

CHAPTER 4: CONSUMPTION AND DECISION-MAKING

In Chapter 1, we defined economic actors, or economic agents, as people or organizations engaged in any of the four essential economic activities: production, distribution, consumption, and resource management. Economics is about how these actors behave and interact as they engage in economic activities. We begin this chapter with a brief overview of the classical and neoclassical perspectives on economic behavior. The rest of the chapter focuses specifically on consumer behavior—how individuals make decisions on what goods and services to consume. We look at both traditional and contemporary approaches to understanding consumer behavior.

1. HISTORICAL PERSPECTIVES ON ECONOMIC BEHAVIOR

Economics is a *social* science—it is about people and how we organize ourselves to meet our needs and enhance our well-being. All economic outcomes are ultimately determined by human behavior. Thus, economists have traditionally used as a starting point some kind of statement about the motivations behind economic actions.

1.1 CLASSICAL ECONOMIC VIEWS OF HUMAN NATURE

The classical economic view of human behavior is largely based on the theoretical framework presented in Adam Smith’s *An Inquiry Into the Nature and Causes of the Wealth of Nations*, published in 1776. In this book, Smith suggests that an economic system based on markets can effectively promote the general welfare of society. He reasoned that a businessman who is interested in maximizing his own monetary gain would nonetheless serve the social good *if* the best available means for his monetary gain was to produce high quality goods at a competitive price.

The idea that self-interest can unintentionally promote the social good is an important and valuable one. However, it has been often taken out of context to mean that if people *only* behave with self-interest, they will also always do what is best for the entire society. This interpretation would have astonished Smith, who, in his other famous book, *The Theory of Moral Sentiments*, emphasized the desire of people to maintain their own self-respect and earn the respect of others. He assumes that this desire motivates people to act honorably, justly, and with empathy for others in their community. Smith recognized that self-interest is important, but he also believed that narrow self-interest will be held in check by people’s “moral sentiments” (the universal desire for self-respect and the respect of others). Thus Smith’s vision of human motivation was one in which individual self-interest was mixed with social motives.

Smith was followed by other economists, such as David Ricardo, John Stuart Mill, and Alfred Marshall, who held similarly complex views of human nature and thought quite deeply about ethics. For example, Marshall viewed human motivations as being influenced by a desire to improve the human condition. He specifically focused on the reduction of poverty so as to allow people to develop their higher moral and intellectual faculties rather than being condemned to lives of desperate effort for simple survival.

1.2 THE NEOCLASSICAL MODEL

In the twentieth century, the **neoclassical model** came to dominate economic thinking. This approach took a narrower and simpler view of human motivations. Recall from Chapter 2 that the basic neoclassical model only considers two main types of economic actors—firms and households. This model assumes that firms maximize their profits from producing and selling goods and services, and households maximize their utility (or satisfaction) from consuming goods and services. Economic actors are assumed to be self-interested and “rational,” meaning that people generally make logical decisions that produce the best outcomes for themselves. Also, firms and households are assumed to interact in perfectly competitive markets. In this model, competition (rather than Smith’s “moral sentiments”) is regarded as the check on self-interested behavior of individuals and firms. Competition is understood as being able to prevent firms from charging too much for their product or producing poor-quality goods.

neoclassical model: a model that portrays the economy as composed of profit-maximizing firms and utility-maximizing households interacting through perfectly competitive markets

Some benefits can be gained from looking at economic behavior in this way. The assumptions reduce the actual (very complicated) economy to something that is much more limited but also easier to analyze. With some additional assumptions, the model can be elegantly expressed in figures, equations, and graphs. This traditional model is particularly well suited for analyzing the determination of prices, the volume of trade, and economic efficiency in certain cases. We will take a closer look at the neoclassical model of consumer behavior in Section 2.

Moving into the twenty-first century, most economists have accepted that human motivations are much more complex. As we will see in Section 3, in recent years, economists have devised many creative experiments to explore how people make actual economic decisions, typically showing how context can influence decisions. While this model of economic behavior can’t necessarily be summed up in tidy mathematical equations and graphs, it is more comprehensive, and often more accurate, than the neoclassical model.

Discussion Questions

1. Discuss, with an example, how individuals acting in their own self-interest may sometimes lead to outcomes that serve the social good.
2. Do you agree with the assumption of the neoclassical model that human behavior is rational and self-interested? Can you think of some examples of economic behavior that might contradict these assumptions?

2. THE NEOCLASSICAL THEORY OF CONSUMER BEHAVIOR

We start our analysis of consumption behavior with the neoclassical model. As mentioned previously, this model is based on simplistic assumptions, but it provides some useful insights.

2.1 CONSUMER SOVEREIGNTY

Consumer sovereignty refers to the notion that satisfaction of consumers’ needs and wants is the ultimate economic goal and that firms will always seek to organize their production solely in response to better meeting consumer desires. For example, consider the increase in the sales of

sport utility vehicles (SUVs) in the United States in recent decades. The theory of consumer sovereignty would suggest that the primary reason for the growth of SUV sales is a change in consumers' preferences for larger vehicles over cars. Consumer sovereignty stands in direct contrast to the idea that some firms can manipulate consumer desires through advertising or that some firms might be largely unresponsive to what consumers actually want.

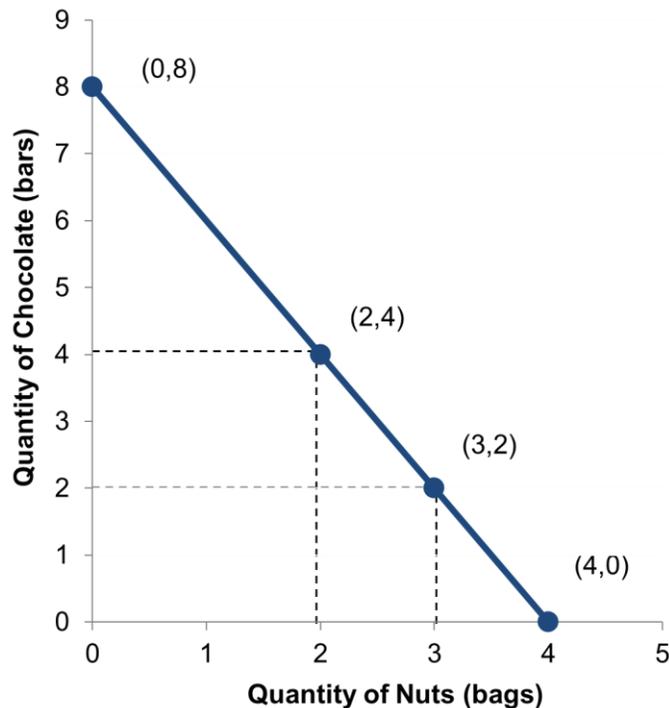
consumer sovereignty: the idea that consumers' needs and wants determine the shape of all economic activities

2.2 THE BUDGET LINE

Consumers are constrained in their spending by the amount of their total budget. We can represent this in a simple model in which consumers have only two goods from which to choose. In Figure 4.1 we present a **budget line**, which shows the combinations of two goods—chocolate bars and bags of nuts—that a consumer can purchase. In this example, our consumer—let's call him Quong—has a budget of \$8. The price of chocolate bars is \$1 each, and nuts sell for \$2 per bag.

budget line: a line showing the possible combinations of two goods that a consumer can purchase

Figure 4.1 The Budget Line



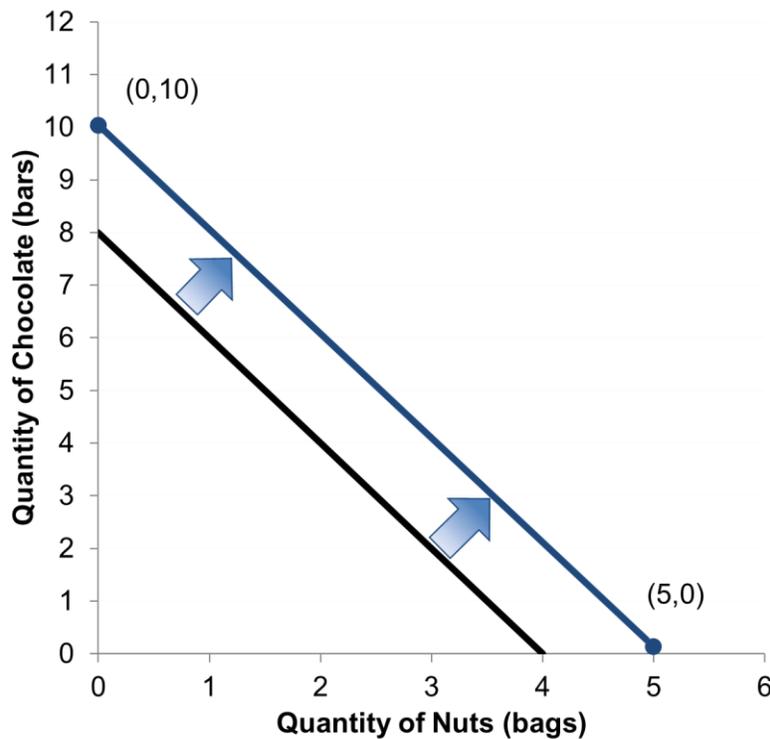
If Quong spends his \$8 only on chocolate, he can buy 8 bars, as indicated by the point where the budget line touches the vertical axis. If he buys only nuts, he can buy 4 bags, as indicated by the (4, 0) point on the horizontal axis. He can also buy any combination in between. For example, the point (2, 4), which indicates 2 bags of nuts and 4 chocolate bars, is also achievable.

This is because $(2 \times \$2) + (4 \times \$1) = \$8$. (Note that to keep things simple we assume that Quong can buy only whole bars and whole bags, not fractions of them—for example, he can't buy 2.5 bars of chocolate. However, we draw the budget line as continuous to reflect the more general case with many more alternatives.)

A budget line is similar to the concept of a production-possibilities frontier, which we discussed in Chapter 1. A budget line defines the choices that are *possible* for Quong. Points above and to the right of the budget line are not affordable. Points below and to the left of the budget line are affordable but do not use up the total budget. This simple model assumes that people always want more of at least one of the goods in question; hence, consuming below the budget line would be inefficient. Therefore, a rational consumer will always choose to consume at a point on the budget line.

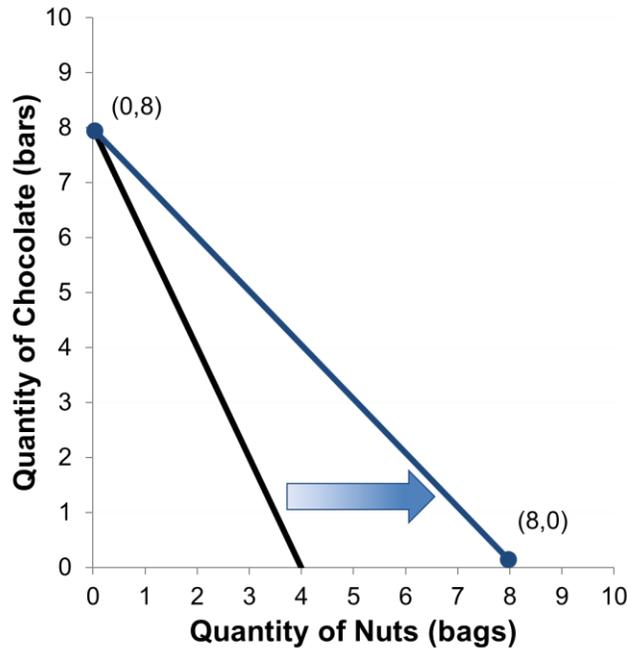
The position of the budget line depends on the size of the total budget (income) and on the prices of the two goods. For example, if Quong has \$10 to spend instead of \$8, the line would shift outward in a parallel manner, as shown in Figure 4.2. He could now consume more nuts, or more chocolate, or a more generous combination of both.

Figure 4.2 Effect of an Increase in Income



A change in the price of one of the goods will cause the budget line to rotate around a point on one of the axes. So if the price of nuts dropped to \$1 per bag (and Quong's income was again \$8), the budget line would rotate out, as shown in Figure 4.3. Now, if Quong bought only nuts, he could buy 8 bags instead of 4. With the price of chocolate unchanged, however, he still could not buy more than 8 chocolate bars.

Figure 4.3 Effect of a Fall in the Price of One Good



Note that if both prices change, the budget line could shift in any direction, depending on how the two prices changed. If both prices changed by the same percentage, then the new budget line would be parallel to the original, similar to a change in income. Draw some graphs to prove this to yourself.

A budget line tells us all the combinations of purchases that are possible. However, it does not tell us which combination the consumer will choose. To get to this, we must add the theory of utility.

2.3 CONSUMER UTILITY

The neoclassical model assumes that individuals have certain preferences (or tastes) for certain goods and services. Consumers seek to satisfy these preferences and thereby derive **utility**, which is defined as the pleasure or satisfaction received from consuming goods, services, or experiences. Consumers cannot satisfy all their preferences because they are constrained by their budget, so they have to think carefully about what goods to purchase in order to maximize the amount of utility from their given budget.

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

Utility is a somewhat vague concept, like well-being, and cannot be measured quantitatively in the real world. However, for the purposes of this model we assume that we can measure utility in some imaginary unit of “satisfaction.” Table 4.1 presents the total utility that Quong obtains from purchasing different quantities of chocolate bars in a given period, say a day.

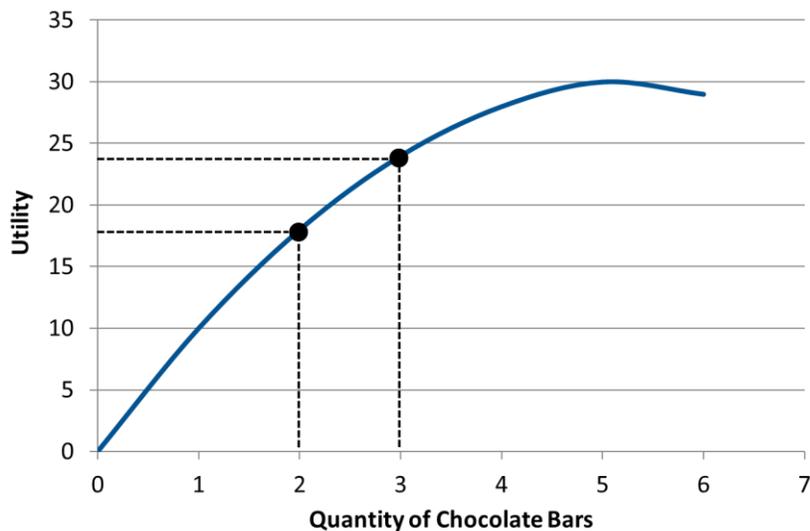
Table 4.1 Quong’s Utility From Consuming Chocolate Bars

Quantity of chocolate bars	Total utility	Marginal utility
0	0	—
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2
6	29	-1

We can then plot Quong’s total utility from consuming chocolate bars in Figure 4.4. This relationship between utility and the quantity outlined in Figure 4.4 is an example of a **utility function**, or a **total utility curve**.

utility function (or total utility curve): a curve showing the relation of utility levels to consumption levels

Figure 4.4 Quong’s Utility Function for Chocolate Bars



Rather than just looking at total utility, economists tend to focus on how utility changes from one level of consumption to another. The change in utility for a one-unit change in consumption is known as **marginal utility**. The word “marginal” puts the focus on incremental change rather than total change.

marginal utility: the change in a consumer’s utility when consumption of something changes by one unit

We can determine Quong’s marginal utility by referring to Table 4.1. We see that Quong obtains 10 units of “satisfaction” from consuming his first chocolate bar. When he eats an

additional chocolate bar, his total utility increases from 10 to 18 units ($10 + 8 = 18$). Here, his total utility is the units of satisfaction obtained from consuming the two bars, while his *marginal* utility from consuming the second chocolate bar is only 8 units. Consuming his third chocolate bar, he obtains a marginal utility of 6 units. Total utility continues to increase, but in smaller installments since the marginal utility is progressively decreasing. If marginal utility becomes negative, total utility decreases.

Figure 4.4 provides a visual picture of how Quong’s utility curve levels off as his consumption of chocolate bars increases. This is generally expected—that successive units of something consumed provide less utility than the previous unit. In other words, consumers’ utility functions generally display **diminishing marginal utility**. Notice that after six bars of chocolate the marginal utility is negative. In other words, the sixth bar of chocolate has left Quong with negative pleasure (i.e., pain). Perhaps that sixth bar of chocolate gave him an upset stomach.

diminishing marginal utility: the tendency for additional units of consumption to add less to utility than did previous units of consumption

We can now apply the concept of utility to the budget line that Quong faces. Realize that Quong will also have a utility function for bags of nuts, which will display a similar pattern of diminishing marginal utility. Let’s assume that his first bag of nuts provides him with 20 units of utility, his second bag with 15 additional units, and his third bag with 10 additional units (more bags result in even fewer units of utility). How can Quong allocate his limited budget to provide him with the highest amount of total utility?

We provide a formal model of utility maximization in an online Appendix to this chapter, but using marginal thinking, we can easily see how Quong can approach his problem in a purely rational manner. Suppose that Quong is thinking about how he will spend his first \$2. With \$2, he can buy either two chocolate bars or one bag of nuts. If he buys two chocolate bars, he will obtain 18 total units of utility, as shown in Table 4.1. If he buys one bag of nuts instead, he will obtain 20 units of utility. Thus, Quong will receive greater utility by spending his first \$2 on a bag of nuts.

What about his next \$2? If he spends this on his second bag of nuts, he obtains an additional 15 units of utility. But if he instead purchases his first two chocolate bars, he will obtain 18 units of utility. So, by spending his next \$2 on chocolate bars, he increases his utility by a greater amount. After spending \$4, Quong has purchased one bag of nuts and two chocolate bars, thus obtaining a total utility of 38 units. Quong can continue to apply marginal thinking to maximize his utility until he has eventually spent his entire budget. (Test yourself: How will Quong spend his third \$2, by buying another bag of nuts or two more bars of chocolate?)¹ The basic decision rule to maximize utility is to allocate each additional dollar on the good or service that provides the greatest marginal utility for that dollar.²

We suspect that you have never thought about how to spend your money in a manner similar to Quong’s marginal analysis of chocolate and nuts. As we will see in the following sections, people may not always act rationally by maximizing their utility, as suggested by the neoclassical model. Additionally, this model does not tell us anything interesting about *why* consumers make particular choices; that is, preferences are taken as given. The contemporary models, which we discuss in the following sections, present a more realistic analysis of consumer behavior by considering how preferences may be influenced by contextual factors.

Discussion Questions

1. Budget lines can be used to analyze various kinds of tradeoffs. Suppose that you have a total “time budget” for recreation of two hours. Think of two activities you might like to do for recreation, and draw a budget line diagram illustrating the recreational opportunities open to you. What if you had a time budget of three hours instead?
2. Explain in words why the total utility curve has the shape that it does in Figure 4.4.

3. MODERN PERSPECTIVES ON CONSUMER BEHAVIOR

Over the past few decades, the neoclassical view of human behavior is being increasingly replaced by an alternative approach that is commonly called **behavioral economics**. Behavioral economics gathers insights from numerous disciplines, including economics, psychology, sociology, anthropology, neuroscience, and biology, to predict how people actually make decisions. Behavioral economics tests theories by conducting experiments and gathering empirical evidence. This work has proven valuable in explaining behavior that may appear to be irrational.

behavioral economics: a subfield of economics that uses insights from various social and biological sciences to explore how people make actual economic decisions

3.1 BEHAVIORAL ECONOMICS AND RATIONALITY

Let us start by examining the neoclassical assumption that people are completely rational, meaning they have *all* the information about the costs and benefits of every single choice available to them and that they can accurately calculate the optimal choice that maximizes their utility. While it may be possible to make a rational choice between a chocolate bar and a bag of nuts, as discussed in the example previously, it becomes much more complicated when we are faced with a wide set of choices. We may not have complete information about each choice. Furthermore, we may not even be able to accurately process and weigh the information that we do possess.

Consider a famous experiment. Researchers at a supermarket in California set up a display table with six different flavors of jam. Shoppers could taste any (or all) of the six flavors and receive a discount coupon to purchase any flavor. About 30 percent of those who tried one or more jams ended up buying some.³ The researchers then repeated this experiment but instead offered 24 flavors of jam for tasting. In this case, *only 3 percent* of those who tasted a jam went on to buy some. In theory, it would seem that more choice would increase the chances of finding a jam that one really liked and would be willing to buy. But, instead, the additional choices decreased one’s motivation to make a decision to buy a jam.

Because we often have trouble processing all the available information, we often employ mental **heuristics**, which are rules of thumb or mental shortcuts that we use to make decisions. While heuristics can often help us make quick and effective decisions, they can often lead to biases based on people’s viewpoints or thinking process. Research by Nobel Laureate Daniel Kahneman has found that people tend to give excessive weight to information that is easily available or vivid, something he called the **availability heuristic**. For example, if you regularly watch crime shows on television, you may over-rate the risk of being a victim of crime yourself.

heuristic: a rule of thumb or mental shortcut that we use to make decisions

availability heuristic: placing undue importance on particular information because it is readily available or vivid

Kahneman has also shown that the way a decision is presented to people can significantly influence their choices, an effect he refers to as **framing**. For example, consider a gas station that advertises a special 5-cent-per-gallon discount for paying cash. Meanwhile, another station with the same price instead indicates that they charge a 5-cent-per-gallon surcharge to customers who pay by credit card. Although the prices end up exactly the same, experiments suggest that consumers respond more favorably to the station that advertises the apparent discount.

framing: changing the way a particular decision is presented to people in order to influence their behavior

Advertisers and politicians have long been known to use framing techniques to influence the behavior of consumers and voters. For example, beverage or automobile companies show their products in beautiful natural settings or with beautiful female models to make the consumer feel as if purchasing these products will bring the feelings of pleasure or well-being they may associate with natural or human beauty. Similarly, politicians are also often adept at framing issues to trigger emotions of greed or fear rather than offering sound information on which voters can make good decisions.

An effect similar to framing is known as **anchoring**, in which people rely on a piece of information that is not necessarily relevant as a reference point in making a decision. In one powerful example, graduate students at the MIT Sloan School of Management were first asked to write down the last two digits of their Social Security numbers. A short time later, they were asked whether they would pay this amount, in dollars, for various products. The subjects with the highest Social Security numbers indicated a willingness to pay about 300 percent more than those with the lowest numbers! The students had unconsciously used their Social Security numbers as an “anchor” in evaluating the worth of the products.⁴ In a real-world example of anchoring, the kitchen equipment company Williams Sonoma was able to increase the sales of its \$279 bread maker after it introduced a “deluxe” model for \$429. The introduction of the deluxe model created an anchoring effect that made the \$279 bread maker seem like a relative bargain.⁵

anchoring effect: overreliance on a piece of information that may or may not be relevant as a reference point when making a decision

In some circumstances, people tend to go with the “default option” when presented with a choice, even if the default option is not necessarily the rational choice. One classic example of the power of defaults looks at whether people are registered to donate their organs at death.⁶ In some European countries, such as Austria, Belgium, and France, people are automatically registered as organ donors, but can opt out if they choose to. In these countries, about 98–99 percent of people stay registered. But in other European countries, such as Denmark, Germany, and the United Kingdom, people must sign up to be organ donors. In other words, the default option is that they are not registered. In these countries, less than 20 percent of people register to be organ donors. Such cases, where people prefer things to stay the same by doing nothing or favor the option that is familiar or expected, is referred to as **status quo bias**.

status quo bias: a cognitive bias in favor of that which is familiar, expected, or automatic

3.2 THE ROLE OF TIME, EMOTIONS, AND OTHER INFLUENTIAL FACTORS

Much evidence suggests that people seem to place undue emphasis on gains or benefits received today without considering the implications of their decisions for the future. A good example of this is the large number of people who have acquired significant high-interest credit card debt due to excessive spending. According to one study, about 6 percent of Americans are considered “compulsive shoppers,” who seek instant gratification with little concern for the troublesome consequences of running up a great deal of debt.

Economists say that someone who does not pay much attention to the future consequences of his or her actions has a high **time discount rate**. This means that in his or her mind, future events are heavily discounted when weighed against the pleasures of today. On the other hand, people who have a low time discount rate would place more relevance on future consequences. For example, people who invest in a college education have a relatively low time discount rate, because they are willing to forgo current income or relaxation, and pay substantial tuition, to study for some expected future gain. Various studies have shown how people who have high discount rates are more likely to make seemingly irrational, or unhealthy choices inconsistent with their long-term goals. A 2016 study reported that those with high time discount rates are consistently found to be more likely to smoke, abuse alcohol, take illicit drugs, and engage in risky sexual behaviors.⁷

time discount rate: an economic concept describing the relative weighting of present benefits or costs compared to future benefits or costs

The choices we make are also influenced by our emotions. The conventional view is that emotions get in the way of good decision-making, as they tend to interfere with logical reasoning. But again, research from behavioral economics suggests a more nuanced reality. It does not seem to be true that decisions based on logical reasoning are always “better” than those based on emotion or intuition. Instead, studies suggest that reasoning is most effective when used for making relatively simple economic decisions, but for more complex decisions, we can become overwhelmed by too much information. In such cases, emotions or intuition can sometimes help us make better decisions.⁸

For example, an experiment with college students involved their tasting five brands of strawberry jam.⁹ In one case, students simply ranked the jams from best to worst. The student rankings were highly correlated with the results of independent testing by *Consumer Reports*, suggesting that the students’ rankings were reasonable. But in another case, students were asked to fill out a written questionnaire explaining their preferences. As a result of the additional deliberation, students’ rankings were no longer significantly correlated with the *Consumer Report* rankings. The researcher concluded that overthinking might cut individuals off from the wisdom of their emotions, which are sometimes much better at assessing actual preferences.¹⁰

Altruism, meaning a concern of the well-being of others without thought about oneself, can also motivate our behavior. Although it would be idealistic to assume that altruism is the prime mover in human behavior, it is reasonable to assert that some elements of altruism enter into most people’s decision-making—contrary to the neoclassical assumption of rational, self-interested individuals. Especially relevant to economics is the fact that much economic behavior may be motivated by a desire to advance the **common good**—the general good of society, of which one’s

own interests are only a part. People are often willing to participate in the creation of social benefits, even if this involves some personal sacrifice, as long as they feel that others are also contributing.

altruism: actions focused on the well-being of others, without thought about oneself

common good: the general well-being of society, including one’s own well-being

A well-functioning economy cannot rely only on self-interest. Without such values as honesty, for example, even the simplest transaction would require costly and elaborate safeguards or policing. Imagine if you were afraid to put down your money before having in your hands the merchandise that you wished to purchase—and the merchant was afraid that as soon as you had what you wanted, you would run out of the store without paying. Such a situation would require police in every store—but what if the police themselves were unethical? Without ethical values that promote trust, inefficiencies would overwhelm any economic system. Fortunately, behavioral economics experiments demonstrate that people really *do* pay attention to social norms, even when this has a cost in terms of their narrow self-interest, as discussed in Box 4.1.

BOX 4.1 THE ULTIMATUM GAME

The “Ultimatum Game” is a behavioral economics experiment in which two people are told that they will be given a sum of money, say \$20, to share. The first person gets to propose a way of splitting the sum. This person may offer to give \$10 to the second person, or only \$8, or \$1, and keep the rest. The second person cannot offer any input to this decision but has the power to decide whether to accept the offer or reject it. If the second person rejects the offer, both people will walk away empty-handed. If the offer is accepted, they get the money and split it as the first person indicated.

If the two individuals act only from narrow financial self-interest, then the first person should offer the second person the smallest possible amount—say \$1—in order to keep the most for himself or herself. The second person should accept this offer because, from the point of view of pure financial self-interest, \$1 is better than nothing.

Contrary to such predictions, researchers find that deals that vary too far from a 50–50 split tend to be rejected. Specifically, offers of around 40 percent or more are almost always accepted, while offers of 20 percent or less are almost always rejected.¹¹ People would rather walk away with nothing than be treated in a way that they perceive as unfair. Also, whether out of a sense of fairness or a fear of rejection, individuals who propose a split often offer something close to 50–50. Such behavior suggests we have cooperative inclinations along with our more self-interested inclinations.

Other recent evidence suggests that pursuing pure self-interest does not lead to happiness. A 2017 journal article by economist Tom Lane reviewed dozens of studies that looked at the relationship between happiness levels and economic behavior and concluded that: “happiness tends to result from pro-social behavior,” including trust and generosity.¹² Meanwhile, there “is clear evidence of a negative relationship between happiness and selfishness.” These results

indicate that if one wants to be happy in life, being trustful and generous might be more “rational” than being selfish.

Finally, our brains, physiology, and genetics also play a role in influencing our decision-making. Referred to as **neuroeconomics**, this relatively new interdisciplinary field is based on approaches, such as using brain imaging, or a functional magnetic resonance imaging (fMRI) machine, to study the brain and predict human behavior. For example, one research study that used an fMRI machine to study the brain confirms the findings discussed previously—that when people engage in cooperative behavior, regions of the brain associated with positive emotions are activated.¹³ On the other hand, when observing others being treated unfairly, our brains react as if we ourselves had been treated unfairly.¹⁴

neuroeconomics: the interdisciplinary field that studies the role our brains, physiology, and genetics play in how we make economic decisions

Now that we have considered several factors influencing economic behavior, we can present a model based on behavioral economics using concepts that have been suggested as alternatives to self-interested and rational behavior.

3.3 CONSUMER BEHAVIOR IN CONTEXTUAL ECONOMICS

Recent research has generally refuted the neoclassical view of self-interested people making economic decisions that maximize their utility (or profits, in the case of businesses). We now use the lessons from the previous discussion to develop a more modern and accurate model of consumer behavior.

One important factor in an economic model of behavior is *information*. Consider the decision to purchase a new automobile. Numerous factors go into such a decision, such as the cost of the car, the importance of fuel economy, safety features, the resale value, and maintenance costs. Making a rational decision requires that you first obtain all this information. The neoclassical approach tends to assume that rational economic actors have “complete information” concerning each choice in front of them. A variation on this assumption is that people will optimize by collecting information until the perceived costs of acquiring additional information exceed the perceived benefits. However, there is a logical problem with this assumption, as Nobel Laureate Herbert Simon points out: one cannot know if that extra information was worth the cost of gathering it until it has been gathered! Maybe some additional searching will yield valuable information, or maybe it won't.

Simon showed that one first needs to have complete knowledge of all choices in order to identify the optimal point at which one should cease gathering additional information. Accordingly, Simon maintained, people rarely optimize. Instead they do what he called **satisficing**; they choose an outcome that would be satisfactory (rather than optimal) and then seek an option that reaches that standard. In other words, they identify an option that is “good enough” rather than continuing to search for the ideal.

satisfice: to choose an outcome that would be satisfactory and then seek an option that at least reaches that standard

Economic decisions are always made subject to constraints, including limits on income and other resources and on physical or intellectual capacities. A universal constraint, for example, is

time—you only have 24 hours in a day to allocate among competing activities such as sleeping, studying, eating, or entertainment. Given such constraints, satisficing seems to be a reasonable behavior. If an individual finds that the “satisfactory” level was set too low, a search for options that meet that level will result in a “solution” rather quickly. In this case, the level may then be adjusted to a higher standard. Conversely, if the level is set too high, a long search will not yield an acceptable outcome, and the “satisficer” may lower his or her expectations for the outcome.

Another deviation from maximizing behavior as traditionally defined has been called **meliorating**—defined as starting from the present level of well-being and finding opportunities to do better. A simple example is a line fisherwoman who has found a whole school of haddock but wants to keep only one for her supper. She first catches a fish. She doesn’t stop there but goes on to catch a second fish, which she compares to the first one—keeping the larger and releasing the other. Each subsequent catch is compared to the one she has retained as the largest so far. At the end of the day, the fish that she takes home will be the largest of all those caught.

meliorating: starting from the present level of well-being and continuously attempting to do better

One result of using melioration as the real-world substitute for optimization is its implication that *history matters*: people view each successive choice in relation to their previous experience. It is commonly observed that people are reluctant to accept a situation that they perceive as inferior to previous situations. For example, workers are likely to resist pay cuts or switch to jobs with lower wages.

Satisficing and meliorating may both be included under the term **bounded rationality**. The general idea is that, instead of considering all possible options, people limit their attention to some more-or-less arbitrarily defined subset of the universe of possibilities. With satisficing or meliorating behavior, people may not choose the “best” choices available to them, but they at least make decisions that move them toward their goals.

bounded rationality: the hypothesis that people make choices among a somewhat arbitrary subset of all possible options due to limits on information, time, or cognitive abilities

Let us now summarize the current thinking about consumer behavior, in five core principles, based on two recent journal articles and contrast it to the neoclassical model presented in Section 2.¹⁵

1. People may try to engage in maximizing behavior, but they often aren’t successful due to insufficient or inaccurate information, poor judgment, limited resources, and other issues. We might think of economic decisions as being a somewhat “muddled” process rather than the maximizing process envisioned by the neoclassical model.
2. People make economic decisions using various reference points to help them. We saw previously how framing and anchoring can influence economic decisions.
3. Most people have a “present bias” when making decisions with long-term impacts. Running up large credit card debts and under-investing in education are examples of “present-bias.”

4. While people often engage in self-interested behavior, they also care about the welfare of others, even people they do not know. People may care about others in order to increase their own well-being or out of true altruism and concern for the common good. Any model that assumes only self-interested behavior is inadequate.
5. The fact that people's preferences are often not fixed or even fully known to them means that their decisions can be influenced through framing, anchoring, or present bias. We have discussed how these techniques may be used by advertisers or politicians to influence people's behavior. But such approaches may also be used to design policies that might encourage people to make healthier and wiser choices, as we will discuss in the final section of this chapter.

The model just described is supported by many scientific studies, and it is also consistent with experience and common sense. We are all human beings, often far from perfect, normally with good intentions but subject to many influential factors.

Discussion Questions

1. Can you think of any economic situations where people seem to make irrational decisions? For the most part, do you think people are rational or irrational?
2. Discuss how one or more conclusions reached by behavioral economists help you to understand an experience that you have had making an economic decision.

4. CONSUMPTION IN SOCIAL CONTEXT

In modern societies, consumption is as much a social activity as an economic activity. Consumption is closely tied to personal identity, and it has become a means of communicating social messages. We are immersed in the culture of **consumerism**, where people's sense of identity and meaning are often defined through their purchase of consumer goods and services. An increasing range of social interactions are influenced by consumerist values.

consumerism: having one's sense of identity and meaning significantly defined through the purchase and use of consumer goods and services

The rise of consumerism is also deeply connected to capitalism, where the profit-driven nature of market competition imposes strong pressure on firms to increase their production and sales. As we will see, firms often devote an enormous amount of resources to advertising and other marketing strategies to encourage consumption.

Consumption behavior has evolved over time, with influences from various cultural, religious, political, and social forces, as well as from the availability of environmental resources. Consumerism is often traced back to the Industrial Revolution, when technological advances in mass production made it possible to increase consumption levels. The rise of consumerism is also related to other historical developments such as the invention of department stores, the expansion of consumer credit (with the invention of credit cards), and changes in work ethics as workers came to see themselves as consumers and became more inclined to work full-time or even overtime (instead of advocating for a shorter work week) in order to increase their consumption.

Despite these developments, consumerism has not become a global phenomenon even in the twenty-first century. Many people around the world are still simply too poor to be considered modern consumers. Over 700 million people, about 10 percent of humanity lives in “extreme” poverty, defined by the World Bank as living on less than \$1.90 per day.¹⁶ Poverty is about more than just low income. The United Nations defines **absolute deprivation** as “a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information.”¹⁷ The poorest of developing countries, particularly in sub-Saharan Africa and Southern Asia, often lack the resources needed to lift their populations out of absolute deprivation.

absolute deprivation: severe deprivation of basic human needs

Additionally, in numerous places around the world, cultural and religious values exist that seek to restrain the consumer society. For example, Buddhism teaches a “middle path” that emphasizes material simplicity, nonviolence, and inner peace. Even in the United States, some Americans are motivated to lower their consumption levels with the goal of reducing environmental impacts and focusing more on social connections. In this section, we discuss some social aspects that influence consumer behavior.

4.1 SOCIAL COMPARISONS

As social beings, we compare ourselves to other people. In a consumer society, such comparison is commonly in terms of income and consumption levels. We are often motivated to maintain a material lifestyle that is comparable to a **reference group**, which includes people around us who influence our behavior because we compare ourselves to them. Most people have various reference groups, traditionally including our neighbors, our coworkers, and other members of our family. We are also influenced as consumers by **aspirational groups**, groups to which a consumer *wishes* he or she could belong. People often buy, dress, and behave like the group—corporate executives, rock stars, athletes, or whoever—with whom they would like to identify.

reference group: the group to which an individual compares himself or herself

aspirational group: the group to which an individual aspires to belong

This tendency to compare ourselves with a reference group has evolved over time. Economist Juliet Schor suggests that in the 1950s and 1960s, people usually compared themselves to individuals with similar incomes and backgrounds, but in recent decades, people have become “more likely to compare themselves with, or aspire to the lifestyle of, those far above them in the economic hierarchy.”¹⁸ One reason for this might be the transformation in media representation, which has over time become increasingly depicted by upper-class lifestyles. Schor’s research indicates that the more television one watches, the more he or she is likely to spend, holding other variables, such as income, constant.

Schor concludes that identifying with unrealistic aspirational groups leads many people to consume well above their means, acquiring large debts and suffering frustration, as they attempt to join those groups through their consumption patterns but fail to achieve the income to sustain them. Because people tend to evaluate themselves relative to reference and aspirational groups, increasing inequality may result in people feeling as if they are falling behind even when their incomes are actually increasing. Schor goes on to note that:

The problem is not just that more consumption doesn't yield more satisfaction, but that it always has a cost. The extra hours we have to work to earn the money cut into personal and family time. Whatever we consume has an ecological impact. . . . We find ourselves skimping on invisibles such as insurance, college funds, and retirement savings as the visible commodities somehow become indispensable. . . . We are impoverishing ourselves in pursuit of a consumption goal that is inherently unattainable.¹⁹

Modern technology means that nearly everyone has some exposure to the “lifestyles of the rich and famous” engaging in conspicuous consumption. The result is the creation of widespread feelings of **relative deprivation**, that is, the sense that one's own condition is inadequate because it is inferior to someone else's circumstances. Such feelings can diminish individual well-being and one's sense of self-respect and self-confidence. Relative deprivation is a condition that exists in all countries to some extent, but it is more extreme in countries where the gap between rich and poor is greatest.

relative deprivation: the feeling of insufficiency that comes from comparing oneself with someone who has more

4.2 ADVERTISING

Advertising is central to the rise of consumerism. As Christopher Lasch writes,

The importance of advertising is not that it invariably succeeds in its immediate purpose, . . . but simply that it surrounds people with images of the good life in which happiness depends on consumption. The ubiquity of such images leaves little space for competing conceptions of the good life.²⁰

Though advertising is often justified by economists as a source of information about the goods and services available in the market, a vast amount of advertising sells consumer culture and influences consumers' values and their spending behavior. Recent research shows that advertising is associated with problems such as obesity, attention deficit disorder, heart disease, and other negative consequences. Furthermore, advertising commonly portrays unrealistic body images, traditionally for women but more recently for men as well. (See Box 4.2.)

Global advertising expenditures were about \$520 billion in 2016, equivalent to the national economy of Argentina or Sweden. About one-third of global advertising spending takes place in the United States. According to one estimate, Americans are exposed to around 5,000 commercial messages per day, up from around 2,000 per day in 1980s.²¹ China recently became the world's second-largest advertising market.

BOX 4.2 WOMEN AND ADVERTISING

A 2007 report by the American Psychological Association concluded that advertising and other media images encourage girls to focus on physical appearance and sexuality, with harmful results for their emotional and physical well-being.²² The research project reviewed data from numerous media sources and found that 85 percent of the sexualized images of children were of girls. The lead author of the report, Dr. Eileen L. Zurbriggen, points out that

the sexualization of girls in media is likely to have negative effects on girls in a variety of domains, including cognitive functioning, physical and mental health, and healthy sexual development. She concludes, “As a society, we need to replace all of these sexualized images with ones showing girls in positive settings—ones that show the uniqueness and competence of girls.”

Three of the most common mental health problems associated with exposure to sexualized images and unrealistic body ideals are eating disorders, low self-esteem, and depression. It is estimated that 8 million Americans suffer from an eating disorder—7 million of them women.²³ According to a 2012 article, most female models would be considered anorexic according to their body mass index. Twenty years ago, the average model weighed 8 percent less than the average woman; now it is 23 percent less.²⁴

Jean Kilbourne, an author and filmmaker, has been lobbying for advertising reforms since the 1960s. She has produced four documentaries on the negative effects of advertising on women, most recently in 2010, under the title *Killing Us Softly*. Kilbourne notes that virtually all photos of models in advertisements have been touched up, eliminating wrinkles, blemishes, extra weight, and even skin pores. She believes that we need to change the environment of advertising through public policy.²⁵

4.3 PRIVATE VERSUS PUBLIC CONSUMPTION

The growth of consumerism has altered the balance between private and public consumption. Public infrastructure has been shaped by the drive to sell and consume new products, and the availability of public and private options, in turn, shapes individual consumer choices.

In the early 1930s, for example, many major U.S. cities—including Los Angeles—had extensive and nonpolluting electric streetcar systems. However, due to a range of factors, including unsupportive policies, poor city planning, and the actions of companies such as General Motors in buying up streetcar systems and then converting many of them to buslines, the presence of streetcars declined in many U.S. cities.²⁶ The ongoing viability of streetcar systems elsewhere in the United States, and across the world, suggests that many of the streetcar systems could have continued had the playing field been more level. U.S. government support for highway construction in the 1950s further hastened the decline of rail transportation, made possible the spread of suburbs far removed from workplaces, and encouraged the purchase of automobiles.

These examples illustrate that many of the choices that you have, as an individual, depend on decisions made for you by businesses and governments. Living in Los Angeles today would be significantly different if it had better maintained and supported its streetcar system rather than cars and buses. As more people carry cell phones and bottled water, pay telephones and drinking fountains either cease to exist or become less well maintained, leading more people to carry cell phones and bottled water. The tradeoffs between public infrastructure and private consumption are significant. As economist Robert Frank notes, “at a time when our spending on luxury goods is growing four times as fast as overall spending, our highways, bridges, water supply systems, and other parts of our public infrastructure are deteriorating, placing lives in danger.”²⁷

4.4 AFFLUENZA AND VOLUNTARY SIMPLICITY

One of the main lessons of economics is that we should always weigh the marginal benefits of something against its marginal costs. In the case of consumerism, these costs include less time for

leisure, friends, and family; greater environmental impacts; and negative psychological and physical effects. In short, there can be such a thing as too much consumption—when the marginal benefits of additional consumption are exceeded by the associated marginal costs.

Two public television specials, as well as a book,²⁸ refer to the problem of “affluenza”—a “disease” with symptoms of “overload, debt, anxiety and waste resulting from the dogged pursuit of more.” Some people see the solution to affluenza as rejecting consumerism as a primary goal in life. The term **voluntary simplicity** refers to a conscious decision to live with a limited or reduced level of consumption in order to increase one’s quality of life.

voluntary simplicity: a conscious decision to live with a limited or reduced level of consumption in order to increase one’s quality of life

The motivations for voluntary simplicity vary, including environmental concerns, a desire to have more free time to travel or raise a family, and to focus on non-consumer goals. Voluntary simplicity does not necessarily mean rejecting progress or living a life of poverty. Some people ascribing to voluntary simplicity have left high-paying jobs after many years, while others are young people content to live on less.

Perhaps the unifying theme for those practicing voluntary simplicity is that they seek to determine what is “enough”—a point beyond which further accumulation of consumer goods is either not worth the personal, ecological, and social costs or simply not desirable. Unlike traditional economics, which has assumed that people always want more goods and services, voluntary simplicity sees these as only intermediate goals toward more meaningful final goals. (See Box 4.3.)

BOX 4.3 VOLUNTARY SIMPLICITY

Greg Foyster had a good job in advertising in Australia. But in 2012, he and his partner Sophie Chishkovsky decided to give up their consumer lifestyles and bicycle along the coast of Australia, interviewing people who have decided to embrace voluntary simplicity and eventually write a book about their experience.

Voluntary simplicity is a growing movement in Australia, with several popular websites and a regular column on the topic in the *Australian Women’s Weekly*. Foyster explains:

The overall idea is that you should step out of the consumer economy that we’re all plugged into and start doing things for yourself because that is how you’ll find happiness. The best way to think of it is as an exchange. In our society people trade their time for money, and then they spend that money on consumer items. . . . It’s really about stepping back and deciding what’s important to you in your life.

Foyster found that his career in advertising conflicted with his personal sense of ethics. His “eureka” moment came during an advertising awards event when he saw colleagues being praised for their efforts to sell people products they didn’t need or even want. He realized that most of the world’s environmental problems stem from overconsumption, not overpopulation. He says:

When I worked in advertising, I had a decent income, I had a prestigious job, and I was miserable. I chose to leave the industry because it wasn't making me happy; it wasn't my purpose in life. And now I have a much lower income; I work as a freelance writer, which isn't the most prestigious job. But I am so much more happy because I know what is important to me and I'm doing what I love and I have everything I need.²⁹

Discussion Questions

1. What are your reference groups? Describe why you consider these your reference groups. What are your aspirational groups? Why do you aspire to be a member of these groups?
2. Think about at least one fashion item you own, such as an item of clothing, jewelry, or accessory, that you think says a lot about who you are. What do you think it says about you? Do you think others interpret the item in the same way that you do? How much do you think that you were influenced by advertising or other media in your views about the item?

5. CONSUMPTION IN AN ENVIRONMENTAL CONTEXT

The production process that creates every consumer product requires natural resources and generates some waste and pollution. However, we are normally only vaguely aware of the ecological impact of the processes that supply us with consumer goods. Most of us are unaware that, for example, it requires about 600 gallons of water to make a quarter-pound hamburger or that making a computer chip generates 4,500 times its weight in waste.³⁰ (See Box 4.4.)

BOX 4.4 THE ENVIRONMENTAL STORY OF A T-SHIRT

T-shirts are perhaps the most ubiquitous article of clothing. What are the environmental impacts of one T-shirt?³¹

Consider a cotton/polyester blend T-shirt, weighing about 4 ounces. Polyester is made from petroleum—a few tablespoons are required to make a T-shirt. During the extraction and refining of the petroleum, one-fourth of the polyester's weight is released in air pollution, including nitrogen oxides, particulates, carbon monoxide, and heavy metals. About ten times the polyester's weight is released in carbon dioxide, contributing to global climate change. Cotton grown with nonorganic methods relies heavily on chemical inputs. Cotton accounts for 10 percent of the world's use of pesticides. A typical cotton crop requires six applications of pesticides, commonly organophosphates that can damage the central nervous system. Cotton is also one of the most intensely irrigated crops in the world, contributing to water shortages for other uses.

T-shirt fabric is bleached and dyed with chemicals including chlorine, chromium, and formaldehyde. Cotton resists coloring, so about one-third of the dye may be carried off in the waste stream. Most T-shirts are manufactured in Asia and then shipped by boat to their destination, with further transportation by train and truck. Each transportation step involves the release of additional air pollution and carbon dioxide.

Despite the impacts of T-shirt production and distribution, most of the environmental impact associated with T-shirts occurs after purchase. Washing and drying a T-shirt just ten times requires about as much energy as was needed to manufacture the shirt. Laundering will also generate more solid waste than the production of the shirt, mainly from sewage sludge and detergent packaging.

How can one reduce the environmental impacts of T-shirts? One obvious step is to avoid buying too many shirts in the first place. Buy shirts made of organic cotton or recycled polyester, or consider buying used clothing. Wash clothes only when they need washing, not necessarily every time you wear something. Make sure that you wash only full loads of laundry, and wash using cold water whenever possible. Finally, avoid using a clothes dryer—clothes dry naturally for free by hanging on a clothesline or a drying rack.

5.1 THE LINK BETWEEN CONSUMPTION AND THE ENVIRONMENT

One measure used to quantify the ecological impacts of consumerism is the amount of “trash” generated by an economy. In 2014, the U.S. economy generated over 250 million tons of municipal solid waste, which consisted mostly of paper, food waste, and yard waste.³² But most of the waste generation in a consumer society occurs during the extraction, processing, or manufacturing stages—these impacts are normally hidden from consumers. According to a 2012 analysis, the U.S. economy requires about 8 billion tons of material inputs annually, which is equivalent to more than *25 tons per person*.³³ The vast majority of this material is discarded as mining waste, crop residue, logging waste, chemical runoff, and other waste prior to the consumption stage.

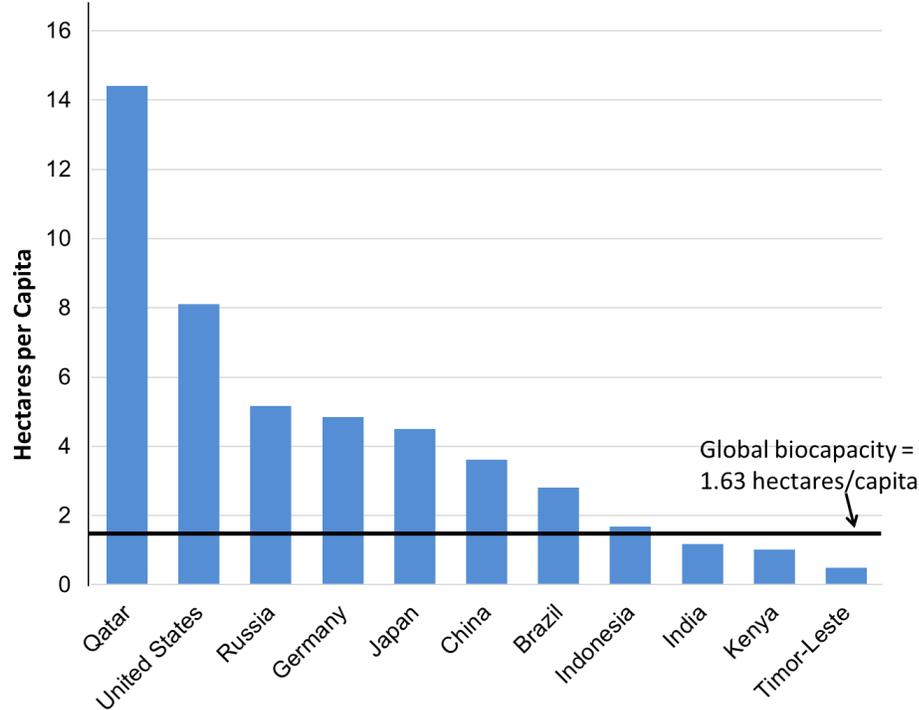
Perhaps the most comprehensive attempt to quantify the overall ecological impact of consumption is the **ecological footprint** measure. This approach estimates how much land area a human society requires, both to provide all that it takes from nature and to absorb the society’s waste and pollution. Although the details of ecological footprint calculations are subject to debate, it does provide a useful way to compare the overall ecological impact of consumption in different countries.

ecological footprint: a measure of the human impact on the environment, measured as the land area required to supply a society’s resources and assimilate its waste and pollution

We see in Figure 4.5 below that the ecological footprint per capita varies significantly across countries. The United States has one of the highest per-capita ecological footprints (the per-capita footprints of only six countries are higher, the highest being Qatar).³⁴ The average European has a footprint about 40 percent lower than the average American, while the average Chinese has a footprint that is only one-quarter of that of a U.S. citizen.

Perhaps the most significant implication of the ecological footprint research is that the world is now in a situation of “overshoot”—our global use of resources and generation of waste exceeds the global capacity to supply resources and assimilate waste, by about 60 percent. As seen in Figure 4.5, the total amount of productive area available on earth (the average “biocapacity”) is only 1.63 hectares per person. In other words, for humans to live in an ecologically sustainable manner, the average person’s ecological impacts could only be about that of the average Indonesian. However, an increasing number of people in the world seek to consume at a level equivalent to a typical American. We would require five earths to provide the resources needed and assimilate the waste to meet such a demand.

Figure 4.5 Ecological Footprint per Capita, Select Countries, 2016



Source: Global Footprint Network, 2019.

5.2 GREEN CONSUMERISM

Green consumerism means making consumption decisions at least partly on the basis of environmental criteria. Clearly, green consumerism is increasing: more people are recycling, using reusable shopping bags and water containers, buying hybrid or electric cars, and so on. Yet some people see green consumerism as an oxymoron—that the culture of consumerism is simply incompatible with environmental sustainability.

green consumerism: making consumption decisions at least partly on the basis of environmental criteria

Green consumerism comes in two basic types:

1. “Shallow” green consumerism: consumers seek to purchase “ecofriendly” alternatives but do not necessarily change their overall level of consumption
2. “Deep” green consumerism: consumers seek to purchase ecofriendly alternatives but also, more importantly, seek to reduce their overall level of consumption

Someone who adheres to shallow green consumerism might buy a hybrid or electric car instead of a car with a gasoline engine or a shirt made with organic cotton instead of cotton grown with the use of chemical pesticides. But those practicing deep green consumerism would, when feasible, take public transportation instead of buying a car and question whether they really need

another shirt. In other words, in shallow green consumerism, the emphasis is on substitution, while in deep green consumerism, the emphasis is on a reduction in consumption.

Ecolabeling helps consumers make environmentally conscious decisions. An ecolabel can provide summary information about environmental impacts. For example, stickers on new cars in the United States rate the vehicle’s smog emissions on a scale from one to ten. Ecolabels are placed on products that meet certain certification standards. One example is the U.S. Environmental Protection Agency’s Energy Star program, which certifies products that are highly energy efficient.

ecolabeling: product labels that provide information about environmental impacts or indicate certification

In addition to environmental awareness by consumers, many businesses are seeking to reduce the environmental impacts of their production processes. Of course, some of the motivation may be to increase profits or improve public relations, but companies are also becoming more transparent about their environmental impacts. The Global Reporting Initiative (GRI) is a nonprofit organization that promotes a standardized approach to environmental impact reporting. In 2017, 82 percent of the world’s 250 largest corporations used the GRI methodology, including Coca-Cola, Wal-Mart, Apple, and Verizon.

Discussion Questions

1. Think about one product you have purchased recently and list the environmental impacts of this product, considering the production, consumption, and eventual disposal of it. What steps do you think could be taken to reduce the environmental impacts associated with this product?
2. Do you think that green consumerism is an oxymoron? Do you think that your own consumer behaviors are environmentally sustainable? Why or why not?

6. POLICY INFERENCES FROM OUR MODEL OF CONSUMER BEHAVIOR

If one assumes that individuals always have perfect information and that they use that information to make the best choice, then one tends to see little role for government. For example, why would we require consumer protection law if consumers know the full consequences of buying something and always choose well? The model of economic behavior presented in this chapter, however, indicates that economic actors often do not behave rationally or have complete information and stable preferences. Their behavior is often significantly influenced by various contextual factors. Adopting a contextual model of behavior justifies the need for a more active role of government policy in affecting market outcomes.

6.1 PREDICTABLE IRRATIONALITY AND NUDGES

It is important to realize that while economic behavior is often irrational, it is not random. Deviations from “optimal” behavior are typically in a specific direction. For example, most people irrationally under-save for retirement rather than over-save. People tend to place too little value on

the future and tend to eat foods that aren't healthy enough. A leading behavioral economist Dan Ariely notes that rationality is the exception rather than rule:

We are all far less rational in our decision making than standard economic theory assumes. Our irrational behaviors are neither random nor senseless—they are systematic and predictable. We all make the same types of mistakes over and over, because of the basic wiring of our brains.³⁵

So if people continually make mistakes in the same direction, how can policies be devised to help them make “better” decisions? One answer comes from the 2008 book *Nudge*, by Richard Thaler and Cass Sunstein.³⁶ They advocate for policy “nudges” that encourage, but don't force, people to make certain decisions—an approach they refer to as **libertarian paternalism**. While they recognize that these two terms may seem unappealing and contradictory, they argue that the libertarian aspect of their strategies lies in the insistence that policies should be designed to maintain or increase freedom of choice. The paternalism aspect lies in the claim that it is desirable to design policies and present choices to motivate people to make better choices.

libertarian paternalism: the policy approach advocated in the 2008 book *Nudge*, where people remain free to make their own choices but are nudged toward specific choices by the way policies are designed and choices are presented

Thaler and Sunstein provide numerous examples in their book related to decisions about health, financial management, education, and the environment. Take the problem of insufficient saving for retirement. They note that many people intend to increase the amount they save for retirement but never get around to it. Recognizing this, the book describes the “Save More Tomorrow” idea, where workers enroll in a program that automatically increases the percent of their income that is set aside for their retirement each time they get a raise. As increased saving is timed to correspond with pay raises, workers don't see their take-home pay go down. Workers enrolled in the program can opt out of it any time, but most don't. Evidence shows that the program is very effective. In one case, implementation of this program increased workers' retirement savings from an average of 3.5 percent of their income to 13.6 percent in four years.

Take another example—how to get people to reduce their home energy use. An experiment in California gave some residents a small electronic ball that would glow red when energy usage exceeded a given level but glowed green with moderate usage. The results showed that the ball led to energy use reductions of 40 percent during peak-use periods, while text and e-mail notifications were ineffective. The key seems to be that the ball makes one's energy use more visible and provides an “anchor” for decision-making about energy use.

Governments around the world are increasingly devising policies based on the findings of behavioral economics, nudging people to make better decisions. For example, in 2007, New Zealand implemented the KiwiSaver program, which automatically enrolls workers in a national savings plan for retirement, with a default contribution of 3 percent. Workers have the freedom to opt out or choose a higher contribution rate. In 2010, the government of the United Kingdom set up the Behavioral Insights Team, commonly known as the “Nudge Unit,” with the objectives of “improving outcomes by introducing a more realistic model of human behaviour to policy” and “enabling people to make ‘better choices for themselves’.”³⁷

One of the issues studied by the Nudge Unit has been ways to reduce rates of tax evasion.³⁸ To encourage people to pay their taxes on time, they experimented with various versions of a reminder letter sent to people who hadn't yet paid their taxes. Making the letter as simple as possible did not significantly affect response rates. However, response rates nearly doubled when people were reminded of social norms such as "9 out of 10 people pay their taxes on time." This illustrates that people's behavior can be influenced when they are nudged to think of themselves in comparison to others.

As another example, government officials in Bogotá, Colombia, initially responded to a water shortage by sending residents information about the crisis and asking them to reduce their usage. Not only was the appeal ineffective, water consumption actually *increased* as many people began stockpiling water. The government then changed its strategy, trying to make water conservation a new social norm. They distributed free stickers with water conservation messages, to be placed on faucets at offices and schools. Households with exceptional water savings were presented with small awards and praised in the local media. This latter strategy proved to be much more effective.

6.2 CONSUMPTION AND PUBLIC POLICY

While government regulations could help address the problem of overconsumption to an extent, some people may argue that government intrusion into personal consumption decisions is unwarranted. But current government regulations already influence consumer decisions—for instance, high taxes on products such as tobacco and alcohol discourage their consumption to some extent. On the other hand, subsidies are often used to increase the demand for certain products. Buyers of new electric vehicles in the United States may be eligible to receive a \$7,500 federal tax credit, a subsidy that reduces the environmental externalities of transportation and encourages a shift away from fossil fuels. Taxes and subsidies can be justified for several reasons, including as a response to externalities or to achieve some social goal. Thoughtful regulations can encourage people to make choices that better align with social and personal well-being. We now consider a range of different policy ideas for responding to concerns about overconsumption.

Flexible Work Hours

One specific policy to reduce the pressure toward consumerism is to allow for more flexibility in working hours. Current employment norms, particularly in the United States, create a strong incentive for full-time employment. Employees typically have the option of seeking either a full-time job, with decent pay and fringe benefits, or a part-time job with lower hourly pay and perhaps no benefits at all. Thus, even those who would prefer to work less than full-time and make a somewhat lower salary, say, in order to spend more time with their family, in school, or in other activities, may feel the imperative to seek full-time employment. With a full-time job, working longer hours with higher stress, one may be more likely to engage in "retail therapy" as compensation.

Europe is leading the way in instituting policies that allow flexible working arrangements. Legislation in Germany and the Netherlands gives workers the right to reduce their work hours, with a comparable reduction in pay. Sweden and Norway give parents the right to work part-time when their children are young. Such policies encourage "time affluence" instead of material affluence. Juliet Schor argues that policies to allow for shorter work hours are also one of the most effective ways to address environmental problems such as climate change.³⁹ Those who voluntarily

decide to work shorter hours will be likely to consume less and thus have a smaller ecological footprint.

Advertising Regulations

Another policy approach to discourage overconsumption is to focus on advertising regulations. Government regulations in most countries already restrict the content and types of ads that are allowed, such as the prohibition of cigarette advertising on television in the United States. Additional regulations could expand truth-in-advertising laws, ensuring that all claims made in ads are valid. For example, laws in the United States already restrict what foods can be labeled “low fat” or “organic.” Again, European regulations are leading the way with stricter advertising regulations, especially for children. For example, Norway has banned all advertising targeted at children under 12 years old. Regulations in Germany and Belgium prohibit commercials during children’s TV shows. At least eight countries, including India, Mexico, France, and Japan, have instituted policies to limit children’s exposure to junk food ads.

Another option is to change the tax regulations regarding advertising expenditures. In the United States, companies are generally able to treat all advertising costs as tax-exempt business expenses. Restricting the amount of this tax deduction (or eliminating the deduction entirely) would create an incentive for companies to reduce their advertising.

Consumption Taxation

One of the ways to reduce the extent of any activity is to tax it. Taxes on foods considered unhealthy are increasingly common. For example, taxes on sugary drinks have been implemented in several countries, including France, Mexico, and Hungary. Other taxes can target specific luxury items that are seen as representing conspicuous consumption—consumption primarily for the display of high economic status. For example, from 1992 to 2002, the United States imposed luxury taxes on new automobiles that cost more than \$30,000.

Rather than classifying particular goods and services as luxuries, some economists prefer broader tax reforms. In his 2001 book *Luxury Fever*, Robert Frank proposes replacing the current emphasis in the United States on taxing income with taxes on consumption. Under his proposal, the tax on a household would be determined by the amount it spends each year. A certain amount of spending would be exempt from taxation so that low-income households would be exempt from the tax—Frank suggests \$30,000 per family. Beyond that, consumption would be taxed at successively higher rates. For example, while the first \$30,000 of spending would be nontaxable, he suggests that the next \$40,000 of spending be taxed at a 20 percent rate. Then the next \$10,000 of spending might be taxed at a 22 percent rate. In his example, consumption tax rates on spending above \$500,000 rise to 70 percent. He argues that such high tax rates on conspicuous consumption are necessary “to curb the waste that springs from excessive spending on conspicuous consumption.”⁴⁰

Frank notes that both conservatives and liberals have expressed support for a shift from taxation of income to taxation of consumption, although they disagree on the details. Frank argues that exempting all savings from taxation would increase savings rates, which he suggests is reason enough for the shift. But the main objective would be to reduce the pressures toward consumerism and promote well-being.

Discussion Questions

1. Do you believe that the government has a right to influence or otherwise interfere in consumer decisions? What additional policies, if any, do you think are needed regarding consumer behaviors?
2. What do you think about libertarian paternalism as a way to guide policies? Do you think there are any problems with this approach?

REVIEW QUESTIONS

1. Is it accurate to describe Adam Smith as an uncritical champion of selfish behavior?
2. What are some of the key assumptions of the neoclassical model?
3. What is consumer sovereignty?
4. What is a budget line? How can we show one on a graph?
5. How does a budget line change when one's income changes?
6. How does a budget line change when the price of one of the items changes?
7. What is a utility function? How can we represent one on a graph?
8. What is marginal utility?
9. What is diminishing marginal utility? What does it imply about the shape of a utility function?
10. What are some of the limitations of the neoclassical consumer model?
11. What is behavioral economics?
12. What is the availability heuristic?
13. How can “framing” affect decision-making?
14. What is the anchoring effect?
15. What is the difference between a high and low time discount rate?
16. Does the evidence suggest that people should always make economic decisions without relying upon their emotions?
17. Does empirical evidence indicate that people act only out of self-interest?
18. What are some of the insights from neuroeconomics?
19. Explain the concept of bounded rationality.
20. Summarize the model of economic behavior in contextual economics.
21. What is the difference between absolute and relative deprivation?
22. What are reference and aspirational groups?
23. What is voluntary simplicity?
24. What is the ecological footprint approach to quantifying environmental impacts? What are some of the findings of ecological footprint research?
25. What is green consumerism? What is the difference between “deep” and “shallow” green consumerism?
26. What are the policy implications of behavioral economics?
27. What are some policy examples of “nudges”?
28. How can flexible work-hour policies reduce excessive consumerism?
29. How would consumption taxation work?

EXERCISES

1. Monica plans to spend her income on concert tickets and movie tickets. Suppose that she has an income of \$100. The price of a concert ticket is \$20, and the price of a movie ticket is \$10.
 - a. Draw, and carefully label, a budget line diagram illustrating the consumption combinations that she can afford.
 - b. Can she afford 6 movie tickets and 1 concert ticket? Label this point on your graph.
 - c. Can she afford 2 movie tickets and 6 concert tickets? Label this point on your graph.
 - d. Can she afford 4 movie tickets and 3 concert tickets? Label this point on your graph.
 - e. Which of the combinations mentioned just uses up all her income?
2. Continuing from the previous exercise, suppose that Monica’s income rises to \$120. Add her new budget line to the previous graph.
3. Next, suppose that Monica’s income stays at \$100, but the price of concert tickets drops from \$20 to \$12.50 each.
 - a. Draw and carefully label both her original and her new budget lines.
 - b. Can she afford 2 movie tickets and 6 concert tickets after the price drop?
4. Suppose that Antonio’s total utility from different quantities of snacks per day is given by the table subsequently.

Quantity of snacks per day	Total utility	Marginal utility
0	0	
1	20	
2	40	
3	60	
4	75	
5	85	
6	90	
7	85	
8	75	

- a. Draw and label Antonio’s utility function for snacks.
 - b. Fill in the last column of the previous table, calculating Antonio’s marginal utility from snacks.
 - c. Does Antonio always display diminishing marginal utility in his satisfaction from snacks?
 - d. Assuming Antonio is rational, what is the maximum number of snacks that he could choose to consume per day?
5. Various U.S. government agencies, among them the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA), include “consumer protection” as one of their goals. The FDA, for example, decides whether drugs that pharmaceutical companies want to sell are safe and effective, and the EPA decides whether particular pesticides are safe for consumer use. Some people believe that such government oversight unnecessarily interferes with companies’ freedom to sell their goods and with consumers’ freedom to buy what they want. Indicate how you think each of the following individuals would evaluate consumer protection policies, in general.
 - a. Someone who believes strongly in consumer sovereignty
 - b. Someone who believes strongly that consumers make rational choices

- c. Someone who believes that consumers sometimes have less than perfect information about what they are buying
- d. One who believes that consumers can be overly influenced by marketing campaigns
6. Which of the following is consistent with the view of human behavior as purely self-interested? Which may indicate broader motivations?
 - a. Michael sells his car on eBay.
 - b. Jane joins a community clean-up group.
 - c. Ramon studies to become a doctor.
 - d. Joe buys a birthday present for his daughter.
 - e. Susan buys a new pair of shoes for herself.
7. Consider the process of applying to college and choosing a college to attend if admitted. Would you say that this process involves:
 - a. Maximizing behavior
 - b. Satisficing behavior
 - c. Meliorating behavior
 - d. Bounded rationalityCould it involve a combination of them? Could this differ from person to person?
8. How does time discounting affect your own decision-making? Do you do things today with a view toward future benefits, or do you look mainly for short-term satisfaction? Does your time discount rate differ in different areas of your life?
9. Consider a rational, profit-maximizing business firm. What motivations might the firm have that are not directly related to making a profit? For example, what if the firm made a donation to a community organization or voluntarily cleaned up pollution resulting from its production process? Why might it do this? How about if it offered employees a good health-care plan or subsidized day care? Are these actions all ultimately directed at making more profit, or could there be something else involved?
10. Match each concept in Column A with an example in Column B.

Column A

Column B

- | | |
|---------------------------------|--|
| a. Self-interest | 1. Finding a restaurant that is close by and has food that is “good enough” |
| b. Altruism | 2. You start getting bored after watching your third TV show in a row |
| c. Satisficing | 3. You decide that you have enough clothing and do not need any more |
| d. Availability heuristic | 4. Looking for a job that’s better than your current job |
| e. Deep green consumerism | 5. You buy clothing made with organic cotton instead of cotton produced with pesticides |
| f. Utility maximizing | 6. Choosing a college because your older brother or sister went there and really recommends it |
| g. Optimizing | 7. How households act in the neoclassical model |
| h. Diminishing marginal utility | 8. Seeking the highest-paying job possible |
| i. Shallow green consumerism | 9. Volunteering at a homeless shelter |
| j. Meliorating | 10. Carefully examining all available automobile models to select the one that is best for you |

NOTES

¹ If he buys his second bag of nuts, he will obtain 15 units of utility. If he buys two more chocolate bars, he will obtain 10 units of utility (6 units for his third bar, and 4 for his fourth bar). Thus, he is better off buying another bag of nuts.

² As most goods and services are not available in \$1 increments, such as bags of nuts, consumers in this model will not always be able to allocate every single dollar in a way that maximizes utility.

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