AIR TRANSPORT ECONOMICS & STATISTICS

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MODULE-I: FUNDAMENTALS OF ECONOMICS

1. ECONOMICS: MEANING & NATURE
2. LAW OF DEMAND
3. LAW OF SUPPLY
4. MARKET EQUILIBRIUM-MARKET OF AIRLINE SERVICES

5. COST & PRODUCTION ANALYSIS IN AIR TRANSPORT INDUSTRY
6. AIR TRANSPORT MARKET STRUCTURES
7. AVIATION FORECASTING & REGRESSION ANALYSIS

RECAP

- Economics: Meaning & Nature
- Law of Demand, Elasticity of demand & demand forecasting
- Law of Supply, Elasticity od supply

MARKET DEMAND& SUPPLY FOR AIRLINES SERVICES

- 1. Demand for Air Transportation

Contd.

- 2. Supply of Airline Services
- 3. Market Equilibrium

MARKET EQUILIBRIUM

COST & Production Analysis in Air Transport Industry

- Cost Function : $C=f(Q)$
- Production function : $Q= f(L,K)$

COST CONCEPTS

- TOTAL COST= TOTAL FIXED COST+ TOTAL VARIABLE COST
- MARGINAL COST= $TC_n - TC_{n-1}$
- AVERAGE COST=AVERAGE FIXED COST + AVERAGE VARIABLE COST

CLASSIFICATION OF COST

- I. **BASED ON ACCOUNTING SYSTEM**
- CAPACITY COST
- OVERHEAD COST
- TRAFFIC RELATED COST

CLASSIFICATION OF COST (CONT.)

- II.
- FLYING OPEARTION EXPENDITURE
- DIRECT MAINTENANCE EXPENDITURE
- PASSENGER SERVICE EXP
- AIRCRAFT SERVICING
- RESERVATION & TICKET SALES
- ADMINISTRATIVE EXP
- SELLING COSTS

CLASSIFICATION OF COST (CONT.)

- **III:COST CONCEPTS USEFUL IN MANAGERIAL DECISIONS**
- **Separable/ Discrete Cost**
- **Common Cost/ Non- discrete**
- **Out of pocket /Frontier cost**
- **Static Cost**
- **Dispatched cost**

- Dispatched cost
- Line haul cost
- Terminal cost
- Direct Operational Cost/ trip cost : Fuel costs
- Indirect ……………….
- Seat Mile Cost

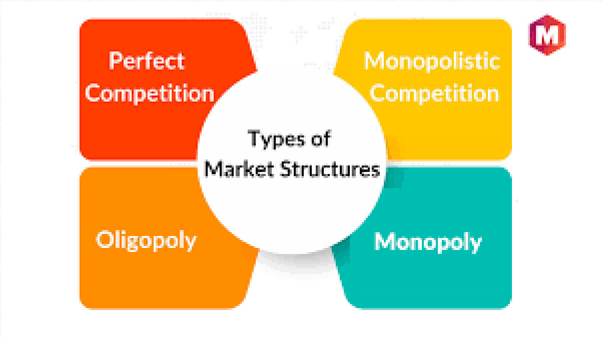
Economies of Scale, Economies of Scope & Density

ECONOMIES OF SCALE=TC/Q

Economies of Scope Formula

$$S = \frac{C(Q_A)+C(Q_B)-C(Q_A+Q_B)}{C(Q_A+Q_B)} \text{ x } 100\%$$

MARKET STRUCTURES

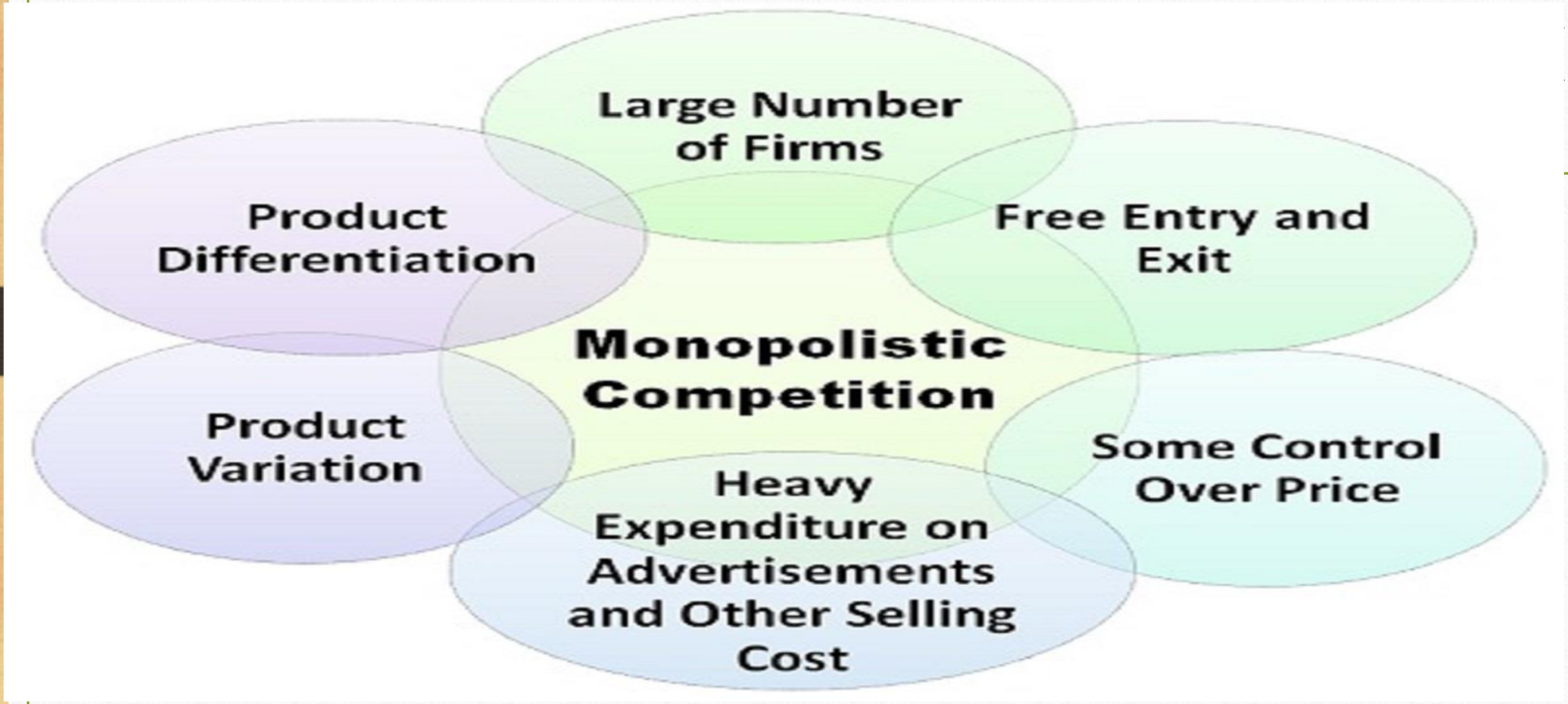


PERFECT COMPETITION

- NUMBER OF BUYERS & SELLERS - LARGE
- NATURE OF PRODUCT : HOMOGENEOUS
- BARRIERS TO ENTRY : NONE
- PERFECT DISSEMINATION OF INFORMATION

MONOPOLY

- NUMBER OF BUYERS & SELLERS - SINGLE
- NATURE OF PRODUCT : ABSENCE OF CLOSE SUBSTITUTES
- BARRIERS TO ENTRY : STRONG


Large Number of Firms
Product Differentiation
Free Entry and Exit
Monopolistic Competition
Product Variation
Some Control Over Price
Heavy Expenditure on Advertisements and Other Selling Cost

OLIGOPOLY

- **Few Dominant Firms**
  - Limited number of large firms
  - Interdependence among firms
- **Market Power**
  - Ability to influence prices
  - Non-price competition (e.g., advertising, product differentiation)
- **Barriers to Entry**
  - High capital investment
  - Regulatory and legal barriers

- **Product Differentiation**
  - Similar but distinct products
  - Varied offerings to meet customer preferences
- **Price Rigidity**
  - Stable prices due to cautious price changes
  - Price leadership by one or a few firms
- **Collusion**
  - Potential for explicit or implicit agreements
  - Risk of price fixing

- **Non-Price Competition**
  - Extensive advertising and promotions
  - Enhanced customer service
- **Market Behavior and Strategy**
  - Strategic planning based on competitors' actions
  - Kinked demand curve theory (price stability)