The Firm and Market Structures

1. INTRODUCTION

Topics covered in this module include:

- **Demand Concepts**: Own-price, cross-price, and income elasticity.
- **Supply Concepts**: labor supply, labor product, labor cost, and income.
- **Market Structure:** Different market structures are also covered, such as monopolies, oligopolies, and perfect competition.

The concepts covered in the module are used to analyze the profitability of firms in different market structures.

2. PROFIT MAXIMIZATION: PRODUCTION BREAKEVEN, SHUTDOWN AND ECONOMIES OF SCALE

Revenue under conditions of Perfect & Imperfect Competition

Under perfect competition:

- Demand curve is horizontal.
- TR curve is linear with slope equal to price per unit.

Under imperfect competition:

- Demand curve is –vely sloped.
- TR curve rises in the range where MR is +ve & demand is elastic & then falls in the range where MR is –ve & demand is inelastic.

Profit-maximization, Breakeven & Shutdown Points of Production

Firm maximizes profit by producing Q where P = SMC & SMC is rising.

Breakeven Analysis

B.E.P →TR = TC, a point where a firm earns normal economic profit.

The Shutdown Decision

- Sunk costs must be ignored to continue to operate in the SR.
- A firm, covering its variable cost, should operate in the SR.
- Shutdown point→ min. AVC.
- Breakeven point:→min.ATC.

Rev. cost relation	SR Decision	LR Decision
TR = TC	Stay in mkt.	Stay in mkt.
TR = TVC but < TC	Stay in mkt.	Exit mkt.
TR < TVC	Shutdown production	Exit mkt.

Understanding Economies & Diseconomies of Scale

- **Short-run**: time period during which *at least one* of the factors of production is variable.
- **Long-run:** time period during which all factors of production are variable.

Short & Long run Cost Curves

- **SR avg. total cost curve (SATC):** Avg. total cost curve when some costs are fixed.
- **LR avg. total cost curve (LATC):** Avg. total cost curve when no cost is fixed.

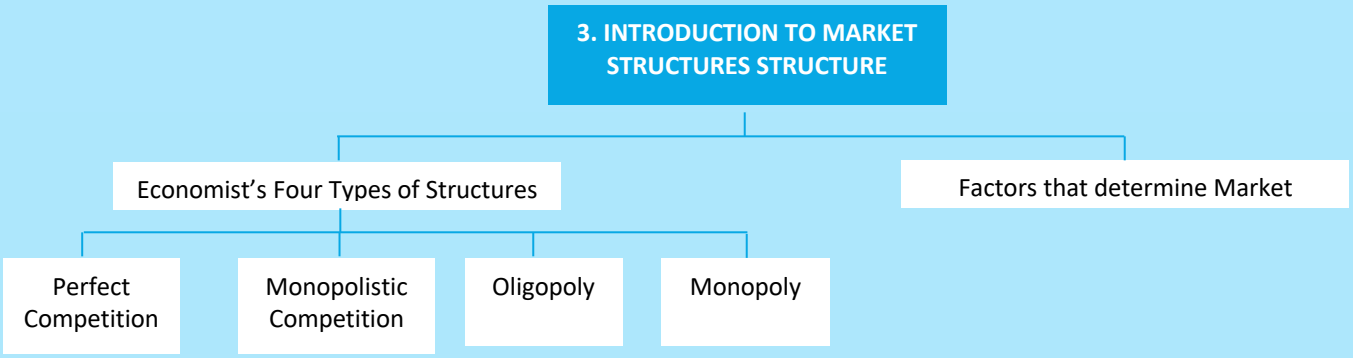
Defining Economies & Diseconomies of Scale

Economies of scale:

- ↓ in per unit cost by ↑ in production.
- LRAC curve with a –ve slope.

Diseconomies of scale:

- ↑ in per unit cost by ↑ in production.
- LRAC curve with a +ve slope.



Market Structure	Number of Sellers	Degree of Product Differentiation	Barriers to Entry	Pricing Power of Firm	Non-Price Competition	Firm's Demand	Non-price competition	Allocative/ productive efficiency	Long-run profits
Perfect Competition	Many	Homogeneous/Standardized	Very Low	None	None	Perfectly elastic	None	Highly efficient	0
Monopolistic Competition	Many	Differentiated	Low	Some	Advertising and Product Differentiation	Elastic over some price ranges and inelastic over others	Considerable	Less efficient than perfect competition.	0
Oligopoly	Few	Homogeneous/Standardized	High	Some or Considerable	Advertising and Product Differentiation	Kinked demand	Considerable for a differentiated oligopoly.	Less efficient than perfect competition.	Positive
Monopoly	One	Unique Product	Very High	Considerable	Advertising	Inelastic	Somewhat	Inefficient	High

4. MONOPOLISTIC COMPETITION

Characteristics:
i) Many Buyers & sellers
ii) Differentiated Products
iii) Low cost Entry & Exit
iv) Firms have some control over

Demand Analysis in Monopolistically Competitive Markets

- Monopolistic Competition firm has a downward sloping demand curve due to product differentiation
- Price > MC
- Price = ATC → Long-run
- MR < Price

Monopolistically Competitive Firm in the Short Run:

- Profit is maximized where MR = MC
- No well defined supply schedule
- Output level is determined at a point

SR-Economic Profit encourages new firm to enter the market resulting in:

- ↑ number of products offered.
- Reduction in demand faced by firms already in the market
- Incumbent firm's demand curve shift to the left.

SR-Economics losses encourage firms to exit the market:

i) Decrease in number of products offered
ii) Increase in demand faced by remaining products.
iii) Shift the remaining firms' demand curve to the right
iv) Increase the remaining firms' profit

Differences between Monopolistic Competition & Perfect

- In perfect competition, there is no excess capacity in the long-run, firms produce at their efficient scale.
- In monopolistic competition, output is at less than efficient scale of perfect competition

- For competitive firm P = MC
- For monopolistically competitive firm P > MC

- Unlike perfect competition, in monopolistic competition explicit cost include advertising or marketing cost

5. OLIGOPOLY

Demand Analysis and Pricing Strategies

- Demand depends on degree of pricing inter dependence
- In case of price collusion, aggregate market demand curve is composed of individual production participants
- In case of non-collusion, each firm faces an individual demand curve

- Duopoly: It is an oligopoly with only two producers in the market.

Characteristics:

i) Few sellers
ii) Industry dominated by small number of large firms
iii) Product offered by each seller is close substitutes for the products offered by other firms
iv) Independent firms
v) Barrier to entry & exit are high
vi) Firms have substantial control over price
vii) Products are differentiated through advertising & other non-price strategies.

- Cartel: A collusive agreement that are made openly & formally

- Price Collusion: An agreement among firms on the quantity produced and price to charge.
  - Profit increases.
  - Uncertainty of cash flows reduces.
  - Provide opportunities to create barriers to entry

Factors necessary for a collusion to be successful

i) Small number of firms in the industry
ii) Products produced by firms are identical/same
iii) Similar cost structure
iv) Orders received by firms are small in size & are frequent
v) Severe threat of retaliation by other firms in the market
vi) Degree of external competition.