

# Introduction To Managerial Economics

***What do Telus, Global, B.C. Hydro and Island Farms have in common?***



Just like thousands of other Canadian firms, they have used the principles of managerial economics to improve their profitability.

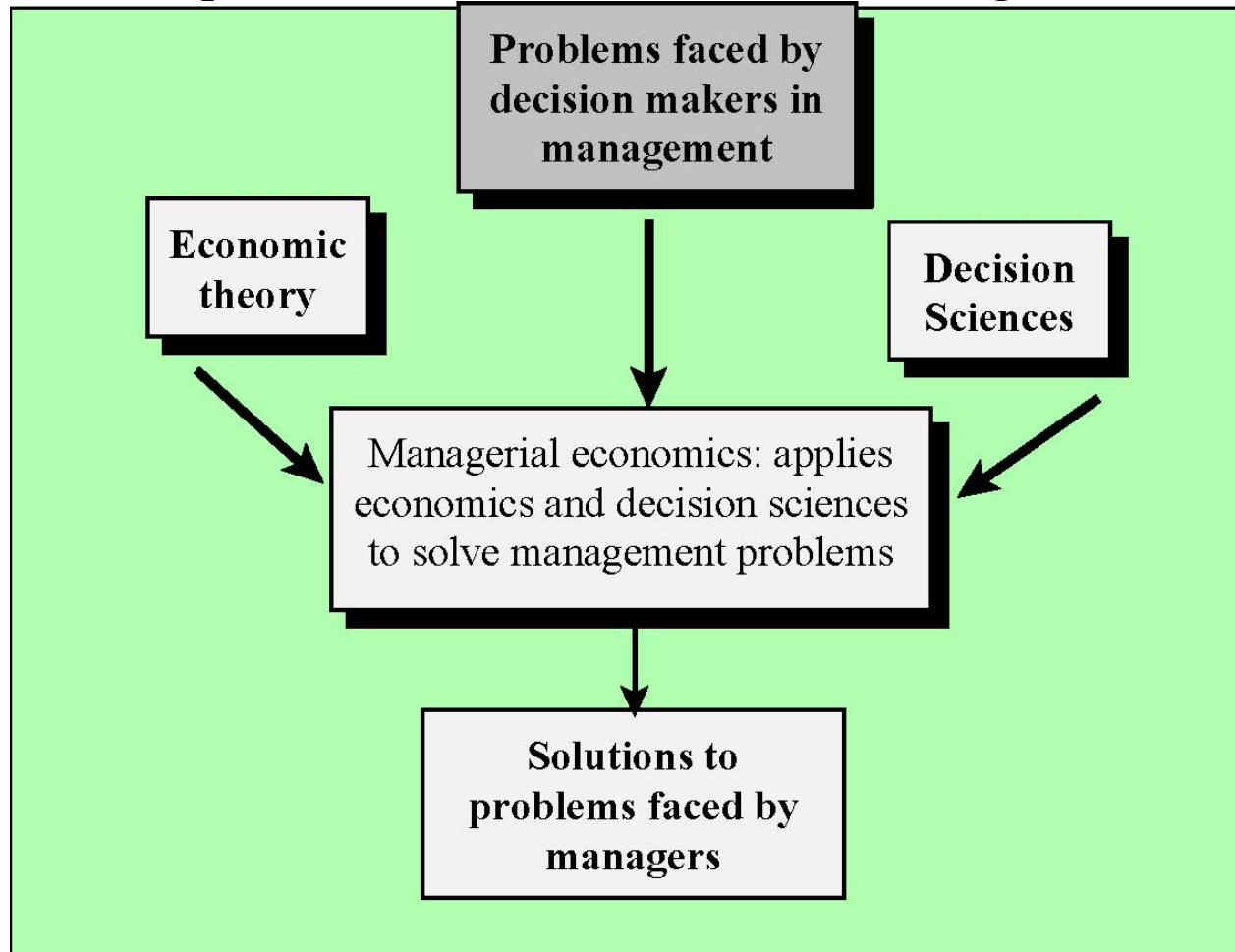
Managerial economics is concerned with the ways in which business executives and other policy makers **should** make decisions.

### **Managerial Economics:**

- draws on economic analysis for such concepts as cost, demand, profit and competition.
- attempts to bridge the gap between **economic theory** and the day-to-day decision making process of managers.
- provides a set of **tools** and approaches for managerial policymaking.

## Relationship Between Managerial Economics and Other Disciplines

How is managerial economics related to other disciplines?



*Managerial economics provides a link between economic theory and the decision sciences in the analysis of managerial decision making.*

**Traditional economic theory consists of:**

(i) **microeconomics**: ( unlimited wants / limited resources)  
(efficient resource allocation)

- ◆ individual consumers
- ◆ individual firms
- ◆ individual industries

(ii) **macroeconomics**: (aggregates)

- total output
- income
- employment
- inflation

Such theory contains a large amount of material that is drawn upon for managerial decision making.

However, managerial economics is actually quite **different** from microeconomics.

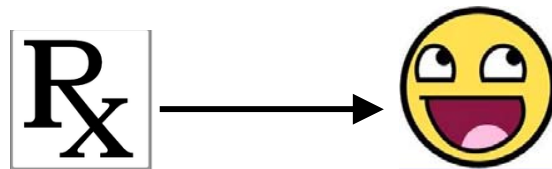
The role of microeconomics is employed relatively more so than macroeconomics for managerial decision making.



- ❖ **Microeconomics** attempts to describe how the economy operates.
- ❖ **Managerial economics** attempts to establish how the economy **should** operate.

That is, managerial economics attempts to establish and use techniques to achieve **specified** goals.

- Microeconomics is “**descriptive**”
- Managerial economics “**prescriptive**”



 The **decision sciences** are also used in managerial economics.

The decision sciences provide ways to analyze the impact of alternative courses of action.

Optimization techniques, such as differential calculus and mathematical programming, are used to determine the optimal course of action for decision makers.

Using econometric techniques (i.e. applied statistics), decision makers can develop models that estimate relationships between relevant variables and that forecast their values.

✿ Managerial economics plays two fundamental roles in the study of **business administration**:

- (1) provides ‘tools’ that can be applied in areas of marketing, finance and production.
- (2) integration of marketing, finance and production in order to view the “total picture” to fulfill the objectives of the firm.

✿ Finally, keep in mind that managerial economics plays a part in both business and **non-business** organizations.

Management of non-business operations still require efficient allocation of resources.



The process of decision making can be divided into five basic steps:

**Step 1: Establish the Objectives**: Management should determine the firm's objectives.  
Example: Increase company's profit by expanding into the global market.

**Step 2: Define the Problem** It is very important to determine exactly what the problem is.

Example: Too much international competition. Regulations in foreign market establishing potential safety restrictions.

**Step 3: Identify Possible Solutions**

Once the problem is defined, management should try to create possible solutions.

Example: Purchase an established firm in the market you are trying to enter that would be in direct competition. (Merger)

**Step 4: Select the Best Possible Solution**

Taking your set of alternative possible solutions, you must evaluate each one and determine which is best, conditional on the objectives of the firm.

**Step 5: Implement the Decision**

The solution must be implemented properly in order to be effective.

## The Theory of the Firm

- In order to apply managerial economics to business management we need a theory describing how firms behave and what their objectives are.
- Since firms vary enormously, any model will be a simplification of reality.
- But, it is possible to create a model that includes the most important elements and neglects the irrelevant factors in order to present a picture that illustrates the manager's problem.
- The basic model originates from what we refer to as the **theory of the firm**.

The theory assumes that the firm tries to maximize its wealth or value.

Value can be defined in many ways, but for now we will define it as the present value of its expected future cash flows or profit.

P.V. Future Profits

$$\sum_{t=1}^n \frac{\Pi_t}{(1+i)^t} = \sum_{t=1}^n \frac{TR_t - TC_t}{(1+i)^t}$$

TC=total cost

TR=total revenue

t goes from 1 (next year) to n, the last year in the planning horizon

i= interest rate

$\pi_t$ =expected profit in year t

Although we assume that firms want to maximize their value, this does not mean that a firm has complete control over its value and can set it at any level it chooses. Firms are faced with many constraints on what they can achieve.



## Factors that Constrain the Ability of a Firm to Increase Its Value:

- 1) Amount of certain types of **inputs** may be limited (especially in the short-run).

Example: Labour shortage Specialized equipment

- 2) **Legal or contractual** constraints

Example: paying taxes minimum wage laws forcing the firm to pay higher wages

Because there are constraints on a firm's actions, we employ constrained optimization techniques, such as linear programming to analyze a firm's problems.

## **Reasons For the Existence of Profit:**

There are **three** central reasons why economic profit exists:

- 1) Innovation
- 2) Risk
- 3) Monopoly power

In a perfectly competitive market economic, profit will be zero.

Everyone has perfect information and all technology is shared. In the real world, this does not occur and new **innovations** occur continuously. Profits are the reward for innovation.

**Risk** also exists in the real world and profit is the reward for risk taking. To motivate people to take the risks involved in owning a firm, a profit must be paid to them.

Finally, profits are made because markets are **not** perfectly competitive. Under perfect competition, long run economic profits tend towards zero.

But if the industry is a **monopoly** or an oligopoly, profits may exist in the long run.

**So, having described the nature of managerial economics, we turn now to an overview of the basic principles of calculus!**

