THEORY OF WAGES

Labour is a factor of prodn. In the process of prodn labourer sacrifices labour. Remuneration for labour which is given to the labourer is called **wage**. So wage is the price of labour. Labour may be of two types – physical labour and mental labour. Generally remuneration for physical labour is called wage and that for mental labour is called salary.

Difference between Nominal Wages and Real Wages:

Economists have differentiated between nominal wages and real wages. Nominal wages are the wages received by a worker in the form of money.

Therefore, nominal wages are also called money wages. For example, a worker gets Rs. 200 from his/her organization in exchange of services rendered by him/her.

In this case, the amount of Rs. 200 is regarded as a nominal wage. On the other hand, real wages can be defined as the amount of goods and services that a worker purchases from his/her nominal wages. Therefore, real wages are the purchasing power of nominal wages.

The economic condition of a worker depends on the amount of goods and services he/she can purchase with nominal wages. In case the prices of goods and services are doubled, the worker would need double the amount of his/her nominal wages in order to buy what he/she was buying prior to the price rise. Therefore, the economic condition of an individual is determined by his/her real wages.

The following is the formula for determining real wages
W= (NW/P), where

W= Real wages, NW=Nominal Wages

P= Level of price.

Factors Determining Real Wages of Workers

Some of the important factors which determine real wages of the workers are listed below

1. Nature of Job

Nature of job has its bearing on the real wages. We have to see whether the job is permanent or not. In some occupations, employment is seasonal as in agriculture. Therefore, a person who has a regular job enjoys more real wages than the person who has the seasonal employment.

2. Future Prospects

The scope for promotion and prospects of higher wages in future may induce a man to work for a low wage in the beginning.

3. Possibilities of Extra Earnings

Real wage is high in those services where there is possibility of earning extra income even though money wage is low. For instance, a hospital doctor may have private practice or a teacher may undertake some private tuition to supplement his earnings.

4. Mode of Payment

The mode of payment also influences the real wages. For example, an agricultural worker might be paid very low wages in money. But he may get other things besides money wages. These things should be taken into account while considering real wages.

5. Hours of Work

In some jobs a person has to devote less time and in others comparatively more. This affects the real wages to a great extent.

6. Other Facilities

The services having access to conveyance, medical, free education-to children, subsidized goods facility have more real wages, other things being the same. These facilities affect the real wages to a considerable level.

7. Price Level

Another factor that does affect the real wages is in the shape of price level or the purchasing power of money. The rise in price level leads to a decrease in the real wages. For instance, with the ten percent increase in prices, the workers real wages go down. It is so because with the same amount of money now the workers can purchase less goods and services than before. Thus, price level affects the real wages.

8. Working Conditions

Working conditions also affect the real wage rates. For instance, the two persons get the same money wage, but their working conditions are different. The person who works in clean and healthy atmosphere will enjoy the high real wages than the person working in dirty and unhealthy atmosphere. The reason is that healthy and conducive working conditions keep the expenditure on medicines at the low ebb.

9. Social Status

The higher social status of a job leads to high real wages. For example, a clerk of govt. service and of a private company gets almost equal salary. But the social status of the clerk in government service is more than his counter partner. Therefore, he enjoys more real wages.

10. Cost of Training

The real wages also depend on the cost and period of training. There is a negative relation between the two. If the cost is high and period of training is short, real wages will be more and vice versa.

11. Travel Expenses

If a worker has to incur some travel expenses from his home to work place then his real wages will be low and vice-versa.

12. Timely Payment

Real wages also depend on the timely payment of wages. If a worker gets his wages regularly and on fixed dates his real wages will be considered more. For instance, the real wages of government employees are considered to be high as compared to the employees of private companies.

13. Money Wages

Other things being equal, if money wages are high, real wages will also be high. The real wages of a teacher who gets monthly income of Rs. 2000 will be more than the teacher who gets the monthly salary of Rs. 1500, because with high money wages, he can buy more. Thus, from the above analysis, we may conclude that the real wages cover the overall working conditions. The nominal wages are only the price for the services offered in terms of

Marginal Productivity Theory of Wages .

The theory is based on the following assumptions

1. Perfect Competition

Conditions of perfect competition prevail in the labour market. This means that the firm can obtain all the labour it requires at the prevailing (market) wage rate. The firm is a price-taker and is faced with a horizontal labour-supply curve.

2. Homogeneity

Labour is treated as a homogeneous factor, i.e., the productivity of each unit of labour is the same. This happens only when all workers are alike in skill, ability and efficiency.

3. Mobility

Labour is perfectly mobile between (among) occupations This means that forces of competition will lead to equalisation of marginal product between (among) sectors.

4. Fixity of other Factors

All factors except labour is assumed to remain fixed. So, the change in output of the firm is attributable to change in the usage of labour input alone.

5. Profit Maximisation

The objective of the firm (entrepreneur) hiring labour is to maximise profits. Therefore, it's (his) main concern will be difference between the cost of employing labour and the revenue to be gained from the sale of the output of labour.

6. The Operation of Law of Diminishing Returns

The theory also assumes the operation of the law of diminishing marginal returns and consequent fall in the marginal product of labour with the increase in the employment of labour.

Two Concepts: MPP & MRP

The marginal productivity theory of wages is based on two concepts, viz., marginal physical product (MPP) of labour and marginal revenue product (MRP) of labour. The MPP is the addition to the total output or product which occurs when one additional unit of labour (the variable factor) is employed. Due to the operation of the law of diminishing returns MPP initially rises but then it starts to decline. Total product increases but at a decreasing rate'.

Suppose a firm has already employed 10 workers and its total product is 30 units. Now, suppose another worker is employed, keeping all other factors fixed. As a result total product rises to 32. So, MPP is 2 units. It is the addition made to the total product by the last (here eleventh) worker.

However, a profit-maximising firm is not really interested in knowing what is the contribution of the last worker to the total product. It is more interested in knowing how much revenue can be made by selling this extra output. So, a more relevant (and important) concept is MRP.

MRP refers to the addition to total revenue received from the sale of the additional output and is calculated as the MPP, e.g., tonnes of wheat, etc., multiplied by price (which is equal to marginal revenue under perfect competition), i.e., MPP x P = MRP. Suppose, the price of

the product (wheat) is Rs 100 per tonne. So, the MRP will now be Rs 200 (= 2 x Rs 100).

As under conditions of perfect competition price is constant, the MRP curve will be identical in shape to the MPP curve. (Under conditions of imperfect competition the MRP curve is obtained by multiplying the MPP by marginal revenue, i.e., MPP x MR = MRP)

A Firm's Optimum Purchase of Labour

In Fig.1, the MRP curve can be seen to rise and then fall cutting the average revenue product (ARP) curve at its highest point. The ARP curve represents the average revenue, in monetary terms, per unit of labour employed. Due to perfect competition in the labour market the supply of labour will be perfectly elastic at the prevailing wage rate (W_o) which is determined by the market.

A profit-maximising entrepreneur will want to employ labour as long as the MRP is greater than the wage rate (cost of labour). In Fig. 1 he will continue to employ additional labour up to OL_o as this will add more to revenue than to cost. Above OL_o additional labour will cost more than its MRP and will not therefore be employed.
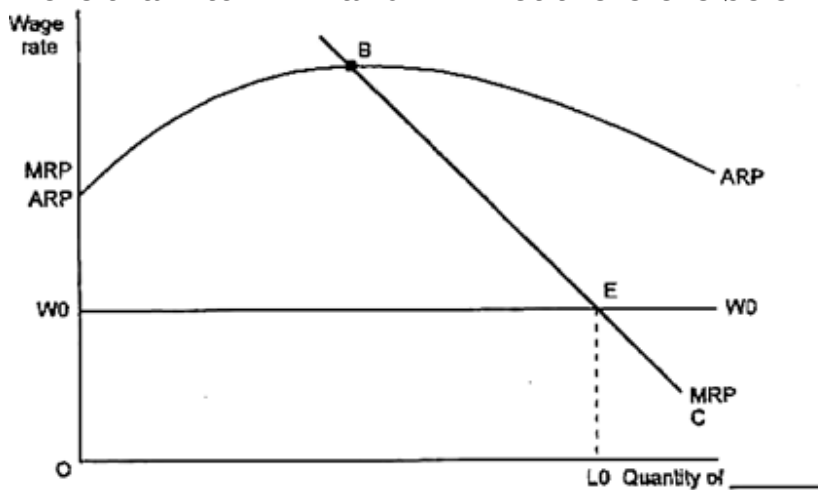

Fig. 1 : Optimum balance of labour
by a profit-maximising firm

The profit-maximising entrepreneur will therefore employ OL_o units of labour. If we consider the wage rate to be the marginal cost of labour,

we can see that the conclusion is another form of the MR = MC rule used in the theory of the firm, point E being the equilibrium point.

A Firm's Demand Curve for Labour

The relevant section of the MRP curve is, however, B-C only. This is so because no firm will employ labour when the wage rate is greater than the ARP as the profit-maximising entrepreneur would never pay more to all workers than the highest ARP, as losses would result. The section of the MRP curve below ARP, i.e., B-C can be considered as the competitive firm's demand curve for labour.

The marginal productivity theory is, therefore, a theory of how the demand for labour is determined. But, as the supply of labour is excluded, it cannot be considered as a theory of how wages are determined as it says nothing about the determination of wage rates.

Criticisms
1. Bias
First, theory is one-sided because it focuses on the demand side of the labour market and completely ignores its supply side. But, in practice we observe that wages are determined by the forces of both demand and supply. So, the theory is incomplete, too.

2. Collective Bargaining
Secondly, according to this theory wages can never be more or less than the marginal revenue product of labour. But, in practice, we observe that trade unions often demand and succeed in getting wages beyond the marginal product of labour.

Likewise, the absence of labour unions creates situations where wages are far less than the marginal revenue product of labour. In fact, wages are not always determined by market forces. Instead, wages are fixed by collective bargaining between the trade union and the employer.

3. Market Imperfection

Thirdly, the theory is based on the assumption of perfect competition in both labour and commodity markets. If we relax the assumption in any one of the markets, the major conclusion of the marginal productivity theory will not hold. Since perfect competition does not exist in most real life markets, the marginal productivity theory is unrealistic.

4. Long-Run Trends

Fourthly, the forces of competition lead to the equalisation of the marginal product among different sectors or industries. Critics point out that the theory offers only a long-term explanation of the determination of wages. It fails to explain how wages are determined in the short run.

5. Lack of Homogeneity

Fifthly, the theory is based on a number of unrealistic assumptions. First, the theory assumes that all workers are alike in skill, ability and efficiency, or, in other words, all units of labour are homogeneous. But, in practice, we observe that workers differ in ability efficiency and productivity. This largely accounts for inter-individual differences in wages and earnings.

6. Measurement Problem

Critics also point out that when production is carried out on a very large scale it becomes very difficult, if not absolutely impossible, to measure the marginal product of labour. This is a practical problem. In large production units, the employment of one extra worker makes hardly any difference to the total product. Thus, we cannot arrive at an accurate estimate of the marginal product of labour.

We may note that the marginal product of labour can be measured only when a worker is actually employed in the work place. So, the question is: how to employ a worker on the basis of his anticipated marginal product? The marginal productivity theory leaves this question unanswered.

7. Economy of High Wages

According to this theory, wages depend on the (marginal) product of labour. Critics point out that the converse is also true Labour productivity also depends on wages. It is in this context, that Alfred Marshall spoke of the economy of high wages.

According to Marshall high wages promote efficiency; low wages retard it. If the wage rate is reasonably high or fair enough, the standard of living of the workers will also be high. Consequently, the productivity of labour will rise. In this case, productivity is influenced by wages.

8. Role of Complimentary Factors

Moreover, marginal product of labour depends not only on the number of workers employed, but also on the supply of complementary resources such as land, capital, etc. Thus, the efficiency of a worker depends, at least partly, on the amount of resources he has to work with.

If the supply of other resources is quite abundant and that of labour is scarce, the marginal product of labour will be very high indeed. The converse is also true. If a worker does not have sufficient amount of other resources, his efficiency and hence productivity are bound to be low.

9. Role of Management

Critics also point out that the (marginal) product of labour also depends upon the efficiency or inefficiency of management. An otherwise efficient worker will not be able to deliver the goods if he has to work under an incompetent manager. (This is usually found in most public sector undertakings).

10. Non-Substitutionality of Factors

Substitution is not always possible. It is also found that the possibility of increasing the number of labour by keeping other factors constant is very little due to technical constraints. The technical coefficients of

production determine the quantities in which the units of different factors are to be combined.

11. Role of Saving

Another criticism is that the demand for labour is not due to its productivity. The demand for labour, according to Maurice Dobb, does not depend on its marginal revenue product; instead it depends on the capitalists' willingness to save, which depends on previous wage-bargains and on previous profits.

12. Wages not Equal to the Marginal Revenue Product of Labour

According to Taussig, wages do not tend to be equal to the marginal product of labour for there is no specific product of labour. In his opinion, 'wages stand for the marginal discounted product of labour' and so wages are less than the marginal revenue product of labour.

Supply Curve of Labour

A perfectly elastic or a horizontal supply curve of labour is not found in reality. An individual labour supply curve is likely to be positive sloping indicating larger supplies of labour at a higher wage rate. But this is not always so.That means, a worker may be induced to work less when his wage rate tends to rise. Thus, labour supply curve may be backward bending. How such individual supply curve of labour is derived may be described in terms of the figure below.
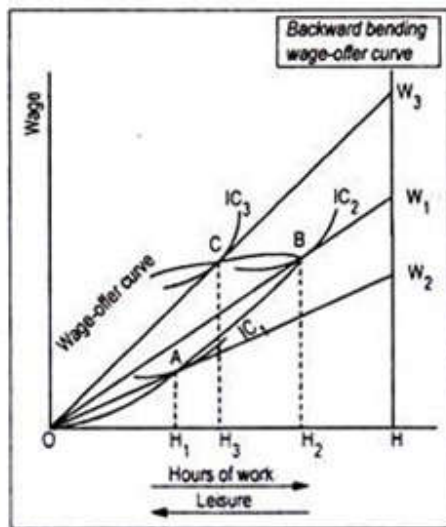
Fig. 6.16: The Wage-offer Curve

We know that the individual supply of labour depends on the wage rate. Usually, as wage rate rises, an individual labour supplies more working hours than before. But there is another temptation on the part of the worker—the temptation of less work and more leisure.

Once the optimum wage is earned by a labour, further increase in wage rate may induce him to work less and take more leisure. Leisure is attractive too.

As a result, labour supply curve becomes backward bending. This has been shown in terms of indifference map between work (or leisure) and wage. A labour's indifference curve represents different combinations of work or leisure and wage that yield the same amount of utility to the labour.

The level of utility, however, depends on total wage earnings and total leisure hours (or working hours). An individual cannot work 24 hours a day, so he must take leisure. Remember that leisure is not an **'inferior good'**. Wage to a labour is considered as a **'good'** while more work is considered as a **'bad'** commodity.

In the figure we measure working (or leisure) hours on the horizontal axis and wage rate on the vertical axis. Let us assume that an individual labour can work up to OH hours, rather than 24 hours. IC$_1$,

IC_2, and IC_3 are three indifference curves. Higher indifference curve represents higher level of utility.

We have drawn three straight lines OW_1, OW_2, OW_3 whose slopes represent different wage rates. These lines are called wage constraint line or simply, the budget lines. Higher the line, higher is the wage rate. The worker will reach equilibrium when the slope of the budget line equals the slope of the indifference curve.

In other words, equilibrium occurs at that point where budget line becomes tangential to the indifference curve. The slope of the line OW_1 represents a wage rate equal to AH_1/OH_1. At this wage rate, an individual works OH_1 hours and takes leisure of H_1H hours.

The slope of the line OW_2 represents higher wage rate than OW_1 and the worker maximizes his utility at point B. At this point, slope of the line $OW_2 = (= BH_2/OH_2)$ is equal to the slope of the IC_2. Since $BH_2/OH_2 > AH_1/OH_1$, the workers supplies more working hours (i.e., OH_2) and takes fewer leisure hour (i.e., H_2H).

Further increase in wage rate induces labour to enjoy more leisure and less work, since leisure is a 'good' commodity. The slope of the line OW $(= CH_3/OH_3)$ indicates higher wages. Corresponding to the equilibrium point C, the individual worker now works fewer hours (i.e., $OH_3 < OH_2$) and enjoys more leisure hours (i.e., $H_3H > H_2H$).

Now, by joining these points of equilibrium (A, B and C), we obtain wage-offer curve. Initially, this curve is upward rising but once point B is reached it takes a backward turn. This means that, in the initial stage, supply of labour rises as wage rate rises, but, ultimately, supply of labour declines as wage rate rises.

This backward bending wage-offer curve may be used to derive a backward bending labour supply curve. In this connection, we may use the concepts of income effect (IE) and substitution effect (SE of wage change).

Higher wage rate induces a worker to work more instead of availing more leisure. To the worker, as leisure is now expensive, higher wage rate encourages a substitution of work for leisure. This is called substitution effect.

Substitution effect is always positive. It is because of the positive substitution effect that an individual labour tends to work more when wage rate rises. This is evident from the figure below. As wage rate rises from OW_1 to OW_2, the supply of labour rises from OH_1 to OH_2. As wage rate rises, the worker substitutes extra hours of work for leisure.
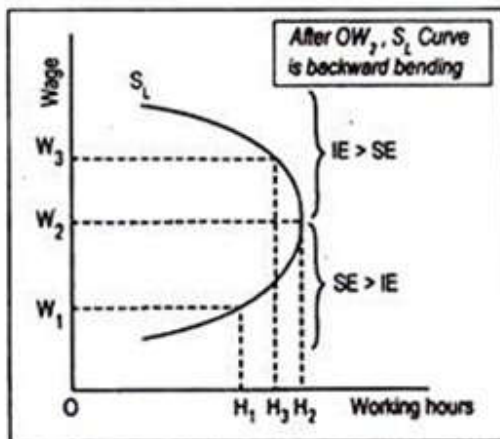

Fig. 6.17: The Labour Supply Curve

But as the wage rate rises, individual worker's real income rises. This increased real income increases his demand for normal goods, including leisure. (Leisure may be an normal or superior commodity.) This is called income effect of wage rate changes.

If the current wage rate becomes too high to an individual labour, he prefers to work less and take more leisure. In our example, if wage rate goes above OW_2, the individual labour may be tempted to work less from OH_2 to OH_3. As a result, his leisure hours increase.

Thus, between wage rates OW_1 and OW_2, substitution effect (SE) is stronger than income effect (IE), inducing individual labour to work more and take less leisure. The S_L curve or labour supply curve slopes upward between wage rates OW_1 and OW_2, and it has a positive slope. Between wage rates OW_2 and OW_3, income effect outweighs substitution effect, inducing our worker to work less and take more leisure.

The supply curve of labour, S_L, thus becomes backward bending. The S_L curve of labour now slopes downwards. The phenomenon of some reputed city doctors working only four hours a day and taking Saturdays and Sundays as absolutely free for themselves may be an

evidence of backward bending supply curve of labour at high income levels.

When we are considering the labour force then at each wage rate there will be some labour who is willing to work. Hence the aggregate supply curve is upward rising.

Modern Theory of Wages

The most acceptable theory of wages is the modern theory of wages. It is also known as Demand and Supply theory of wages. According to this theory wages are determined by demand and supply of labour. We consider the modern theory i) when there exists perfect competition in the labour market and ii) when there exists imperfections in the labour market.

Wage Rate Determination When There Exists Perfect Competiton In The Labour Market

Demand for labour : Producers demand labour because labour is productive. When a labourer is employed he produces goods. The capacity of labourer can be measured in terms of goods. According to marginal productivity theory of wages the rate will be equal to the marginal productivity of labour. No producer will pay a wage higher than the marginal productivity of labour. As more labourers are employed, the marginal productivity of labour falls keeping the other factors constant. This happens because of the operation of the law of diminishing returns. At higher level of wages the demand for labour will be low, and at lower level of wages the demand for labourers will be high. So, the demand curve for labour slopes downward from left to right.

Supply of labour : By the supply of labour, we mean the number of workers of a given type of labour which would offer themselves for employment at various wage rates. The supply of labour depends on the following factors:

1) Population, 2) Age composition of population, 3) Working age, 4) Expenses of education, 5) Preference between leisure and work, 6) Attitude of women towards work, 7) Birth control 8) Wages.

If other things are constant, generally as wages increases the supply of labour will increase, and vice versa. So the supply curve for labour slopes upward from left to right.

Determination of wages : According to this theory wage rate is determined by the interaction of demand for supply of labour. This can be shown with the help of the following diagram

In the diagram, SS is the supply curve of labour, And DD is the demand curve for labour. These two curves intersect each other at point E. So, OW is the equilibrium wage rate as at this wage rate both the demand for the supply of labour are equal. At a wage higher than OW the demand for labour is less than the supply of labour.

So, some labourers will not be able to find employment. So, the wage rate will come down till all the labourers can be employed. On the contrary if the wage rate is below OW, the demand for labour will be more than the supply of labour. Consequently the wage rate will rise through competition among employers till the demand for labour becomes equal to the supply of labour.
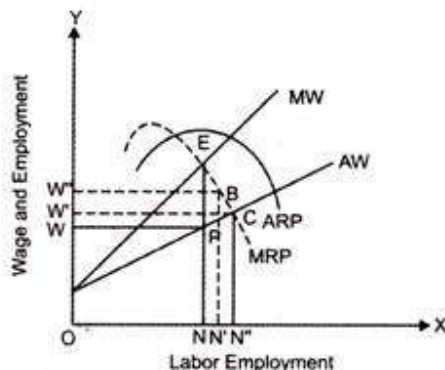

Demand / Supply
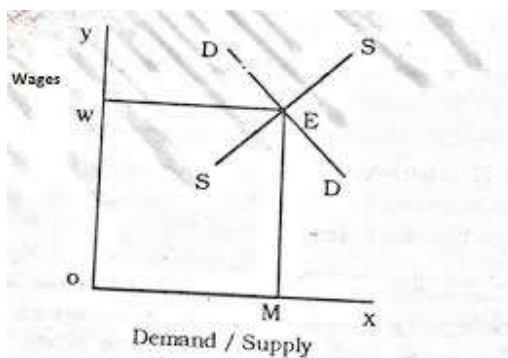
Wage Rate Determination under Imperfect Competition

There can be various forms of imperfect market. We will assume there exists monopsony in the labour market i.e there is only one buyer of labour . This single buyer has no competitor in the market.

Therefore, the position of the buyer is very strong as compared to labor. Monopsony can also take place when a single employer employs a huge labor force for a particular job type. In this case, the employer would have a control on setting the wages for that particular job.

Figure shows the determination of wage rate in case of imperfect competition

Figure-11: Determination of Wage Rate under Imperfect Competition

In this figure AW (average wage curve) is representing the supply curve of labor, while MRP represents the demand curve of labor. AW is showing an upward slope. This implies that employer needs to pay higher wages if he/she wants to hire more labor. MW represents the marginal wage curve.

MW intersects MRP at point E, which is the equilibrium point. At point E, MW gets equal to MRP when the number of labor is equal to ON with the wage rate of OW (=NH). The wage rate OW is lower than

the MRP wage rate that is NE. Therefore, the labor is getting wage rate lower by EH from the actual MRP rate that they deserve.

EH represents the level of wage rate at which labor is exploited in monopsony condition. It is also termed as monopsonistic exploitation. Therefore, in case of monopsony, the wage rate and number of employees is low as compared to perfect competition. In case of perfect competition, the equilibrium point would be at C. At point C, wage rate would be OW (=NC) and number of labor is ON that is higher as compared to the case of monopsony.

Trade Unions

Definition of Trade Union

A Trade Union has been defined as a continuous association of workers formed for the purpose of maintaining and improving their conditions of employment.

Their aim is not merely to fight against the wage-cuts but also to fight for higher wages. A temporary organisation or a mere strike committee cannot be considered a trade union. It must be a continuous association.

Functions of Trade Unions

Trade unions perform, broadly speaking, two types, of functions:
(i) Fraternal or mutual-help functions; and

(ii) Militant or fighting functions.

The fraternal functions include organisation of indoor and outdoor games, dramatic clubs, arranging of lectures, running of schools, hospitals, etc. All these are intended to promote the general welfare of the working classes through their own efforts.

The militant functions of the unions refer to the struggle that they make against the employers for getting higher wages or for getting their grievances redressed. Strike is the weapon that they wield. This is

a weapon of last resort. Sometimes the employers take up a very unreasonable and uncompromising attitude. No alternative is then left to the workers except to fight for their rights. Thus a strike becomes inevitable.

Collective Bargaining

Collective bargaining is a **process** of **negotiation** between employers and a group of employees or Trade Union aimed at agreements to regulate working salaries, working conditions, benefits, and other aspects of workers' compensation and rights for workers.

Role of Trade Unions in Raising Wages under Monopsony

The monopsonist, working on the marginal productivity principle equates marginal revenue product of labour with the marginal wage to be in equilibrium .

In such a situation wage rate (i.e., average wage) determined is less than the marginal revenue productivity. It will be seen from the figure below that, under monopsony, wage rate OW and employment ON is determined. Under such circumstances if workers organise themselves into trade unions, they can achieve increase in the wage rate without creating unemployment, indeed the employment will increase for some increases in the wage rate.
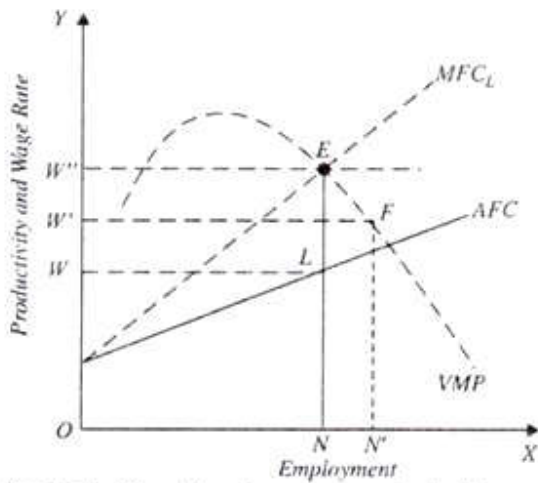
Fig. 33.18. *When there is monopsony in the labour market, increase in the wage rate can be secured by the labour union without creating unemployment.*

When the trade unions come into existence, the supply of labour is channelled through it and the bargaining with the employer is on the basis of 'all or nothing' at a particular wage rate demanded, that is, no supply of labour will be offered below the demanded and/or mutually agreed wage rate and the whole supply of labour will be offered at the mutually agreed wage.

This means, in other words, that the supply curve of labour under trade union becomes perfectly elastic at the demanded or mutually agreed wage rate. It will be seen from the figure that if the trade union succeed in getting higher wage rate OW, the supply curve of labour becomes horizontal or perfectly elastic shape at the agreed wage level OW' the new supply curve of labour will coincide with the marginal factor cost curve.

It will be seen that, given the wage rate equal to OW and the labour supply curve W' F, the employer's equilibrium will be at point F, at

which employment ON', which is greater than ON, will be offered by the employer.

It should be carefully noted that a powerful trade union can raise the wage rate even up to OW" that is equal to the marginal value product NE at the original level of employment ON. When the wage rate OW' is fixed under collective bargaining and as a consequence the supply curve of labour or marginal factor cost curve W"E becomes perfectly elastic at the level OW", the employer's equilibrium will be at ON, the original level of employment.

Thus, under conditions of monopsony, a strong trade union can raise the wage rate to the level of value of marginal product NE without the fear of creating unemployment. In the absence of trade union, the monopsonist would exploit the workers to the extent of LE or WW". Where the wage will settle will depend upon the relative bargaining power of the two parties i.e. the trade union and the employer.

It is, therefore, clear that the workers by organising themselves into trade unions and thereby collectively bargaining with the employer, can raise the wage rate to remove monopsonistic exploitation by the monopsonist.