Managerial Economics

Chapter 1

Introduction

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Introduction

- Economics
  - It is the study of decision-making in the presence of scarcity
- Managerial Economics
  - It is the application of economic analysis to managerial decision-making
- Managers
  - Make economic decisions by allocating the scarce resources at their disposal
  - Must understand the behavior of consumers, workers, other managers, and governments to make good decisions

1.1 Managerial Decision Making

- Decisions Made by Managers
  - A production manager's objective is normally to achieve a production target at the lowest possible cost. Of course, the manager has to use the existing factory.
  - Human resource managers design compensation systems to encourage employees to work hard. Of course, the manager has limited resources and employees are already in the firm.
  - A marketing manager must allocate an advertising budget to promote the product most effectively. Of course, the manager has a limited marketing budget.

- Decisions Made by the Firm’s Top Manager
  - The firm’s top manager must coordinate and direct all these activities. Could you think on this manager’s constraints?
- Profit = Revenue - Costs
  - The job of the chief executive officer (CEO), is to focus on the bottom line: maximizing profit.
  - The CEO is also concerned with how a firm is positioned in a market relative to its rivals.
  - However, it is critical the CEO focuses on maximizing the firm’s profit rather than beating a rival.
- Maximizing Profit Requires Coordination
  - The CEO orders the production manager to minimize the cost of producing the particular good or service.
  - The CEO asks the market research manager to determine how many units can be sold at any given price, and so forth.
  - It would be a major coordination failure if the marketing department set up a system of pricing and advertising based on selling 8,000 units a year, while the production department managed to produce only 2,000.
- Markets
  - A market is an exchange mechanism that allows buyers to trade with sellers.
  - Most interaction and economic decisions are done in markets.
- Firms, Consumers, and Government Policies
  - The primary participants in a market are firms who supply the product and consumers who buy it. But, government policies such as taxes also play an important role in the operation of markets.
- Strategy

- A strategy is a battle plan that specifies the actions or moves that the manager will make to maximize the firm's profit when interacting with a small number of rival firms.

- Game Theory
  - One tool that is helpful in understanding and developing such strategies is game theory, which we use in several chapters.

1.2 Economic Models

- Models in Different Sciences
  - A model is a description of the relationship between two or more variables.
  - Meteorologists use models to predict weather conditions.
  - Medical researchers use models to describe and predict the effect of medications on diseases.
  - Astronomers use models to describe and predict the movement of comets and meteors.
  - Economists use economic models to explain how managers and other decision-makers make decisions and to explain the resulting market outcomes.
- Models, Economists and Managers
  - Managers use models to consider hypothetical situations—to use a what-if analysis —such as "What would happen if we raised our prices by 10%?" or "Would profit rise if we phased out one of our product lines?"
  - Models help managers predict answers to what-if questions and to use those answers to make good decisions.
- Simplifying Assumptions
  - The real economic world is too complex to analyze fully. To understand it and be able to make valid predictions, economic models include only the essential issues, leaving aside complications that might disguise those essential elements.

- Economic models can be presented in words, using graphs or mathematics. Regardless of how the model is described, an economic model is a simplification of reality that contains only its most important features.

- Mini-Case: Income Threshold Model
  - To explain car purchasing behavior in China we <u>assume in this model</u> that only income has an important effect on the decision to buy cars. Other factors are ignored, such as the color of cars. If this assumption is correct, we make our analysis of the auto market simpler without losing important details. If the ignored issues are important, our predictions may be inaccurate.
  - Part of the skill in using economic models lies in selecting a model that is appropriate for the task at hand.
- Testing Theories
  - Economists test theories by checking whether the theory's predictions are correct.
  - One model might argue that prices will go up next quarter. Another, using a different theory, may contend that prices will fall. Which one is correct?
  - Use empirical evidence (real facts) to find out which prediction is correct.
- Good Models
  - A good model makes sharp, clear predictions that are consistent with reality. A good model is one that is a close enough approximation to be useful.
  - It is not helpful to have simple models that make incorrect predictions or complex models that make untestable predictions. The skill is to have a model simple enough to make clear predictions but realistic enough to be accurate.
  - A theory that says "If the price of a product rises, the quantity of the product demanded falls" provides a clear prediction.
  - A theory that says "Human behavior depends on tastes, and tastes change randomly at random intervals" is not very useful because it does not lead to

testable predictions and provides little explanation of the choices people make.

- Positive Statement
  - A testable hypothesis about matters of fact such as cause and effect relationships
  - A positive statement concerns what <u>is</u> or what <u>will</u> happen and <u>describes</u> reality.
  - “If we double the amount of sugar in this soft drink we will significantly increase sales to children.”
  - <u>Positive</u> does not mean that we are certain about the truth of our statement; it indicates only that we can test the truth of the statement.
  - Good economists and good managers emphasize positive analysis.
- Normative Statement
  - A belief about whether something is good or bad
  - A normative statement concerns what somebody believes *should* happen and *prescribes* a course of action.
  - “The government should tax soft drinks so that people will not consume so much sugar.”
  - A normative statement cannot be tested because a value judgment cannot be refuted by evidence.