Managerial Economics

Chapter 1

Introduction

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- Introduction to Managerial Economics
- Structure of Decision Models
- Profit's Role
- Agency Problems & Solutions
- Not-for-Profit Organizations
- Why Corporations Have Succeeded Over Other Organizational Forms

Managerial Economics

An Applied Course

Integrates the use of economics, math, and financial analysis to make good business decisions

TOPICS

- **Demand and Supply Analysis**

  and how to estimated elasticities

- **Production and Cost Analysis**

  and how to estimate relationships

- **Monopoly, Competition, and Oligopolies**

  and how to make good pricing decisions

Economic Decisions

CONSTRAINTS

GOALS & OBJECTIVES

INFORMATION

- Constraints -- limitations of time, energy, money, productive capacity, regulatory climate, *etc.*
- Information -- forecasting, relationships, expectations, possible retaliation by rivals, *etc.*

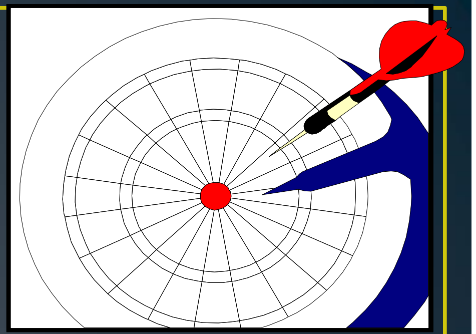
Objectives of the Firm

- Profit maximization
- Shareholder wealth

The value of the firm $=V_0$ (shares outstanding), is the present value of expected future profits (π) or cash flows, discounted at the shareholders required rate of return, k_e, ignoring taxes.

$$V_0 \text{ (shares outstanding)} = \sum_{t=1}^{\infty} \pi_t / (1+k_e)^t$$

Goals or Objectives



- **Maximize Present Value of Profits =**

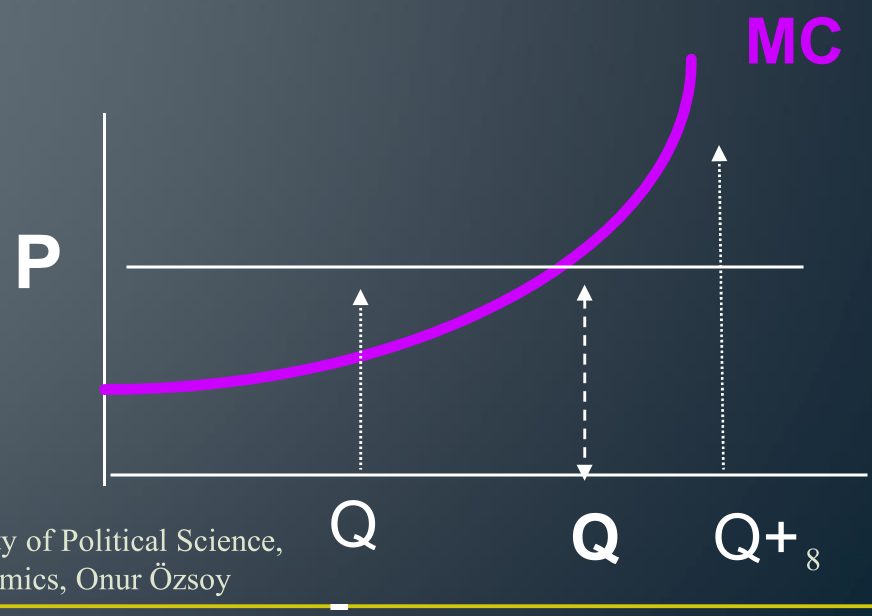
$$\sum_{t=1}^{N} (Revenue_t - Costs_t) / (1+k_e)^t$$

- **Decision Model Language:**
  - **Objective Function** = sets up the goals & the constraints
  - **Decision Rule** = shows what is optimal

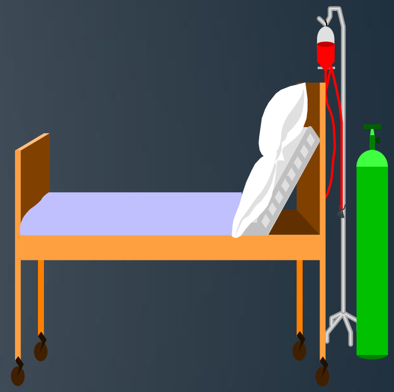
EXAMPLE: MAX Π { A, B }

- **simple objective function, simple decision rule**
  - **Pick A if profit {A} > profit {B}, otherwise pick B.**
- **Max Profit { Q} for a competitive firm**
  - **produce where P = MC**

$$\text{Profit} = TR - TC = P \bullet Q - TC$$



- To make good economic decisions, managers need to be able to forecast & estimate relationships
- Will be forecasting demand
  - applies to for-profit corporations
  - non-profit organizations
    - Hospital Administrators -- # patients
    - University Administrator -- enrollment



- Regression analysis, time series methods, and qualitative forecasting methods used for forecasting

The Role of Profits

- **Economic Cost** (or opportunity cost) is the highest valued benefit that must be sacrificed as a result of choosing an alternative.
- **Economic profit** is the difference between revenues and total economic cost (including the economic or opportunity cost of owner supplied resources such as time and capital.

Theories of Why Profit Varies Across Industries

- **RISK-BEARING THEORY**
- **DYNAMIC EQUILIBRIUM (*or FRICTIONAL*) THEORY OF PROFIT**
- **MONOPOLY THEORY OF PROFIT**
- **INNOVATION THEORY OF PROFIT**
- **MANAGERIAL EFFICIENCY THEORY OF PROFIT**

Agency Problems

- Modern corporations allow managers to have no, or limited, ownership participation in the profitability of the firm.
- Shareholders may want profits, but managers may wish to relax.
- The shareholders are principals, whereas the managers are agents.
  - Conflicting motivations between these groups are called agency problems.

- **The Principal-Agent Problem**
  - Shareholders (principals) want profit
  - Managers (agents) want leisure & security
- **Examples**
  - KKR's takeover of RJR Nabisco to refocus on wealth-maximization
  - The LBO by O.M. Scott from ITT improved Scott's performance

Solutions to Agency Problems

- **Compensation** as incentive
- Extending to all workers stock options, bonuses, and grants of stock
  - Help make workers act as owners of firm
- Incentives to help the company, because that improves the value of stock options and bonuses.

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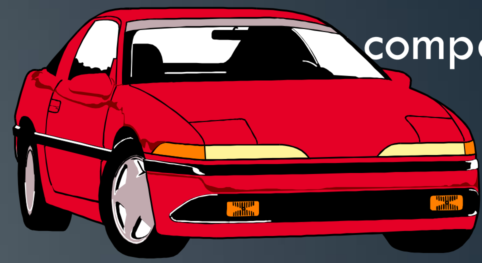
What Went Right? What Went Wrong?

- Saturn Corporation
  - Different kind of company in 1991



  - No-haggle pricing
  - Sales were above expectations
- But, margin of only $400 per car to GM
  - GM earned only 3% on capital
  - Saturn customers wanted bigger Saturns rather than trade up to Buick, as GM hoped.
  - When the dollar appreciated, Japanese firms could price their cars more competitively.

Shareholder Wealth Maximization: Conditions

- **COMPLETE MARKETS** - *liquid markets for firm's inputs and by-products (including polluting by-products).*
- **NO SIGNIFICANT ASYMMETRIC INFORMATION** - *buyers and sellers all know the same things.*
- **KNOWN RECONTRACTING COSTS** *future input costs are part of the present value of expected cash flows.*

Goals in the Public Sector and the Not-For-Profit (NFP) Enterprise

Instead of profit, NFP organizations may have as their goals:

1. Maximization of the quantity of output, subject to a breakeven constraint.
2. Maximization of the utility (happiness) of NFP administrators.
3. Maximization of cash flows.
4. Maximization of the utility of contributors to the NFP organization.

- **Which goal a NFP manager selects affects decisions made.**
  - A food shelter manager may decide to maximize the utility of contributors by selecting only "healthy foods"
- **Public sector managers are performance monitored.**
  - **V.A. hospital administrators are rewarded by reducing the cost per bed over a year. Hence, they become efficient with respect to costs.**
  - **The "friendliness" of the hospital staff is harder to measure, so friendliness will tend not be a high priority of the public sector manager.**