

Dayash

1) Law of variable proportions:

law of variable proportion is also called as law of return to a factor. and short run production function
 → law of a variable proportion studies the reaction of output to change in a variable factor such as labour. while others factor inputs are fixed in short run.

Hence, short run production function can be written as.

$$Q = f(L, K, N, E, \dots)$$

where,

Q = output (total product), L is labour and are fixed capital, fixed land, fixed input. entrepreneurship respectively.

► Statement :

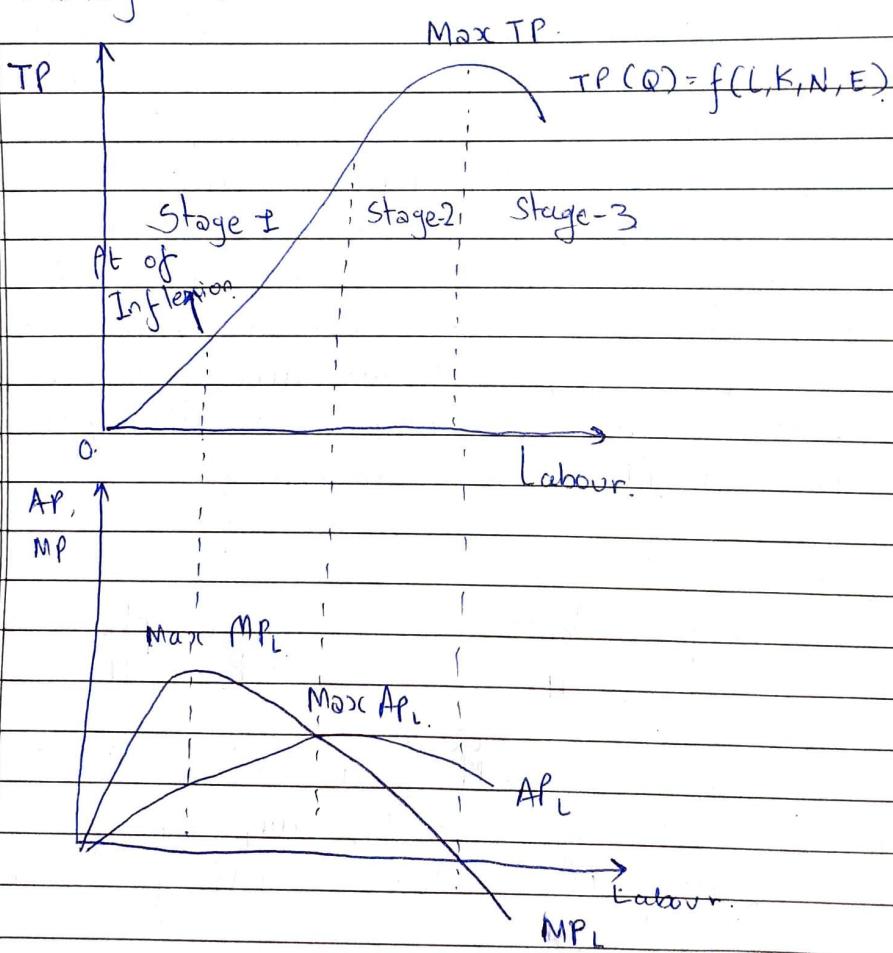
Law of variable proportion states as more and more quantities of a factor (say labour). is employed with fixed quantities of other factors in short run, total output increases at:

- An increase rate (increasing return to a factor)
- decreasing rate (decreasing return to a factor)
- And finally diminishes after reaching its maximum point (neg which means negative returns to a factor).

▷ Assumptions:

- There is short run
- Capital is fixed
- State of technology is also given and unchanged.
- Factor-proportion is variable and keeps on changing.

▷ Diagram:



► Explanation:

There are three stages of Variable returns.

As the variable input is increased while keeping others factor as cons., behavior of output exhibits three distinct stages. These stages were shown in previous figure.

Stage 1

First stage starts from origin and ends at max. Average of variable factor. Total Product is increasing at an increasing rate up to the point of inflection at which means marginal product of variable factor (MP) attains at its max point. After point of inflection, TP increases at a decreasing rate meaning MP is falling. MP continues to fall until becomes equal to maximum AP_L . At this stage, MP of fixed factor is zero. This stage is also called as INCREASING RETURNS at AP_L in increasing.

Stage 2

Second stage starts from max AP_L and ends at max. TP or zero MP_L . TP continues to increase at a decreasing rate meaning MP_L continues to fall. Also when TP increases to max point, MP_L (Marginal Product) becomes zero. AP_L starts falling from its maximum point.

This is the stage of diminishing returns because both, AP_L and MP_L falls from this stage.

Q-1
continue.

Stage-3.

Third stage starts from maximum TP or zero MP.
at this stage, TP starts falling for which MP is negative.

AP continues to fall but would never become equal to zero. This stage is called the stage of negative return since MP of variable factor is negative.

Q-1 B a) Price elasticity:

$$E_p = \frac{(q_1 - q_2) \times (P_1 + P_2)}{(P_1 - P_2) \times (q_1 + q_2)}$$

If $|E_p| = \infty \rightarrow$ perfect elastic

$|E_p| > 1 \rightarrow$ Elastic

$|E_p| = 1 \rightarrow$ Unit elastic

$|E_p| < 1 \rightarrow$ Inelastic.

$(E_p) = 0 \rightarrow$ Perfect Inelastic.

A good's price elasticity of demand is the measure of how sensitive the quantity demanded of it is to its price. When price rises, quantity demanded falls almost any good, but it falls more for some than others.

Q-2 (A) DEMAND CURVE

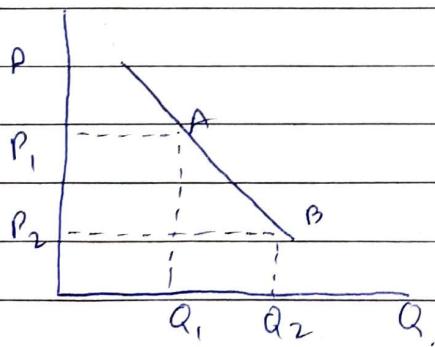
→ demand curve is the graphical representation of demand. The information it contains which describes the quantity of a good that a buyer is willing to purchase at different prices.

→ Demand curve and the demand schedule should describe the same information.

► The law of demand:

According to the law of demand, a lower price will result in an increasing in the quantity of the goods that consumers are willing to buy, holding all else constant.

► Demand curves at different market situations



A movement along the demand curve is brought about by a change in the price of good.

► A shift of demand curve:

→ A shift of demand curve is brought about by a change other than the price of the good. The demand curve can be shifted left which denotes decrease in demand whereas a shift in right denotes increase in demand.

⇒ INFLATION:

1... understood as a situation
on level

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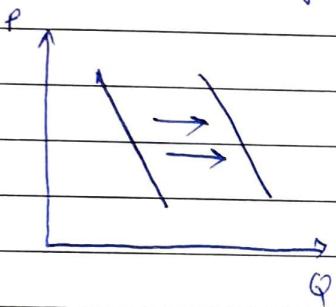
6.

Q-2 A
continue.

▷ Increase in demand:

→ Possible causes:

- Greater preferences
- More population
- Income increase (for normal good)
Income decrease (for Inferior good)
- Expected future price increase.
- More expensive substitute.
- less expensive complement.

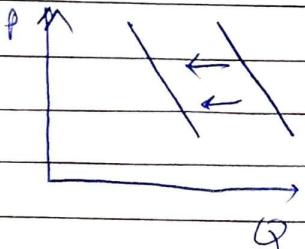


↳ Increase in demand is illustrated by a shift in the demand curve to the right.

▷ Decrease in demand:

→ Possible causes:

- less preferences
- less population
- Income decrease (for normal good)
- Income increase (for Inferior good)
- Expected future price decrease
- less expensive substitute
- More expensive complement.



↳ Decrease in demand is illustrated by a shift in the demand curve to the left.

Q-2 A

Continue.

→ A movement along the demand curve:

An increase in price decreases the quantity demanded. [Upward movement]

→ A shift movement along the demand

curve: A decrease in price increases the quantity demanded

[Downward movement]

Q-3 ~~EAT~~

3) INFLATION:

Inflation is commonly understood as a situation of substantial, and general increase in the level of prices of goods and services in an economy and a consequent fall in the value of money over a period of time.

Inflation rate is a chief measure of price, which expresses percentage change in a general price index.

When general price level rises, value of money falls and as such each unit of currency buys fewer goods and services.

Consequently inflation reflects a reduction in the purchasing power per unit of money.

Mathematically, rate of Inflation expressed as

$$\text{Rate of Inflation} = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100 \text{ percent}$$

where, P_t and P_{t-1} are price level at two time periods respectively.

Price level is the average of prices.

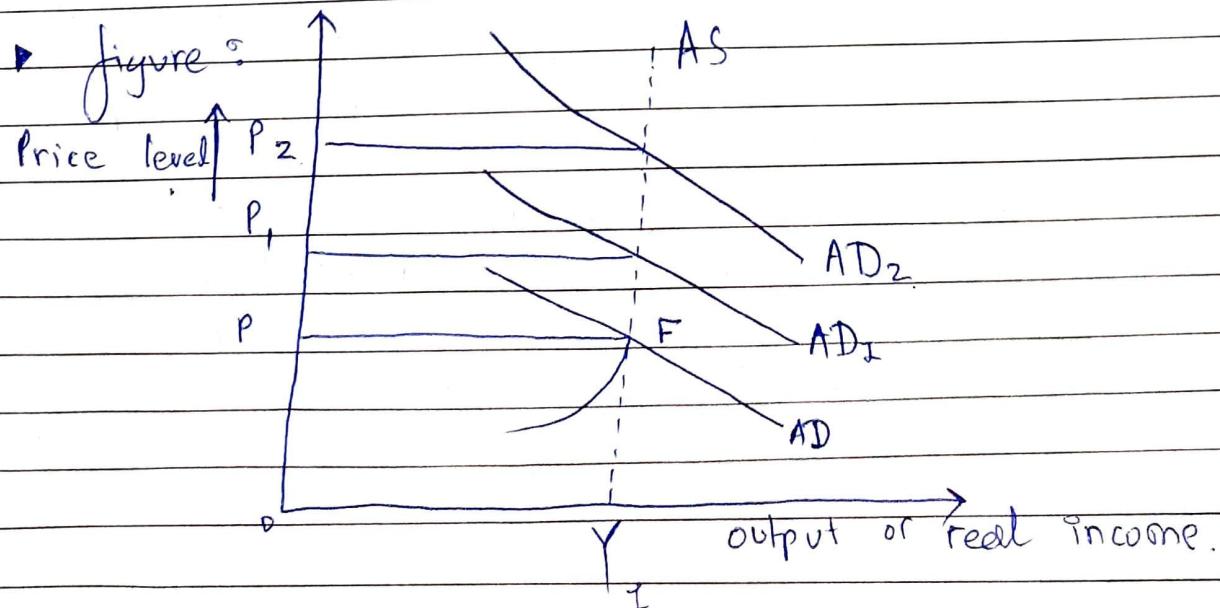
Demand Pull Inflation:

→ According to demand Pull theory, price rises when aggregate demand (AD) in an economy exceeds aggregate supply (AS) of goods and services at full employment level.

The demand pull theorists point out that inflation might be caused, in the first place, by an increase in the quantity of money, when the economy is operating at full employment. As the quantity of money increases, the rate of interest will fall, and consequently investment expenditure will increase. The increase in investment expenditure will increase the income of various factors of production.

As a result, aggregate consumption expenditure will increase leading to an increasing in effective demand. With economy already operating at the level of full employment, this will immediately increase price and inflationary forces may emerge.

Thus, when general monetary demand rises, faster than the general supply, it pulls up the prices, which is in both commodity as well as factor prices.



Q-3

continue.

In the previous figure, curves AD, AD₁ and AD₂ represents aggregate demand curves.

The AS curve represents the aggregate supply function which slopes upward and becomes vertical straight line at point F indicating that the economy has reached at full-employment level.

Therefore, the real output of this figure tend to be fixed or inelastic at point F. Assuming that AD₁ curve intersects with AS curves at point F, the real output or income is Y at full-employment and price level is P. When there is an increase in aggregate demand there would be an upward shift in aggregate demand curve such as from AD to AD₁ or to AD₂. The aggregate supply being inelastic, the price rise from P to P₁ and then to P₂.

There are many reasons which causes demand-pull inflation. Here are some of them described:

- ▷ A quick increase in consumption or MPC.
- ▷ A sudden increase in exports which might lead to a huge under-valuation of your currency.
- ▷ Increase in autonomous investment in firms.
- ▷ Increase in government spending or public expenditure.
- ▷ Excessive money growth:
↳ too much money in the system chasing, too few goods, \Rightarrow price of good will increase.

Q-4 D Factor incomes : are

Factor incomes are the incomes generated and earned by the owners of factors of production. These includes wages, rents, interests, profits etc.

National Income (NI)

National income (NI) or NNP at factor cost is the sum total factor income generated and earned by suppliers / owners of factors of production in a country during year.

$$\begin{aligned}
 NI &= \text{domestic factor income} + \text{Net factor income from abroad} \\
 &= \text{wages and salaries in kind and cash} \\
 &\quad + \text{contribution to social security} \\
 &\quad + \text{Rents including imputed rents + royalties} \\
 &\quad + \text{interests + undistributed profits +} \\
 &\quad \text{dividends + Mixed income of self-} \\
 &\quad \text{employed + Net factor income from} \\
 &\quad \text{abroad}
 \end{aligned}$$

Step Income method sums up all the factor incomes earned by suppliers.

Steps :

Step 1 : Identification and classification of production units located within the economic territories into 3 distinct industrial sectors on activity basis such as primary, secondary and tertiary sectors.

4
Continued.

Step-2 Classification of factor income earned by each factor separately in different sectors of economy. Factor incomes include

- income from work : (wages, salaries in kind),
- income from ownership which includes rents, royalties and interests
- Income from control property
- mixed incomes of self-employed
- net factor income from abroad (NFIA)

Step-3 Estimation of National Income

Fact

NDP at factor cost / Domestic factor income = wages / salaries + contribution to social security + rents including imputed rents + interest + dividends + undistributed profits + mixed incomes.

Adding NFIA with NDP at factor cost, we arrive at NNP at factor cost or national income.

NDP at factor cost + NFIA

= NNP at factor cost / National income