international organizations established for some public purpose beyond individual or family self-interest, operating without the goal of making a profit

Organizations in the public purpose sphere tend to be more formally structured than those in the core sphere and often rely on paid labor, though many are dependent on volunteers. When paid, workers in the public purpose sphere may accept salaries that are below the going wages for comparable work in the business sphere. The reason for this salary difference is twofold. First, some public purpose organizations have very limited budgets and cannot afford to pay prevailing wages. Second, some people are willing to accept lower salaries in public purpose work because they receive an additional psychic benefit in feeling that their work is meaningful.

In some instances, public purpose organizations offer goods and services for sale as businesses do, though 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. Hospitals in the United States may also be operated by nonprofit, government, and for-profit entities, and thus may or may not be part of the public purpose sphere.

The public purpose sphere is able to provide goods and services that cannot, or would not, be adequately provided by core sphere institutions and businesses alone. Some of the goods and services that it provides are what economists call public goods. A **public good** (or service) is freely available to anyone (or some people could be excluded from using it only with difficulty), and use of a public good by one person does not diminish the ability of another person to benefit from it.

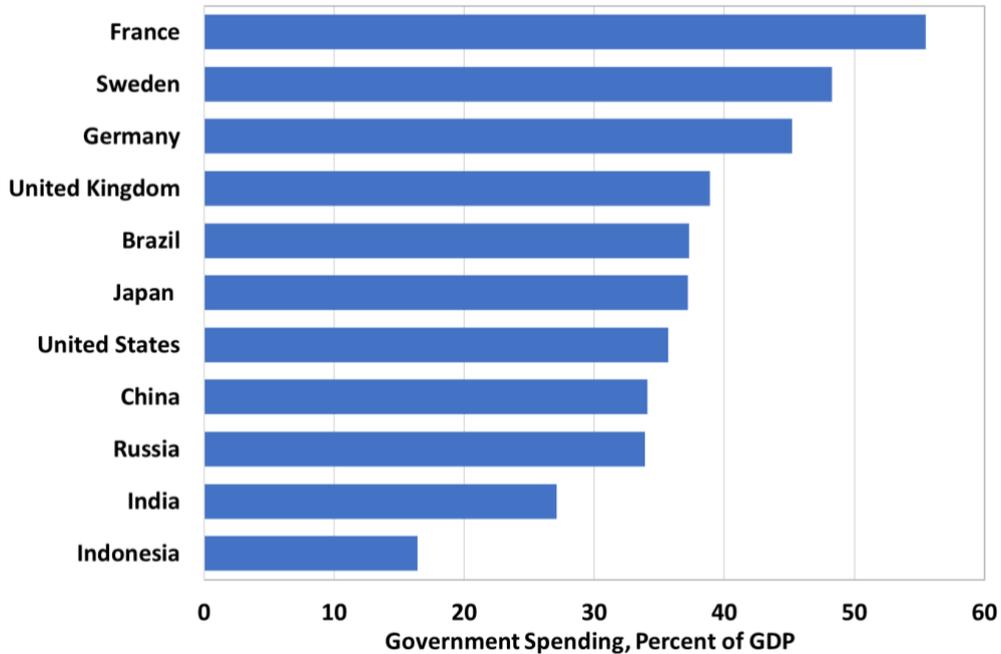
**public good:** a good whose benefits are freely available to anyone, and whose use by one person does not diminish its usefulness to others

For example, when a local police force helps to make a neighborhood safe, all the residents benefit. Public roads (at least those that are not heavily congested and have no tolls) are also public goods, as is national defense. Education is often a public good, provided for free or at low cost to all by a government institution. A system of laws and courts provides the basic legal infrastructure on which all business contracting depends. We discuss public goods in more detail in Chapter 13.

The public purpose sphere is a substantial contributor to economic activity. Figure 2.2 presents the share of GDP attributed to the government spending in selected countries. In some countries, normally in Europe, around half of the economy is a result of government spending. In the United States, the government, including the Federal, state, and local levels, comprises 36 percent of the economy. The share of government in GDP tends to be lower in poorer countries.

We would also need to add the contribution of nonprofits to the data in Figure 2.2 to estimate the full scale of the public purpose sector. Unfortunately, data on the share of the economy attributed to nonprofits are not available for most countries. In the United States, nonprofits contributed 5.6 percent of the national economy in 2016.<sup>9</sup> A 2016 analysis presented data on the scale of the nonprofit sector in 16 countries. The countries with the largest share of GDP attributed to nonprofits were Canada (8.1 percent), Israel (7.1 percent), and Mozambique (6.7 percent). Countries with the smallest nonprofit sectors were Portugal (2.0 percent of GDP), the Czech Republic (1.6 percent), and Thailand (0.8 percent).<sup>10</sup> So combining both government and nonprofits, we see that the public purpose sphere can easily exceed one-third of the economy in many countries.

Figure 2.2. Government Spending, Percentage of GDP, Select Countries, 2019



Source: International Monetary Fund, World Economic Outlook database.

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 to take on jobs that require broader social coordination. Countries differ on the distribution of tasks between the public purpose and business spheres. In European countries, services such as education and health care are generally operated by the public purpose sector, while the role of the business sector in providing these services is more prominent in the United States. However, the United States has traditionally been one of the leading nations in charitable support for nonprofit organizations.

The public purpose sphere has its weaknesses, of course. Government institutions and agencies are often criticized as too bureaucratic and impersonal. Compared to for-profit businesses, nonprofit institutions are sometimes accused of being slow to adapt and less efficient. Some public purpose organizations are supported by taxes or donations that are often not tightly linked to the quality of their services. For this reason, they may not have a strong incentive to improve the quality of what they provide. Many current debates about reforms in both governments and nonprofits concern how efficiency and accountability can be improved without eroding the commitment of these organizations to providing valuable goods and services.

Finally, because definitions of “the public good” vary, some people may reject the mission of certain organizations. Nonprofits may offer their services only to specific groups, defined, for example, by religion or gender. Some nonprofit organizations may have goals that are directly at odds with other public purpose organizations (e.g., groups that favor or oppose abortion rights, gun control, etc.). Trade organizations and labor unions promote the interests of their own members, while other members of society may disagree with their agendas. A continuing issue with government institutions is the question of *whose* interests are represented—the majority, minority groups, or special interests who donate money to campaigns? Yet, because of the many important functions of the public purpose sphere, the question isn’t whether to

have a public purpose sphere but how to make it operate as efficiently as possible, while serving human well-being as inclusively as possible.

### 1.3 THE BUSINESS SPHERE

The U.S. government defines businesses as “private entities that produce goods and services for sale at a price intended at least to approximate the costs of production.”<sup>11</sup> The **business sphere** is made up of such firms. Business firms generally look for opportunities to buy and manage resources in such a way that, after their product is sold, the owners of the firm (whether individuals or shareholders) will earn profits.

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

It is sometimes thought that maximizing profits is the *only* goal of businesses. But firms may not always aim for the highest profit for two main reasons. First, some business managers cite being a good “corporate citizen,” with regard to their workers, communities, or the environment, as a motivation for some of their actions. Businesses organized on a cooperative model (including large food-marketing organizations such as Land O’Lakes for dairy products and Ocean Spray for cranberries) explicitly state their purpose in terms of providing services to their members, rather than in terms of profit. Still, making enough profit to stay afloat is a goal of all well-run businesses. Some businesses may set a certain goal for profits while also pursuing other goals. Mindless profiteering, however—going after the last bit of profit at all costs, neglecting social and even ethical concerns—need not be how businesses are run.

Second, within a modern corporation, the activities of “the firm” are made up of the activities of many people, including its stockholders, board of directors, chief executive officer (CEO), mid- and top-level managers, and employees. The interests of the various individuals and suborganizations may be in conflict. Sometimes, top officers and managers may act, for example, not in the profit-making interest of the owners but according to their personal self-interest. That is, they may seek to maximize their own prestige and incomes, even when this goes against the interests of others involved in the firm, including those who have invested in it. Profits, and even the long-term survival of the company itself, may be sacrificed in a race for individual high salaries and lucrative bonuses.

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 can afford to buy the firms’ products. One strength of businesses is that because they have at least one clear goal—making a profit—their efficiency in reaching that goal may be greater than the efficiency of actors in the other two spheres. Market forces are commonly thought to drive firms to choose to produce the most economically valuable outputs (based on people’s willingness to pay for them), and try to produce them at the least possible cost. (In Chapter 3 we take a closer look at how markets operate.)

Another advantage of the profit motive is that it encourages innovation. Not only do businesses benefit from innovation, but consumers benefit from the availability of new or improved products.

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 workers, as well as taking into account externalities. They may be guided in these directions by the goodwill of their owners and managers,

by pressure from their customers or workers, or by government regulation. But the business sphere has no *built-in* correction for externalities (defined in Chapter 1 as side effects, or unintended consequences, of economic activity). We will discuss externalities in more detail in Chapter 12.

Moreover, sometimes “innovation” can take a perverse form. Leading up to the global financial crisis in 2007, financial firms created “innovative” investment products by bundling risky mortgages and selling them as supposedly safe investments. When the crisis hit, many of these investments were revealed as being nearly worthless. In fields such as for-profit health care and education, the “buyers” may be unaware of the quality of the services. For example, a 2016 analysis of students who attended for-profit universities found that they would have been better off attending lower-cost community colleges, in terms of both their post-graduation salaries and student debt.<sup>12</sup>

The potential for social harm grows when firms gain excessive market power. They may then be able to charge socially inefficient prices (discussed further in Chapter 17) or to squelch innovations by competing firms. Large firms also have considerable power to harm the natural environment on which they ultimately depend. Thus market economies today face a major conundrum: How can societies continue to benefit from the strengths of the business sphere while ensuring that this sphere supports the well-being of current and future generations? This question forces us to think 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 sphere. For one example of the debate over the allocation of certain economic activities to the business sphere, see Box 2.1.

### BOX 2.1 PRIVATE PRISONS IN THE UNITED STATES

The United States has more prisoners than any other country, not only in absolute numbers but also on a per-capita basis. Up until the 1980s, prisons in the U.S. were operated exclusively by state and federal government agencies. From the mid-1980s to 2012 the number of prisoners held in prisons operated by for-profit companies steadily increased, until decreasing slightly more recently. In 2019, about 115,000 prisoners in the U.S., or 8 percent of the prison population, were housed in prisons operated by private companies.<sup>13</sup> The main argument in favor of prison privatization is that for-profit companies will have an incentive to identify economic efficiencies, and thus reduce prison operation costs to taxpayers.

However, a 2011 report on private prisons reported that most studies indicate little or no cost savings when prisons are turned over to for-profit companies. Analysis of private prisons in Arizona found that per-prisoner costs were actually *higher* in private prisons. The report concluded that:

The supposed benefits (economic and otherwise) of private prisons often fail to withstand scrutiny. The view that private prisons save taxpayer money, fuel local economies, and adequately protect the safety of prisoners helps to feed mass incarceration by making privatization appear to be an attractive alternative to reducing prison populations. But the evidence for such benefits is mixed at best. Not only may privatization fail to save taxpayer money, but private prison companies, as for-profit institutions, are strongly incentivized to cut corners and thereby maximize profits, which may come at the expense of public safety and the well being of prisoners.<sup>14</sup>

A 2016 audit by the Department of Justice studied the management of federal prisoners in private prisons. The audit found that safety and security incidents, such as assaults and lockdowns, occurred at higher rates at private, as opposed to federal, prisons. For example, there were 4.2 inmate-on-staff assaults per month in private prisons, versus 1.6 assaults in prisons operated by the federal government. Private prisons were more likely to be overcrowded, with new prisoners often housed in cells indented for disciplinary segregation. The audit did find, however, that private prisons operated at a lower cost than federal prisons, yielding an 8 percent savings per inmate.

As a result of this audit, in August of 2016 the Department of Justice announced that it was going to end contracts with private prisons for federal prisoners.<sup>15</sup> This order was reversed under the Trump Administration in February 2017. President Trump also signed an executive order to expand immigrant detention facilities near the border of Mexico, including establishing new contracts with private prisons. Two corporations, CoreCivic and The Geo Group, hold most of the contracts to house federal prisoners. Both companies were large donors to the Trump campaign.<sup>16</sup>

A 2019 report from the Department of Homeland Security noted that U.S. Immigration and Customs Enforcement (ICE) has documented “thousands of instances” where private facilities failed to comply with detention standards, including failure to report sexual assaults to ICE. However, ICE imposed financial penalties on only two occasions. The report recommended numerous reforms to make private contractors more transparent and accountable.<sup>17</sup>

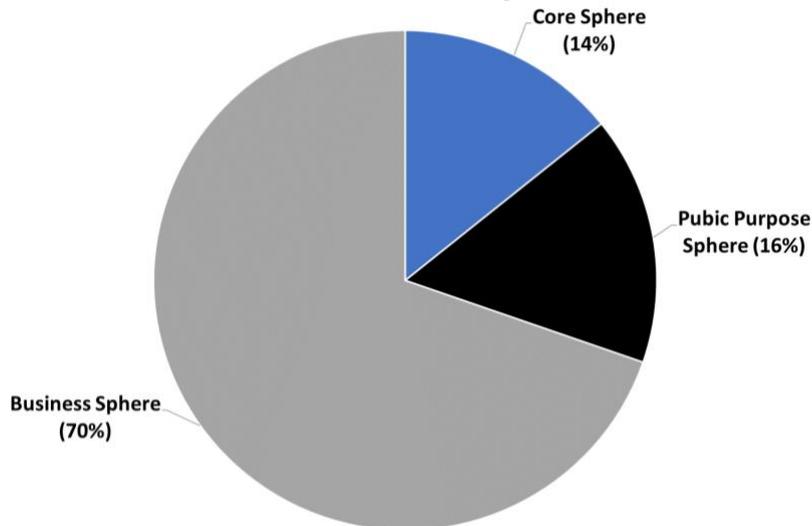
In January 2021, the incoming Biden administration approved an executive order to phase out the Department of Justice’s use of private prisons. The order directs the Justice Department to decline to renew contracts with privately-operated, for-profit prisons.<sup>18</sup> States, however, remained free to contract with private prison companies, and the order did not apply to immigration detention centers.

## 1.4 THE SIZE OF THE THREE SPHERES

We can now bring together various data sources to estimate the relative contribution of each of the three spheres to the overall economy. 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 contributed 14 percent, and the public purpose sphere contributed 16 percent. The dollar figures add up to more than 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.<sup>19</sup> 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 based on these estimates, that is not the case in all countries. For example, some rough estimates indicate that the largest sphere in France is the public purpose sphere, at about 40 percent of the overall economy.<sup>20</sup> As mentioned earlier, official government statistics published by the United Kingdom indicate that the value of unpaid labor in the UK is 63 percent of GDP, suggesting a relatively large core sphere.

Figure 2.3. Estimated 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.

### 1.5 THE INFORMAL SPHERE AND LESS INDUSTRIALIZED COUNTRIES

In addition to the three spheres discussed so far, all countries have, to some extent, an informal sphere. The **informal sphere** comprises market enterprises, normally small in scale, operating outside government oversight and regulation. 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 tend to be 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.” Barter transactions would also be part of the informal sphere.

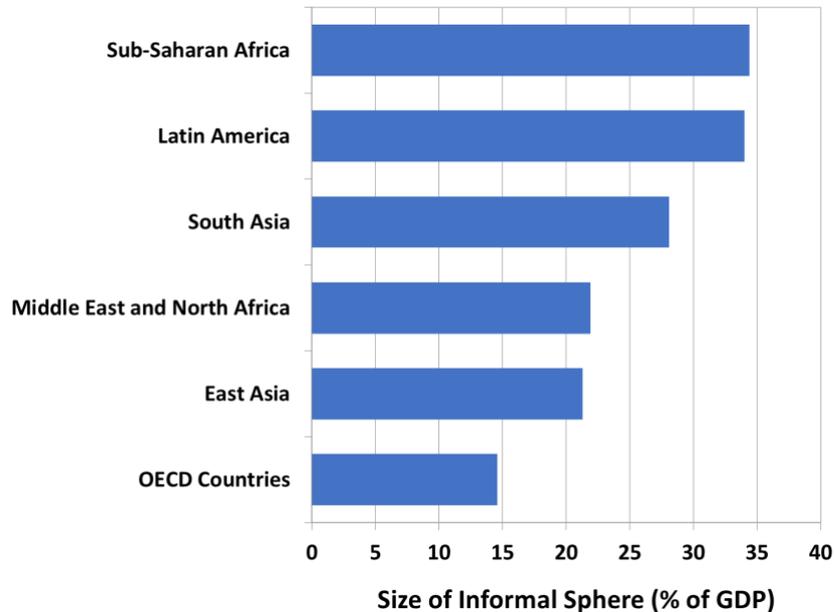
**informal sphere:** businesses, normally small in scale, operating outside government oversight and regulation

Of course, accurate estimates of the size of the informal sphere in various countries are difficult to obtain, as the businesses involved often seek to hide their activities. Nonetheless, estimates of the informal sphere are available for most countries, including both developed and developing countries. Among OECD countries, the informal sphere has been estimated to be between about 8 percent and 25 percent of GDP.<sup>21</sup> The relative size of the informal sphere tends to be much larger in developing regions of the world, as shown in Figure 2.4. We see that the informal sphere is the largest, as a percentage of GDP, in sub-Saharan Africa. Other developing regions, including Latin America and South Asia, also have informal spheres equal to at least 25 percent of GDP.

Other estimates suggest that the informal sphere is even larger in developing countries. According to the Asian Development Bank, the informal sphere in Bangladesh is equal to more than 40 percent of GDP, and provides nearly 90 percent of the jobs in the country.<sup>22</sup> A 2018 study finds that the informal sphere accounts for 86 of employment in Africa, and 68 of employment in Asia and the Pacific.<sup>23</sup> According

to the International Labour Organization, informal workers are more likely to be in vulnerable forms of employment (i.e., lacking decent working conditions and legal rights, along with inadequate pay) and more likely to be women.<sup>24</sup> A 2021 report from the World Bank found that the COVID-19 pandemic was particularly damaging to informal workers, who generally lack access to social safety nets.<sup>25</sup>

**Figure 2.4. The Average Size of the Informal Sphere, Percentage of GDP, by World Region**



Source: Medina and Schneider, 2019.

If this textbook were being written primarily for use in developing countries, it would be necessary to pay a great deal more attention to the complicating reality of informal economic activity and emphasize its importance as a fourth sphere. However, even in industrialized countries we should recognize that informal economic activity can be significant. When informal economic activity is clearly illegal, we might conclude that it does little to enhance well-being. But when the informal sphere provides employment to those who would have difficulty obtaining employment in the other spheres, such as undocumented immigrants or women facing discrimination, the challenge is to ensure that these workers are treated fairly and can eventually transition to formal employment.

### Discussion Questions

- 1 Education is sometimes provided within the core sphere (at-home preschool activities and home schooling), is often provided by the public purpose sphere (public and nonprofit schools), and is occasionally 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 Make a list of several things that, over the past few days, you have eaten, drunk, been entertained by, been transported by, been sheltered by, or received other services from (e.g., “dinner at Gina’s,” “my apartment,” and “the health clinic”).

Then, using the definitions in this section, determine which of the three spheres of economic activity provided each item.

## 2. THE ROLE OF MARKETS

Having discussed the three major spheres of economic activity, we are now ready to move to the more specific economic issue of how markets work. When you think of the word “market,” you probably think of a store where you buy groceries. But in economics markets are defined more broadly and represent an important structure to guide many economic activities. We first define precisely what we mean by the term, starting with the most concrete definition and moving toward the most abstract. Then we look at ways to make markets work smoothly. We end the chapter by considering the advantages and limitations of markets as a way to conduct economic activities.

### 2.1 THREE DEFINITIONS OF MARKETS

#### *Markets as Places to Buy and Sell*

The most concrete and common sense 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. For example, the Grand Bazaar in Istanbul, Turkey, is one of the world’s oldest and largest covered markets, dating to the fifteenth century. The Grand Bazaar now has more than 4,000 shops and attracts hundreds of thousands of visitors every day. The Grand Bazaar and produce stands in African villages have flourished for ages as meeting places for people who wish to buy and sell things.

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

In the context of the contemporary world, many different kinds of physical markets have these same functions. They can be a single store, a shopping mall with many retail stores, or a livestock auction. A market, as suggested by these examples, can be defined as a physical place where there is a reasonable expectation of finding both buyers and sellers for the same product or service.

In modern societies, however, markets do not necessarily need to be physical places. One can now easily make purchases online that used to require a physical visit to a store. Amazon and eBay are modern examples of “places” where buyers and sellers can also come together.

#### *Markets Defined by Product Categories*

The term “market” can also refer to economic activity that is not confined to a single place such as a shopping mall or a Web site. A more general definition is that a market is a concept that covers broad product categories. For example, we can speak of the “real estate market” in a particular city or even the entire country. We can define the market for used cars, the market for wind turbines, or the market for luxury goods. Speaking of the “stock market” in a broad sense is another common example of a market defined by a product category, whereas the New York Stock Exchange would be a market according to our first definition.

**market (second meaning):** the interaction of buyers and sellers defined within the bounds of broad product categories, such as the market for used cars or the real estate market

We can define markets at various levels of detail depending on our interests. Thus, we can analyze the wheat market or be more specific and study the market for No. 2 dark winter wheat or No. 1 dark northern spring wheat. Or we might delineate a market based on geographic location, such as the New England market for home heating oil.

### **"The Market" as an Economic System**

In the most abstract terms, people sometimes refer to markets as an economic system, for example, describing the United States as having a “**market economy**” or indicating a preference for “free markets.” In this macroeconomic 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

When you think of an alternative to a market economy, you might think of a system that relies on central planning to conduct economic activities, as was the case in the Soviet Union. But we should realize that, even in modern market economies, many economic activities are not structured by markets. For example, decisions about resource management are not always made based on markets, but often on scientific evidence or political preferences. The distribution of economic resources within the core sphere is normally made based on social or family relationships rather than market forces.

The view of markets as an economic system underlies some of the most heated current debates in economics. We frequently hear claims by “free market” advocates that a **laissez-faire economy** (one with very little government regulation) leads to economic growth and prosperity. Critics of this approach argue that markets can provide social benefits in many cases, but that unchecked and unregulated markets can contribute to problems such as poverty, inequality, environmental degradation, and an erosion of social ethics. As we examine different issues throughout this book, we frequently refer to these differing perspectives and this continuing debate.

**laissez-faire economy:** an economy with little government regulation

## **2.2 INSTITUTIONAL REQUIREMENTS OF MARKETS**

Contemporary markets do an amazing thing: they allow many separate decision makers, acting in a decentralized manner, to coordinate their behavior, resulting in highly complex patterns of economic activity. But markets do not exist in a vacuum. In order for markets to operate smoothly, they depend on a number of social, physical, and legal institutions.

An **institution** refers to a way of structuring human activities, based on customs, culture, infrastructure, and laws. An institution can be a physical location, such as educational institutions (schools and colleges), penal institutions (prisons) or institutions for residential care of elderly persons (nursing homes). But an institution in

an economic sense need not be a physical structure. It can also refer to the ways that custom, culture, and laws structure human activities. Thus we can speak of, for example, the institutional structure of health care in the United States as one that relies on private medical insurance for many working-age adults, Federally-subsidized insurance such as the Affordable Care Act and Medicare for qualifying lower-income people, and Medicare for older adults. This institutional structure also includes the laws regarding health care and health insurance, as well as customary procedures for doctor visits.

**institution:** a way of structuring human activities based on customs, infrastructure, and laws

Many institutions help markets work more smoothly. For example, credit cards and systems such as PayPal and Venmo are institutions that facilitate purchases without the use of cash or checks. Consumer protection laws are an institution that defines certain exploitative business practices as illegal. The ability to return purchased items for a refund can also be viewed as a widely accepted institution. Legal contracts are important for many larger items, such as a house purchase, providing protection for both buyer and seller.

We classify institutions that facilitate the functioning of markets 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 information
4. money as a medium of exchange

### ***Institutions of Property and Decision Making***

Before people can begin to think about making a market transaction, they have to be clear about what belongs to whom. Ownership is usually defined through systems of property rights set out in law and enforced by courts and police. These rights define what is **private property** and how economic actors can manage their property. Markets require that economic actors be free to make decisions about voluntarily trading their private property (including their financial assets) for others' property. Also, prices must not be under the control of a central planning agency but are generally determined by the interactions of market participants themselves.

**private property:** ownership of assets by nongovernment economic actors

The institutions of private property and voluntary decision making exist both formally, in codes of law, and informally, in social and cultural 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 and less market activity. In most Western 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 expected merchandise. A seller must be able to trust that the payment offered is valid, whether in the form of currency, personal check, credit card, or electronic payment.

Trust can be established between buyers and sellers over time as a result of successful interactions. On the other hand, if a buyer who is fleeced by a seller, can spread the word to warn other potential customers. Online reviews on websites such as Yelp provide useful information about which products and merchants are reliable. Cultural norms and ethical or religious codes can also help to establish and maintain an atmosphere of trustworthiness. The functioning of markets is facilitated by having enough members of a society subscribe to a common moral code and not betray one another's trust.

In addition to broad cultural ethics, markets depend on specific legal institutions. A “contract” is a general set of terms that structure a market exchange. **Explicit contracts** are formal, usually written, contracts that provide a legally enforceable description of the agreed-on terms of exchange. Explicit contracts can be quite complex, including many clauses to cover a multitude of contingencies (such as “If goods are not delivered by June 1, the price paid will be reduced to . . .”). They may involve many parties, as in a contract between a union and an employer. For formal contracts to work, there must be laws that state the parties' legal obligation to honor contracts and establish penalties for those who fail to do so.

**explicit contract:** a formal, often written agreement that states the terms of an exchange and may be enforceable through a legal system

An **implicit contract** is said to exist when the parties have agreed informally about the terms of their exchange. Such agreement may be based on verbal discussions or on cultural traditions and normal expectations.

**implicit contract:** an informal agreement about the terms of a market exchange, based on verbal discussions or on traditions and normal expectations

## Infrastructure for the Smooth Flow of Goods and Information

A third set of institutions needed for market functioning has to do with making possible a smooth flow of goods and information. Most obviously, **physical infrastructure** is needed for transportation and storage of goods, such as roads, ports, railroads, and warehouses. In addition, infrastructure must be in place for information to flow freely. Producers and sellers need information on what and how much their customers want to buy. Consumers need to know what is available and how much they will have to pay for it. Access to the Internet, as well as more traditional sources of information such as newspapers and radio, facilitate the flow of market information.

**physical infrastructure:** roads, ports, railroads, warehouses, and other tangible structures that provide the foundation for economic activity

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.

### **Money as a Medium of Exchange**

The final basic institution required to facilitate the operation of markets is a generally accepted form of money. Many different things have been used as money in the past. Early monetary systems used precious or carved stones, particular types of seashells, or other rare goods. Gold, silver, and other metal coins were the most common choice for many centuries. More recently, paper currency became important. Today, the use of checks, credit cards, debit cards, and electronic payment systems further facilitate making payments for goods and services.

What makes something **money**? Three criteria are necessary for something to be defined as money:

1. One obvious criterion is that money must be widely accepted as a *medium of exchange*. In other words, money is whatever everyone accepts as money. In this sense, money is a social institution of trust.
2. Money must provide a *durable store of value*. Imagine the problems that would occur if heads of lettuce were proposed as money. A form of money that starts to rot within a week or two would be difficult to use! The value of money must be relatively stable over time. In addition, money *must have minimal handling and storage costs*. By this criterion, paper currency is generally 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 or sanctioned by national governments. But this is not always the case. For example, in World War II cigarettes were used as a form of money by prisoners of war. (Once the convention of cigarettes as money became established, they acquired value even to non-smokers as a medium of exchange.) 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. People earn time dollars by performing valuable services for others or for the community as a whole, such as childcare, tutoring, or building repairs. Time dollars can then be used to pay for other services or used instead of “normal” dollars to purchase products from local merchants (see Box 2.2).

Electronic forms of exchange such as Bitcoin are sometimes claimed by their advocates to play the role of money, but their often rapidly changing value means that they do not fulfill the requirement of providing stable value over time. This could change if electronic forms of money acquired stable backing, perhaps by central banks.

### Discussion Questions

- 1 You attend a college or university. In what sense is it an “educational institution”? Can you identify any institutionalized patterns that structure the behavior of students and faculty at your school?
- 2 In what sense is the term “market” being used in each of the following sentences? “Go to the market and get some bananas.” “The market is the best invention of humankind.” “The labor market for college graduates is bad this year.” “The advance of the market leads to a decline in social morality.” “The market performance of IBM stock weakened last month.” Can you think of other examples from your own readings or experience?

### 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. When you join a time bank, you indicate what services you might be able to offer others: financial planning, computer de-bugging, handyman repairs, childcare, taking someone to a doctor’s appointment, etc. 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 normally considered equally valuable. Whether one is performing nursing services, tutoring new immigrants in English, or driving someone on errands, all activities earn time credits at the same rate (1 hour = 1 credit). Second, exchange through time banks helps build social relationships and community spirit. Many time bank members note that performing activities eventually becomes viewed as spending time with friends rather than work. In fact, according to one time bank director a majority of members don’t claim credit for all hours logged.<sup>26</sup> Another interesting feature is that time banks can particularly flourish during economic downturns when traditional employment is difficult to find. Thus one can still feel they are contributing to society, and accruing credit for needed services, without paid employment.

According to the organization TimeBanks, about 30,000 to 40,000 people participate in time banks in the United States.<sup>27</sup> In 2017 a time bank was created in the United Kingdom to provide care and companionship for elderly people, partially funded by the UK government. In this system, people contribute time helping others to eventually be redeemed when they themselves need assistance later in life.<sup>28</sup> 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.<sup>29</sup>

### 3. TYPES OF MARKETS

Markets take a wide variety of forms. They can be classified according to what is sold, how prices are determined, and the period covered.

### 3.1 MARKETS DEFINED BY WHAT IS SOLD

Recall from last chapter that we defined two basic market types—product and factor markets—in the traditional model of economic activity. In this section we further classify different types of markets.

The most obvious and well-known product markets are those in which people buy goods and services from businesses. Such **retail markets** deal in food, books, clothes, and so on. Many retailers, such as Walmart and Target, don't actually produce the products they sell. Instead, they purchase final products through **wholesale markets**, normally in large quantities. Wholesalers act as intermediaries between producers and retailers.

**retail markets:** markets where goods and services are purchased by consumers from businesses, generally in small quantities

**wholesale markets:** markets where final goods are purchased by retailers from suppliers, normally in large quantities

We can differentiate between wholesale markets and **intermediate goods markets**, which involve sales of unfinished products between businesses, such as the purchase of sheet metal by an automobile company. **Resale markets** are product markets for items that have been previously owned. Used-car markets are resale markets, as are markets for antique furniture. Most shares traded in stock markets are also being resold, having been previously owned by other investors.

**intermediate goods market:** a market for an unfinished product

**resale market:** a market for an item that has been previously owned

The **labor market** is a type of factor market where employers interact with people who wish to work. 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. Labor markets are sufficiently different from other types of markets that this topic warrants separate treatment (in Chapter 9).

**labor market:** a market in which employers interact with people who wish to work

**Financial markets** are markets for loans, equity finance, and financial assets such as stocks and bonds. An economic actor who needs money may get a loan from a bank. Businesses may sell shares of stocks—that is, partial ownership rights in the firm—as a way to raise funds via “equity financing.” Although corporations sometimes issue new shares of their stock to raise funds, as just noted nearly all the activity on stock markets is resale of existing stocks.

**financial market:** a market for loans, equity finance, and financial assets

Some markets operate outside the law. **Underground markets** (also called black markets) are illegal markets. It might be that the good or service itself is illegal, as are heroin, smuggled antiques, and murder for hire. Or it may be that the markets deal in legitimate goods but in illegal ways. For example, smugglers may sell cigarettes or imported perfume at prices that do not include payment of required taxes. “Gray markets” are unofficial but not necessarily illegal; these include many markets in

developing countries such as street sellers of electronic goods and other consumer devices.

**underground market:** a market in which illegal goods and services are sold or legal goods and services are sold in an illegal way

### 3.2 MARKETS DEFINED BY HOW PRICES ARE DETERMINED

At first glance, it might seem as if many consumer retail markets violate one of the institutional requirements for markets that we mentioned above: that prices must generally be allowed to be set by the interactions of market participants themselves. In an old-fashioned open-air bazaar or flea market, buyers and sellers haggle about prices. But in a typical retail setting in an industrialized society, you do not “interact” so directly with the retailer to determine the price of bread or a shirt. The price is set by the seller and either you pay the **posted price** or you do not buy the item.

**posted prices:** prices set by a seller

Even though you do not haggle with the cashier at The Gap or at the supermarket, the fact that you *can* decide whether to buy is itself a form of interaction. Over time, retailers will take note of what moves off the shelf most quickly and will then order more of it and may also raise its price. They will also take note of what does not sell so quickly and will then 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.

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-determined price, or **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. But if large firms have significant market power, they may be able to control or manipulate the market price, something discussed in detail in Chapter 17.

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

**Auction markets** are markets in which an item is sold to the highest bidder. Although in the past auction markets were commonly limited to goods such as antiques and artworks, the advent of online auction sites such as eBay have made auction markets much more prevalent. Real-world auctions offer interesting opportunities to observe how market values are determined.

**auction market:** a market in which an item is sold to the highest bidder

Finally, in markets with **bargaining**, a single buyer and a single seller negotiate the price of an item, for which no definitive market value has been established.

Residential real estate, for example, is generally sold by using such negotiated agreements, as are used cars. (Sometimes there is also a posted price, but both parties understand that it is merely a starting point for negotiation.) Salaries of high-level managers, unionized employees, and sports and entertainment stars are also commonly set by bargaining.

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

### Discussion Questions

- 1 Reviewing the different types of markets outlined in this section, think about whether you have ever directly participated in a market of each type. If so, describe specific instances.
- 2 The Internet has opened up a whole new set of markets for everything from antiques to airplane tickets. Pool your knowledge with that of others in the class, and, for the types of markets listed in this section, think of as many examples as possible that are online.

## 4. ADVANTAGES AND LIMITATIONS OF MARKETS

Earlier in this chapter, we talked about the strengths and weaknesses of each of the three economic spheres—core, public purpose, and business. As we conclude this chapter with a discussion of the advantages and limitations of markets, it will be evident that these topics overlap, especially concerning the strengths and weaknesses of the business sphere. The reason for this is obvious: The business sphere operates entirely through markets.

An important point is that people’s motives may differ when they are interacting in markets as opposed to other situations. In markets, people act as “consumers” and are often looking to get the best deals. In doing so, they may not pay sufficient attention to the harmful external effects of their purchasing decisions; recall our discussion of externalities in Chapter 1. In seeking the lowest prices consumers may not consider the working conditions of those employed to make various products, often in developing countries. This doesn’t mean consumers don’t care about the environment or the welfare of others, but sometimes as we interact in markets it is less obvious how to express these views than it is when interacting in the core sphere. People may have different preferences depending on whether they are acting as buyers or sellers, compared to when thinking of themselves as parents, students, voters, or volunteers.

### 4.1 OVERVIEW OF ADVANTAGES AND DISADVANTAGES OF MARKETS

We will spend considerable time throughout the text assessing the advantages and disadvantages of markets. In this section we offer a preliminary overview of the advantages and disadvantages 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 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, and they encourage some beneficial forms of social cooperation.

We will see in Chapter 5 that under certain assumptions markets result in the “best” outcome for society. Economists can estimate the benefits that accrue to sellers and buyers in markets and recommend ways to make markets work more efficiently. Markets can also be thought of as a type of democracy in which all participants can express their views by buying some items and not others.

Against these advantages, markets have a number of limitations and disadvantages. An important drawback of markets is that they can result in an excessive concentration of economic power. They also cannot on their own address an inequitable distribution of resources, the dependency needs of people with little to offer in the market, or the provision of public goods. For all these reasons, market allocations may not be fair or even efficient.

As mentioned above, markets tend to provide goods and services at affordable prices. (This does not assume any benevolence on the part of sellers; if prices were excessively high, no one would buy and sellers could make no profit.) But some markets are clearly not affordable for the majority of people, such as the real estate market in New York City or the market for top universities. Markets may be democratic in a sense, but they operate according to the principle of “one dollar, one vote” rather than “one person, one vote.”

As we will also see later in the text, markets don’t always operate efficiently. We will consider several instances of “market failure”—when an unregulated market fails to produce the best outcome for society. This may suggest a need for government regulation, or for some goods and services to be provided by nonmarket institutions, such as governments or other public purpose sphere organizations.

At the social level, many people have expressed concern about the loss of certain community values when pitted against the individualism that is at the heart of modern markets. Individualism can be a liberating force, especially when it releases less powerful groups in society from traditional relations of subservience. At the same time, individualism has been associated with a weakening of family ties, creating social, economic, and moral challenges for modern societies. Increasingly, markets are providing services that were traditionally performed by the core sector, such as childcare and housecleaning. In some cases, these shifts create new opportunities, but in others they may perpetuate inequality or result in lower quality services.

Another serious concern is environmental degradation. Like many types of businesses, markets do not do well on their own in protecting the environment because the costs of environmental damage are generally external to market transactions, as we discussed previously. Perhaps the greatest externality in human history is the challenge of climate change—a topic we will address in Chapter 13.

## 4.2 ASSESSING MARKET OUTCOMES

Sometimes the debate about markets is seen in terms of one side being “pro-market” while the other side is “anti-market.” We seek to avoid such a polarizing distinction in this text. Such broad generalizations often reflect a lack of knowledge about the details of markets and economics. But it is only by knowing these details that we are truly able to understand 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 three broad categories of market outcomes, assessed on a case-by-case basis:

1. situations in which market outcomes are reasonably efficient, fair, and sustainable, with only limited government involvement required
2. situations in which market outcomes are reasonably efficient, fair, and sustainable only with significant government involvement
3. situations in which market outcomes are not efficient, fair, and/or sustainable, necessitating provision through nonmarket institutions (such as government)

We evaluate market outcomes in terms of three factors: efficiency, fairness, and sustainability. We will learn how economists define the efficiency of markets in more detail in Chapter 5. Issues of fairness and inequality will be addressed in Chapter 10. The topic of environmental sustainability is covered in Chapters 12 and 13. But for now we can begin to consider potential examples in each of these three categories.

Which category would the market for t-shirts in the United States fall into? A quick search on Amazon suggests that one can purchase a basic t-shirt for under \$10, with hundreds if not thousands of choices. Significant competition among many producers means that prices are low. This suggests a relatively efficient market. The t-shirt market may also be considered fair, as virtually anyone in the United States who wants a t-shirt can afford one. Another, more difficult, equity issue is the working conditions of the workers making the t-shirts. The environmental impacts of a t-shirt may also be difficult to assess, as it depends on the materials used, how far it is transported, whether it is dyed, etc. We will consider this exact issue in Chapter 8. But overall, there is limited government involvement in the t-shirt market in the United States and we may reasonably suggest that this market could be classified in the first category, even though some may argue that more government regulation is needed to ensure fairness and sustainability.

As an example of a good that might be classified in the second category, consider the market for gasoline in Europe. While gasoline is provided by private companies in European markets, it is heavily taxed to account for its environmental impacts. Gasoline taxes in European countries are typically \$2–\$4 per gallon.<sup>30</sup> As we will see in Chapter 12, unregulated gasoline market outcomes are both inefficient and unsustainable.

Finally, what goods and services would fall into the third category? Some are rather obvious, such as national defense and major highways—which are nearly always provided by governments rather than private markets. But what about education and health care? In many countries, these are provided by the government and funded by taxes. Yet in the United States, health care in particular is often provided by private markets. Whether these markets are efficient and fair is a subject of strong debate. Meanwhile, health care in Switzerland is provided almost entirely through private markets, but health insurance is compulsory and highly regulated to ensure fairness. For example, no one pays more than 8 percent of their annual income for health insurance in Switzerland.<sup>31</sup> So whether health care is classified in the second or third category may depend on the country.

In short, we need to assess markets contextually—yet another reason for the title of this book. We need to understand the contexts in which markets work well, the contexts in which government regulation is needed, and the contexts in which markets do not produce acceptable outcomes. But before we can intelligently categorize

different situations, we need to develop a deeper understanding of how markets actually operate. We begin that task in Chapter 3.

### Discussion Questions

- 1 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?
- 2 “Indeed, it has been said that democracy is the worst form of government,” said British Prime Minister Winston Churchill (1874–1965), “except all those other forms that have been tried from time to time.” Some people make the same claim about more market-oriented forms of economic systems. What do they mean? Do you agree or disagree?

### REVIEW QUESTIONS

1. What are some major characteristics of the core sphere?
2. What are some major characteristics of the public purpose sphere?
3. Why do businesses find it difficult to supply “public goods”?
4. What are some major characteristics of the business sphere?
5. Give three different meanings of the term “market.”
6. Describe four main categories of institutional requirements for markets.
7. Give several examples of ways in which trust can be established.
8. Give several examples of the infrastructure necessary for markets to function.
9. List eight different types of markets in terms of what is sold.
10. List three major types of markets in terms of how prices are set.
11. What are three major categories of market outcomes, based on efficiency, fairness, and sustainability?

### EXERCISES

1. Give an example of each of the following:
  - a. A retail market
  - b. A resale market
  - c. A financial market
  - d. An underground market
  - e. An auction market
  - f. A market with bargaining
2. Match each concept in Column A with an example in Column B.

Column A	Column B
a. Explicit contract	1. Failure to account for environmental externalities
b. A core sphere activity	2. A signed lease for an apartment
c. Implicit contract	3. An example of a financial market
d. A public purpose sphere activity	4. The expectation that roommates will contribute to rent
e. A drawback of markets	5. Police services
f. A car loan	6. An example of a resale market
g. A used bike sold on craigslist	7. Home care for the elderly
h. The sale of crude oil to Exxon Mobil	8. An example of a commodity market

3. Imagine trying to run a contemporary market economy without each of the following. What problems do you think would arise? What might people have to do to get around the lack of each one?
  - a. Money
  - b. The expectation that most people will not cheat
  - c. An organized way of keeping people from adulterating foods or selling medicines that do not work
  - d. A system of roads, canals, or railways
  - e. Phone and computer connections
  - f. An expectation that individuals will take the initiative in decision making

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## NOTES

- <sup>1</sup> AARP and NAC, 2020.
- <sup>2</sup> Annual hours worked statistic from the OECD Statistics online database. Value from 2020.
- <sup>3</sup> Reinhard, *et al.*, 2019.
- <sup>4</sup> Folbre, 2015.
- <sup>5</sup> UK Office of National Statistics, Household Satellite Account, UK: 2015 and 2016.
- <sup>6</sup> Vreel, 2011, p. 30.
- <sup>7</sup> Botek, 2019.
- <sup>8</sup> UN Women, 2015.
- <sup>9</sup> NCCS Project Team, 2020.
- <sup>10</sup> Casey, 2016.
- <sup>11</sup> Bureau of Economic Analysis, 2009.
- <sup>12</sup> Cellini and Turner, 2016.
- <sup>13</sup> The Sentencing Project, 2021.
- <sup>14</sup> ACLU, 2011, p. 18.
- <sup>15</sup> Zapotosky and Harlan, 2016.
- <sup>16</sup> Sommer, 2017.
- <sup>17</sup> U.S. Department of Homeland Security, 2019.
- <sup>18</sup> Adams, 2021.
- <sup>19</sup> Value of unpaid labor of 8 percent of GDP in the United States calculating using unpaid time data from Hess *et al.*, 2020 combined with replacement wage data from the U.S. Bureau of Labor Statistics.
- <sup>20</sup> Estimate for France based on the value of unpaid labor from Folbre (2015) and the value of nonprofits from Casey (2016).
- <sup>21</sup> Schneider and Williams, 2013, Table 6.
- <sup>22</sup> Asian Development Bank, 2012.
- <sup>23</sup> International Labour Organization, 2018.
- <sup>24</sup> International Labour Organization, 2015.
- <sup>25</sup> World Bank Group, 2021.
- <sup>26</sup> Rosenburg, 2011.
- <sup>27</sup> <https://timebanks.org/timebankingabout/>.
- <sup>28</sup> Anonymous, 2016.

<sup>29</sup> Burroughs, 2017.

<sup>30</sup> <https://taxfoundation.org/oeed-gas-tax/>.

<sup>31</sup> Swartz, 2009.