Book I
The market economy, overview and application

The first five chapters of *Microeconomics for MBAs*, which constitute Book I, develop the broad outlines of *The Economic Way of Thinking for Managers*. We explore in these chapters what economists mean by "rational behavior" and show how rationality-based thinking can illuminate public and management policies. The chapters will focus on how markets can be analyzed through the forces of supply and demand, developed with graphical analysis. We show how supply and demand curves can be used to explain how and why competitive markets work efficiently and under what conditions competitive markets can fail to work efficiently. In chapters 4 and 5, supply and demand curves are used to explore the market consequences of an array of governmental and organizational policies. Throughout the first five chapters, we will consider how management policies can affect the forces of supply and demand and how market forces can affect management policies. Our goal in this first book is to provide a broad overview of the market economy. In Book II, chapters 6 through 8, and Book III, chapters 9 through 12, we will examine many of the theoretical details underpinning supply and demand. In those chapters, we will develop a theory of firms and how they can be pressed to minimize their production costs in markets with different levels of competitiveness and in markets dominated by firms with differing levels of monopoly power.

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Microeconomics: a way of thinking about business

In economics in particular, education seems to be largely a matter of unlearning and "disteaching" rather than constructive action. A once famous American humorist observed that "it's not ignorance that does so much damage; it's knowin' so darn much that ain't so" … It seems that the hardest things to learn and to teach are things that everyone already knows.

Frank H. Knight

The late Frank Knight was a wise professor at the University of Chicago who realized that students beginning a study of economics, no matter the level – even those who are in advanced business programs – face a difficult task. They must learn many things in a rigorous manner that, on reflection and with experience, amount to common sense. To do that, however, they must set aside – or "unlearn" – many preconceived notions of the economy and of the course itself. The problem of "unlearning" can be especially acute for MBA students who are returning to a university after years of experience in industry. People in business rightfully focus their attention on the immediate demands of their jobs and evaluate their firms' successes and failures with reference to production schedules and accounting statements, a perspective that stands in stark contrast to the perspective developed in an economics class.

You are now one of the many students to whom Knight directed his comments. As all good teachers must do, we intend to challenge you in this course to rethink your views on the economy and the way firms operate. We shall ask you to develop new methods of analysis, maintaining all the while that there is, indeed, an "economic way of thinking" that deserves to be mastered. We shall also ask you to reconsider, in light of the new methods of thinking, old policy issues – both inside and outside the firm – about which you may have fixed views. These tasks will not always be easy for you, but we are convinced that the rewards from the study ahead are substantial. The greatest reward may be that this course of study will help you to better understand the way the business world works and how businesses may be made more efficient and profitable.

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[See online Video Module 1.1 Introduction]

Each chapter is divided into two major parts. The first part (Part A) will always develop microeconomic concepts and theories and apply the concepts and theories to social and economic policies. Part B will always apply the theory developed in Part A directly to issues that mid-level and executive-level managers confront all the time.

Online Perspective

On the publisher's website for this book, we provide a "perspective" that extends the discussion in the chapter, covers some policy or management topic new to economics, or provides a novel take on a topic that economists and lay people to economics have mistakenly accepted as settled. For example, in this chapter we discuss a topic traditionally considered in microeconomics textbooks, "the tragedy of the commons" (or the tendency of resources to be overused when property rights are not defined). Online, in Perspective 1, we present the opposite tragedy, "the tragedy of the anticommons" (or the tendency for resources to be underutilized when there are too many decision makers from the assignment of property rights, or just decision rights).

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On the publisher's website, we also provide one or more additional "readings" on topics relating to themes in the different chapters. In the chapter, we briefly review a famous article by the late economic journalist Leonard Read titled " I, pencil," which covers a paradox of sorts: no one in the world knows how to produce a pencil from scratch, but yet millions of pencils are produced each year. Online, under Reading 1.1 we provide Reed's short but very insightful and easy to read article.

We understand that time is a scarce commodity for most MBA students, especially those who have to balance their studies with the demands of a full-time job and a family. Accordingly, we conclude each chapter with a "box" in which we identify one or two key "practical lessons for MBAs" that emerge from the analytics of each chapter. With these "lessons" we seek to show how some aspect of the economic way of thinking can be used to understand workplace problems and to devise profit-enhancing solutions to the problems managers face on a daily basis. Then, we close

with a section we call "the bottom line," which itemizes and crystallizes the most important large and small points developed in the chapter. We have deliberately kept these lists of "key takeaways" short, but at the same time we expect this section will ease student reviews of the chapters.

Throughout the volume, we have one goal: to change the way you think about the world in large and small ways. When you complete this book, your view of how markets work (and fail to work) should be greatly clarified, with an improved ability to predict market outcomes. You will see more clearly the manager's role as one of coping with and responding to the competitive market forces that are ever-present outside the doors of every business, pressing both owners and executives to pay as much attention to the way business organizations and executive and line workers' incentives are structured as to how products are created and developed. We submit that by your thinking through problems with clarity, you will be able to avoid the waste of resources in your personal and work lives that comes from making errors in judgment that are bound to arise when people make decisions from "gut feelings" or simply wrongheaded presumptions about how the world works. After all, Knight was on target when he mused, quoting Mark Twain, "It's not ignorance that does so much damage; it's knowin' so darn much that ain't so."

We began revising this book during the fall of 2008 as the United States and the world slid into the worst economic recession since the Great Depression of the 1930s, with the current downturn set off by a "financial crisis" that left many major banks and investment houses and insurance companies struggling to stay alive because of the bursting of the "housing bubble" and subsequent meltdown of the market for "mortgage-backed securities" and other exotic financial instruments. At this writing, the daily economic news was dismal. Foreclosures on homes and businesses were mounting monthly as the unemployment rate broached 10 percent. With housing and stock prices in freefall, Americans lost in 2008 over $11 trillion, or 18 percent, of their net household wealth (an amount equal to the annual output of Germany, Japan, and the United Kingdom combined) (Kalita 2009). When you complete this book, you will better understand the micro-economic foundations of the crisis (which, when you read these words, will be widely known as the Great Recession) by understanding how investments based on borrowed money can inspire risk taking, with one rule elevated to prominence: the greater the leverage on business ventures, the greater the incentive to undertake risk – and excessive risks. You will understand what is meant by "moral hazard" and how that concept was at the foundation of the housing bubble and the mortgage meltdown. You might also worry about how subsequent government bailouts of failing banks and a range of other companies can inspire incentives on risk taking that can give rise to another (perhaps larger)

moral-hazard problem, which could harbor the potential for an even more severe economic crisis in the future.

When you complete this book, you will also naturally be able to make observations that might, without going through this course of study, escape your attention. For example, most people now understand the entire world, not just the developed nations, faces a growing obesity problem, which is giving rise to a growth in obesity-related health problems that, in turn, are driving up firms' health insurance costs and depriving workers of increases in money wages (Brody 2005; Girion 2005).

You might now be aware of how obesity problems have been caused by long-term reduction in the price of calories (especially those obtained from fast-food restaurants) and the long-term growth in real incomes. Having completed this book, you will be able to easily extend the cause-and-effect change. You will naturally think about how people's weight problems are founded, at least partially, on the growing openness and competitiveness of the world's food markets, which are driving down the cost of food and driving up people's real incomes, with both effects leading to more food consumption – and people's expanded girths and backsides. You will also naturally wonder how managers will change their pay offers for prospective overweight workers, since the health care costs of such workers can be expected to feed into company health insurance costs. Indeed, might not competitive market forces be expected to put downward pressures on the money wages of overweight workers and upward pressures on prospective workers who maintain a healthy weight (and lifestyle)? You also will be naturally inclined to think of how people's excess weight may increase the demand for and market price of gasoline and jet fuel. You also will wonder why airlines that charge thin passengers extra for their checked bags weighing over 50 pounds do not add extra charges on obese passengers.

On completing this book, you will no longer be able to assess the terrorists' attack on the World Trade Center towers on September 11, 2001 as having only political or military consequences. After all, the 9/11 attack immediately hiked many people's perceived risk of flying, as well as causing a substantial lengthening of security lines at airports, with both factors – risk and wait time – increasing the total cost of plane trips. You will naturally understand why economic academic researchers have looked for, and found, that the greater cost of flying from the terrorists' actions should be expected to lead to – and apparently has led to – more people driving to many destinations, the consequence of which should be more automobile accidents, injuries, and deaths (Blalock, Kadiyali, and Simon 2005a, 2005b).

Hence, you will understand with greater facility after completing this book how airport security is truly a management problem with life-and-death consequences: Tighter airport security can have two opposing effects. First, it can increase the cost of flying (by increasing the length of the security lines), which can lead to less flying

and more driving – and more highway accidents, injuries, and deaths. Second, the greater security can reduce the risk of flying and, thus, can increase the demand for flying (and reduce the demand for driving). Which effect is stronger? To date, the evidence suggests that, on balance, raising the alert status at airports from, say, yellow to orange can lead to more driving and more road deaths (Blalock, Kadiyali, and Simon 2005a, 2005b). Managers of the nation's homeland security system must weigh their actions very carefully and, before they raise the alert status, feel reasonably confident that the higher alert status will avert more deaths in the air than will arise on the nation's roads. Hence, we should expect that airport homeland security managers often will not elevate the alert status when the increase in the perceived risk of terrorist attacks is small.

In casual conversations, businesspeople talk as if they *know* many things that few listeners think to challenge:

- "Houses with views sell more quickly than houses without views."
- "Buying a house is a better deal than renting a comparable size apartment because houses carry tax advantages (interest on home mortgages is deductible from taxable incomes)."

On completing this textbook and hearing any such comment, you will be inclined to ask reflectively and in earnest, "How can that be?"

The kind of economic thinking that will be central to this book, and evident in the foregoing discussions of the housing bubble and burst, obesity, airport security, and any assessment of the above statements, springs from an innocuous observation: *people have a basic drive to improve their lot in life because they don't have everything they want and need*. Much of this introductory chapter and the book (and the course), both in theory and in application, is directed at driving home this easily overlooked lesson. Oddly enough, many lessons covered in this book are crystallized in a classic story of what happened in a German prisoner-of-war (POW) camp during the Second World War, as related by a prisoner who happened to be a trained economist.

Part A Theory and public policy applications

The emergence of a market

Economic systems spring from people's drive to improve their welfare. R. A. Radford, an American soldier who was captured and imprisoned during the

A **market** is the process by which buyers and sellers determine what they are willing to buy and sell and on what terms. It is the process by which buyers and sellers decide the prices and quantities of goods that are to be bought and sold.

Second World War, left a vivid account of the primitive **market** for goods and services that grew up in the most unlikely of places, his POW camp (Radford 1945). Because the inmates had few opportunities to produce the things they wanted, they turned to a system of exchange based on the cigarettes, toiletries, chocolate, and other rations distributed to them periodically by the Red Cross.

The Red Cross distributed the supplies equally among the prisoners, but "very soon after capture ... [the prisoners] realized that it was rather undesirable and unnecessary, in view of the limited size and the quality of supplies, to give away or to accept gifts of cigarettes or food. Goodwill developed into trading as a more equitable means of maximizing individual satisfaction" (Radford 1945, 190).

As the weeks went by, trade expanded, and the prices of goods stabilized. A soldier who hoped to receive a high price for his soap found he had to compete with others who also wanted to trade soap. Soon shops emerged, and middlemen began to take advantage of discrepancies in the prices offered in different prisoner bungalows.

For example, a priest, one of the few prisoners allowed to move freely among the prisoner bungalows, found that he could exchange a pack of cigarettes for a pound of cheese in one bungalow, trade the cheese for a pack and a half of cigarettes in a second bungalow, and return home with more cigarettes than he had started with. Although he was acting in his own self-interest (not so much out of religious convictions), he had provided the people in the second bungalow with something they wanted – more cheese than they would otherwise have had. In fact, prices for cheese and cigarettes differed partly because prisoners in different bungalows had different desires and partly because they could not all interact freely. To exploit the discrepancy in prices, the priest moved the camp's store of cheese from the first bungalow, where it was worth less, to the second bungalow, where it was worth more. Everyone involved in the trade benefited from the priest's enterprise.

A few **entrepreneurs** in the camp hoarded cigarettes and used them to buy up the troops' rations shortly after issue, and then sold the rations just before the next issue, at higher prices. Although these entrepreneurs were pursuing their own private interest, like the priest, they were providing a service to the other prisoners. They bought the rations when people wanted to get rid of them and sold them when people were running short. The difference between the low price at which they bought and the high price at which they sold gave them the incentive they needed to make the trades, hold on to the rations, and assume the risk that the price might not rise.

An **entrepreneur** is an enterprising person who discovers potentially profitable opportunities and organizes, directs, and manages productive ventures.

Soon the troops began to use cigarettes as money, quoting prices in packs or fractions of packs. (Only the less desirable brands of cigarettes were used this way; the better brands were smoked.) Because cigarettes were generally acceptable, the soldier who wanted soap no longer had to search out those who might want his jam; he could buy the soap with cigarettes. Even nonsmokers began to accept cigarettes in trade.

This makeshift monetary system adjusted itself to allow for changes in the money supply. On the day the Red Cross distributed new supplies of cigarettes, prices rose, reflecting the influx of new money. After nights spent listening to nearby bombing, when the nervous prisoners had smoked up their holdings of cigarettes, prices fell. Radford saw a form of social order emerging in these spontaneous, voluntary, and completely undirected efforts. Even in this unlikely environment, the human tendency toward mutually advantageous interaction had asserted itself.

Today, markets for numerous new and used products spring up spontaneously in much the same way. At the end of each semester, college students can be found trading books among themselves, or standing in line at the bookstore to resell the books they bought at the beginning of the semester. Garage sales are now common in practically all communities (with eBay effectively being the largest global "garage sale"). Indeed, like the priest in the POW camp, many people go to garage sales to buy what they believe they can resell – at a higher price, of course. "Dollar Stores" have sprung up all over the country for one purpose, to buy the surplus merchandise from manufacturers and to unload it at greatly reduced prices to willing customers. There are even firms that make a market in getting refunds for other firms on late overnight deliveries. Many firms don't think it is worth their time to seek refunds for late deliveries, mainly because they individually don't have many late deliveries (because the overnight delivery firms have an economic incentive to hold the late deliveries in check). However, there are obviously economies to be had from other firms collecting the delivery notices from several firms and sorting the late ones out, with the refunds shared by all concerned.

Gift cards have become a big and profitable business for retailers, partially because many of the cards go unused. Recipients lose them or don't care to shop where the card is redeemable. Plastic Jungle has created an exchange for gift cards, offering recipients $80 (typically) for a $100 gift card from Macy's. It will then put the card up for sale on Plastic Jungle's website for more than $80. Recipients can also donate the unused balances on their cards to charity through DonorsChoose.org (Wortham 2009).

Today, we stand witness to an explosion of a totally new economy on the Internet, which many students reading this book will, like the priest in the POW camp, help to develop. The development of the new economy has obviously brought gains to many firms – most notably Microsoft, Apple, and Amazon – and their customers

who have gained from higher-quality products that have fallen in price through competition. But then the new economy has wreaked havoc for other firms – most notably brick-and-mortar bookstores and a host of major city newspapers – that have lost market share or have closed. The expansion of some industries – regardless of whether they are seen as a part of the "old" or "new" economy – and the contraction of others are interrelated for a reason that lies at the heart of economics: we simply can't do everything.

The economic problem

Our world is not nearly as restrictive as Radford's POW camp, but it is no Garden of Eden either. Most of us are constantly occupied in securing the food, clothing, and shelter we need to exist, to say nothing of those things we would only like to have – a high-definition television, a trip to Tahiti, and a shopping spree. Indeed, if we think seriously about the world around us, we can make two general observations.

Resources are things used in the production of goods and services. There are only so many acres of land, gallons of water, trees, rivers, wind currents, oil and mineral deposits, trained workers, and machines that can be used in any one period to produce the things we need and want.

First, the world is more or less fixed in size and limited in its **resources**. We can plant more trees, find more oil, and increase our stock of human talent, but there are limits on what we can accomplish with the resources at our disposal.

Economists have traditionally grouped resources into four broad categories: land (surface of the world and everything in nature), labor (human and mental efforts devoted to production), capital (also called investment goods), and technology (knowledge of how resources can be productively combined). To this list, some economists would add a fifth category, *entrepreneurial talent*. The entrepreneur is critical to the success of any economy, especially if it relies heavily on markets. Because entrepreneurs discover more effective and profitable ways of organizing resources to produce the goods and services people want, they are often considered a resource in themselves. Entrepreneurs not only create "better mousetraps," they often do nothing more than what the priest did in the POW camp, find novel ways of redistributing the available but scarce resources and goods, to the benefit of everyone.

Second, in contrast to the world's physical limitations, human wants abound. You yourself would probably like to have books, notebooks, pens, and a calculator, perhaps even a computer with a several gigahertz microprocessor and a 200 gigabyte hard-disk drive. A stereo system, a car, more clothes, a plane ticket home, a seat at a big concert or ballgame – you could probably go on for a long time, especially when you realize how many basics, like three good meals a day, you normally take for granted.

In fact, most people want far more than they can ever have. One of the unavoidable conditions of life is the fundamental condition of **scarcity**. Put simply, there isn't enough of everything to go around. Consequently, society must face unavoidable questions: (1) What will be produced? (2) How will those things be produced? (3) Who will be paid what, which converts to who will get the goods produced? (4) Perhaps most important, who will determine how the above questions shall be answered?

Scarcity is the fact that we all cannot have everything we want all the time.

These questions have no easy answers. Most of us spend our lives attempting to come to grips with them on an individual level. In a broader sense, these questions are fundamental not just to the individual but to all the social sciences, economics in particular. Indeed, most economists see the fact of scarcity as the foundation of **economics**. More to the point, economics is a way of *thinking* about how people, individually and collectively in various organizations (including firms), cope with scarcity.

Economics is a method of thinking founded on the study of how people cope with the pressing choice problems associated with scarcity, with all effort directed toward satisfying as many wants as possible.

The problem of allocating resources among competing wants is not as simple as it may first appear. You may think that economics is an examination of how one person, or a small group of people, makes fundamental social choices on resource use. That is not the case. The problem is that we have information about our wants and the resources at our disposal that may be known to no one else. This is a point the late Leonard Read made (Read 1983) in a short article concerning what it takes to produce a product as simple as a pencil, and it also is a point that F. A. Hayek stressed in many of his writings that, ultimately, gained him a Nobel Prize in Economics (Hayek 1945).

In his short article, Read makes the startling observation that no one in the world knows how to make a product as seemingly simple as a pencil, not from scratch at least, but tens of billions of pencils are made each year, all through markets that mysteriously guide the economic decisions of millions of producers and consumers through multiple layers of production. Hayek stressed that the mystery of production (of pencils and numerous other more complicated products) can be understood by viewing the pricing system as a decentralized information system that is critical to coordinating so many people's decisions to employ and redeploy the world's scarce resources to satisfy people's wants. These wants may be known in detail only by the people who have them, which means they can't be known by centralized authorities who might imagine that they can do what markets do, but can't because they can't know and can't absorb the vast information that people have access to individually. Hayek argued that market prices are especially important because they reveal the values of resources and goods and