Managerial Economics :- (M.E). — (I)

DATE
PAGE

(1) Nature & Scope of Managerial Economics :- It is built on certain assumptions and on 4 pillars.
1. Scarcity of resources (limited)
2. Unlimited desires / Wants.
3. Priority of wants / desires (Ranking from 1...n)
4. Rational behaviour [Maximization (Profit of buss., Satisfaction for consumer, optimization of resource..].

Main branches :- (1) Micro (2) Macro and (3) Welfare Eco.

Micro :- Individual consumer etc.
Macro :- More than 1 consumer etc or group of consumer.
Welfare :- for welfare of Society & people.

(2) Application of economic concepts to Managerial decision Making.
1. Areas 2. Application of economic concepts and theories in decision making 3. Use of quanta methods.

(3) Decision Areas :-
1. Selecting business Area 2. Choice of product.
4. Determining Max. output 6. Determi. price of product
7. Determining Input combination and technology.
8. Sales promotion. 5. Input mix
3. Technology for production

DATE
PAGE

2. Collecting relevant data and facts.
3. Processing and analyzing the facts.
4. Relevant conclusions.
5. Evaluation of alternatives
6. Decision

Economic Concepts, tools of analysis leading to rational decisions.

7. ME - Interrelated Topics and Objectives of the firm

• Mathematical tools :- Quantitive in nature. Demand, price, Cost, product, Capital, wages, interest rate and inventories. To minimize cost and maximize profits various mathematical models are used. They could be, dealing with inventory or any other decisions i-they use Inventory models, game theory and linear programming etc.

• Statistical tools :- theory of probability, forecasting frequencies, correlation and regression techniques.

• Operations research :- It combines economics, maths and statistics to build models for solving specific business solutions.

• Management theory & Accountancy :-

DATE
PAGE

(1.) Gap between theory and practise :- Incidents.

- Economic theory —

(1) Economic world is very complex.
(2) Economic theories are simplistic.
(3.) Hypothetical in nature but not too far away from reality.
(4). Do not offer custom made or readymade solutions.

- Bridging the gap. :-
- ME helps in analyzing the business problems and finding an appropriate decisions.

(1) Objectives of the firm — Various alternatives :-

(1.) Profit maximization
(2.) Maximization of sales revenue. (Total revenue)
(3.) Maximization of managers utility functions.
(4.) Making a satisfactory rate of profit.
(5.) long run survival of the firm.
(6.) Entry prevention.
(7.) Risk avoidance.

(1) Profit maximization :-

- Accounting profit = TR − TC.
  - TC = Only explicit costs are considered.

- Economic profit (Pure Profit)
- TC = Even implicit costs are considered.

DATE
PAGE

- opportunity costs.
- Unauthorized payments.

(7.) Profit maximization – A defense.

(1.) Profit is indispensable for firm's survival.
(2.) Achieving other objectives depends on firms ability to make profit.
(3.) Profit is more reliable measure of a firm's efficiency.
(4.) Profit maximization is time honored.
(5.) P.M has a greater predicting power.

(7.) Making reasonable Profits :-

- Preventing entry of competitors.
- Projecting a favourable public image.
- Restraining trade union demands.
- Maintaining customer good will.
- Managerial utility function preferable than maximizing profits.
- Balancing between various executive levels.

(7.) Economic concepts for Decision making :-

- Concepts for decisions :-
- opportunity cost and decision rule.
- Marginal principle.
- Contribution analysis.
- Equi- Marginal principle.
- Time perspective in business decisions.

DATE
PAGE

(2.) Marginal principle :-

- Marginal principle
- Marginal utility — consumer analysis

- Marginal Cost — production analysis
  - Marginal cost = Total Cost (N number) − TC (N−1)

- Marginal revenue — Pricing theory
  - TR.

(3.) Incremental principle :-
- It is based on Total cost and Total Revenue.
- Decision based on Bulk production not unit wise.
- Incremental Total Cost (present explicit cost, opportunity cost and future costs).

- Incremental Total revenue.
  - Post decision revenue — Pre decision revenue.

(4) Contribution analysis :-
- Incremental Revenue − Incremental Cost = Contribution

This decision rule analyses the impact on contribution due to any decisions, which are taken within the organization.

(5.) Equi- marginal Principle :-
- Equi- marginal principle based on marginal productivity.

Allocation of resources between alternative uses — v number of business activities.

MP from Project A = MP from Project B = ... = MP from Project N.

- If project costs vary from project to project,
  MP-A / COP-A = MP-B / COP-B = ... MP-N / COP-N.

Time perspective in business decisions.

- Time :- Short-term.
  long - term.

7) Market Equilibrium :-

- Desire and Demand.

Concept of market :-

- Market for a commodity consists of buyers & sellers, who decide the price.

- Sellers and buyers may be firms, individuals, factories, agents, dealers at various levels.
  - Retail or wholesale
  - National (Domestic) or International (global)
  - Based on products etc.
  - Online
  - Factor market (input) or product (output market).
  - Perfect, Monopoly or Oligopolistic market.

DATE
PAGE

(7.) Demand Side of the Market :-
- Law of Demand
  - It is the relationship between price of the product and quantity demanded.
  - This uses "cetrius paribus" assumption — other things remaining constant.

(8.) Supply Side of the Market :-
- Law of Supply :-
  - It is a relationship between price and quantity supplied.
  - Assumption — other things remaining constant.

(9.) Market equilibrium :-
- Market demand and market supply, together determine equilibrium price of a product, commodity or service.

- Concept of Market equilibrium :-
  - Quantity demand = Quantity Supplied = Equilibrium price.
  - Equilibrium price is also refered as clearance price.

- Determination of Market Price :-

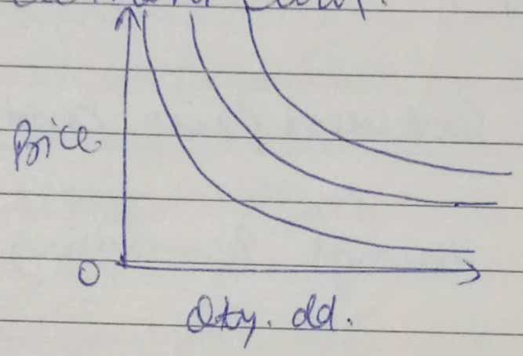
Price	Qty. demand		Supplied	Market posit.n	Effect on P
100	500	>	100	Shortage of S.S	Price ↑
200	300	=	300	Equilibrium	Stable
300	200	<	450	Excess SS.	Price ↓
400	100	<	600	"	"

DATE
PAGE

- Price determination :
  - Quantity demanded for $X = 150 - 5P$
  - Quantity Supplied of $X = 10P$
  - Price =
    - $150 - 5P = 10P$, in equilibrium.

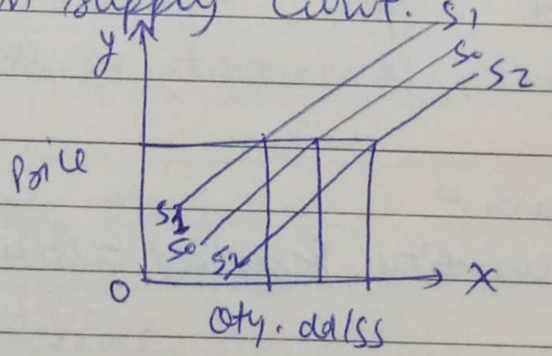
$\boxed{P = 10}$

- Shifts in demand Curve.



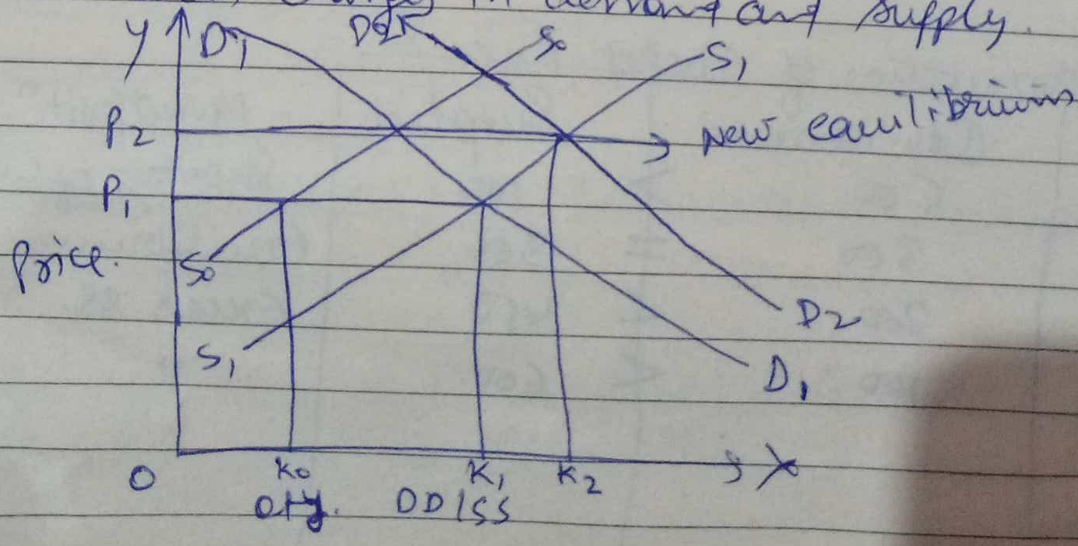
Qty. dd (↓) = (P x) ↑

- Shifts in Supply Curve.



↑ Qty. ss = f(P) ↑

- Equilibrium with Changes in demand and Supply.



DATE
PAGE

- Analysis of Consumer Demand.

Meaning of Demand :- • Demand Vs Desire.
- Aspects to be considered
  - Quantity demanded. • Price • Area • Timeperiod

- Utility
  - Product angle • Consumer angle - Satisfaction

- Cardinal Utility Vs Ordinal utility
- utility - " Utils "
- Total Utility • Marginal Utility •
- Law of diminishing marginal utility.

- Concepts - TU, MU and DMU

Total utility = Satisfaction consuming 'N' units. 1 unit utils + 2^{nd} unit utils + ... + n^{th} unit utils.

Marginal utility = TU with N units less TU with n-1 units.

Diminishing marginal utility.

- Determinants of Market demand :-

1. Price of the product.
2. Prices of the related goods - Substitutes, complements and supplements.
3. Income of the Consumer.
4. Tastes and preferences.

5. Advertisements.
6. Expectations about the future prices.
7. Demonstration effect.
8. Credit facility.
9. Population.
10. Distribution of national Income.

- Price of the related product
    - Qty demanded = f (P of x) - Price of the product.
        - Substitute goods
        - Complementary goods

- Consumers income:-
- Essential Consumer goods
- Inferior goods
- Normal goods
- Luxury goods

- Consumer tastes and preferences :- Life style, Social customs and religious values.

- Advertisement Expenditure :-
    - Consumers are sensitive to various modes of advertisements
    - No reaction from rival firms.
    - It did not reach the saturation point.
    - Advertisement cost should not increase the costs very heavily.

- Consumers expectation:-
    - Future expectations on

• Prices • Income • Supply position of goods

• Demonstration effect :- • Band wagon effect.

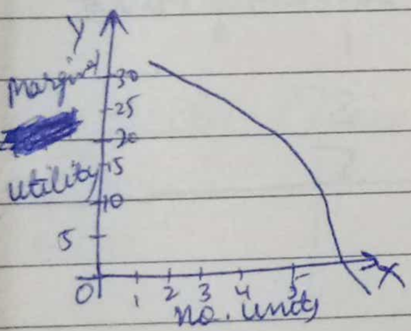
• Consumer Credit facility :- • Availability of consumer credit facility.

• Population of the Country :- • population

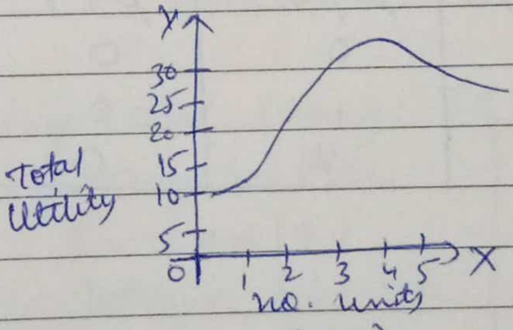
• Distribution of National Income ∝ to quantity demanded.

• Multivariate demand function :- • Demand function with 6 variables.

• Law of Diminishing Marginal Utility.



(MU)



(TU).

Law of DMU :- Assumptions :-

• Rationality • Limited money income
• Maximization of Satisfaction • Utility is measurable (cardinal)
• Diminishing marginal utility
• Constant marginal utility of Money -
• Consumption Continuous • Utility is additive.

DATE
PAGE

- Demand under Variable MUL
  - Marginal utility of money decreases, when stock of money increases.

·Demand - Analysis of market demand:-

(1) Factors behind the law of demand

(a) Substitution effect (b) Income effect.

(2) Exception to law of demand.

(a) Status goods and (b) Giffen goods

Analysis of Market demand :- The aggregate of individual demand for a product is called market demand for the product. its schedule will be.

~~Price of X~~	Qty. dd by A	by B	by C	Demand of Market
30	1	0	0	1
25	2	1	0	3
20	3	2	0	5

- Types of demand :-
  - Individual demand and market demand.
  - Firm's demand and industry demand.
  - Autonomous and derived demand.
  - Demand for durable and non durable goods.
  - Short-term and long term demand.

Elasticity.

Defined :- Degree of responsiveness of demand to the change in determinants is called elasticity.

- Various elasticities :-
  - Price
  - Income
  - Cross
  - Advertisement
- Elasticity of price expectation.

→ Point and Arc Elasticity — Price

- Point price Elasticity = $\frac{\text{\% change in Qty. DD}}{\text{\% change in Price}}$

$$\frac{\Delta Q}{Q_1} \div \frac{\Delta P}{P_1} = \frac{\Delta Q}{\Delta P} \times \frac{P_1}{Q_1}$$

- Arc Price Elasticity :-

$$\frac{\Delta Q}{\Delta P} \times \frac{(P_1 + P_2)/2}{(Q_1 + Q_2)/2}$$

Elasticity, Price change and Change TR :-

Coe.	Change in Price	Change in TR
$e = 0$	Increase (↑)	↑
	Decrease (↓)	↓
$e < 1$	↑	↑
	↓	↓
$e = 1$	↑	No change
	↓	No change
$e > 1$	↑	↓
	↓	↑
$e = \infty$	↑	Decrease to Zero
	↓	∞ Increase.

- Determinants of Price Elasticity of Demand
  - Availability of Substitutes
  - Nature of Commodity
  - Weightage in the total consumption
  - Time factor in adjustment of consumption pattern.
  - Proportion of market supplied.

- Numerical on Price Elasticity:-
  - M/s xyz Limited is selling 1000 units of its product at ₹15. The Company had increased its price to ₹18. The sales came down to 850 units.
    - Cal. price elasticity using point & arc elasticity.
    - Cal. its impact on total revenue.
    - Comment on the nature of the product

$Q_1 = 1000$, $Q_2 = 850$, $P_1 = 15$, $P_2 = 18$

Ans:- Point $= -.75$, Arc $= -.89$ Ans

Total Revenue $= |1000 \times 15 - 18 \times 850| = 300$ Ans

- <u>Cross Elasticity:-</u> $\dfrac{\text{\% change in quantity demanded of } x}{\text{\% change in price of } y}$

- <u>Income Elasticity:-</u> $\dfrac{\text{\% change in quantity demanded of } x}{\text{\% change in the disposable income}}$

- <u>Nature of Commodity and Income Elasticity:-</u>
  - <u>Income elasticities:-</u>

S.No.	Consumer Goods	Coe.	Effect on sales with change in income

1.	Essential Consumer goods	<1	less than proportionate change in Sales.
2.	Comforts	=1	Almost proportionate change in Sales.
3.	Luxury	>1	More than proportionate change in Sales.

• **Advertisement Elasticity :-**

$$= \frac{\text{\% Change in quantity demanded of X}}{\text{\% change in the advertisements Outlay.}}$$

• **Interpretation :-**

Advertisement Elast.	Interpretation.
e = 0	Sales do not respond to Advertisement.
>0, but <1	Increase in Sales less than proportionate of Ad. E
=1	Sales increase ∝ Ad. Expenditure.
>1	Sales increase at a higher rate than the rate of increase of ad. expenditure.

• Factors Influencing Ad. elasticities :-

1. The level of Total Sales.
2. Advertisements by Competitors.
3. Impact of past advertisement
4. Other factors (product price, Income and growth of Substitutes).

• **Balance of Payments :-**

→ **BOP :-** • A systematic record of all economic transacti between the residents of the country and residents of other countries

- Residents
- Profits earned by FII - foreign Institutional Investors.
  - Divident - Profit / No of Shareholders.
  - Retained earnings

- Purpose :-
- Provides the strengths and weaknesses of the country with international Trade - for comparison
  - Corrective measures by the government
- Composition and magnitude of the trade.
- Future repercussions of country's past trade performance.

- BOP - Accounts

- 1. Current Account / Transactions :- Merchandise, foreign travel, Transportation, Investment Income, Government sales and purchase of goods and services,
  - Balance of Trade
  - Full Convertibility of a rupee. 100%

- 2. Capital Account / transactions :- Short term and long term capital movements (gold reserves and foreign exchange reserves).
  - FDI, FII

- BOP - Always in balance
  - Autonomous Transactions.
  - Induced or accommodating Transactions.

DATE
PAGE

- Disequilibrium in BOP :-
- Causes of Disequilibrium :
  - Determinants of exports
    - foreign demand for imports
    - Competitiveness of its price and quality.
    - its exportable surplus.

  - Determinants of imports
    - Internal demand for foreign goods
    - The relative prices of imports and their domestic substitutes.
    - people preference for goods
    - Price-elasticity of demand for imports
    - Income-elasticity of imports.

- BOP- Causes
  1. Price changes and fundamental Disequilibrium.
  2. Business cycles and cyclical Disequilibrium.
  3. Structural changes and structural Disequilibrium.
  4. Other factors Causing Disequilibrium.
     1. Crop failures.
     2. Growth of population.
     3. Ambitious development programmes.
     4. Demonstration effect

- BOP- Adjustments
  - Short term
  - long term
  - Policy measures to correct adverse BOP
  - Income related policies.
    - Monetary policy.

DATE
PAGE

- fiscal policy
- Price measures
  - Exchange depreciation
  - Devaluation.

- Direct measure
  - Exchange control

Problems arising due to exchange control.

(→) Business Cycles :- Government Measures to control.

- Phases of Business cycle.

5 - Stages of business cycle.

1. Expansion of Economic Activity.
2. Peak of boom or Prosperity.
3. Recession the down trend.
4. Trough, the bottom of Depression -
5. Recovery & Expansion.

- Theories of Business Cycle :-

1. Innovation theory.
2. The pure monetary theory.
3. The ~~mo~~ monetary over-investment theory.
4. The non-monetary over-investment theory.
5. Acceleration principle of trade cycle.
6. Psychological theory.
7. Under consumption Theories.
8. Exogeneous forces theories.
9. Multiplier - Accelerator Interaction Theory.

· Protection local talent (local to vocal).

· Innovation Theory
· Schumpeter's theory of Innovation: More Sociological and role of Innovations
  · model on two approximations.
  · I Approximation
    · $MR = MC$
    · $P = AC$
    · No incentive to add nor - dis incentive to reduce additional investment.

  · II Approximation - when the speculation starts. Existing capital goods firms borrow heavily.

→ Economic Stabilization Policies by government
· Objective
  · Prevention of economic fluctuations to long term healthy growth of the economy.
  · Efficient Utilization of productive resources.
  · Encouraging free competitive enterprises in the market economy.
  · Avoid the conflict between the internal and external interests of the economy.

→ Fiscal policy - Govt. revenue and Govts expenditure.
· Public expenditure and GNP.
· Taxation and GNP.

DATE
PAGE

→ Monetary Policy – MV = PT
- Changes in bank rate Recession Boom
  - Interest rate – Savings decrease Increase
    - Borrowing
  - Changes in SLR / CRR Decrease
  - Repo / Reverse rate (Basis)
  - Open Market operations.

→ ME – inflation :- Meaning, Causes and measures to Control.

WPI = Wholesale price Index
CPI = Consumer price Index
Base year (2011–12) = 100.

→ Why! :- Mismatch b/w Aggregate demand and aggregate supply.

1. Cost push 2. Demand pull 3. Wage spiral theory
4. Monetary theory MV = PT
5. Market power theory / Monopoly.

Agg. DD > Agg. SS – Prices Increases
Agg. DD = Agg. SS – Stable
Agg. DD < Agg. SS – Prices fall

→ Measures to Control :-
1. Monetary measures = MV = PT
   (a). Central Bank – RBI
      (i) Interest (ii) CRR (iii) SLR
      (iv) open market operations.

(b.) Commercial Bank.
(i) Repo (ii) Reverse Repo

2. Fiscal measures - Govt. Revenue, Govt. Expenditure.
3. Physical measures.

(4.) <u>Economic Policy - 1991.</u>
LPG and other features & effects.
(1) Structural reforms (2) Stabilization reforms.

(∴) Why? :- Economic Indicators.
National Income - GDP, Per Capita
Inflation, BOP - imports & exports, Exchange rate,
Employment.

(∴) Paradigm shift from previous policies,
(1) Liberalization - License Raj
(2) Privatization - allowing private players.
(3) Globalization - External Sector
(4) Think globally and act locally.

(5) <u>Industrial Policy</u> -
(1) Abolishing License Raj
(2) FDI, FII - Merger, Acquisitions
(3) Broad Banding
(4) Automatic approval of Technology.

(6) <u>Globalization</u> :- (1) BOP - Imports & Exports
(2) MFN (3.) Quotas, Quantitative Restrictions, Customs and

excise duties, Tariffs.
(4.) External policy - Current account, Capital account

(5.) Partial Convertible.
(6.) Fully Convertible.

(7.) Agri culture - Seeds & BT Seeds

(7.) Present Scenario -
(1) Make in India - Extension of FDI.
(2.) Atmanirbhara Bharat
(3.) Skill India
(4.) Local to Vocal
(5.) Encouragement to Start-ups.
(6.) Change in Educational policy.

(1.) ~~Exchange Rate Determination~~ - Foreign Exchange Market

The price of one currency in terms of another currency is called the exchange rate.

(:) Two ways of determination
(a.) when foreign exchange
(i) market works freely.
(ii) controlled and regulated

(:) Structure of the foreign exchange market
(i) Central Bank
(ii) Brokers
(iii) Commercial Banks - Market Makers.
(iv) Exporters, importers, tourists, investors and immigrants.

DATE
PAGE

(1) funtions of FEM :-
- transfer of funds from one country to another.
- Provides short term Credit to the importers.
- Stabilizing the foreign exchange rate.

(4) FE Transactions :-
(1) Hedging (2) Arbitrage (3) Speculations.

(5) Causes of change in exchange rate :-
(1.) Increase in demand for foreign exchange.
(2) Rise in real income of country.
(3) Rise in real income abroad.
(4.) Interest rate in the domestic economy increases when compared to interest rates abroad.
(5.) The speculative purchases and sales of foreign exchange market.

(:) Market Structure :-

(1) Market Structure & Degree of Competition :-
- The market, Online, offline, local, regional, national, International.

- The no. of sellers of a product in a market determines the nature and degree of Competition in the market.

- The nature and degree of competition in the market make the structure of the market.

DATE
PAGE

I. Perfect competition.
II. Imperfect Competition.
(1) Monopolistic
(2) Oligopoly
(3) Monopoly.

- Perfect competition :-

1/ Number of firms and degree of product differentiation :- large no. of firms with homogeneous products.

2/ Nature of industry where prevalent :- financial markets and some farm products.

3/ Control over price : None

4/ Method of marketing : Market exchange or auctions.

- Monopolistic Competition :-

1/ No. of firms and degree of product differentiation :- Many firms with real perceived product differentiation.

2/ Nature of industry where prevalent :- Manufacturing, Tea, toothpaste, TV sets, Refrigerators etc.

3/ Control over price :- Some.

4/ Method of marketing :- Competitive advertising, quality rivalry.

• Oligopoly :- Points are same as Monopolistic Competition
1). Little or no product differentiation
2). Aluminium, Steel, Cement
3). Some.
4). Competitive advertising, quality rivalry.

• Monopoly :-
1). A single producer without a close substitute.
2). Public utility.
3). Considerable but usually regulated.
4). Promotional advertising if supply is large. MRTP act

• Consumer Surplus :-
• Price Discrimination based on Consumer Surplus.

• Price Discrimination :-
• I degree :- When market is very small.

• II degree :- When market size is very large, block pricing Method.

• III degree :- Different Prices in different markets based on elasticities.