

Chapter 8 - Factor Pricing

Modern Theory of Rent → Joan Robinson

The Ricardian theory of rent had define rent as a surplus which arises due to differences in the fertility of land. But in the modern theory of Rent, Joan Robinson, Boulding has used the concept of scarcity rent. It arises due to the inelastic or less than perfectly elastic supply of land or any other factor of prodⁿ. According to them it is a generalized surplus i.e. it is earned not only by land but also by all the factors of production. Rent is determined by supply & demand for the factor.

Rent as a surplus of current earning / Present / actual earning over transfer earning.

Transfer earning is the minimum supply price necessary to retain a given unit of a factors in a certain use. (It refers to the amt of money which a factor could earn in its next best alternative use). Rent can be define as the difference betⁿ current earning & transfer earning. $\text{Rent} = C.E - T.E$

Eg: An individuals current earning = Rs 5000 , Transfer earning = Rs 3000

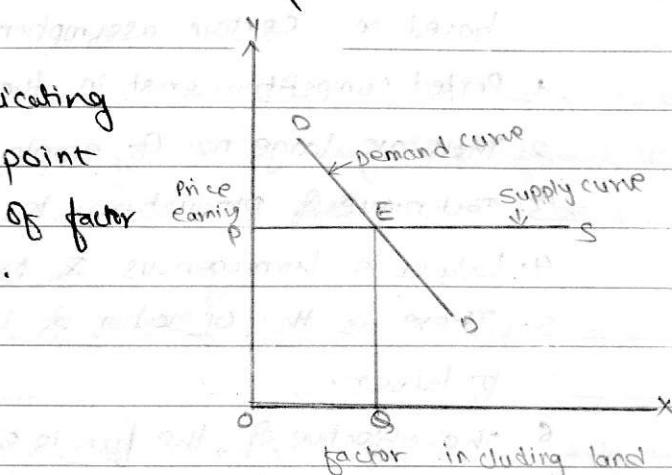
$$\text{Rent (Surplus)} = 5000 - 3000 = 2000$$

Rent is a surplus of transfer earning. Acc. to this theory rent arises only when the supply of the factor including the less than perfectly elastic. On the basis of elasticity of supply of the factors there are 3 possibilities.

1. Perfectly elastic

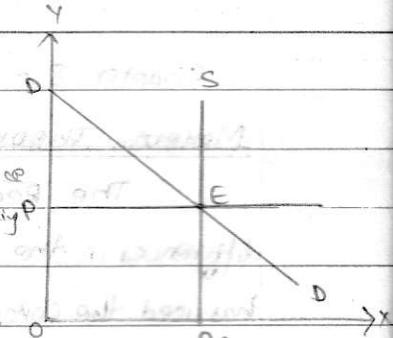
PS is the horizontal supply curve indicating perfectly elastic DD is demand, E is eqⁿ point where demand for the factor & supply of factor are equal. OQ is qty of factor used.

$$\text{Rent} = C.E - T.E$$



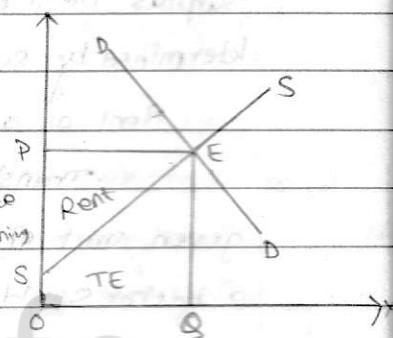
2) Perfectly inelastic

SQ is the vertical supply curve perfectly inelastic supply curve. It shows the supply of factor is fixed. DD is the demand curve. E is the eq^m point where the demand & supply are equal. CE is $OQEP$. Since the factors have alternative use the whole current earning is rent as TE is O .



3) Less than perfectly elastic supply.

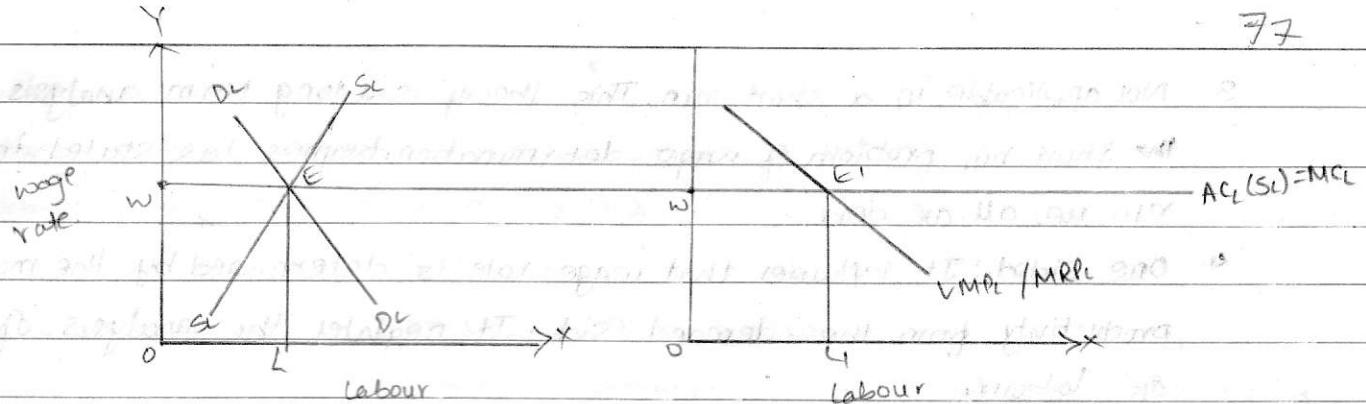
SS is the supply curve of the factors which slopes upward to the right indicating less than perfectly elastic supply. E is the eq^m point of the factor. Total current earning is $OQEP$, TE is $OQES$ & Rent is SEP



Marginal Productivity theory of wage.

This theory was developed by Clark, Marshall, Hicks etc. Acc. to this theory the wage is determined by the intersection of supply & demand for the wage, thus, will be equal to the value of marginal product of labour (VMPL). VMPL is calculated by $MP \times \text{Price per unit of the product}$. This theory is based on certain assumption.

1. Perfect competition exist in the labour market & product market.
2. There are large no. of employers & labour.
3. Technique of production is constant.
4. Labour is homogeneous & perfectly mobile.
5. There is the operation of law of diminishing returns in the productivity of labour.
6. The objective of the firm is to maximize the profit.



In fig. (a) demand for labour is downward sloping indicating an inverse relⁿ betⁿ wage rate & demand for labour. The supply curve of labour is upward sloping indicating the direct relⁿ betⁿ wage rate & supply of labour.

The demand curve for labour is D_L & Supply curve of labour is S_L , which intersect each other at the point E. OW is the eqⁿ wage rate. This wage rate OW is equal to the VMP_L curves. VMP_L curves slopes downward to the right indicating the value of marginal product of labour goes on decreasing as more & more units of labour is added due to the operation of diminishing return.

In fig. (b) $VMP_L = W = MC_L$ at the point E. The no. of labour employed by the firm is OL_1 at this level of employment it gets maxi. profit.

When the labour employment is less than OL_1 , VMP_L is more than $OW(MC_L)$ it is beneficial to use additional units of labour.

When the labour employment is more than OL_1 , VMP_L is less than $OW(MC_L)$, the firm gets loss. Hence only OL_1 level of employment maximizes profit. In order to expand employment either VMP_L should be increased or wage rate should be decreased.

In the perfect competition $AR(P) = MR$. Hence $VMP = MRP$.

Criticisms

1. Unrealistic assumption: This theory is based on unrealistic assumption such as perfect competition, homogeneity & perfect mobility of labour.
2. Not applicable in a dynamic economy: Since this theory is applicable in static economy it has no meaning in the economy which is dynamic in nature.

3. Not applicable in a short run: This theory is a long term analysis & neglects the short run problem of wage determination. Keynes has stated in the long run we all are dead.
4. One Sided: It explains that wage rate is determined by the marginal productivity from the demand side. It neglects the analysis of supply of labour.
5. Ignored the role of trade union: Wage rate is also determined by the relative bargaining power of two parties (firm / employers & labours). Labour's trade union is more powerful in influencing wage rate.
6. Underemployment (full employment): The theory assumes the full employment of labour but according to Keynes there is likelihood of under employment rather than full employment of labour in the economy.

Dynamic Theory of Profit

J.B Clark has introduced this theory. In his view dynamic changes in the economic should be regarded as the fundamental cause of the emergence of problem. Profit is the difference betw! selling price & cost. It is the surplus over the cost resulting from the changes in demand & supply.

1. Static / Stationary economy - In such an economy the stock of Capital invested, technique of production, business organization, demand pattern, etc doesn't change. Demand & supply will be equal. Entrepreneurs can earn only normal profit. Entrepreneurs can earn only normal profit. There will be thus no pure / real profit as a surplus. But the wages of mgmt. Profit emerges only when the price increases or the cost of prod! falls. But they remain constant in a static economy.
2. Dynamic economy - 5 generic changes

Profit is a surplus originates in a dynamic economy. A dynamic economy is full of changes. 5 generic changes are constantly in progress

- a change in the size of pop?
- b change in the consumer's taste & preferences/wants } D
- c Change in the size/stock of capital } S
- d Change in the form of business organization }
- e Improvement in the technique of production }

These above mentioned changes cause a change in price & cost of production. The first two factors influence demand condition & the last three largely influence the supply condition.

In the economy change in any one factor disturbs the demand & supply eqⁿ. Efficient entrepreneur may get real profit. For eg: If any entrepreneur is able to introduce improved technology he will be able to reduce its cost & earn profit. Similarly an increase in demand due to an increase in pop? or taste of the product which leads to rise in the price of the product. If the cost of production remains constant the profit will rise, the price will not. Other producer are also attracted by the profit & follow them. Demand & supply find their new eqⁿ, profit will disappear.

Though whole profit disappear new firm will emerge due to dynamic changes in the determinant of demand & supply.

Criticism.

- 1) This theory ignores the role uncertainty/unpredictable \rightarrow Risk in the emergence of profit. Uncertainty bearing is one of the imp. function of entrepreneur.
- 2) This theory creates an artificial distinction betⁿ profit & wage of mgmt.
- 3) Profit is not the result of dynamic changes as stated in this theory - Profit is reward for risk taking. Entrepreneur bear the risk & earn profit.
- 4) According to this theory capitalist, not entrepreneur bear risk but it is the established fact that risk bearer is the entrepreneur himself.

- 5) According to this theory profit is a temporary surplus. But long period investment is introduced for long period profit.
- 6) This theory does not explain how profit is determined; it only explains profit arises due to dynamic changes.

Innovation Theory of Profit

This theory was developed by J.A. Schumpeter like Clark

he also opines that profit originates due to dynamic changes, but he has given importance only to innovation. Innovation means commercial application or use of new scientific inventions or discoveries. It helps the economic development of a country. The person who introduces the new idea on commercial use is the entrepreneur himself for which he gets profit. Schumpeter starts the theory from the stationary eqⁿ in a capitalist closed economy. Price & cost of prodⁿ are equal & there is no profit (normal profit). Routined prodⁿ works are carried out by the salaried managers. Entrepreneurs disturb this condition by introducing innovation in manufacturing. It reduces cost of prodⁿ or increases demand for product.

An innovation may include one innovation that increases the demand.

1. The introduction of new product.
2. Change in the quality of the product.
3. Discovery of a new market.
4. Introduction of new & better method of advertisement.

Innovations that reduce the cost of prodⁿ

5. The introduction of new technique of prodⁿ.
6. Exploitation of new sources of raw mat. or new form of energy.
7. Re-organization of an industry.

Whenever any innovation is introduced the surplus over cost arises, this profit exist only temporarily. It disappears because some competitor starts producing the commodity in the same manner. The demand for factor increases, its supply remaining the same. As a result cost of prodⁿ increases. On the other hand as the supply of good increases, price decreases in this process the profit originated due to innovation disappears but the economy reaches a higher level of stationary eqⁿ. As the whole profits are being competed away, some entrepreneur will again introduce the innovation & profit begins to appears. In this way innovational profit appears, disappears & reappears.

Criticisms

all of Dynamic theory.

- (7) The entrepreneur function include not only innovation but also organizational & coordinate activity which reduce cost but Schumpeter has ignore them.

$$\text{Business Profit} = \text{TR} - \text{EC}$$

$$\text{Economic Profit} = \text{TR} - (\underbrace{\text{Ec} + \text{IC}}_{\text{eco. cost}})$$

Explicit cost / All cost \rightarrow wage for labour

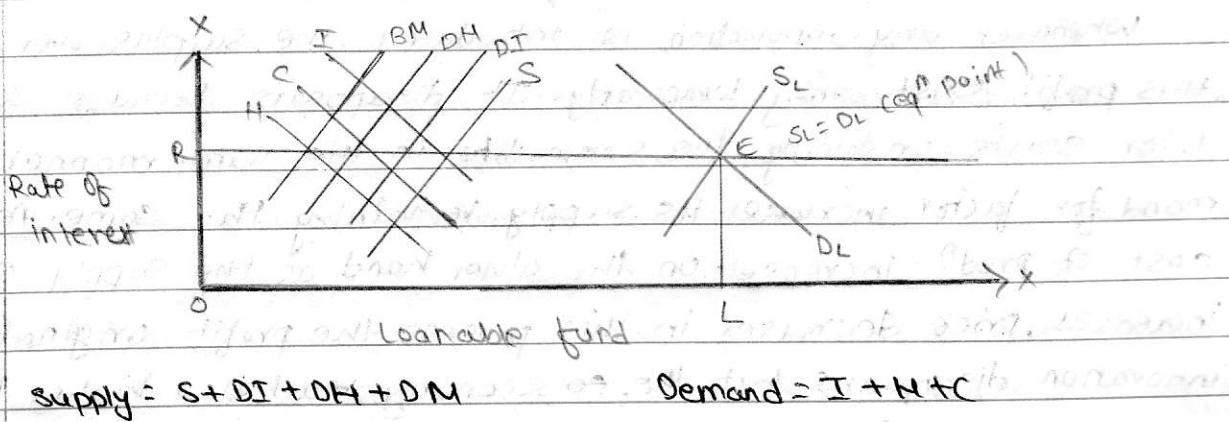
Implicit cost \rightarrow self employed

Interest - Loanable Fund Theory

- | | |
|-----------------------------|----------------------------|
| 1. Demand for loanable fund | 2. Supply of loanable fund |
|-----------------------------|----------------------------|
- \rightarrow Interest Investment \rightarrow Saving
 - \rightarrow Consumption durable goods. \rightarrow Disinvestment
 - \rightarrow Hoarding \rightarrow Dishoarding
 - \rightarrow Bank money / credit money

Indirectly proportional
with rate of interest

Directly proportional with rate
of interest.



In the fig., S_L is the supply curve of loanable funds & D_L is the demand curve for loanable funds. The curves, I , C & H refer to the components of demand & S , DH , BN & DI refers to the component of supply.

The total demand curve D_L & the total supply curve S_L intersect each other at the point E . The eqⁿ. rate of interest is OR . At this rate, the loanable funds supplied are equal to the loanable funds demanded.

Criticisms:

1. Unrealistic integration of monetary factors & real factors : Real factors includes saving & investment. Monetary factors include bank money, hoarding & dishoarding. The nature of these two factors are different all together. Hence it is not correct to integrate them in one theory.
2. Assumption of full employment criticised: Like the classical theory of interest, this theory also assumes full employment of resources. But according to Keynes less than full employment is a general rule.

3. Unrealistic assumption of constant level of income: Keynes has criticized this theory on the ground that it changes with the level of investment which is influenced by rate of interest.

4. Effect of the rate of interest on saving & investment objected:

Saving is determined by the level of income rather than by rate of interest. Though investment is influenced by rate of interest its main determinant is marginal efficiency of capital (MEC).

5. Indeterminate theory: According to Keynes & Hansen loanable fund theory of interest is an indeterminate theory. Supply of loanable fund theory depends on saving which on the other hand varies with level of income ($S=f(y)$). Investment determines the level of income. If it, in turn, is influenced by the rate of interest, $I=f(r)$. Thus, it involves circular reason & doesn't provide a determinate solⁿ to the interest rate determination.

Liquidity Preference Theory of Interest/Monetary Theory of Interest

J.M. Keynes developed this theory. In 1936 J.M. Keynes published his book 'A General Theory of Employment, Interest & Money'. According to him Interest is the reward paid for parting with liquidity for specified period. Rate of interest is determined by the monetary factor. Hence, this theory is known as Monetary theory of interest.

a) Demand for money: It refers to liquidity preference. It is the desire of the people to hold cash; people hold the money to fulfill following motives:

- 1. Transactions Motive. ← (Daily expenses)
 - a. Income motive.
 - b. Business motive.
 - 2. Pre-cautionary Motive.
 - 3. Speculative Motive
- Depends on level of Income
 $L_i = f(y)$

Transaction Motive

1. a. Income motive: People desire to hold cash for bridging the gap betⁿ the receipt of income & expenditure because they need it for day to day transactions. It is known as income motive. Amt of money the people have to hold depends on the size of income. The time betⁿ the pay-days. the existing method of payment.

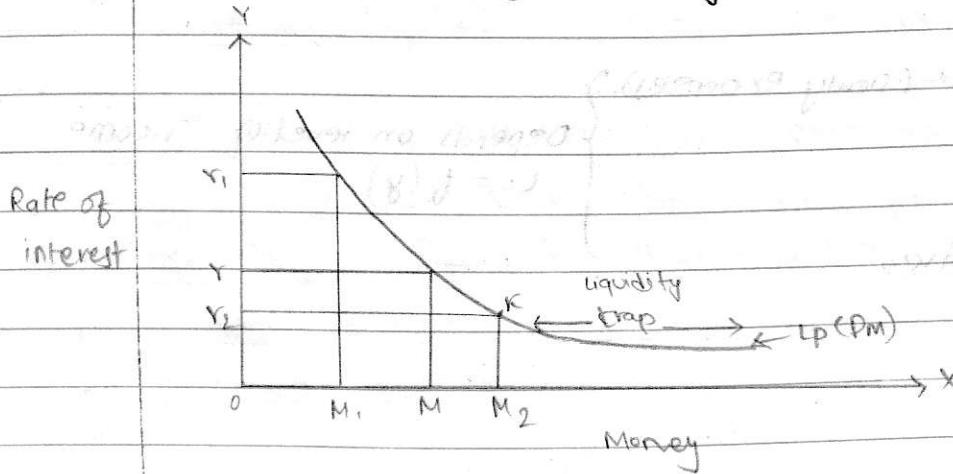
b. Business motive: Business man also hold cash to meet his expenditure on raw mat., wages, fuel, etc. it is known as business motive.

2. Pre-cautionary Motive: Individual hold cash to meet the unforeseen contingencies such as unemployment, sickness, accident, etc. Business man also hold cash in order to meet the unforeseen expenses.

The amt of money helps for these two motive is the function of level of income not the rate of interest.

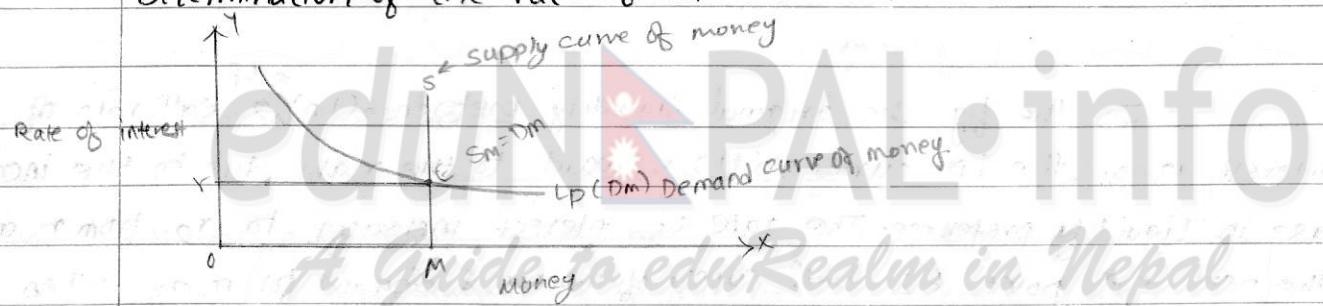
3. Speculative Motive: It is the desire of the people to hold cash to secure profit from the future changes in the rate of interest given, the expenditure of future changes in the rate of interest less amt of money is held at a high present rate of interest & vice-versa. Thus, there is an inverse relⁿship betⁿ present rate of interest & demand for money L_P for speculative motive thus $L_P = f(r)$.

(b) Supply of money: The total supply of money includes coins, bank notes & bank dep deposit. It is determined by govtⁿ policy. It indicates fixed supply of money. Supply of money is vertical st. line.

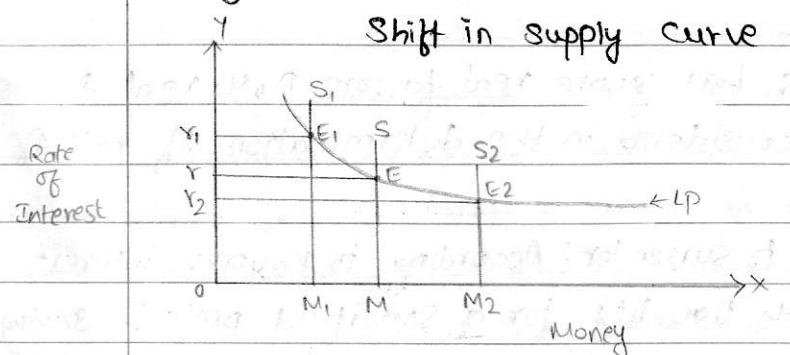


The L_p is the demand curve for money, it slopes downward to the right indicating at the higher present rate of interest, o_r_1 , less amt of money oM_1 is demanded for speculative. At the lower present rate of interest, o_r_2 , larger amt of money oM_2 is held for speculative motive. L_p curve is a horizontal st. line beyond the point K, it means L_p curve is perfectly elastic at a very low rate of interest o_r_2 , indicating people hold all money they have, this part of the L_p curve is known as liquidity trap, when interest rate in the economy is so low that cannot fall below it. People hold all money with them. The monetary policy will become ineffective.

Determination of the rate of interest



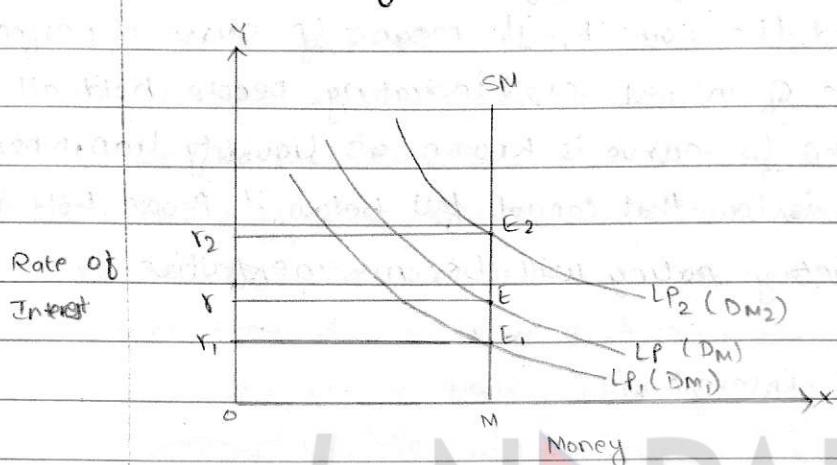
The rate of interest is determined by demand for money & supply of money. E is the eqⁿ point where supply of money & demand for money are equal. The eqⁿ rate of interest is o_r when the supply of money is oM .



In the fig. new supply curve of money N_2S_2 curve is drawn at the right of the original supply curve N_s , it indicates an increase in money supply. E_2 is the new eqⁿ point betwⁿ supply of money & demand for mon^f

Interest rate decreases to r_2 from r due to an increase in money by M_2 . If money supply is reduced by M to M_1 , the rate of interest goes up from r to r_1 .

Shift in demand (LP) curve



In the fig. the original liquidity preference (LP_1)^{is LP} & eq^m rate of interest is r , the LP curve shifts upward to the right due to the increase in liquidity preference. The rate of interest increases to r_2 from r at the new eq^m point E_2 betⁿ supply of money & demand for money. When LP curve shifts downward as indicated by LP_1 the eq^m point betⁿ demand for money & supply of money will be E_1 the rat of interest falls from original rate of interest r to r_1 .

Criticisms

1. Real factor ignored: Keynes has ignore real factors. Both real & monetary factors should be considered in the determination of rate of interest.
2. Saving essential for liquidity to surrender: According to Keynes interest is a reward for parting with liquidity for a specified period saving is necessary for parting with liquidity or for liquidity liquidity to surrender but Keynes has not given importance to Saving.

3. Short run analysis: This theory analyzes the interest rate determination in short run. No place has been given to long run rate of interest determination.
4. Indeterminate: Acc. to Keynes, interest rate is determined by liquidity preference & demand & supply of money. LP for pre-cautionary & transaction motive depends on income level. Unless the level of income is already known, supply of money & LP can't guide us above the determination of rate of interest.
5. Self-contradictory: If a man is holding his funds in a form of time deposit or treasury bills he is getting interest & liquidity too. Hence, Keynes' theory is self-contradictory.

Minimum Wage Fixation

Minimum wage is the lowest wage at which an employee is able to maintain himself & his family at a minimum level of subsistence. The level of subsistence includes food, clothes & shelter. The main objective of minimum wage is not to control or determine wages in general but to inhibit the employment of any one at a wage below an amount necessary to maintain a minimum standard of living.

Minimum wage in a country is fixed by the govt. in consultation with business org. & trade union. The laws relating to the minimum wage either state definitely the wage considered to be the minimum or the determination of the wage is left to an administrative commission which from time to time according to the varying economic conditions determine the minimum wage; eg:

Govt. determines the wage

→ if the wage rate is too low.

→ if employer exploits the labourers.

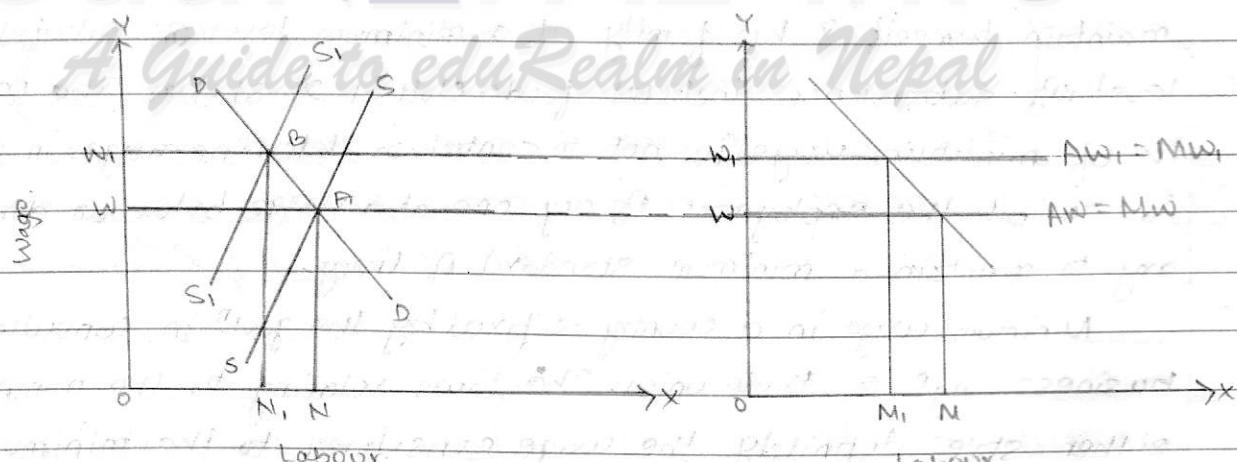
→ for industrial peace → security, education, medical, entertainment.

Determination of Wages under Collective Bargaining

Collective bargaining is the discussion & negotiation between employer & trade union to achieve higher wage rates, more non-wage benefits & improving general conditions of work. Non-wage benefits mean provident fund, gratuity, pension, medical attendance, reduction in hours of work, security, regular payment of wages, etc. Wage determination under collective bargaining can be explained under the following two heading.

1. Perfect competition in both labour & product market

The firm employs labour up to the point where its marginal revenue productivity (MRP) is equal to its marginal wage rate (MW). Under perfectly competitive labour market, wage rate is determined by the demand & supply of labour in the market. Average wage rate & marginal revenue are equal.

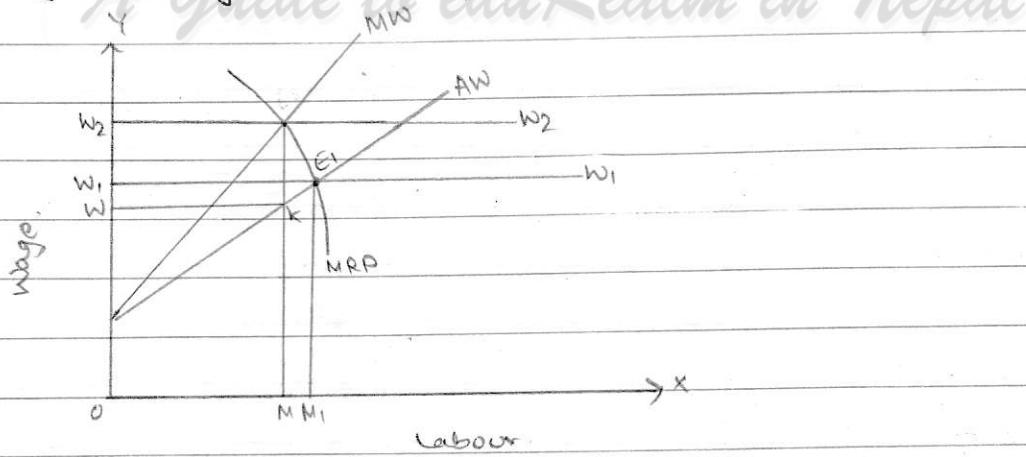


In the fig. DD & SS are demand & supply curve of labour respectively. They intersect at a point A & determine the wage rate W_1 . Corresponding to this wage rate, a firm's faces the point E where the $MRP_L = MW$ & employ OM level of labour.

Now, if the trade union restricts the supply of labour in the market, the supply curve of labour will shift upward from SS to S_1S_1 & the wage rate rises from OW to OW_1 . Corresponding to OW_1 , the new eqⁿ of the firm will be established at point E_1 where the firm will employ only OM_1 level of labour. Thus, MM level of labour will be unemployed in the industry as a whole. It is clear from the above that collective bargaining can't increase wage rate without causing unemployment if there is perfect competition in both labour & product market.

2. Monosony in labour market & perfect competition in product market.

When labour is facing with a monosony, i.e., a single buyer of labour, the firm does not face a horizontal demand curve for labour. A monosony firm can buy more labour by offering higher wages & less labour by offering lower wages. Hence, the monosonyist is facing upward sloping average & marginal wage curve.



In the fig., the monosonyist is in eqⁿ at point E where $MRP=MW$. He is paying average wage rate OW employing OM level of labour. Labour is getting a wage rate MK below its marginal revenue product MF . The difference $KE = MF - MK$ is the monopolistic exploitation of labour.

Now, the trade unions through collective bargaining can secure a

higher wage rate as well as the level of employment. If the union can supply labour as much as demanded by the firm at OW_1 wage rate but supply is nothing below this rate. The supply curve of labour will become W_1W_1 parallel to the x-axis with the new position of eqm would be E_1 where we get MRP equal to the wage rate OW_1 & level of employment OM_1 . In this case, the exploitation of labour is reduced & employment of labour is increased.

Again, if a trade union is very much powerful, it can even secure a still higher wage rate equal to OW_2 with a supply curve of labour W_2W_2 . The firm will establish its equilibrium point at its old point E where $MW = MRP$ & the employment level will be maintained at OM . Thus, without causing any unemployment trade union can succeed in securing higher wage rate of labour.

A Guide to eduRealm in Nepal