SIMPLIFIED REAL-WORLD ECONOMICS

A Practical Guide for Managers and Small Business Owners

MICHAEL C. THOMSETT

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INTRODUCTION

WHAT DO WE REALLY KNOW ABOUT *ECONOMICS*?

If ignorance paid dividends, most Americans could make a fortune out of what they don't know about economics.

—Luther Hodges (March 14, 1962)
The Wall Street Journal

A business owner deals with economics every day. Questions about cash flow, customer needs and wants, production, wages, taxes—it all comes down to how economics are managed and how economic problems are anticipated and avoided.

In other words, business owners are the ultimate economists of the world. Professional economists offer allegedly sage advice about all things economic. But, have any of them ever run their own business? Have any of them ever had to worry about economic survival, including threats of bankruptcy, business failure, home foreclosure, or meeting payroll? Chances are that few, if any, economists have a footing in the real world of business operations.

As the *real* economists of the world, business owners pay a role in educating others about how the economy really works. It is not efficiently controlled or influenced by the government, which—like economics in general—is populated by individuals who, in many cases, have never worked in the private sector or confronted the problems that business owners face every single day. A business owner has a great opportunity to educate—employees, fellow business owners, and family members—about how things really work.

For example, how many employees ever consider the problems that management faces in meeting this week's payroll? Or paying for merchandise that is essential to marketing products? Or deciding whether or not to give out raises or bonuses? Chances are that employees have never considered these issues. Why? It is because a large segment of the population is blind to economic reality. This is true in the private sector, government, academia, and even among business owners in some cases. This blindness prevents a realistic understanding of everything concerning the immediate economy (microeconomics) as well as the national and international economy (macroeconomics).

This is the motive for writing this book. Because so many people (perhaps a majority) have never even confronted their own, immediate economic reality, they never have the chance to advance knowledge about how it all works. For most, the economy is like a shiny box that produces electrical current. What is inside the box? How does it work? What happens if it stops working and who will fix it? If the box continues working, these questions simply don't come up; but they should. Knowledge is a powerful tool, and knowledge about the economy is essential to everyone who wants to be in control of their destiny, their financial health, and ultimately, their happiness and security.

This book is divided into three sections. The first section is *introductory* topics, three chapters exploring the basics and universal truths about economics. The second section is *microeconomics*, covering a range of topics of interest to business owners and consumers. The third section is *macroeconomics*, which includes matters pertaining to the entire country and the international community (inflation, employment, taxation, import/export policies). The book is designed to provide information about the economy as well as the underlying principles. The topics in this book are presented without complex and theoretical concepts that are of little interest to the typical business owner. Most business people want to know the bottom line of economics. How does it affect what I do daily? What outside influences help or hurt my operations? How can I anticipate next month's economic impact? How can I compete effectively and maintain market share? How will I make cash flow next month?

These are the kinds of real-world questions that business owners ask daily—and these concerns are kept in mind on every page of this book. The purpose: to promote practical thoughts and not theoretical concepts. That is what the business owner needs. That's what this book is designed to provide.

ABOUT THE AUTHOR

With a career that's spanned more than 40 years, Michael Thomsett is considered by many as a *financial guru* or financial expert several times over. Always in high demand, Michael is a frequent speaker at financial-based seminars and conventions throughout the world. He is also a prolific best-selling author, instructor, trainer, coach, and blogger.

Michael is arguably the world's best-selling author of options investment educational books, having written more than a dozen on the topic, most notably *Getting Started in Options*, published by John Wiley and Sons, which has sold over 350,000 copies. The rights to this best seller were recently acquired by DeGruyter. A revised edition of the book is now available under the new title of *Options: The Essential Guide for Getting Started in Derivatives Trading*. Michael's first compilation, *Investment and Securities Dictionary*, was named Outstanding Academic Book of the Year by *Choice Magazine* and was also published in paperback as *Webster's New World Investment and Securities Dictionary*. He has taught classes for Moody's Analytics, the New York Institute of Finance, and many others via online platforms. He has also been a guest on numerous financial television programs including NBC, CBS, ABC, CNN, and Fox News.

Early in his career while working as a consultant in the financial services industry, Michael discovered that he had the unique ability to simplify and convey complex topics, with a focus on practical real-world application, in a way that most business people, managers, entrepreneurs, and individual investors including the novice could easily understand. So he began writing articles regularly for dozens of business, trade, and professional magazines as well as for peer-reviewed academic journals. Between 1985 and 1987 alone he had more than 500 published articles to his credit.

Having developed a love for writing and educating people, with a reputation as a top expert in the fields of investing, accounting, and finance and being well versed in several areas of business and management, Michael made the decision to start writing books. To date, Michael has written more than 90 books on a wide variety of topics in the fields of investing, technical analysis, trading and real estate, bookkeeping and accounting, finance, personal consumer finance, business, and management—including topics such as Six Sigma and project management. In each instance, Michael has chosen areas to write about in which he believed the public would benefit from his unique ability to simplify and convey complex topics in a manner that people can more easily understand with a focus on practical real-world application.

Michael currently lives near Nashville, Tennessee.

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Downloads for *Simplified Real-World Economics* include the figures from the book for classroom or instructional use.

Part I

Introductory Topics

1

BASIC ECONOMICS—WANTS AND NEEDS

Abstract

Economics is all about wants and needs and the fact that those wants and needs can never be satisfied fully. Economics is the study of behavior and the way that behavior functions in an environment of scarcity. If a desirable product is not scarce, it has no economic value. For example, oxygen is abundant and free; attempting to place value on the air that people breathe does not make sense. Scarcity is a requirement for identifying value—and consumer response to the pricing of goods and products is based on that value.

The topic of economics is taught in many universities—but, is it well understood in the business community? Too much of what is called *economics* should be accurately named *political* economics. A bias in the presentation of ideas makes it difficult for people to grasp the fundamental attributes of the topic. Consequently, many economics concepts are based on class envy, desirability of redistribution of wealth, and how governments can and should use their power to tax.

Beyond the biased presentation in some economics courses, complexity is a second issue. Some economics courses, books, and articles are overly complex, so that most readers are discouraged and lost in the process. Economics is really a simple idea, so it should be taught in a simplified way.

EXACTLY WHAT IS ECONOMICS?

Economics is the study of behavior. The definition varies somewhat depending on the source used. Here are some examples of definitions:

1. Economics is the social science that studies the *choices* that individuals, businesses, governments, and entire societies make as they cope with *scarcity* and the *incentives* that influence and reconcile those choices.[1]
2. Economics is a study of the ways in which people use resources to satisfy their wants. The word *wants* requires little explanation. All of us want the food, clothing, and shelter that we need to stay alive. But most of us . . . want much more. We want cars, television sets, vacation trips—in fact, our capacity to want is almost unlimited.[2]
3. Economics is the study of how society manages its scarce resources. In most societies, resources are allocated not by a single central planner but through the combined actions of millions of households and firms. Economists therefore study how people make decisions: how much they work, what they buy, how much they save, and how they invest their savings.[3]
4. Economics is the study of how scarce, or limited resources are used to satisfy people's unlimited wants and needs. In other words, economics is concerned with how people make decisions in a world of scarcity. Much of the study of economics is focused on satisfying people's wants and needs for material *things*—shoes, cars, medical services, entertainment, and the like. And, although happiness, sorrow, beauty, and integrity are not direct concerns of the discipline of economics, we know that often these values underlie the economic decisions that people make.[4]

Economics can be defined briefly or in greater detail, as these examples reveal. But they all contain the same basic idea: scarcity, wants and needs, and decisions.

Economics
The interaction of scarcity with the wants and needs of consumers, and how decisions are made.

SCARCITY

What makes something scarce? This question must be answered to understand the nature of economics.

Everyone deals with scarcity, regardless of their income level. To someone who is poor, it may seem that wealthier people do not deal with scarcity, but they do. Governments also deal with scarcity when a limited revenue stream cannot possibly pay for all of the infrastructure, social programs, and other initiatives that are brought up and either addressed or deferred.

Example

A new business specializes in providing ready-to-eat meals for home delivery. The concept is that busy people coming home from work are tired and do not want to cook a healthy meal for their children. Many people in this situation turn to fast food as an easy alternative, but health concerns make the ready-to-eat meals industry appealing. The owner established a commercial kitchen in an existing restaurant. Creating a new kitchen is expensive, but a shared kitchen solves problems for both businesses. The existing restaurant does not open until 6 p.m. The ready-to-eat business prepares food between 4 and 6 p.m. The existing restaurant collects rent from the new enterprise and the new enterprise solves the problem of investment in a new kitchen.

In this case, existing kitchen space for rent was scarce. Finding a restaurant in which the schedule was a good fit solved this problem. One business reduced its investment and the other generated rental income. Scarcity was dealt with through coming up with a solution. This example exhibits a core attribute in economics: scarcity leads to choice, and at times, a creative choice overcomes the initial problem.

The same decisions are made even by wealthy consumers.

Example

A business executive has saved her money and invested wisely. Now she is considering starting her own consulting business. But even with a considerable nest egg, she must think about start-up costs and ongoing expenses. These include hiring and paying employees, providing benefits, advertising services, finding suitable office space, and allowing for the reduction in income while a clientele is created. Even though this executive is wealthy by most definitions, she will need to borrow money to finance the new business venture. Not only is money scarce, but finding potential clientele requires competitive effort. The field of likely clients is scarce. One solution is to start out operating from home with a dedicated office space. This cuts down on rent, utilities, and salary expenses. Expansion may lead to creation of an outside office, the addition of staff, and using available capital to attract new clients (rather than paying for overhead).

Even with a considerable nest egg available to invest, the executive recognizes that her savings are a limited (scarce) asset. It must be deployed wisely to maximize the new enterprise's chances for success.

In these two examples of how individuals deal with scarcity, the same challenge is presented. The individual needs to develop solutions based on circumstances, and people at all income levels face scarcity. It is unavoidable. Everyone must choose between available solutions to problems they face, whether it is figuring out how to find a commercial kitchen for a new food business or how to finance a new service business.

Choices such as these are determined by the incentives they provide. For the ready-to-eat meals business, the owner avoided the expense of creating a new commercial kitchen. For the business executive, the incentive was to build a business without committing to overhead that would rapidly absorb capital.

These choices are going to change as the price of goods and services change. For example, if the wholesale cost of food grows by 5%, the food business owner would need to creatively solve the problem of a shrinking margin. Can volume be increased, prices raised, or can alternative food sources reduce the net wholesale cost?

If the executive decided to start her business without hiring any employees, at least initially, that would reduce the start-up expense of the new business. She could also work from home, saving the cost of a lease, utilities, insurance, parking, and other related forms of overhead. The price of starting the business is lowered by starting out slowly and without adding those expenses until they are unavoidable.

WANTS AND NEEDS

Limitation of goods and services—the things consumers need and want—is a constant and realistic feature of the economy. This limitation applies to both sides of the equation. Supply of anything is limited, and supply of resources is also limited.

A principle of economics is that the wants and needs that everyone experiences can never be fully satisfied. All commodities are limited, so there is never enough of anything. In an ideal world, goods and services would be limited, but at a comfortable level. Consumers can satisfy their needs and wants to a degree, but not completely. Those goods and services can be found, but only to a certain degree.

Decisions must be made. An important point to keep in mind is that unlimited supply means that there are no underlying economic constraints. The example of oxygen makes this point. It is free to breathe, so trying to place a monetary value on it would not work.

An exception: a modern fad is the oxygen bar, where consumers are offered flavored oxygen for a price. Someone has figured out how to turn oxygen into a commodity and to create a business out of this. Even so, is this a fad or does it eventually become a new necessity? Opinions will vary and there certainly are a group of consumers who swear by the oxygen bar. These tend to be located at leisure outlets such as nightclubs, spas, resorts, yoga studios, or casinos. It seems that buying oxygen goes along with other forms of *wants* rather than *needs*. Do you *want* mint-flavored oxygen, or do you *need* it?

For the owner of an oxygen bar, costs are low and limited to an initial investment in equipment plus a nominal cost for oxygen:

> Oxygen bars provide very high profit margins. It costs an oxygen bar owner about $0.45 per *session* to run the bar, which includes the aroma, nose hose, and oxygen (labor is not figured into this since it is variable). The average session costs the consumer $10.00 for 10 minutes, leaving a $9.55 *profit* for the owner per session or customer![5]

DECISIONS

A discussion of scarcity and choice cannot be undertaken separately. The two are aspects of the same issue—that of *decisions*. Daily life, whether by an individual, business, or government, consists of a series of decisions.

Everyone must make the comparison between cost and benefit. This often-cited cost-benefit analysis is more than a study of raw numbers. It is the most reasonable system for how decisions are made. It may take one of two forms. First is a decision between two different choices, and could be based on price, quality, brand recognition, or level of want for a product. For example, do you select a somewhat more expensive brand of cereal or cola because you trust the company?

Second is a decision to do something or not. For example, can you afford a vacation this year? It might cost more than you can afford, so a few decisions must be made. You can skip the vacation, borrow money, pay for the trip using credit, or select a vacation that costs less than the one you want to take.

Your decision is also going to vary based on circumstances. You have probably heard the advice to not shop for food when you are hungry. A hungry shopper is likely to buy desirable items that are beyond the budget. Eating unhealthy but tasty food brings you heightened pleasure, but once you have eaten half of the potato chips, you might look at the remaining chips and wonder what you were thinking. Your hunger, once satisfied, pointed out how the decision was not a wise one. The decision attribute has two sides: how are decisions made? and equally important, why were those decisions made at the time?

If you begin with the assumption that, as a consumer, you know all of the possible choices that you have (products, prices, value) *and* that you know how much utility each brings, then you will make informed decisions. Many of the decisions everyone makes are poorly informed or even uninformed.

For example, what is the purpose in paying an exceptionally high price for a handbag or shoes, based solely on the designer label? This is an applicable case because many consumers will gladly pay a high price for the Gucci or Prada purchase when an off-the-rack brand might be equal in quality. Why? Is this irrational or is there an intangible benefit beyond quality? Even with full information about comparative price and quality, many will make an expensive purchase based on branding rather than on quality.

This requires an analysis between cost and benefit. This is not going to be identical for all decisions or for all consumers. Clearly, the purchase of a $500 purse brings some form of benefit that is believed to be greater than a purse of equal craftsmanship costing only $30. The perceived benefit justified the cost of the $500 purse on some level. It might not be real, but it is perceived as real, and that's what matters. The wants and needs of people are assumed to be fully informed. Economists tend to think this is the case. However, in many cases, the choices being made are not truly informed, but are perceived as being informed—an important distinction.

This comes into play in an economic sense in many ways. Do you want to pay $10 for flavored oxygen? Were you one of those 5 million people who in 1975 bought a pet rock? The perceived value was part of a short-lived fad, of course, but even at a cost of about $4 each, the founder of the pet rock brought in $15 million in six months.[6]

These points define the science of economics. Thus, the combination of scarcity, needs and wants, and decisions must be present in all decisions made by consumers, business, and government. Much more may be said on the topic of managing scarcity—and that is the topic of the upcoming chapter.

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2

MANAGING SCARCITY—DECISIONS

Abstract

Scarcity is an essential ingredient in economics. If something is not scarce, it cannot be assigned economic value. The greater a product's scarcity, the higher the price; in addition, a tendency among consumers is to have a greater desire for scarce goods. Balancing scarcity with price and quantity is a constant struggle in the realm of economics. Consumers make choices based on this struggle. Every consumer wants the highest quality of scarce goods at the lowest possible price. Opportunity cost describes how choices are made. This further relies on the concept of marginal analysis, the study of the variables that are involved in choice.

How do consumers make decisions? This is the question that every producer must ask in order to better understand the economics of providing goods and services. The product must be affordable and at the same time, scarce. The price and quantity determine how consumers react, and this is the essence of how decisions are made in the market. It all begins with *scarcity*.

Scarcity is essential before any goods can have value. If something is not scarce, its economic value cannot exist.

Scarcity
The limitation of all goods and services, and of their affordability; the essential element required to set value on anything.

If a product is abundant and anyone can access it, its economic value is zero. Some attempts have been made by producers to change this dynamic, but it cannot change permanently. By creating a fad based on artificial scarcity (thus, artificial supply), a producer may create demand in the moment.

ARTIFICIAL DEMAND AND FADS

In 1975, one of the oddest fads in the market was created by advertising man Gary Dahl. His *pet rock* was marketed over a six-month period and 1.5 million were sold at a price of $4 each. These were, literally, rocks, marketed like live pets and complete with cardboard boxes and breathing holes. Dahl, who passed away in 2015, became an instant millionaire. The fad was short-lived but profitable. The origin of this strange fad was described in an article about Dahl:

> Over beers in a Los Gatos bar, Gary Dahl's drinking buddies spewed tales about incontinent dogs, destructive cats, overly fecund gerbils, and vacations foiled because no one could babysit the bird.
>
> Everyone had problems with a pet except for Dahl, who claimed his was hassle-free.
>
> "I own a pet rock," he quipped.
>
> His friends cracked up and turned it into a running joke. Dahl laughed his way to the bank.[1]

This strange example was based on packaging and marketing of an abundant resource, the ordinary rock. The originality of the idea created artificial demand. Although it lasted only six months, that was long enough to be a success. Similar ideas that enjoyed short lives but financial success include Beanie Babies, the Sock Monkey, and Cabbage Patch Kids. However, the idea of artificial demand is nothing new. One of the strangest tales in economic history is that of the 17th century *Tulipmania*.

In the 1630s in Holland, Tulipmania (in Dutch, *tulpenmanie*) was an extreme speculative bubble. These bubbles occur periodically and, even in hindsight, they are normally impossible to comprehend. Why do people speculate with vast fortunes in goods that clearly are overpriced? The ability to analyze and understand how irrational this is cannot compete with a single human tendency: greed.

Speculators want to get rich quickly, and will risk all they own, even borrowing money to invest more than they can afford. This is seen repeatedly in the stock market even today. Speculators do not learn the economic lessons of the past, but repeat the mistakes made by others. The irrational run-up in prices of single tulip bulbs began in 1636 and by May 1637, prices collapsed—speculators lost everything. Today, the very term itself, Tulipmania often is used as a metaphor to describe speculative fevers and panics. This is defined as situations in which some prices behave in a way that appears not to be fully explainable by economic *fundamentals*.[2]

At the height of this speculative fever, single tulip bulbs sold for as high as 10 times more than the average income of a Dutch craftsman. Typical of such speculative bubbles, prices rose rapidly but then crashed even more rapidly:

> Many individuals grew suddenly rich. A golden bait hung temptingly out before the people, and, one after the other, they rushed to the tulip marts, like flies around a honey-pot. Every one [*sic*] imagined that the passion for tulips would last forever [*sic*], and that the wealthy from every part of the world would send to Holland, and pay whatever prices were asked for them. The riches of Europe would be concentrated on the shores of the Zuyder Zee, and poverty banished from the favoured clime of Holland. Nobles, citizens, farmers, mechanics, seamen, footmen, maidservants, even chimney sweeps and old clotheswomen, dabbled in tulips.[3]

This artificial demand should not be confused with the real thing, based on economic needs and wants. A consumer will purchase bread and milk to feed the family but will not speculate in possible increases in food prices by borrowing money and buying a garage full of one product. Artificial demand is based at times on the greed of a seller, wanting to sell goods for prices that are

Artificial demand Any form of demand created by generating interest in a product or service when no true economic value exists.

Greater fool theory
Speculation, the belief that paying too much for a product or service is rationalized by the belief that someone else (i.e., a *greater fool*) will be willing to pay more.

many times higher than his own purchase price. This relies on the *greater fool theory*, the observation that during times of speculation, prices are not determined by the true or intrinsic value, but rather by beliefs among other speculators that are, in a word, irrational. Under this theory, one speculator pays a foolishly high price in the belief that it can be resold later to a *greater fool*, someone with even greater irrational expectations: ". . . that is, they paid such spectacularly high prices on the assumption that some other nitwit would come along willing to pay even more."[4]

REAL SCARCITY

Artificial scarcity recurs often and despite history's many lessons, it is tried by many, either intentionally or as the result of a current fad. In comparison, real scarcity exists and creates the fundamental points about economics:

There are never enough goods or services to satisfy needs and wants.

A supply of goods and services works best when it is available, but not without limitations. Consumers will value those goods and services on these terms but will not even think about the price of goods or services if the supply is unlimited. Why? Because lack of limitations means there can be no reasonable price.

Prices move based on scarcity and choices made by consumers.

The price asked by a seller will only be paid by a buyer if (a) the product or service is needed or wanted; (b) comparable choices are at best equal or, at worst, of lower value; and (c) a perceived value is accepted so that the price is considered fair and reasonable.

Without scarcity, goods and services cannot have any economic value.

How does economic value exist? How is it created? Without scarcity, the price of goods or services must be zero. In the previous chapter, the example was given of oxygen. It is abundant and is freely breathed. Thus, it cannot be priced and marketed directly.

Every consumer confronts scarcity daily. With a limited income, choices must be made. First, the necessities must be paid for: housing, food, utilities, transportation, and clothing. Next, a family may put money aside in savings for the future. Finally, the remaining *disposable income* can be spent on a variety of goods or services: a new car, a family vacation, a bigger television, a better cell phone. Because disposable income is often scarce, a consumer cannot buy all of these goods and services. Choices must be made.

> Disposable income
> The income available after paying for necessities and not saved; income available for wants rather than for needs.

In having to decide which discretionary goods or services to buy, everyone deals with scarcity and this is expressed in the choices they make. Scarcity also limits the availability of goods and services. A producer must fund the creation of a factory, equipment and machinery, intellectual property, and labor. All of this is required to produce products offered to the market. But they cannot be produced without limits; even if they could, it would destroy the producer's profits.

For example, if a producer had unlimited funds and could flood the market with an item previously costing \$40 each, what would occur? By producing so many of this item that the supply outpaced demand, could they still ask for \$40? No, the abundance of supply based on unlimited production capability would destroy the economic value of the product. In this sense, scarcity is a positive force, for both sides. The producer creates enough product to meet demand at a price adequate to yield a profit. The consumer is willing to buy a finite number of products at a given price because that price is reasonable, and the product satisfies a want or a need.

CHOICE BASED ON SCARCITY

Choice and scarcity cannot be separated. Consumers make choices based on the limitations of income, personal preferences, and priorities. This is unavoidable. Because all goods and services with economic value contain a price, a choice must be made about everything. There is no such thing as abundance without limit.

The same limitations apply to producers, governments, and society in general. Some governmental policies are based on a belief that money is unlimited for the choices made, and by printing more and more currency, those limits can be overcome. However, when money is printed excessively, it dilutes value and leads to bigger problems later. This is another lesson of history. However, even with the ability to print currency, governments—like all consumers—must make economic and political choices.

Governments and consumers must make choices about everything, and these choices are invariably based on defining core values and priorities. A government, for example, may set spending policies based on social justice and welfare; or on economic progress and economic growth. An individual does the same; choices are set based on priorities, and in turn, priorities grow from understanding wants and desires.

Is it so important to have a high-priced status automobile that you will sacrifice saving for retirement? Is one of your core values being able to enjoy an annual one-week vacation costing one month's salary by delaying the purchase of needed new clothes? Do you want to enjoy a weekly trip to an expensive restaurant, deferring the payment of expenses in your small business?

All these choices define not only your core values, but also how those values affect your economic health. As a business executive, for example, you must approve an annual forecast and budget. Will part of this year's spending be drastically reduced to improve net profits after the past year's unexpected increases? Did you pay for skilled technical expertise, which is considered a long-term investment in improved productivity? Will you focus more on spending money to pursue a larger market share or expand your product line? If you cannot afford to do both, will you take on more long-term debt as an alternative? Or will you cut back on expenses with strict internal controls?

Business managers and executives make choices every day. In this respect, producers are also consumers. For example, it might be necessary to pay large salaries to recruit the experts whom you need to expand your market. It might also be necessary to invest in a concentrated marketing campaign, product development, or research and development. All of these choices demand judgment, and in business, choice is the result of estimating or understanding the underlying value of an expected outcome. In other words, choices and decisions are invariably based on scarcity; but those choices are not made randomly or carelessly. With awareness of limitations in resources (scarcity), the executive selects between higher expenses that are intended to generate more revenue or internal cuts in order to improve net margins (choice).

Like private companies, governments work with scarce resources to make choices based on perceived value. Does a local county or city invest in public schools, parks, roadways and police protection? Or does it cut back on those services to balance its budget? Are tax increases necessary in order to provide what people need and want? And how far should those tax increases go? Local governments, in the role of consumers, must evaluate available revenues and desirable spending programs and make choices just like individuals. National governments face the same range of issues and must apply scarce revenues to pay for choices made.

EVALUATING OPPORTUNITY COST

The choices made by consumers, governments, and society at large are the result of evaluation. Comparisons between costs and benefits lead to these choices while also remembering the core economic rule that there is never enough resources to satisfy all of the wants and needs—no one can have everything they want.

This is termed *opportunity cost*, the informed evaluation of costs and benefits to a decision. The method by which consumers decide what to buy and what not to buy, the price they are willing and able to pay, and the quality of a product are all part of the analysis of opportunity cost. It also includes what a consumer decides to give up. For example, a business owner invests in the

> Opportunity cost
> The evaluation of costs and benefits undertaken to arrive at a decision, including knowledge of what must be given up as a result.

Core values
The well-defined purposes and goals held by a business or person; the expansion of financial considerations to include nonfinancial ideals about future outcomes of present decisions.

Mission statement
A formalized and brief description of goals, aims, and values for a company, expressed and shared with all stakeholders.

Long-term objectives
The set of actions and outcomes developed with the mission statement in mind, expressing the desires and underlying values of the organization.

expansion of operations into new markets (research and development, hiring of a sales staff, product development and expansion, and promotion). In order to make this investment, the owner defers increasing his or her compensation and giving raises to staff. The opportunity cost of expansion was based on a belief that future revenue and net profit will justify the decision. Whether that turns out to be a sound decision depends on the success of the decision itself versus what could have occurred by not pursuing an expanded market share and using funds to increase salaries and wages.

This opportunity cost applies at all levels of the economy. A family might decide to purchase a new car but give up their annual vacation. Another family decides to move to a larger, newer home but sacrifices adding to their savings and retirement accounts in order to increase the down payment. The opportunity cost of every decision is likely to involve a *value judgment*, the analysis of a decision or action versus an alternative decision or action.

Opportunity costs are not analyzed solely on the financial merits of one course of action or another. They are based on the *core values* held by the business or person. Therefore, businesses are encouraged to devote time in the development of a mission statement, long-term objectives, and a value proposition. All of these phases may be largely academic if they are developed and then simply filed away. However, when difficult decisions must be made, the defining attributes of a business are essential to making an informed decision and maximizing the opportunity cost.

The purpose of these defining attributes is not only to help a company identify what decisions enhance opportunity costs for the business, but also to help the consumer address their opportunity costs. Why should a customer choose your company's product or services versus those of your competitors? The creation of a competitive advantage is the purpose of this defining exercise, which was termed an *economic moat* by Warren Buffett. The wider the moat, the stronger and more sustainable the competitive advantage.

Value proposition
A set of defining attributes about why products or services address customer or client needs; the special or exceptional talents of owners and staff; the qualities in the product and service that set it apart from others.

HOW SCARCITY SHAPES CORE VALUES

Every business has core values, whether these are clearly expressed or not. However, even when those core values are described, they must take scarcity into consideration. Otherwise, the core values will not be practical. For example, core values may be expressed in these ways:

- Capture 100% of the market for our product.
- Become a Fortune 500 company within 10 years.
- Retire within five years with $10 million in net assets.

All of these core values are exciting and optimistic. But are they realistic? Probably not. Few if any companies can capture 100% of a market. It would necessitate putting competitors out of business or acquiring them, and then preventing new enterprises from entering the market. This is not realistic; and even if it were, what is the opportunity cost of acquiring 100% of business, even if it were possible? It does not lead automatically to higher profits; in fact, in order to accomplish these unrealistic goals, a company would have to spend money to defeat competitors. Translation: lower profits.

Becoming a Fortune 500 company is an odd goal. This is not something that occurs because the goal has been set; it is the result of making smart decisions regarding how goods and services are marketed and how market share is acquired and maintained. Being a Fortune 500 company is a result, not a goal.

Retiring in only a few years with $10 million in net assets is a goal that few people would reject on its own merits. But what must take place for this to occur? The goal is incomplete because it does not lay out the steps required for it to occur.

In each of these cases, the assumed core values are either unrealistic or they ignore the role of scarcity. Just as consumers must set core values for how they conduct their financial and nonfinancial lives, businesses also must develop a plan based not only on desire, but on acknowledgment of scarcity. Everyone—including consumers and businesses—confronts scarcity at every turn. The wants and desires of people and businesses can never be satisfied, due to scarcity. In setting up core values, this reality must be included to ensure that reality dominates the course of action that is planned and followed. This process has a name: *economics*.

Core values for individuals can be reduced to single terms: happiness, wealth, love, respect, security, health, etc. For businesses, core values tend to be more generalized when they are reduced to single words: profits, reputation, esteem, [market] dominance, etc. However, beyond the single words, core values take on greater meaning when expressed with scarcity in mind. In other words, going back to the mission statement—long-term objectives and value proposition—the development of core values can and should include not only the desired result, but the ways in which scarcity is navigated to arrive at the desired outcome. Acknowledging scarcity helps to ensure that core values are not only a focused outcome in the future, but realistic as well.

Efficiency
The application of scarce resources in the best possible manner and for the lowest possible cost.

SCARCITY IN A WORLD OF INEFFICIENCY AND INEQUITY

The fact that scarcity must exist in order to acknowledge economic value leads to a related idea: that of *efficiency*. To most people, this refers to accomplishing tasks in the most expedient manner and at the lowest cost. From a business point of view, it means using scarce resources in the best possible manner and for the lowest possible cost. If production of all goods and services was accomplished efficiently, it would maximize overall benefit and reduce costs, thus also reducing scarcity.

Society (often referred to collectively as the *economy*) would benefit when production processes were fully operated at maximum efficiency and use. The result would be lower prices and increased quantity of products. An efficient consumer would recognize and reward efficiency by buying more of a product that is needed or wanted, and would benefit from that efficiency by paying a lower cost.

Efficiency addresses a related problem with scarcity. Identification of a fair or equitable distribution of scarce goods is a constant problem. Should fairness be a goal for society, in an economic sense? For example, if a pharmaceutical drug is sold for $6 per pill and some families who need the drug cannot afford it, would it be fair and equitable to adjust the price? Perhaps a wealthier consumer could pay $9 and a poor consumer pay only $3 for the same medicine.

This is a complex issue related to efficiency. Maximum efficiency viewed in isolation would recognize a fair price based on a producer's cost of goods sold and their minimum profit margin—that might be the $6 level. However, someone who needs the medicine and cannot afford it would be subsidized in an equitable economic system. These two ideas—efficiency and equity—often conflict with one another.

Equity fairness in the economy A provision of a needed product or service at a lower cost to those who cannot afford a higher price.

The equitable provision of goods and services needed by everyone is complicated because it requires both a consideration of affordability and a value judgment. A compassionate society wants equitable distribution, so that a family who is living in poverty is subsidized in terms of housing, food, and medicine. Because subsidies cost money, this means that producers who provide products below their marginal cost must be able to raise prices for other consumers; or that if governments subsidize some citizens, they will raise taxes to pay for the subsidies. This demands a value judgment, which is a balance between efficiency and equity. The compassionate society makes the value judgment, which becomes involved with not only economic considerations, but larger political ones as well—such as, immigration, foreign aid, welfare policies, tax rates, employment and wages, and government spending.

Because these policies and decisions are all based on scarcity at the core of the questions involved, the role of scarcity is more than the obvious establishment of price and quantity or even the decision about how to spend money. Scarcity affects everyone in several ways. Efficiency and equity are the most complex attributes of scarcity.

The conflict generated by this higher level of scarcity is described as competition for a limited degree of resources. Consumers compete with one another. If one group has higher access (can afford a drug, for example) and another group has no access or limited access, the situation is perceived by many as unfair. Even though economic success in terms of earnings distinguishes one group from another, *fairness* is a desirable but often irrational desire.

For example, poverty may be caused by many different factors. These may include lack of education and specialization, obsolescence that makes a skill unmarketable, or ill health reducing or eliminating a family's income. It may also be the result of substance abuse, violent crime, and other poor decisions made by consumers. It is a complex matter. Even in cases when the head of a family makes selfish decisions leading to poverty, should small children suffer as a result? Should they go to bed without enough food or live through the winter without heat?

The compassionate society recognizes that the value judgments made to deal with scarcity cannot be applied universally. In some situations, people are victimized by their own decisions and their families suffer. They need to be cared for by society, and that care should be paid for with higher taxes or lower prices of essential goods and services.

A distortion of this value judgment is based on class envy. Some people believe that equity is the goal of an economy. The wealthier and more successful citizen should be required to pay higher taxes in order to give greater benefits to the less fortunate. This is not based on need alone or even on the idea of subsidizing the less fortunate. It is based on an extreme twisting of the concept of equity, using class envy and even punishment for success to equalize everyone, even beyond the concept of compassionate subsidizing of the poor.

When equity enters the economic picture, the entire study of economics becomes complex and political. What may be studied rationally as the study of behavior and value judgments easily becomes a political view; in this view, economics is seen as a tool for exacting justice or revenge, aimed at the successful business or individual for the benefit of the less successful citizen.

INDUCED SCARCITY

The study of scarcity as the underlying force of economics may be studied not only in terms of efficiency and equity, but also in how scarcity is induced. This is a reference to two ideas: demand-induced scarcity and supply-induced scarcity.

The theory behind these induced forms of scarcity is a starting point for determining how price and quantity are set. Despite a widespread belief that producers may simply raise prices whenever they want to increase net profits, this is not the case. Consumers ultimately determine price by how they react to producer actions.

Scarcity may be broken down into three types. *Demand-induced scarcity* occurs when the consumer population grows, thus setting up greater demand for products or services. In these situations, it might prove difficult for producers to meet demand immediately and the will need to improve methods for creating and transporting goods to market.

Supply-induced scarcity occurs whenever producers limit production, most often due to limitations on natural resources, production capability, and other factors beyond their control. Except for artificial supply-induced scarcity, the influences that cause this cannot be controlled. For example, in 2011, a massive earthquake and tsunami hit Japan. This was the most costly disaster in history.[5]

Demand-induced scarcity
A form of scarcity generated when the consumer population grows or when the demand for a product or service is expanded.

Supply-induced scarcity
A form of scarcity resulting from shortages or unavailability of raw materials, labor, or other requirements of production.

The sole-source Japan-based company Merck KGaA produced Xirallic, a pigment used on new automobiles, and because of the disaster, the pigment was unavailable to the auto industry. Xirallic created a distinct shimmering effect in autos and this could not be reproduced exactly. Both Ford and Chrysler were forced to limit production and marketing of two popular colored autos, red and black. The limitation of the paint supply cost both manufacturers millions of dollars in lost revenue.[6]

This example of supply-induced scarcity was not made by choice. Because the supply chain for the pigment was provided from a single factory, no immediate alternatives were available.

Beyond demand-induced and supply-induced scarcity, *structural scarcity* is found when some consumers cannot access goods or services. This may be due to geographic, demographic, or income restrictions. For example, in some third world countries, some populations might not have access to necessities due to political causes, weather, or wars. This is an example of structural scarcity.

Structural scarcity
A form of scarcity resulting from consumers being unable to access goods and services, due to geographic, demographic, or income-based restrictions.

The nature of scarcity is further distinguished by *scarce goods* and *nonscarce goods*. Scarce goods are defined as any goods where demand is greater than supply. As a result, prices will also be greater for scarce goods, and this leads to conflict about which consumers are entitled to acquire goods at a specific price. This conflict is unavoidable; it describes "the possible existence of conflict over the possession of a finite thing . . . my ownership and control excludes your control."[7]

Scarce goods
Any products or materials for which demand is greater than supply.

Nonscarce goods are abundant and often cannot have economic value. Not only are they abundant; they are also available to a wide consumer population. They may also be termed *free goods*.

Why are these definitions crucial to a business owner or manager? These are economic theories if studied only as concepts. However, they also hold real-world importance. The example of the single-sourced Xirallic was used by all the major auto manufacturers. When it became unavailable for an indefinite period following the disaster in Japan, auto companies faced a reality: they could not produce autos on the same basis as before. If they used an alternative material, they would need to track every auto produced so that in the future, replacement parts and body shop work would vary based on which form of paint had been used.

Nonscarce goods
Any products or materials that are abundant, usually having no economic value.

Free goods
Are the ultimate description of nonscarce goods—available to everyone and anyone, and without cost.

For even a small, localized business, the same limitations on demand and supply can easily impact operations and lead to losses. For example, if a business relies on employees belonging to a union, a strike could put a company out of business. For example, a 1989 strike by the International Association of Machinists and Aerospace Workers was supported by Eastern Airlines pilots and flight attendants—closing all domestic operations. This forced Eastern into bankruptcy and they closed permanently in January 1991.[8]

When applied to a small operation with limited capital, a labor strike, the unavailability of an essential raw material that is needed in the production process, or the obsolescence of a product could all spell the end based on changing levels of demand and supply, which are all based on degrees of scarcity. For example, when the auto industry began in the early 20th century, blacksmithing—previously an in-demand business for those relying on horse and carriage transportation—was made obsolete. Those blacksmiths who transitioned into auto mechanics were able to survive; the rest went out of business.

CHOICE AND SCARCITY

The choices made by consumers are based, unavoidably, on the status of scarce and nonscarce goods. This *choice theory* assumes that consumers

Choice theory
The belief that consumers are rational in the way they choose when comparing prices, quality, and reputation of scarce goods.

Perfect information
The belief that consumers make choices based on complete knowledge of all aspects going into those choices.

are rational in how they choose. For example, if price is a primary driver of choice, the rational step is to select the lowest-priced comparable goods. If brand loyalty is the primary driver, the consumer is willing to pay more for acquisition of a known brand. Both choices are rational.

The assumption that choice is rational is based on another assumption—that choices are made with complete and total information about all aspects of a product. This idea, *perfect information*, explains how choice theory works, or at least how it should work.

Consumer behavior, whether informed and perfect or impulsive, is the collective result of choices made. The consumer will prefer one product over another, given comparable pricing and quality. The means for developing a preference is of paramount importance to every business. The distinctions of price are obvious and tangible. However, some choices are made based on other criteria. These include brand loyalty, packaging style and color, the list of ingredients, and reputation of a company and its products. For example, many consumers buy Campbell's Soup out of loyalty and brand recognition. Campbell's, in existence since 1869, is one of the oldest established food companies in the world. However, their product is not necessarily the healthiest soup available. The company reduced sodium content in their soups between 2007 and 2010 in response to criticism of its high salt content. However, by 2011, sodium content was again increased. Based on name recognition and reputation, Campbell's soup products continue to dominate shelf space in retail stores.[9]

In this case, consumers make the choice to buy a product even when alternatives are available with healthier content. This is a choice made by consumers. If it is a rational and informed choice, the high sodium content is not an issue for the family purchasing soup. The brand and its reputation matters more.

Choice theory enables companies to evaluate consumer behavior. Why does a consumer prefer one brand over another? Beyond the obvious differences in price, what other factors, tangible and intangible, go into choices? Beyond simple preferences and brand loyalty, choice is altered when demand and supply are changed. Price is changed as demand changes, and this realization helps to clarify how demand and price interact. Consider a case in which two separate levels of demand are compared. Figure 2.1 presents two demand levels and reveals how price is affected when demand changes.

The assumptions about price and quantity are not independent, but act in harmony with each other. The scale of demand impacts the scale of supply, without exception. Demand A and Demand B intersect with supply at different points on the graph. The greater the pressure from the demand side, the more price and quantity are impacted and must change. Choice is not based on a simple or predictable curve of demand

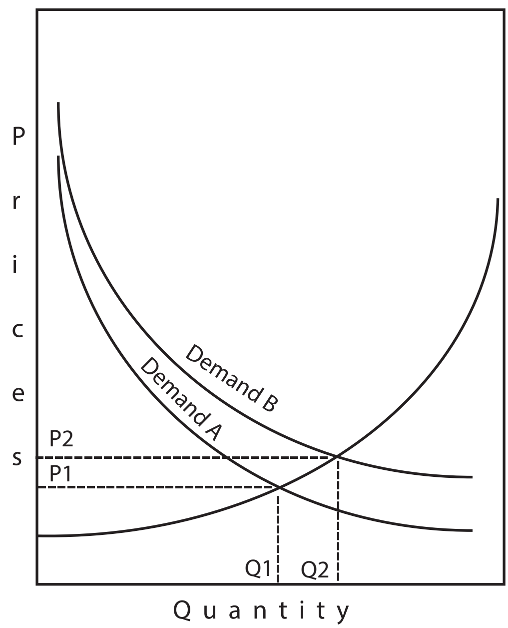

Figure 2.1 How changing demand affects price

and supply. Consumers will prefer the most advantageous qualities in the choices they make, including not only price but many additional factors, packaging and reputation among them. What do consumers think of when they see Campbell's Soup on the shelf next to other brands? Why are the labels dominated by red? What consideration do consumers give to price versus name recognition and label color?

THE ROLE OF MARGINAL ANALYSIS

Marginal analyses
Adjustments in price by producers to achieve the best possible profits, or in behavior among consumers to get the best possible price and quality.

Another crucial test of scarcity and how it affects the interaction between price and quantity is that of *marginal analysis*. This is a quantification of choices made by both producers and consumers. Marginal analysis is the study of how behavior is optimized. For example, consumers want the best possible price and use to result from their decisions; and producers want the best possible level of profits.

All benefits and costs must be studied marginally, meaning that consumers will compare benefits and costs for every decision and producers will increase prices marginally to maintain profits while at the same time remaining competitive. Small increases in benefits to consumers versus small increases in price by producers are possible only when scarcity rules over all choices made on both sides.

Why is this important from the business manager's point of view? Consider this example: a manufacturer of a product has experienced increases in the price of raw materials and labor in its plant. To reduce these costs, management decides to outsource a major segment of its production process, resulting in lower cost of goods sold. However, this also means that to reduce costs, a degree of quality is sacrificed. The manufacturer believes that the small decrease in quality will be perceived as marginal and will not affect consumer perceptions about the product or its price.

Outsourcing does not always accomplish the overall results desired. For example, when moving manufacturing operations overseas, some have discovered that it is more economically beneficial to keep operations at home: "When quality, the cost of freight, delivery times, and other factors are considered, sometimes it's cost-neutral or cheaper to make products yourself, in U.S. factories, rather than outsource them overseas."[10]

From the consumer's point of view, there might be a willingness to pay higher prices in exchange for other features, such as extended warranties. This gives the buyer peace of mind, although it often is the case that a product is most likely to last longer than the warranty period. The marginal increase in price is based not on complete information, but on perceptions and peace of mind.

In each of these instances, the *economies of scale* are at play. This is the idea that production is improved in marginal costs when higher output does not add greatly to the cost per unit. And consumers are exposed to economies of scale with price incentives: "Buy one, get one free" or "Buy three or more for a 20% discount" are examples.

A danger to any business that manufactures products is the *diseconomies of scale*. This refers to the tendency for marginal costs to rise at a rate exceeding marginal revenues. This occurs when a producer loses profit margin as the consequence of increasing production volume. It is possible that the higher volume of output cannot improve the costs of lower volume. The resulting diseconomies of scale eventually erode profits and force producers to cut back, having failed to generate greater economies of scale.

The producer may apply marginal change not only in price, but also in revenue analysis. Marginal costs are expected to rise when revenue rises and thus makes production more efficient (lowering per-unit cost). However, with competition, it is possible that marginal costs will be forced higher even if marginal revenue does not also improve. Consumers face a similar decision.

Economies of scale
The improvement by producers in marginal costs, which may include a small reduction in quality; the incentives offered to consumers to purchase more of a product for a small discount.

Diseconomies of scale
The loss of profitability because of increased production volume, caused by the inability of lowered costs per unit.

Do they need a two-year supply of a product just to get a small discount in today's price? An informed consumer is likely to question the offer based on whether it even makes sense. Unless the consumer expects prices to rise substantially in the near future, there may be little or no incentive to over-purchase a product today.

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