

MANAGERIAL ECONOMICS

Syllabus :

- Knowing the kind of system you belong to (local & global env)
- Macro-economic concepts (GDP, Inflation etc.)
- Markets, market-structure, profit maximisatⁿ efforts, cost-benefit analysis, demand-supply etc.
- Mostly Micro-economic analysis would be asked in Semester exam

'Managerial Economics' is knowledge & discussion of concepts to lead the management towards profit maximisation (which also includes cost reduction, attainment of objectives of the organisatⁿ etc.)

Q.) What things define a person's choice of economic decision?

MANAGERIAL ECONOMICS is about:

- Resource optimisation techniques - i.e. how one optimizes the different resources available & exercise profit optimization

Q.) What kind of system do we, (Indians) belong to:

- Emerging economy
- Open (but cautious at the same time) economy
- Savings (almost 39% of Gross National Product is saved)
- Liberalized economy (because of our prudent central bank RBI)

(ii) Agriculture based economy (almost 54% of the populatⁿ depends on agriculture based products/jobs for livelihood but contribute less than 20% of the GDP). So, this is a mismatch as compared to western world.

- We offer cheap markets to for technical innovations
- FDI & FPI (Foreign Portfolio Investment) are the two streams through which Foreign Institutional investors

Note: 52% of India's population falls below the age of 25 yrs. classmate

'Medical Tourism' is gaining popularity in India.

PPP - 'Public Private Partnership' model
LPG - Liberalisation Privatisation

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invest money in India.

- Transactions in Global Foreign Exchange markets could now be done by any bank (before 1991, only SBI could do so). Except for capital market ^{transactions}.
- Rupee is 100% convertible to foreign exchange at market rate.
- Service sector contributes the max. (more than 48% for the last 20 yrs) in India's GDP.
- Theoretically, both physical & social infrastructure growth adds to economy; but Enron etc. prove contradictory.
- Aviation & Real Estate also contribute to economy.
- Contribution of Industries ~~to~~ & Manufacturing is now a little more than 20% of the GDP (as compared to more than 40% earlier).
- The growth of an economy can be sustained only if the resources are ^{sustained & free} ecologically balanced.

Manufacturing sector is not getting a boost because:

- Pvt. sector focusses more on services
- the govt. policies need to be more robust.
- India is a major disaster in public health.
- Issues of poverty & malnutrition also haunt Indian economy.
- 98% of India's work-force work in an unorganized sector (with no access to facilities etc.). Hence, the poor do not enjoy the fruits of India's success story, though they contribute to it.
- 54% of ^{India's} population lives in urban cities, hence we are no longer a rural population.

Note: To design a management policy, a humanistic approach has to be formulated.

→ 1st area where we started with liberalization

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Fiscal Policy — policy that monitors & decides

The last module of the syllabus is about:

- Business Environment
- Business Policies

Managerial Economics — significant in terms of changes in local & international environment ^{that} influence business decisions. changes in the market could even be non-economic like festivals.

All variables need to be identified and applied to our econometric models (e.g. demand, competitor's pricing policy, government's tax policies etc).

Essentially, there are 4 major economic activities that decide the economic policy (for free or non-controlled economy):

- production
- consumption
- distribution
- transactions/exchange

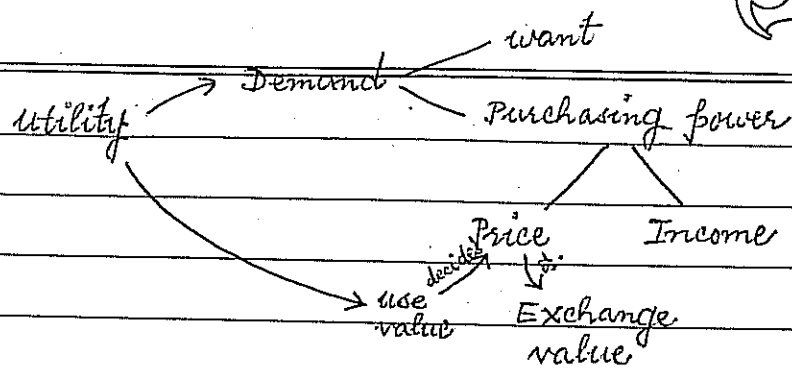
“Production” is creatⁿ of utility ^{→ capacity to satisfy a want}

Utility is the basis of demand. Want for a commodity coupled with the purchasing power decides its utility.

Purchasing power is decided by:

- income
- price — ~~anything~~ value of a commodity in terms of other ^{OR} something that can be exchanged with other

Value is decided by utility.



'Price' is decided by

- demand
- supply : Supply is DETERMINED by -
 - availability of commodity in stock & inventory
 - availability of raw materials
 - transportation
 - warehousing
 - location
 - climatic conditions
 - tax policy & subsidies
 - energy (for manufacturing, transportation etc.)
 - cost
 - labour (cost & availability both)
 - capital
 - price of the commodity in the market (i.e. price is both determinant as well as something that is determined) supply \leftrightarrow Price

'Demand' is DETERMINED by -

- price
- population
- climate
- utility
- preferences of consumers
- location
- psychology of consumers
- income

LIBOR - London Inter Bank offer Rate
World Bank decides its lending rate against LIBOR

speculation - buying at lower rates & selling at higher rates

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- advertisements
- promotional activities
- price/availability of substitutes & complimentary goods

Money - acts as a medium of exchange & has the capacity to measure and store value. It does not necessarily have to be a currency note.

It acts as a standard of deferred/postponed payment. Anything that has the above characteristics could be termed as 'money'.

Money has 'liquidity' which means it has:

- easy convertability,
- easy exchangability and
- easy acceptability

Note: Legally, the central bank of the country decides what & how much money should be created, not the government.

Fiduciary system - system against which money is created. Earlier, backing of gold reserve was sufficient to generate money, but now gold is no longer sufficient ^(less availability) to back all money or currency system.

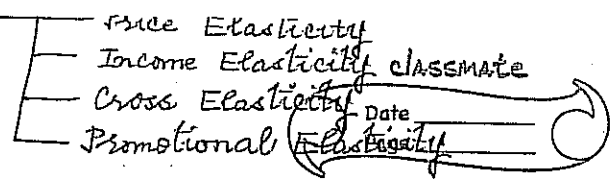
Along with gold, govt. securities & foreign exchange reserves collectively decide the currency system/money.

Treasury bills - Govt securities ^{certificates} between 90 days to 364 days.

Note: IMF & World Bank are bodies created to facilitate liquidity of money on a global level.

→ Elasticity of demand
→ Demand forecasting

Demand



Market - Network of buying & selling makes a market.

There are two types of markets:

- one where there is competition
- one where there is absolutely no competition (e.g. monopoly)

Business decisions are based on typical market structure, hence understanding of markets is very imp. Market structure decides ^{influences} the price & nature of demand/supply (at which to sell commodities in this market).

Actually, markets are of the foll. two types:

- Monopolistic competition - you hold monopoly on some part of the market
- oligopoly -

Note: The relationship between price of a commodity & its demand is -ve in nature. Response of customer to a change in price is very significant. Before determining the final price of an item, a number of sample studies are performed by the company.

For 3 diff. reasons, the study of elasticity of demand becomes imp. Marketer can't influence the type of income consumer has, but the fact remains that change in income of the consumer changes the demand for his products.

Pricing strategy has to take into account the cross elasticity of demand. What matters for a firm is the price of another (say) complimentary product as well.

The psychology of a customer can be tuned/controlled independently by changing the promotional ^{expenditure} budget of a product.

A.) Price Elasticity - responsiveness of the demand in response to the change in the price of a commodity.

Price elasticity is the proportionate change in the demand of a commodity due to a change in the

Note: The only factor that a firm can change is its price.

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(↑ P_x ⇒ ↓ D_x)

price of the commodity. Since demand is inversely proportional to price, price elasticity is always negative.

$$e_p = - \frac{\frac{\Delta D_x}{D_x}}{\frac{\Delta P_x}{P_x}}$$

Price elasticity of demand

The -ve value indicates that the demand does not respond much to the change in price.

The following scenario warrants 'elasticity':

- the commodity is necessary
- the responsiveness of the customer is not much
- the commodity (of the company) has a monopoly in the market

So, this is very imp. factor for knowing price elasticity

Those ~~commodities~~^{demands} which have elasticity of demand less than 1, are relatively inelastic & hence price change ~~do won't~~ go well. Demands having elasticity of demand more than 1 are relatively elastic & hence you can, ^{not} very ~~well~~^{easily} change the price.

Price elasticity of demand is ~~utilising~~^{utilised} in demand ^{forecasting}

- to decide the initial price (for any change in price)

Price Effect - If the commodity's price goes down, you need not necessarily buy more of that commodity; you may even move over to a superior quality product.

Perfectly elastic & perfectly inelastic demands are two exceptional ^{raremost} cases of price elasticity.

Perfect elasticity is a theoretical concept whereas perfect inelasticity might rarely be seen in case of life-saving drugs.

B.) Income elasticity of demand - The degree of responsiveness of demand due to the change in the income of the consumer.

In case of giffin goods, income elasticity is -ve whereas in case of normal goods income elasticity is +ve. Relatively elastic & inelastic are related to relevant change in demand on change in income.

C.) Cross Elasticity of ^{demand} - An impact of price of commodity X on the demand of commodity Y.

Here relationship between X & Y is important. X and Y may be complimentary goods or substitute goods ~~etc~~ or unrelated goods etc.

* In case of complimentary goods the cross elasticity is -ve whereas in case of substitute goods the cross elasticity is +ve. For unrelated goods, cross elasticity of demand is zero.

D.) Promotional Elasticity - Proportionate change in the demand for a commodity due to proportionate change in ~~price~~ promotional expenditure on that commodity.

By increasing promotional expenditure, the demand may increase or remain the same.

Pre requisite for Methods of Measurement of Elasticity of Demand

1. Percentage Method -

$$e_p = \frac{\% \text{ change in } D_x}{\% \text{ change in } P_x}$$

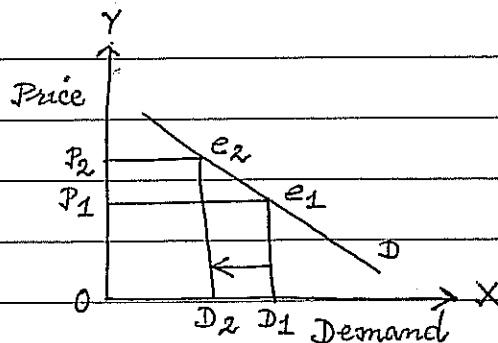
2. Proportionate Method -

$$e_p = \frac{\frac{\Delta D_x}{D_x}}{\frac{\Delta P_x}{P_x}}$$

3. Point elasticity of demand - The entire demand analysis of Economics lies on the 'law of demand'.

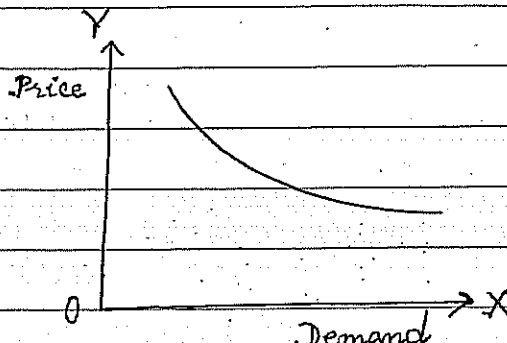
This law makes certain assumptions known as 'ceteris Paribus' before arriving at the relationship between only one set of variables (known as microeconomic analysis) (say) price and demand.

So, if $P \downarrow$ $D \uparrow$ (other factors considered indeterminate or non-existent)
 \uparrow \downarrow

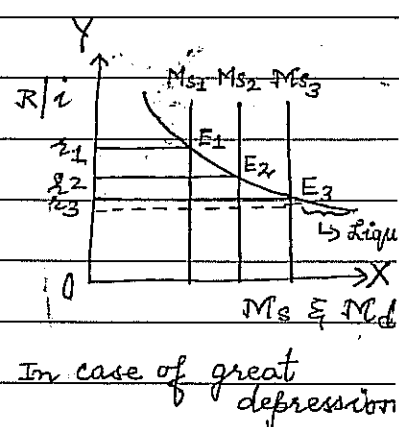
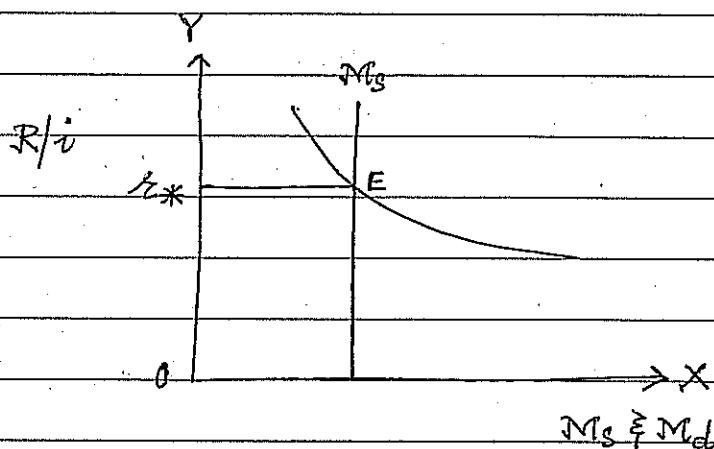


$$\text{slope} = \frac{\Delta Y}{\Delta X} = \frac{\Delta P}{\Delta D}$$

Here Price has increased but demand has decreased, hence slope is -ve.



speculation is calculative risk taking. Demanding money for speculation means investing money ~~for~~ ⁱⁿ govt. bonds (acc. to Keynes, in his time). Rate of interest earned on govt. bonds is always ~~less~~ ^{different} than their current market rates \Rightarrow this diff. in interest rates is the basis for speculative investment.



Marginal Efficiency of Capital (MEC) - What do the investors demand out of the investment?

Rate of inflation reduces every annuity associated with an investment. Everyone wants to know the present value of a future income.

"The Marginal Efficiency of Capital is that rate of discount which equalises the supply price of capital to the present value of future income out of this capital/investment"

Example:

$$\text{Price} = \text{Rs. } 20,000$$

$$\text{Life span} = 5 \text{ years}$$

Annuities/annual incomes (in Rs.)

$$A_1 = 10,000$$

$$A_2 = 12,000$$

$$A_3 = 20,000$$

$$A_4 = 28,000$$

$$A_5 = 32,000$$

The rate of inflation erodes the value of future income.
 Only, if the present value of future income (PVFI) is equal to or greater than the supply price, will I invest.

i.e. $PVFI \geq S_s \text{ price}$

i.e. $S_s \text{ price} = \frac{A_1}{(1+r)^1} + \frac{A_2}{(1+r)^2} + \frac{A_3}{(1+r)^3} + \frac{A_4}{(1+r)^4} + \frac{A_5}{(1+r)^5}$

where r is marginal efficiency of capital (MEC). r is equal to that value of discount

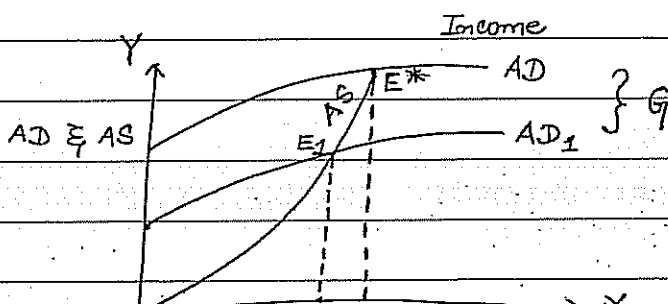
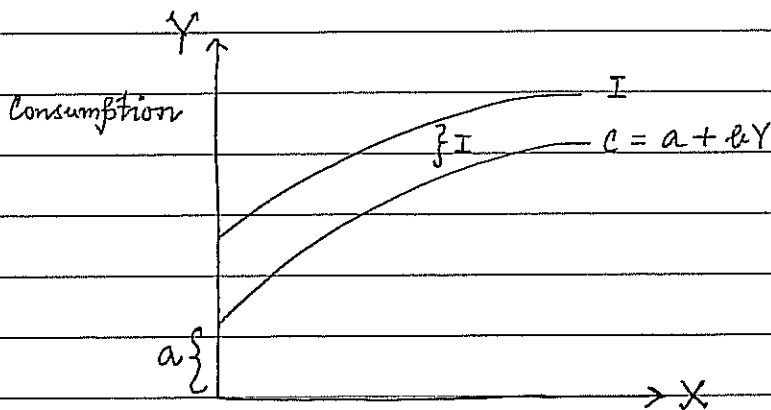
In the initial phase, Keynes assumed that the economy is closed (no trade relations), hence $X-M$ is not there. Also, G should not be included.

$\therefore AD = C + I$

Effective Demand — the level of aggregate which can bring aggregate

If $C + I = AD \neq AS$, this is where Govt. ^{expenditure} ~~intervention~~ ^{should} ~~come in~~ (i.e. lack of effective demand)

Here the economy is under 'underemployment equilibrium' i.e. not full employment equilibrium



FE - Full Employment Equilibrium

Fiscal Policy measures can correct (in large volumes) this diff.

Limitations of Keynesian Solution/Analysis :

1. Time lag was not taken into consideration
2. Role of monetary policy is undermined.
3. The entire analysis is short-term.

Though the solution was offered for great depression, it has not lost relevance even today (particularly emphasizing the economic role of government).

{ Modules 1, 2, 3 & 7 have been completed
 { Modules 4, 5, 6 still need to be completed (as on 24-03-2012)

Topics for Syllabus

- Indian Economy - IIIrd year B.Com, ^{Indian} Economics book
- Demand
- Supply
- Consumer Behaviour
- Demand Estimation & Forecasting
- Costs of Prod. & the financing of a firm
- Chap 8 + (except) ^{except} types of firms
- Profit maximisation, perfect competition and the supply curve
- Demand, Supply & Market Equilibrium
- Monopoly
- Monopolistic competition & Oligopoly

20 marks - Project Assignment

10 marks - Numerical Problems

10 marks - Attendance

60 marks - External Exam ('Data Interpretation', 'Averages' based numericals)

Project (Internal Assessment) - Pick up any Bank or Financial Company or Corporate or Govt./Non-Govt. organisation & focus on one aspect say Pricing - Demand Forecasting - Marketing, OR Financial Management, OR System Management, OR HR Management ^{in that area} tracing 25 yrs. policy history & mapping what it could do in the next 5 years.

How to write it? - Field Work + Reference

size of project - should not exceed 30, ^{A4} pages ~~written or~~ ^{print}
 • send soft copy to madam's email by 5th May '11
 • a CD copy

Technical Specifications {

- Default Margin (1" on all four sides)
- Double Space
- Arial 11
- No Red colour

Top sheet - Name, Roll No., Institute Name

2nd page - Certificate

3rd page - Acknowledgement (optional)

4th page - Index

5th page - Introduction

followed by {

- Historical Analysis of past 25 yrs (Qualitative/Quantitative)
- Future 5 year plans

2nd last page - Conclusion

Last/End page - Bibliography (Books, web pages' reference etc.)

1-03-'12

Cost Analysis & Revenue Analysis

Objective/Goal of a firm - profit maximization

other goals are: sales maximization

Still others may have 'growth maximization' (ie Profit + sales both)

Some firms may ^{want to} sustain themselves in the market for long & serve socially.

We don't want to look at non-economic (or social) organization and confine only to economic firms with profit/sales/growth maximization goals.

This will include ^{study about} economic costs & types of markets.

However, while discussing profit maximisation, non-economic costs will creep in.

Market - a network of buyers & sellers (where goods or services are bought or sold)

Competitive Market - a market which has no control on the buyers/sellers (this only depends on network of buyers & sellers). This is what is known as 'perfect competition' e.g. ^{International/Global} Foreign Exchange market. But, this is the closest example to 'perfect competition', there is no such thing in reality

^{sense of} ^{kind of} ^{competition} ^{any} Monopoly - Doesn't ~~to~~ exist in the true sense of the word as country's govt. stops pure monopoly. Pure monopoly either doesn't exist or occurs for a short time in the form of monopolistic instances

So, the two markets that exist normally are:

- Monopolistic Competition
- ~~Duopoly~~ Oligopoly

A' Characteristics of Perfect ^{or Pure} Competition :

- i) There are a large no. of buyers & sellers & hence price is decided by demand & supply factors. There is no external interference including that of Govt.
- ii) There is free entry & exit from the market.
- iii) There is free flow of market information.
- iv) The transport cost is assumed to be NIL.
- v) Perfect competition deals with such ~~competition~~ commodity which are homogeneous (identical in physical as well as intrinsic characteristics).

If there is lack of any of the above characteristics, it is not perfect competition.

CHARACTERISTICS :

- B. Monopoly — (i) It is another extreme market where there is one seller & numerous buyers. The seller controls either the price or the quantity of the commodities (but not both).
- ii) There is no substitute for the products (no homogeneous commodities).
- iii) Transport cost does not come into picture.
- iv) Monopoly exists because there is lack of free flow of information.
- v) In pure monopoly there is no govt. intervention; if there is any govt. intervention it is called 'limited monopoly'.

Note : Duopoly is a type of a special type of monopoly.

Description of Oligopoly & Monopolistic competition - lie between Monopoly & Perfect competition

Monopolistic competition - There are sellers in the market but the no. is ^{NOT} as large as perfect competition or as low as monopoly e.g. airline sector in India.

There is competition among the sellers but one seller occupies or monopolise some section of the market

Product differentiation (either existing or shown to be) is a characteristic of monopolistic competition. In order to do this they incur some cost known as "selling cost" (cost incurred on differentiating own products, either actually or superficially, from others). e.g. Cola market

Disadvantage: 1) There is a lot of ^{macro-economic} wastage of resources in case of monopolistic competition.

2) ~~For~~ ^{While} trying to make the product different, no new employment opportunities are created.

3) There is an excess capacity involved (say) for advertising etc. which could have been utilized in providing newer opportunities etc. This is wastage in

Oligopoly - The sellers are only a selected few (ie lower than the no. in monopolistic competition) e.g. cola manufacturing companies; though the buyers are many.

Oligopolists can collude (come together) & form cartel (ie monopolise the market).

e.g. crude oil and petroleum producing countries' association

They can't monopolise markets but supersede the competitor's share.

oligopoly uses 'Limit Price Strategy' - ^{long run lowest cost curve} i.e. lowest limit of the ^{oligopolists} is decided as the price. This prevents any new entrant to the market (or forces others to exit the market).

'Price rigidity' is another characteristic of oligopoly (i.e. price can neither be increased nor decreased).

e.g. open insurance market is an example of oligopoly. Another example is telecom market in India.

'Cost of production' includes all types of costs, including the min. profit of the ^{or producer} seller, to sustain his production capability.

Four factors of Production: These are four categories -

- Land - Rent
- Labour - Salary/wages
- Capital - includes physical (equipments, machinery etc), human, financial &
- Entrepreneur, - the one who puts all other factors to business

We are looking at the 'money' cost of production.

'Real' cost of production also includes the toil & trouble that has been undergone. In fact, this 'real' cost of production can't be put into the books of account.

Hence, this accounts to assigning some amount of value to this 'real' cost \Rightarrow however, this is very arbitrary as this differs from case to case.

There is also the ^{concept} cost of 'opportunity cost' (defined as 'opportunity lost'). When a factor of production is used to a particular use, it basically loses the income it would have generated had it been put to another use. That income lost is actually the 'opportunity cost'.

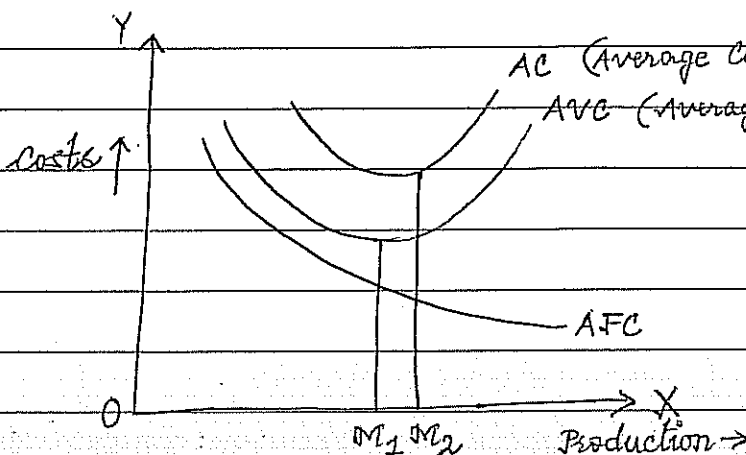
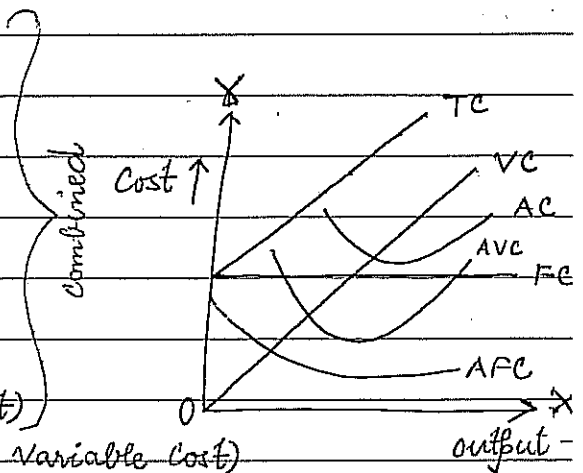
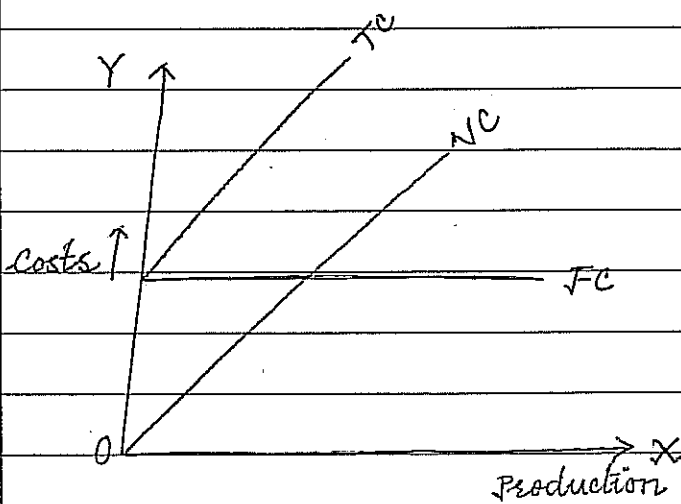
Recently, opportunity cost has become an important factor e.g. in the books of accounts of Mumbai University, the opportunity cost of JBIMS building.

A new non-economic cost is the 'social cost' which is: the cost that the society bears for the use of a particular resource. Again, social cost has become very significant today e.g. Bhutan measures its income as GDH (Gross Domestic Happiness) rather than GDP.

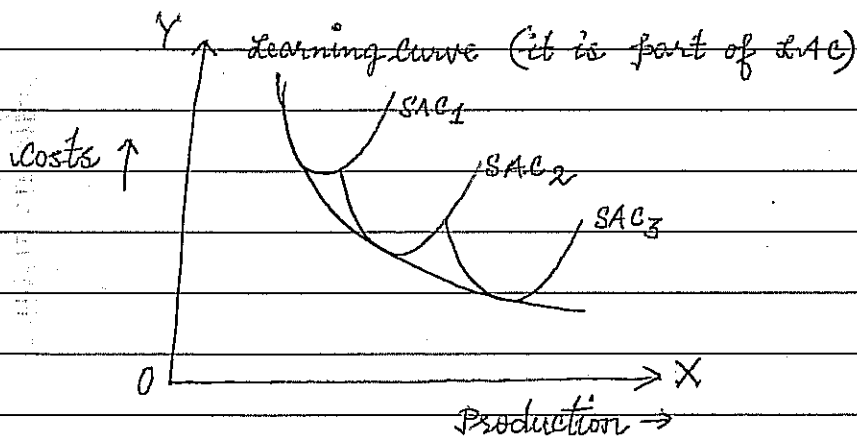
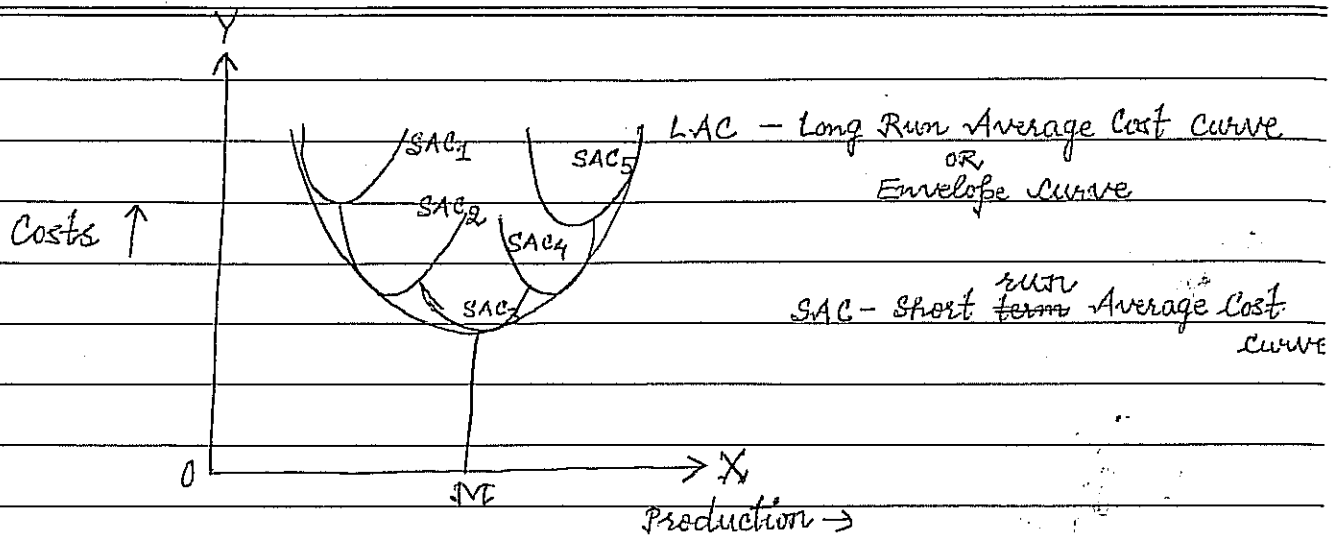
We would only consider the 'money cost' which is payment made to all factors of production.

Money costs are of two types :

1. Fixed cost - incurred on fixed factors of production.
2. Variable cost - incurred on the variable factors of production.



$$AC = AFC + AVC$$



Every process in production

Usually cost of a firm remain unaffected by the market condition it is in (ie monopoly, monopolistic competition etc.) but the revenue structure WILL change.

The short-run structure need to be studied to understand the long-run policy of the firm. Based on short-term experience, the longrun strategy of the firm is decided.

Revenue - proceeds from sales

Total Revenue = Price/unit \times Total quantity

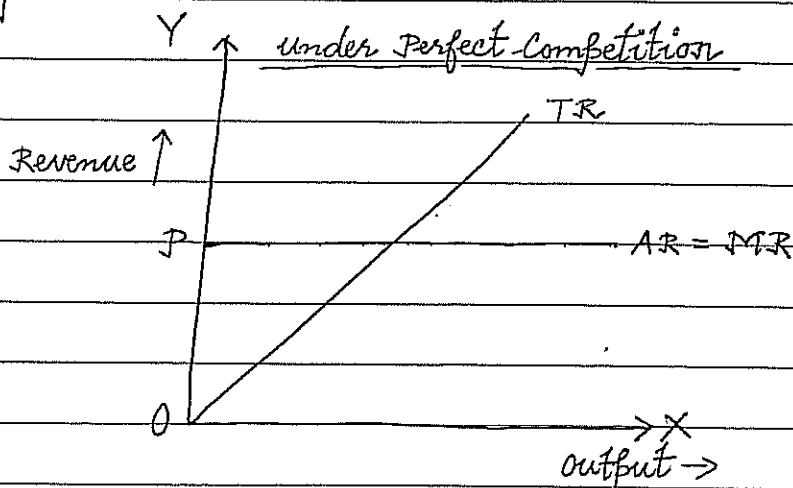
$$\text{i.e. } TR = P \times Q$$

$$\therefore \text{Average Revenue, } AR = \frac{TR}{Q} = P \quad (\text{ie. Price})$$

$$\text{Marginal Revenue, } MR = \frac{\Delta TR}{\Delta Q}$$

$$= \text{Revenue from } n^{\text{th}} \text{ unit} \\ = TR_n - TR_{n-1}$$

The revenue structures are diff. for Monopoly $\&$ ^{Perfect} Monopolistic competition.



Imp. ques.) A firm with losses can ~~be~~^{remain} in the market for long-run. Discuss

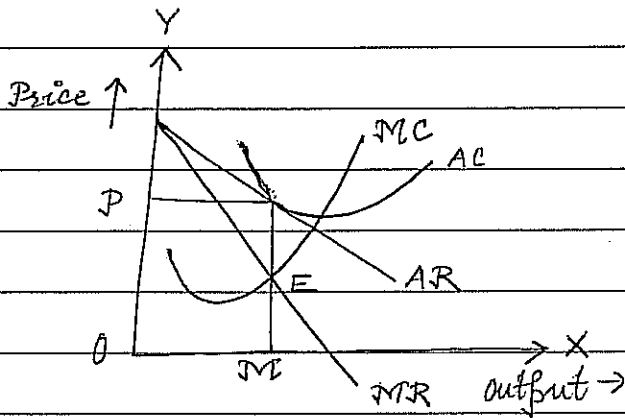
For a firm to remain in business

At least that much revenue should be generated so that it covers the avg. variable cost of production. So, till this pt., a loss making unit can survive, but beyond this the firm can't survive.

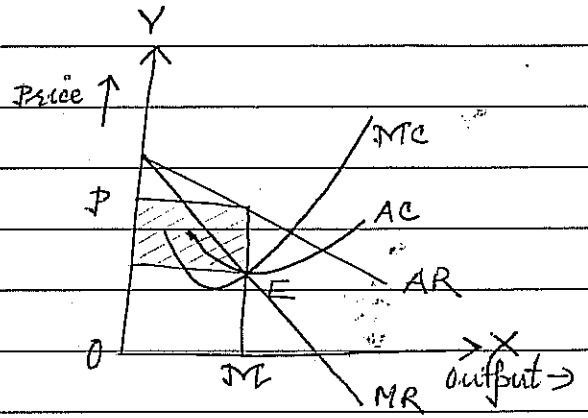
Loss making firms in perfect competition would either die or come out of it by ^{adjusting out of the situation by} earning profits. Firms with supernatural profits would attract more competition \Rightarrow In the ^{the prices would go down $\bar{=}$} long run, the supernatural profits would be washed away $\bar{=}$ only normal profits would remain.

Monopoly :

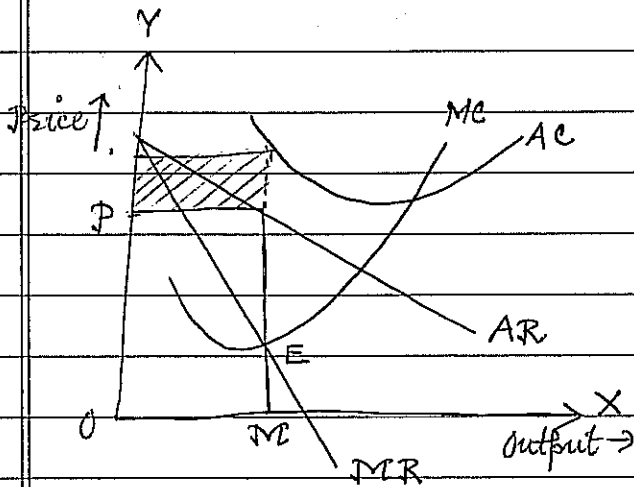
Short Run - Firm



Normal Profits



Supernormal profits



Loss

Long Run

