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# THE ECONOMICS OF MANAGERIAL DECISIONS



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For Chau, our kids and our grandkids  
Roger D. Blair

For Sue's memory and our kids  
Mark B. Rush

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## Solving Teaching and Learning Challenges

Students who enroll in the managerial economics course are typically not economics majors. They take the course with the goal of building skills that will help them become better managers in a variety of business settings, including small and large firms, nonprofit organizations, and public service. In teaching our classes, we often skipped theoretical, abstract coverage in existing books—such as indifference curves, isoquants, the Cobb–Douglas production function, the Rothschild Index, and the Lerner Index—because these topics are not useful to students pursuing careers in management. Based on our teaching experiences and feedback from many reviewers and class testers, we have omitted this sort of theoretical, abstract coverage from our book.

Our decision to omit these topics does not mean that we shortchange economic theory. On the contrary, our book and a wide range of media assets show students how economic theory and concepts—including opportunity cost, marginal analysis, and profit maximization—can provide important insights into real-world managerial challenges such as how to price a product, how many workers to hire, whether to expand production, and how much to spend on advertising. Applications and extensions of the core theory abound. Some of the topics include bundled pricing, vertical integration, resale price maintenance, industry-wide advertising, settlement of legal disputes, present value and investment decisions, auctions and optimal bidding, and optimal patent search. We focus on how to think critically and make decisions in real-world business situations—in other words, how to *apply* economic theory.

### MyLab Economics

MyLab Economics is an online homework, tutorial, and assessment program that delivers technology-enhanced learning in tandem with printed textbooks and etexts. It improves results by helping students quickly grasp concepts and by providing educators with a robust set of tools to easily gauge and address the performance of individuals and classrooms.

The Study Plan provides personalized recommendations for each student, based on his or her ability to master the learning objectives in your course. This allows students to focus their study time by pinpointing the precise areas they need to review, and allowing them to use customized practice and learning aids—such as videos, eText, tutorials, and more—to keep them on track.

First-in-class content is delivered digitally to help every student master critical course concepts. MyLab Economics includes Mini Sims, Auto-Graded Excel Projects, and Digital Interactives to not only help students understand important economic concepts, but also help them learn how to apply these concepts in a variety of ways so they can see how they can use economics long after the last day of class.

MyLab Economics allows for easy and flexible assignment creation, so instructors can assign a variety of assignments tailored to meet their specific course needs.

Visit [www.pearson.com/mylab/economics](http://www.pearson.com/mylab/economics) for more information on Mini Sims, Auto-Graded Excel Projects, Digital Interactives, our LMS integration options, and course management options for any course of any size.

## Chapter Features

The following key features and media assets demonstrate how *The Economics of Managerial Decisions* keeps the spotlight on the student as a future manager.

**Real-world chapter openers and closers:** Each chapter begins with a real-world example that piques student interest and poses a managerial decision-making question. We revisit this question and apply the chapter content to provide an answer at the end. Because students pursue careers in various fields, the chapter openers present challenges faced by a number of different types of organizations, including large and small profit-seeking firms, government organizations, nongovernmental organizations, and nonprofits.

### Managers at the Gates Foundation Decide to Subsidize Antimalarial Drugs

The Bill and Melinda Gates Foundation (Gates Foundation) is the world's largest philanthropic organization, with a trust endowment of nearly \$40 billion. The foundation provides grants for education, medical research, and vaccinations around the world. As of 2015, the foundation had made total grants of \$37 billion. The goal of the Gates Foundation is not maximizing profit. Instead, its goal is to save lives and improve health in developing countries.

In 2010, the Global Fund to Fight AIDS, Tuberculosis and Malaria presented proposals to the Gates Foundation to subsidize antimalarial drugs in Kenya and other nations of sub-Saharan Africa. Although the Gates Foundation provides nearly \$4 billion in grants per year, there are more than \$4 billion worth of competing uses for its resources. Consequently, before the managers accepted these proposals, they needed to determine their expected impact: How many people would these projects save compared to alternative uses of the funds? The managers

realized that lives hinged on their decision, so they wanted to be certain that they were getting the most value for their money.

The proposed subsidy programs would lower the price patients pay for the drugs. As you learned in Chapter 2, according to the law of demand, a decrease in the price of a product increases the quantity demanded. Antimalarial drugs are no exception; if their price falls, more patients will buy them. To make the proper decision about the proposals, however, the foundation's managers needed a more quantitative estimate: Precisely how many additional patients would buy the drugs when their prices were lower?

This chapter explains how to answer this and other questions that require quantitative answers. At the end of the chapter, you will learn how the Gates Foundation's managers could forecast the number of patients they would help by subsidizing the drugs.

**Sources:** Karl Mathiesen, "What Is the Bill and Melinda Gates Foundation?" *The Guardian*, March 16, 2015; Gavin Yamey, Marco Schaferhoff, and Dominic Montagu, "Piloting the Affordable Medicines Facility-Malaria: What Will Success Look Like?" *Bulletin of the World Health Organization*, February 3, 2012, <http://www.who.int/bulletin/volumes/90/6/11-091199/en>; Einstar, "Availability of Subsidized Malaria Drug: Behavioral Foundations of Primary Health Care Policy Advocacy," March 11, 2012, <https://www.who.int/bulletin/volumes/90/6/11-091199/en>.

### Revisiting How Managers at the Gates Foundation Decided to Subsidize Antimalarial Drugs

As noted at the beginning of the chapter, the managers at the Bill and Melinda Gates Foundation want to use their funds in the best way possible. Because wasting their resources means that people could die unnecessarily, managers at the foundation want to fund the most cost-effective programs. To achieve that goal, they must determine the quantitative impact of the proposals presented to them.

In the case of the proposals to subsidize antimalarial drugs in Kenya and other nations, the managers were unlikely to have an estimated demand curve for the drugs in these countries because of data limitations. Instead, they probably relied on estimates of the price elasticity of demand to determine the increase in the quantity of drugs demanded.

The subsidy programs lowered the price of these drugs between 29 percent and 78 percent (the fall in price differed from nation to nation and from drug to drug). Overall, the average decrease in price was roughly 50 percent. Because there are few substitutes, the demand for pharmaceutical drugs is price inelastic. The price elasticity of demand for pharmaceutical drugs for low-income Danish consumers is estimated to be 0.31. Denmark and

Kenya differ in an important respect: Low-income consumers in Kenya have much lower incomes than their counterparts in Denmark. Consequently, the expenditure on drugs in Kenya is a much larger fraction of consumers' income, which means that the price elasticity of demand for drugs in Kenya is larger than in Denmark. If the managers at the Bill and Melinda Gates Foundation estimated that the price elasticity of demand for drugs in Kenya was about twice that in Denmark—say, 0.60—they could then predict that lowering the price of the drugs by 50 percent would increase the quantity demanded by 50 percent  $\times$  0.60 = 30 percent.

The Gates Foundation funded the proposals to subsidize antimalarial drugs. The actual outcome was that the quantity of the drugs demanded in the different nations increased by 20 to 40 percent. The quantitative estimate was right in line with what occurred. Using the price elasticity of demand to estimate the impact of the drug subsidy proposals allowed the managers at the foundation to compare them to competing proposals and to make decisions that saved the maximum number of lives.

**MANAGERIAL APPLICATION**

**3.5 Regression Analysis and Elasticity**

**Learning Objective 3.5** Use regression analysis and the different elasticity measures to make better managerial decisions.

Regression analysis and the different elasticity measures are important to managers because they help quantify decision making. As a manager, you will face situations in which you need to know the exact amount of a change in the price of an input, the precise change in your cost when you change your production, or the actual decrease in quantity demanded when you raise the price of your product. Regression analysis and the application of the different elasticity measures help you answer these and many other important questions.

**Using Regression Analysis**

Using the results from regression analysis is an essential task for managers in various positions. Analysts can use regression analysis for much more than just estimating demand curves. For example, you can use it to estimate how your production changes. We explain this important concept, called *elasticity*, in Chapter 4 and use it in all future chapters. Large companies often use regression analysis to estimate the influence of changes in such factors as personal income (important to auto manufacturers such as General Motors and Honda) or new home sales (important to home improvement stores such as Home Depot and Lowe's).

The ultimate goal of regression analysis is to help you make better decisions. For example, as a manager at the high-end steak restaurant chain *Enlighten*, you can use regression analysis to help you make both immediate and long-term decisions about whether to open a new restaurant. An analyst for your firm has used regression to determine the factors that your chain's steak dinners depends on the following factors:

1. The price of the dinners, measured as dollars per dinner
2. The average income of residents living within the city, measured as dollars per person
3. The unemployment rate within the city, measured as the percentage of the labor force that is unemployed
4. The population within 30 miles of the restaurant

Suppose that Table 3.4 includes the estimated coefficients, *t*-statistics, and *P*-values.<sup>4</sup> The *R*<sup>2</sup> of the regression is 0.72, which indicates that the data reasonably well. In the table, the *t*-statistics for all variables are greater than 1.96, and accordingly all five *P*-values are less than 0.05. Therefore, you are confident that all the variables included in the regression are significant. The coefficient for the price variable is -12.9, which indicates that a \$1 increase in the price of a dinner decreases the quantity demanded by 12.9 dinners per night. Similarly, the coefficient for the average income variable, 0.0073, shows that a \$1,000 increase in average income increases the demand by 7.3 dinners per night.

<sup>4</sup> Often regression results are written with the standard errors in parentheses below the coefficients. For example, the coefficient for the price variable is -12.9 with a standard error of 1.8, which is written as (-12.9) (1.8). The coefficient for the average income variable is 0.0073 with a standard error of 0.0012, which is written as (0.0073) (0.0012).

**Managerial Applications:** Fifteen of the sixteen chapters include a major numbered section devoted to managerial applications of the chapter content.

**Table 3.4 Estimated Demand Function for Steak Dinners**

The table shows the results of a regression of the demand for meals at an upscale steak restaurant, with the estimated coefficients for the price, average income in the city in which the restaurant is located, unemployment rate in the city, and population of the city.

	Coefficient	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Constant	139.2	11.9	11.7	0.00	117.3	163.1
Price of dinner	-12.9	1.8	-7.2	0.00	-9.4	-16.4
Average income	0.0073	0.0012	6.1	0.00	4.9	9.7
Unemployment rate	-10.0	3.1	-3.1	0.00	-3.9	-16.5
Population	0.0005	0.0002	2.5	0.02	0.0001	0.0009

The coefficient for the unemployment rate variable, -10.0, shows that a one percentage point increase in the unemployment rate decreases the demand by -10.0 × 1, or 10 dinners per night. And the coefficient for the population variable, 0.0005, shows that a 1,000-person increase in population increases the demand by 0.0005 × 1,000, or 0.5 dinners per night.

**Short-Run Decisions Using Regression Analysis**

Although a more detailed explanation of how managers determine price must wait until Chapter 6, intuitively it is clear that demand must play a role. The estimated demand function can help determine what price to charge in different cities because you can use it to estimate the quantity of dinners your customers will demand in those cities. Suppose that one of the restaurants is located in a city of 900,000 people, in which average income is \$66,300 and the unemployment rate is 5.9 percent. If you set a price of \$60 per dinner, you can predict that the nightly demand for steak dinners equals

$$Q^d = 139.2 - (12.9 \times \$60) + (0.0073 \times \$66,300) - (10.0 \times 5.9) + (0.0005 \times 900,000)$$

or 240 dinners per night. You can now calculate consumer response to a change in the price. For example, if you raise the price by \$1, then the quantity of dinners demanded decreases by 12.9 per night, to approximately 227 dinners.

**Long-Run Decisions Using Regression Analysis**

You can also use the estimated demand function to forecast the demand for your product. Such forecasts can help you make better decisions. For example, you and the other executives at your steak chain might be deciding whether to open a restaurant in a city of 750,000 residents, with average income of \$60,000 and an unemployment rate of 6.0 percent. Using the estimated demand function in Table 3.4 and a price of \$60 per dinner, you predict demand of about 118 meals per night. Suppose this quantity of sales is too small to be profitable, but you expect rapid growth for the city: In three years, you forecast the city's population will rise to 950,000, average income will increase to \$70,000, and the unemployment rate will fall to 5.8 percent. Three years from now, if you set a price of \$60 per dinner, you forecast the demand will be 293 dinners per night. This quantity of dinners provides support for a plan to open a restaurant in three years. You might start looking for a good location!

Other companies can use an estimated demand function to forecast their future input needs. General Motors, for example, can use an estimated demand function for their automobiles to forecast the quantity of steel it expects to need for next year's production. This information can help its managers make better decisions about the contracts they will negotiate with their suppliers.

Demand and Supply

MY PROGRESS - 11%

**Decision Point: Establishing Base Price Based on Demand: Setting Price**

Now that you've straightened out that administrative issue, you can focus on pricing the Enlighten.

While the Enlighten project was being developed, you hired a market research company to survey consumers to try to find out how much they would be willing to pay for a car with the Enlighten's features. The best estimate of the demand curve for the Enlighten is shown below.

Based on this projected demand curve, at what price would you set the Enlighten if you were going to manufacture 30,000 cars and wanted to sell all of them?

Type values in the space provided below, and click Submit.

**NEW! Mini Sims:** The Managerial Applications are accompanied by Mini Sims that are located in MyLab Economics. Written by David Switzer of St. Cloud State University and Casey DiRienzo of Elon University, these Mini Sims are designed to build students' critical-thinking and decision-making skills through an engaging, active learning experience. Each Mini Sim requires students to make a series of decisions based on a business scenario, which helps them move from memorization to understanding and application. These also allow students to experience how different functional areas of a business interact and how each employee's decisions affect the organization.

**SOLVED PROBLEM** Which Regression to Use?

Your research department gives you the following two estimated demand curves. The estimated demand curve to the left is log-linear, and the estimated demand curve to the right is linear.

a. Which regression do you think has the highest  $R^2$ —the one with the log-linear specification or the one with the linear specification? Explain your answer.

b. Are the predicted quantities from one demand curve *always* closer to the actual quantities than the predicted quantities from the other demand curve?

c. Which estimated demand curve would you use to make your decisions? Why?

**Answer**

a. The log-linear specification is closer to more of the data points than the linear specification. So the  $R^2$  of the log-linear specification exceeds that of the linear specification.

b. Even though the predicted quantities from the log-linear specification are closer to most of the actual quantities, there are a few predicted quantities that are closer when using the linear specification. In particular, for prices of \$67 and \$64, the predicted quantities from the linear specification are closer to the actual quantities than the predictions from the log-linear specification.

c. As a manager, you want to base your decisions on the most accurate information possible. The log-linear specification has the higher  $R^2$ , which means that it does a better job of capturing the variation in the actual quantities than does the linear specification. Consequently, you should use the log-linear specification as the basis for your decisions.

**Solved Problems:** This section-ending feature guides students step by step in solving a managerial problem, set in the context of a situation managers may encounter.

**DECISION SNAPSHOT** Advertising and the Price Elasticity of Demand

Your marketing department estimates that at the current price and quantity, your firm's product has a price elasticity of demand of 1.1. You run an advertising campaign that changes the demand, so that at the current price and quantity the elasticity falls to 0.8. In response to this change, would you raise the price, lower it, or keep it the same? Explain your answer.

**Answer**

You should raise your price. Before the advertising campaign, the demand for your product was elastic, so according to the total revenue test, a price hike would lower your firm's total revenue. After the campaign, the demand became inelastic. You now will be able to increase your firm's profit by raising the price. Because the demand is inelastic, a price hike raises your firm's total revenue. A price hike also decreases the quantity demanded, so your firm produces less, which decreases your costs. Raising revenue and lowering cost unambiguously boost your firm's profit!

**Decision Snapshots:** This feature places readers in the role of managers facing a decision in a range of industries, including large and small for-profit firms, public service organizations, and nonprofits. An answer is included so students can confirm the decision they have made.

**Integrated examples:** We consistently present economic concepts in the context of business scenarios from a range of industries. For example:

- Chapter 4, "Production and Costs," uses dinners at a restaurant to present the concepts of production and costs.
- Chapter 13, "Marketing Decisions: Advertising and Promotion," includes examples of advertising by a private company as well as by an entire industry.
- Chapter 14, "Business Decisions Under Uncertainty," discusses the effect of uncertainty on business decisions using examples including Starbucks and Samsung.

### Decision-Making Using Regression

**CASE STUDY**

**Introduction**

Upper-level managers frequently make important long-run strategic decisions about acquisitions, mergers or store locations, pricing, financing, and so on. Indeed, a major focus of this book is to explain how managers can use economic principles as a guide to these types of decisions. But even the best guide falls without adequate information and analysis. Company analysts often use regression analysis to help them provide quantitative information to trial decision makers. In this chapter, you learn regression analysis can help managers estimate functions. But regression can be used to help answer other questions, such as: How many units of a product will we sell if our store stays extra hour each day? In San Diego a good location a new store? How will consumers react if we do packaging of our product? In this case study, we how regression analysis can help provide information about another important manager whether to remodel the company's stores and how the company prices its products.

**Regression Example**

Regression can help managers make the decision by companies that are debating whether to remodel stores and/or their operations. Companies such as fast-food chains continually struggle to retain the share by remaining fresh and relevant for customers. Most restaurant chains undertake constant remodeling and refining their more permanent offerings. However, upper-level managers decide if their restaurants need renovation. Take, for example, Olive Garden, a division of Darden with more than 1,000 restaurant locations. In 2013, the new president, Dave George, announced that Olive would remodel and modernize its interiors.

Suppose that you work in the research department for a similar restaurant chain. Your chain has a president, and your president also is considering a remodeling for your restaurants. Remodeling a store, so the new president asks your research department if the expense is justified by the increased in the chain's profit.

To obtain the information needed to make a decision, a firm often remodels a few stores

uses regression analysis to compare the profitability of the remodeled stores to that of stores that are not remodeled.

- Total cost.** The higher the total cost, the lower the profit. So your team should include independent variables in the regression that affect a restaurant's cost. For example, your group might settle upon two variables: (1) the rent paid for the restaurant, which will vary among locations, and (2) the legal minimum wage employees receive, which will also vary among locations. When these variables are included in the regression, the estimated coefficients for both of them are expected to be negative—a higher rent and a higher minimum wage both increase the restaurant's cost and thereby reduce its profit.

In addition to the factors that affect total revenue and total cost, the regression needs to take account of whether the restaurant was remodeled according to the past president's ideas, or not remodeled at all. To do so, your team needs to include indicator variables (colloquially called "dummy variables") as additional independent variables. Indicator variables equal 1 when a condition is met and equal 0 otherwise. For example, one indicator variable should equal 1 if the restaurant had previously been remodeled and 0 if it had not been remodeled. Call this variable OLDREMODEL. For the purposes of determining the profitability of the new style of remodeling, the crucial indicator variable measures whether the location has been remodeled according to the new scheme. This variable equals 1 for restaurants that are newly remodeled and 0 for the other restaurants. Call this variable NEWREMODEL. The estimated coefficient of each indicator variable measures the effect of whatever condition is being met.<sup>3</sup> That means that the coefficient for the variable NEWREMODEL is key because when the variable equals 1, the restaurant has been newly remodeled along the lines suggested by the new president. The change in profit for a restaurant going from no remodeling at all to the new remodeling equals the estimated coefficient of NEWREMODEL—call it  $\beta$ —multiplied by the value of

<sup>3</sup> More specifically, the NEWREMODEL indicator variable's coefficient,  $\beta$ , measures the profit from the new remodeling relative to whichever condition has not been given an indicator variable. In the example at hand,  $\beta$  measures the restaurant's change in profit from being newly remodeled compared to not being remodeled at all.

**Case studies:** Four chapters end with case studies that illustrate how managers used the topics in the chapter to approach or solve a business challenge.

The case studies conclude with open-ended questions about a similar situation that instructors can use for class discussion or assign as homework. Here are the four cases:

- Chapter 3 Case Study: Decision Making Using Regression
- Chapter 9 Case Study: Student Athletes and the NCAA
- Chapter 14 Case Study: Decision Making with Final Offer Arbitration
- Chapter 16 Case Study: Analyzing Predatory Pricing as an Investment

**Assessment:** End-of-chapter Questions and Problems are grouped by the titles of the major numbered sections and the accompanying learning objectives so that instructors can easily assign problems based on those objectives, and students can efficiently review material that they find difficult. Students can complete these problems and questions on MyLab Economics, where they receive tutorial help, instant feedback, and assistance with incorrect responses.

**NEW! MyLab Economics Auto-Graded Excel Projects:** Excel is a software application that managers in all industries and all functional areas, such as marketing, sales, and finance, use to analyze data and make decisions such as what to produce, how much to produce, and how to price products. Mandie Weinandt of the University of South Dakota created Excel projects for each chapter based on the content of the chapter. Kathryn Nantz of Fairfield University accuracy checked the projects and solutions. The projects are accessible in MyLab Economics, where instructors can seamlessly integrate Excel content into their courses without having

**Questions and Problems**

All exercises are available on MyEconLab; solutions to even-numbered Questions and Problems appear in the back of this book.

**3.1 Regression: Estimating Demand**

**Learning Objective 3.1** Explain the basics of regression analysis.

- 1.1 In the context of regression analysis, define the terms dependent variable, independent variable, and error term.
- 1.2 Why do we use regression analysis?
- 1.3 Explain the difference between a regression line and a regression curve.

product:  $Q^d = 500.6 - 11.4P + 0.5INCOME$ , where  $P$  is the price of your product and INCOME is average income.

**3.3 Limitations of Regression Analysis**

**Learning Objective 3.3** Describe the limitations of regression analysis and how they affect its use by managers.

- 3.1 You are a manager at a company similar to KB Home, one of the largest home builders in the United States. You hired a consulting firm to estimate the demand for your homes. The consultants' report used regression analysis to estimate the demand. They assumed that the demand function is  $Q = 100 - 2P + 0.5I$ , where  $Q$  is the quantity demanded,  $P$  is the price of the house, and  $I$  is the average income. The  $R^2$  is 0.24.
  - 3.2 Your research assistant asks you to estimate the demand for your homes. You have the following data:
 

Return Price	Returns Completed
1	70
2	70
3	70
4	75

4.2 Complete the following table.

Elasticity	Percentage Change in Price	Percentage Change in Quantity Demanded
a.	8 percent	12 percent
b.	1.4	6 percent
c.	0.6	6 percent
d.	1.2	6 percent

**MyLab Economics Auto-Graded Excel Projects**

- 3.1 Bret's Accounting & Tax Services is a small but locally well-known accounting firm in Sioux City, IA, that completes taxes for individuals. Every year firms like Bret's decide how much they will charge to complete and file an individual tax return. This price determines how many tax returns firms complete each year.
  - a. Graph the data using a scatter plot. Using the Insert Trendline function in Excel, determine whether you should use linear or log-linear regression. (Place the graph beneath the data; be sure to label both axes.)
  - b. Using Excel's Regression Analysis function, run a regression, and answer the following questions about your output. (Place your regression results beneath the graph from part a.)
  - c. What is your estimated demand function? (Round the estimated coefficients to two decimal places.)
  - d. What is the  $R^2$ ? (Report this as a percentage; round to two decimal places.)
  - e. Based on the  $R^2$ , do you think this regression can be used for analysis?
  - f. How many returns do you expect to be completed if the firm charges \$85 per return?
  - g. What is the elasticity at this point on the demand curve?
  - h. At this price, are you on the elastic, inelastic, or unit-elastic portion of your demand curve?
  - i. Do you recommend an increase, a decrease, or no change in the price with this information?
- 3.2 Hawaiian Shaved Ice, in Newton Grove, NC, sells shaved ice and snow cone equipment and supplies for individual and commercial use. Suppose that you purchased a commercial-grade machine and supplies from a company similar to Hawaiian Shaved Ice to open a shaved ice stand on a beach busy with tourists. Because this is a new business, you've tried a number of prices and run a few specials to try to attract customers. As such, you have 20 days' worth of data to analyze and help you set a more permanent price.

Smoothie Price	Smoothie Quantity
2	4.08
3	3.61
4	3.5
5	2.46
6	1.69
7	5.33
8	2.33
9	3.14
10	4.33
11	4.72
12	2.57
13	2.58
14	3.62
15	4.78
16	4.24
17	2.19
18	3.86
19	4.14



to manually grade spreadsheets. Students simply download a spreadsheet, work live on a problem in Excel, and then upload that file back into MyLab Economics, where they receive personalized, detailed feedback in the form of reports that pinpoint where they went wrong on any step of the problem.

**Optional calculus appendices:** The mathematics we use in the chapters is algebra and geometry because this level is appropriate for managers. For those who want to delve more deeply into the math, appendices showing calculus derivations of the important results accompany 9 of the 16 chapters (Chapters 1, 3, 4, 5, 6, 7, 10, 12, and 13). Each appendix includes five homework problems that use calculus.

**Decision Point: Establishing Base Price Based on Demand: Setting Price**

Now that you've straightened out that administrative issue, you can focus on pricing the Enlighten.

While the Enlighten project was being developed, you hired a market research company to survey consumers to try to find out how much they would be willing to pay for a car with the Enlighten's features. The best estimate of the demand curve for the Enlighten is shown below.

Based on this projected demand curve, at what price would you set the Enlighten if you were going to manufacture 30,000 cars and wanted to sell all of them?

Type values in the space provided below, and click Submit.

## Developing Career Skills

Students who want to succeed in a rapidly changing job market should be aware of their career options and how to go about developing a variety of skills. As featured on the previous pages, the text focuses on developing these skills in various features:

- *Real-world chapter openers and closers* show how managers from a variety of business organizations apply economic concepts to make decisions.
- *Solved Problems* and *Decision Snapshots* help students build their analytical and critical-thinking skills.
- *Mini Sims* related to the Managerial Application at the end of each chapter, except Chapter 1, help build students' critical-thinking and decision-making skills through an engaging, active learning experience. The screen on the left shows one decision-point step in the Mini Sim that accompanies Chapter 2, "Demand and Supply."

- ✕ *Auto-Graded Excel Projects* at the end of each chapter help students build their skill using Excel, a software application that they will need to use as managers regardless of the industry or functional area in which they choose to work.

## Table of Contents Overview

Chapters 1 through 6 are core chapters. An instructor can cover these chapters in order and then proceed either to Chapters 7 and 8 or to Chapter 10. The chapters in Part 3 (Chapters 10–16) can be covered in any order. For those who want to delve more deeply into the mathematics, appendices showing calculus derivations of the important results accompany 9 of the 16 chapters (Chapters 1, 3, 4, 5, 6, 7, 10, 12, and 13). An appendix on how to write a business plan and an additional chapter on franchising decisions are located at [www.pearson.com/mylab/economics](http://www.pearson.com/mylab/economics).

### Part 1. ECONOMIC FOUNDATIONS

Chapter 1: Managerial Economics and Decision Making

Chapter 2: Demand and Supply

Chapter 3: Measuring and Using Demand

### Part 2. MARKET STRUCTURES AND MANAGERIAL DECISIONS

Chapter 4: Production and Costs

Chapter 5: Perfect Competition

Chapter 6: Monopoly and Monopolistic Competition  
 Chapter 7: Cartels and Oligopoly  
 Chapter 8: Game Theory and Oligopoly  
 Chapter 9: A Manager's Guide to Antitrust Policy

### Part 3. MANAGERIAL DECISIONS

Chapter 10: Advanced Pricing Decisions  
 Chapter 11: Decisions About Vertical Integration and Distribution  
 Chapter 12: Decisions About Production, Products, and Location  
 Chapter 13: Marketing Decisions: Advertising and Promotion  
 Chapter 14: Business Decisions Under Uncertainty  
 Chapter 15: Managerial Decisions About Information  
 Chapter 16: Using Present Value to Make Multiperiod Managerial Decisions

The following content is posted on [www.pearson.com/mylab/economics](http://www.pearson.com/mylab/economics):

Web Appendix: The Business Plan  
 Web Chapter: Franchising Decisions

## Instructor Teaching Resources

The following supplements are available to instructors for download at [www.pearsonhighered.com](http://www.pearsonhighered.com).

The **Instructor's Manual** was prepared by David Switzer of St. Cloud State University and includes the following features:

- Solutions to all end-of-chapter and appendix questions and problems, which the authors prepared and then revised based on an accuracy review by two other professors.
- Chapter summaries
- Lists of learning objectives
- Chapter outlines, section summaries, and key term definitions
- Extra examples
- Teaching tips

The **Test Bank** was prepared by Casey DiRienzo of Elon University and includes over 2,400 questions, with approximately 125 multiple-choice questions and 25 true/false questions *per chapter*. Between 5 and 10 questions per chapter include a graph and ask students to analyze that graph. The questions are organized by learning objective, and each question has the following annotations:

- Topic
- Skill
- AACSB learning standard (Written and Oral Communication; Ethical Understanding and Reasoning; Analytical Thinking; Information Technology; Interpersonal Relations and Teamwork; Diverse and Multicultural Work; Reflective Thinking; Application of Knowledge)

The **PowerPoint Presentation** was prepared by Julia Frankland of Malone University and includes the following features:

- All the graphs, tables, and equations in each chapter
- Section summaries for all chapters
- Lecture notes

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