Labour Market

Under Perfect Competition wage rate is determined by Market forces i.e; demand for Labour and supply of Labour.

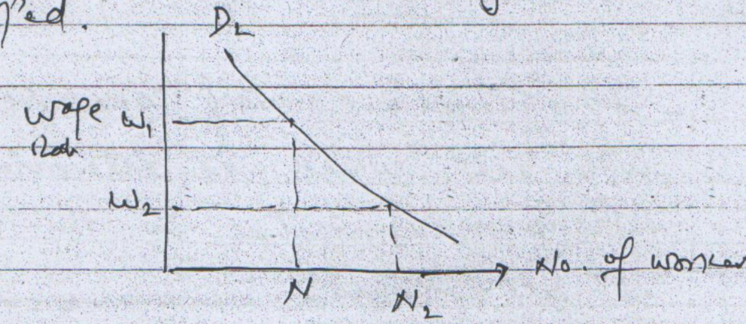
Main assumptions of Perfect competition are

- All firms are wage Taker i.e; follows the wage rate which is determined by D_L & S_L
- Profit maximization is the main objective of all firms.
- There is no barrier on entrance and exit of ~~&~~ workers.
- They have perfect knowledge about the market.
- Workers are homogenous.
- Price of the Product does not change.

As wage rate is determined by D_L and S_L. Hence

Demand for Labour for a market shows number of worker, which a market is willing and able to employ at the given wage rate in specified

- There is an inverse relationship between wage rate and demand for Labour. As wage rate increases demand for Labour decreases and vice versa. This is why demand curve for Labour is negatively ~~sloped~~ sloped.



- There are other determinants too, due to which there is a complete shift in demand curve.

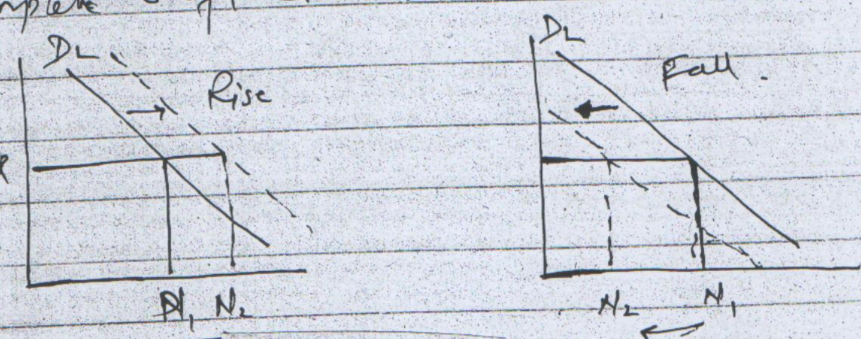
a) Derived demand: Labour is not demanded for its own sake but it is essential to produce good and services. Hence if demand for goods and services increase, there will be a rise in demand for Labour and vice versa.

b) Technological changes have dual effect on demand for Labour. As Technological changes occur, demand for skilled workers and those who are adaptable with the new technology increases and demand for unskilled workers fall.

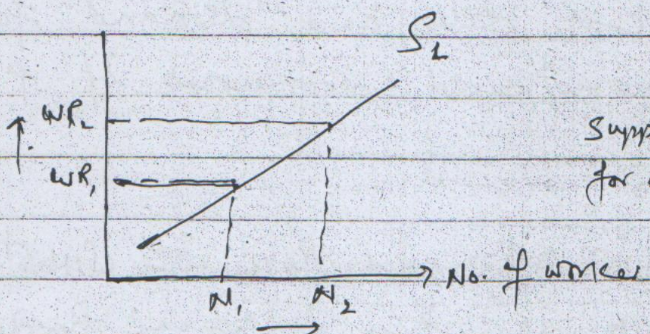
c) Productivity of Labour does matter, in demand for Labour. As Productivity rises more then the cost of Labour, Avg. cost falls and demand for Labour increases and decreases if productivity falls.

d) Productivity and Price of Substitutes and and Complementary factors of Production also affect the demand for Labour. For Instance if Price of the Substitute is high or less productive, then demand for the given Labour will be increased.

Due to non-wage factors there is a complete shift in demand curve.



Supply of Labour (S_L): Number of workers who are willing and able to work ~~for~~ in a Market at the given wage rate in specified period of time.
There is a positive relationship between the wage rate and S_L. As wage rate increases S_L increases and vice versa.



Supply of Labour for an industry Market

- There are other determinants too, due to which supply curve of Labour is shifted completely.

a) Wage rate in other industries can influence S_L. If in other ~~indus~~ industry wage rate is comparatively higher, supply of Labour will fall for the given industry, and vice versa.

b) ~~Non~~ Non-Monetary benefits also influence Supply of Labour. If more fringe benefits are given in an industry, there will be more supply of Labour, and, if there are more fringe benefits in other market, S_L will fall.

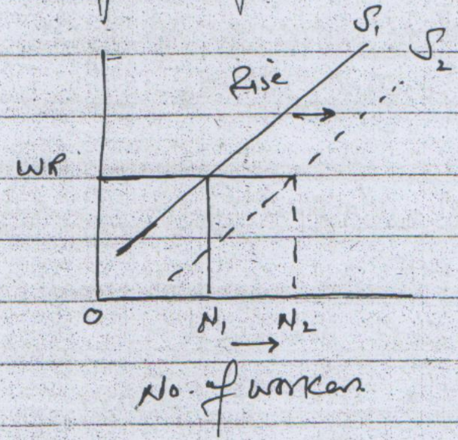
c) Future expectations of workers do matter in Supply of Labour. If Labour expect a bright and Prosper future in an industry, their supply for that industry will rise

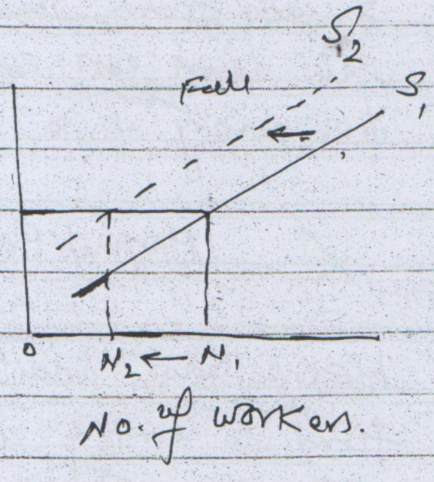
d) Supply of Labour to an economy also effect the supply of Labour to a firm or industry. If S_L to an economy Increases there will be increases in S_L to a firm or and industry and vice versa.
- The age structure of Population ~~does matter~~ effect supply of Labour to an economy. As there are more people in working Population or increase in the size of working Population, S_L Increases and vice versa.

- Secondly, Labour Participation Rate determines the Supply of Labour. This term is used to determine that part of the working Population, who are actually willing to work. It includes all employed and unemployed. If Participation Rate falls, SL falls and if vice versa.

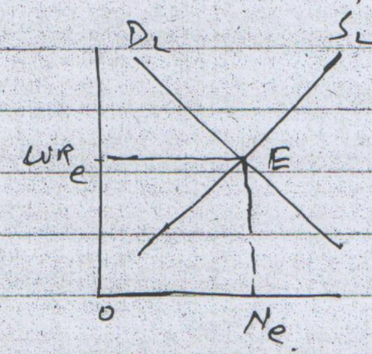
- Third factor which determines SL is the tax and unemployment benefits Level. If govt increases tax rate, workers are reluctant to work more as a result Supply of Labour falls. Similarly if govt. increases Social securities benefits such as ~~ex~~ unemployment benefits, once again willingness of people to work falls and supply of labour falls.
- Net migration can also influence Supply of Labour to an economy. If net migration is (+ive) SL increases and if it is (-ive), SL will fall.

- Due to non-wage determinant Supply curve shifts completly. in case of Rise it shifts rightwards and in fall it shifts leftwards.





In perfect competition wage rate is determined at that point where $\boxed{D_L = S_L}$



If $D_L \uparrow \Rightarrow WR \uparrow$.

If $D_L \downarrow \Rightarrow WR \downarrow$

If $S_L \uparrow \Rightarrow WR \downarrow$

If $S_L \downarrow \Rightarrow WR \uparrow$.

FIRM'S EQUILIBRIUM

Since Profit maximization is the main objective of all firms, therefore all firms want to gain least cost combination. Hence, A firm will employ labour up to that extent, where.

Marginal Factor Cost = Marginal Revenue Product
MFC = MRP

MFC shows additional cost incurred by a firm to employ an extra unit of Labour.
MRP shows the addition to Total Revenue as a consequence of employing an extra unit of Labour.
MRP is drawn under Perfect competition's assumption

MRP = Marginal Physical Product x Marginal Revenue

Since it is drawn under Perfect Competition, hence,
Marginal Revenue = Avg. Revenue = Price.

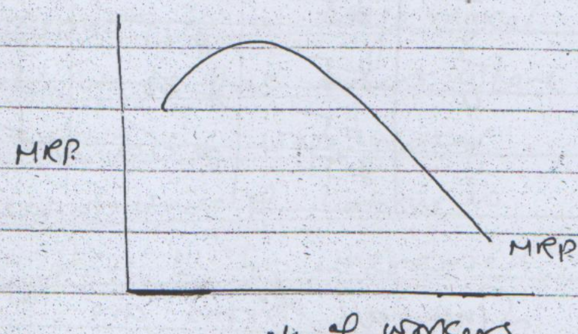
MRP = MPP x Price.

~~MPP shows marginal physical output~~
MPP shows change in Total Physical Product by employing an additional Unit of Labour.

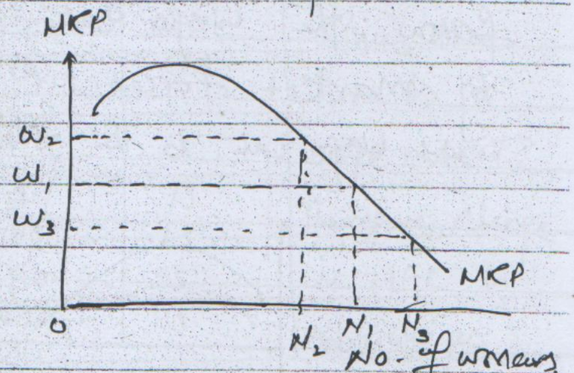
$$MRP = \frac{TRP}{\Delta \text{ workers}}$$

Where TRP = Total Revenue Product = Total Physical Product × Price.

The shape of the MRP is because of diminishing marginal return in the short run and in the long run, because of return to scale.

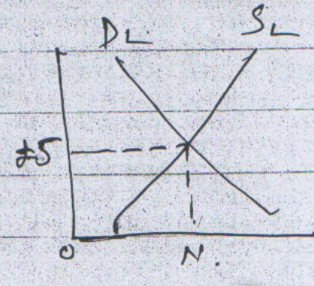


If the wage rate is $\overline{OW}$, then firm will employ ON_1 of workers, if wage rate increases to OW_2, lesser workers (ON_2) will be employed.

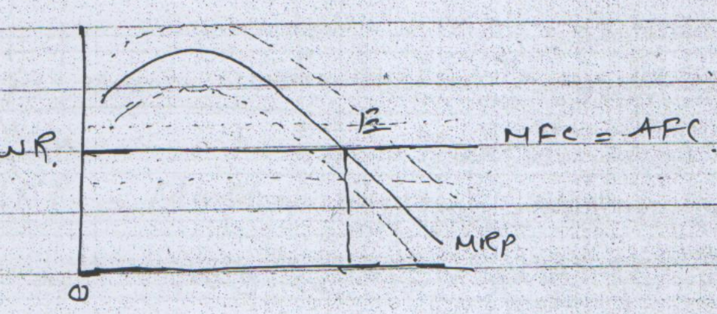


However, if wage rate is OW_3, then more workers will be employed. As MRP curve shows the same relationships as is shown in demand curve of Labour, for wage rate to demand for Labour. Hence, $\boxed{MRP = D_L}$ for a firm.

No. of workers	(AFC) Wage Rate	(TFC) Total Factor cost	(MFC) Marginal Factor cost
0	–		
1	£5	£5	£5
2	£5	£10	£5
3	£5	£15	£5
4	£5	£20	£5
5	£5	£25	£5



Since all firms are wage taker, hence they follow the wage rate, which is determined by market forces i.e; £5.
As wage rate is the same, hence AFC = MFC = SL



If WR↑ = No. of workers fall.
WR↓ = No. of workers ↑
If MRP↑ = No. of worker ↑.
MRP↓ = No. of workers ↓

Limitations of the Marginal Productivity Theory

There are various limitations and criticisms of the Marginal Productivity Theory as a general principle of distribution. .With reference to its application to wages, we may repeat that the theory is true only under certain hypothesis such as homogeneous character of all labor, perfect competition, and perfect mobility of labor from employment to employment, stable rates of interest, rent and specified prices of the goods.

It is, however, a static theory. The actual world is dynamic. All the factors assumed to be constant are in fact constantly changing. Competition is never perfect; mobility of labor is restricted for various reasons; all labor is not of the same grade; remuneration to other factor of production does not remain constant; and the prices of the products of labor vary. All these changes modify the theory when applied to actual conditions. The theory, however, as an assertion of a tendency is true and is valuable in understanding the basic forces that determine wage rates.

In the real world, owing to the absence of the above assumptions, there is no single rate of wages that may be applicable to all labor of a particular type. Wages differ from place to place, from person to person and from employment to employment.

The following further points of criticism may now be noted:

(i) This theory has little applicability to reality. The labor is not perfectly mobile. Workers of the same skill and competence may not obtain the same wages at two dissimilar businesses.

(ii) Though the conditions of a large number of independent sellers are fulfilled for a few industries of all countries and for most industries of some countries, the employers usually combine to the disadvantage of the worker. It is a case of monopsony, i.e., one consumer and many vendors, the employers succeed in pulling downward the wages beneath the worth of the marginal net product of labor. If employees are also collectively organized, the wages may or may not be equal to the values of marginal net products of labor in the occupations or industries concerned. The wages are determined by the comparative negotiating strength of the two parties but will in no case exceed the value of the marginal net product of labor.

(iii) The market for goods is in general characterized by imperfect competition..

(iv) The efficiency of workers is also reliant on aspects such as the value of capital and competent administration. These factors are outside the control of workers.

(v) This theory may not be applicable in case of service sector because there is no physical product.

Conclusion

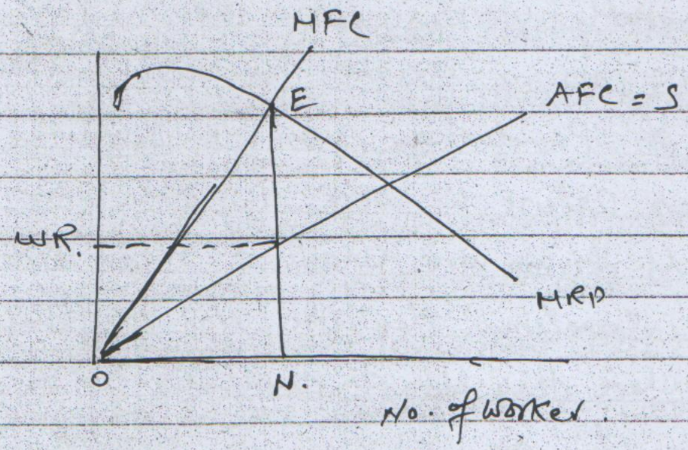
In short, the marginal productivity theory ignores the effect of wage changes on the supply of labor, bargaining strength and monopoly conditions, etc.

MONOPSONY

It is a kind of market structure where we have many sellers but one buyers. usually this term is used for imperfect Labour Market. Monopsonist is a wage maker. However, employ workers up to that extent where MRP = MFC. Since he is a wage maker hence as an additional unit of Labour is employed, wage rate have to be increased.

Unit of workers.	(AFC) Wage Rate (#)	TFC (#)	MFC (#)
0	—		
1	5	5	5
2	10	20	15
3	15	45	25
4	20	80	35
5	25	125	45

Since, the firm is a wage maker, Therefore, change in MFC is double as compare to the change in AFC. This is why MFC rises more quickly than the AFC.



Monopsonist always pay workers according to their willingness i.e; AFC, hence WR will be OWR.

Trade Union

is an organization formed by workers to protect their rights and interests. Trade unions are formed to strengthen bargaining power of workers. Trade unions have objectives like, increase in wage rate, to improve working condition and environment, to reduce redundancies, to eliminate unfair dismissals, to develope better relation between employer and employees, to train workers etc.

Traditionally, increase in wage rate is the primary objectives of a trade union. To increase wages, Trade union negotiate with the employer. If negotiation are successful no further action is taken, in case of failure, Trade union may opt, go slow policy, where deliberatly workers slow down the pace of work as a result productivity falls and cost of production rises. In over time ban, workers refuse to work in over time as a result firms are unable to meet orders and suffer. Sometimes they use Non-Co-operation technique, where they donot cooperate with the employer if any change is brought.

Strike is the last resort for workers where they refuse to work. As a result production process is stopped and firm incur huge loss.

When does trade union influence wage rates

- If labour cost is making small proportion of the total cost.
- If there is no close substitute available for labour.
- If level of employment is high.
- If demand for the product is inelastic, and any rise in price due to increase in wage rate does not have a considerable effect on demand for the product.
- If firm is strong in numbers and financially.

Why are trade union loosing their importance

- Govt discourages trade unions because
  - Trade unions waste economic resources due to strike
  - Trade unions cause unemployment due to higher wages.
  - Economic growth falls due to fall in productivity
  - Foreign Direct Investment (FDI) falls, because MNC, are reluctant to invest in such economies which have strong trade unions.

- Due to increase in part-time workers.
- Due to increase in females' participation rate.

Trade unions in Perfectly Competitive Market
Govt. Intervention

Fig. 1

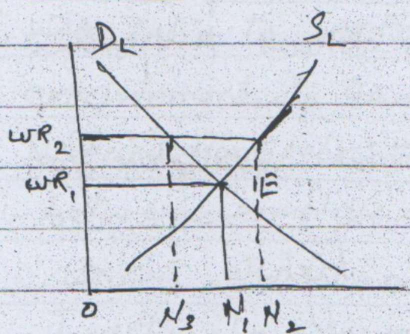
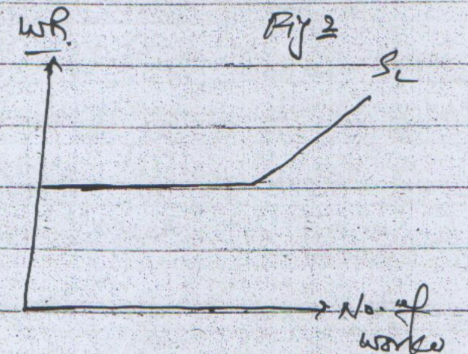


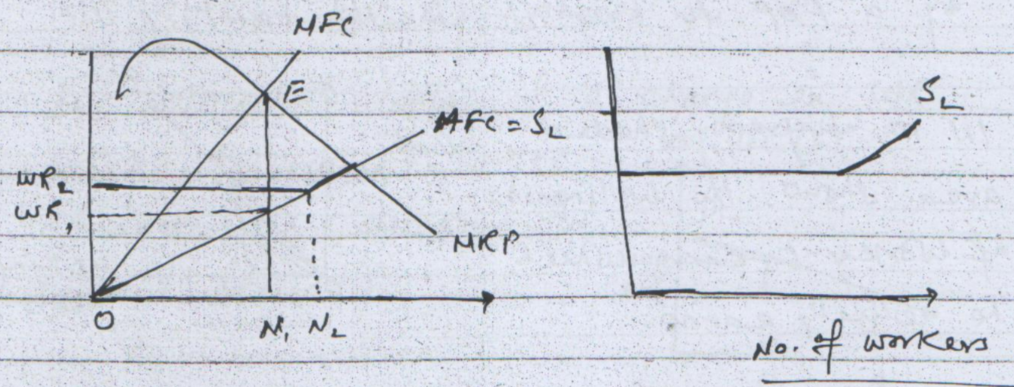
Fig 2



$\overline{ON_1}$ of workers are employed at $\overline{OWR_1}$ wage rate. As trade union / Govt intervene, WR increases to $\overline{OWR_2}$, as a result demand for Labour falls to $\overline{ON_3}$ and $\overline{N_1N_3}$ workers are made Redundant. However, if market needs more worker, can afford to employ additional workers up to $\overline{ON_2}$ at the same wage rate. However beyond $\overline{ON_2}$ higher wages must be given. This is why S_L curve shape is just like in fig. 2. In perfect market as trade union intervene, unemployment rises.

Trade Union & Monopsony

- This situation is called as bi-lateral monopolies, where there is one buyer and one seller.

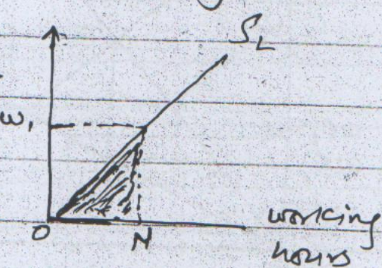


As trade union intervenes wage rate increases from $\overline{OWR_1}$ to $\overline{OWR_2}$. However in monopsony monopsonist prefer to employ more workers as trade union intervenes or govt. applies minimum wage rate at the same wage rate, but beyond ON_2 will have to raise wage rate to employ more workers.

TRANSFER EARNINGS & ECONOMIC RENT.

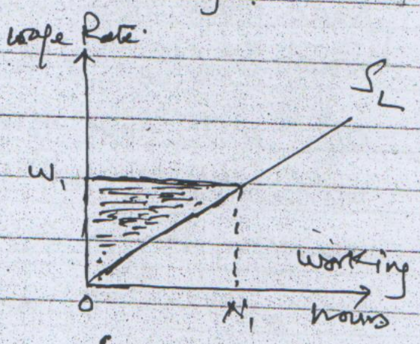
Transfer earning is the amount that any FOP can expect to earn in its best alternative use. o.R. the minimum amount must earn by a FOP to keep it in its existing use.

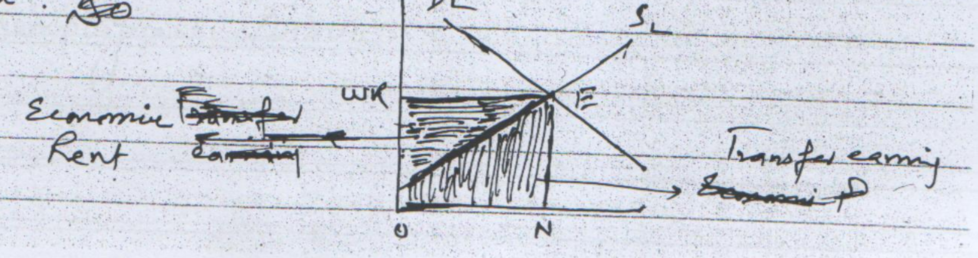
In the diagram shaded area shows, the willingness of worker to earn, which he actually earns.



ECONOMIC RENT is a payment made to a FOP above what is necessary to keep it in its current use or any amount which a worker earns above then the transfer earning.

In the diagram shaded Area shows economic Rent of a worker if he works for $\overline{ON}$ hours at $\overline{OW_1}$ wage Rate. So



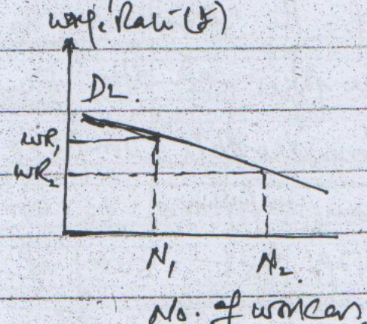


ELASTICITY OF DEMAND FOR LABOUR (EdL)

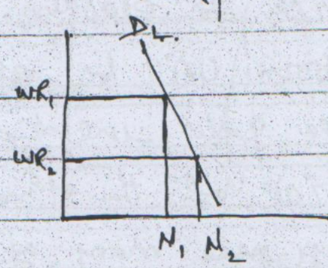
It shows degree of responsiveness in demand for labour as wage rate changes.

$$Ed.\ of\ L = \frac{\text{Percentage change in } D_L}{\text{Percentage change in } WR}$$

D_L will be elastic if a change in WR brings proportional larger change in demand for labour. ($Ed > 1$)



Demand for labour will be considered as inelastic if a change in wage rate brings proportionally smaller change in demand for labour.



Elasticity of demand for labour depends upon the following reasons:-

Firstly, the time period, in the short run firms find it difficult to change their methods of production as wage rate changes, hence Ed of labour will be low, however, in the long run appropriate changes can be brought and demand will be elastic.

Secondly, it depends upon number of substitute and their availability. If substitutes are easily available demand for labour will be elastic but if are not available will be inelastic.

Thirdly, is the Price elasticity of demand for the product which they produce. If PED of the product is ~~less~~ inelastic, then any rise in price of the product does not have any considerable impact for its demand, hence employer can afford to ~~er~~ ~~increase~~ pay increased wage rate but if demand of the product is price ~~in~~ elastic, firms' demand for ~~Product~~ Labour will be elastic, because increase in wage rates increases cost of production and price of the product, as a result may loose ~~may~~ many of customers.

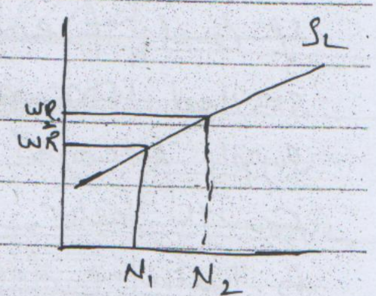
Fourthly, the cost of labour as proportion to the total cost. ~~A~~ If labour cost makes large proportion to the total cost demand for labour will be ~~in~~elastic, but, if labour cost is making small proportion to the total cost, demand for labour will be inelastic.

ELASTICITY OF SUPPLY OF LABOUR

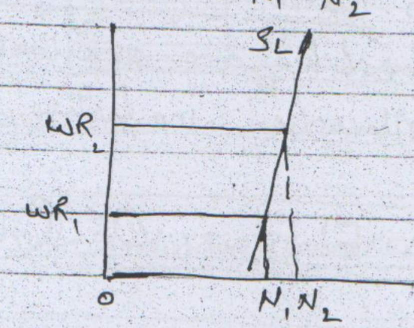
It is the degree of responsiveness in supply of labour due to change in wage rate.

$$Es \text{ of Labour} = \frac{\%\text{age change in } S_L}{\%\text{age change in } WR}$$

S_L will be elastic if a change in wage rate brings proportionally more change in supply of labour.



S_L will be inelastic if a change in wage rate brings proportionally less change in supply of labour.



Elasticity of supply of labour depends upon time period. In the short run degree of mobility is low or workers find it difficult to adapt themselves for a change or may be lack of information. Therefore supply will be inelastic, however, in the long run supply will be elastic.

Secondly, it depends upon nature of worker. Supply of labour ~~fo~~ of unskilled workers will be elastic, but Supply for skilled workers will be inelastic because longer time is required to train them.

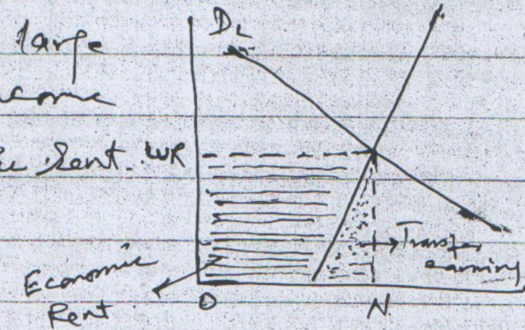
Thirdly, if level of employment is high, it is difficult to increase even supply of unskilled workers, hence supply will be inelastic but if level of employment is low, even supply of skilled workers can be increased easily and supply becomes elastic.

Fourth factor, which affect supply of ~~Ski~~ labour is training facilities. If sufficient training facilities are available supply will be elastic otherwise inelastic.

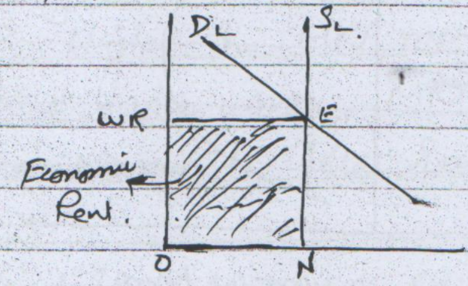
ELASTICITY OF SUPPLY OF LABOUR & ECONOMIC RENT

There is an inverse relationship between E_s of labour and economic Rent. Higher the elasticity less will be the economic Rent.

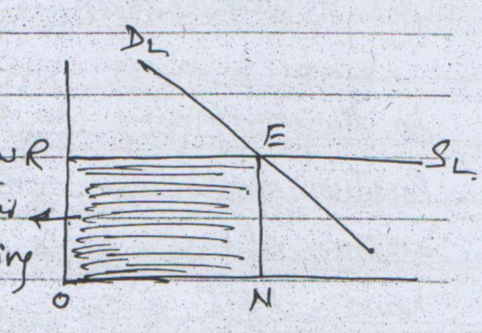
Supply of highly skilled workers is inelastic, therefore large proportion of their income is made by economic Rent.



Film, T.V and Sports stars have unique talent, therefore their supply is perfectly inelastic this is why, all part of their income is made by economic Rent.



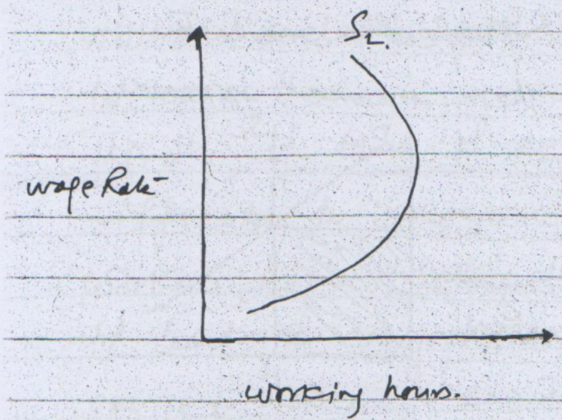
On the other hand Supply of Labour of unskilled workers is perfectly elastic. Therefore, all of their income is made by Transfer earning and economic Rent will be zero.

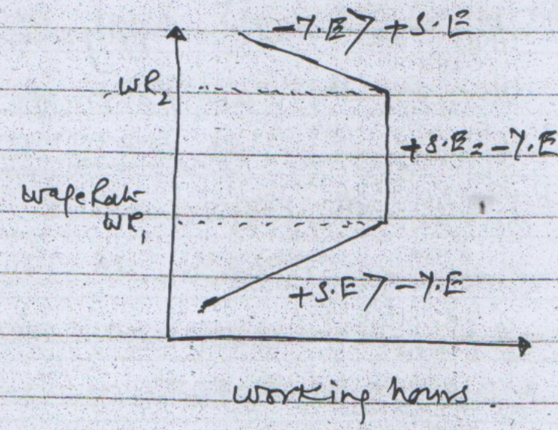


Supply Curve Of An Individual Worker

According to economics Theory work is considered as an inferior good. Therefore as wage rate increases, income increases and fall in demand for work. So there is negative income effect on work as income changes.
However on the other hand there is a Positive Substitution effect, which enforce that as wage rate is increased, worker should

'Substitute this leisure hours into working hours.





In the beginning as wage rate is increased Positive substitution effect outweight negative income effect. hence worker increases working hours. After a certain wage rate (+ive) substitution effect may be equal to the (-ive) income effect, hence no change in working hours even wage rate increases. But beyond WR_2 (-ive) income effect outweight (+ive) substitution effect, therefore a further rise in wage rate discourages workers to work more, hence he prefers to convert working hours into leisure hours.

REASONS FOR WAGE DIFFERENTIAL

- According to Economics Theory workers are paid according to their MRP. Higher the MRP, more will be the wage rate and vice versa. MRP is the contribution of a worker to Total Revenue of a firm.
- Another Reasons for wage differential are Skills and qualification. Highly skilled and qualified people will get better wages as compared to poorly skilled or low qualified workers. For example, in a bank an accountant gets higher wages as compare to a cashier.
- Experience make workers more productive, therefore experience workers get better wage rate as compare to young workers even in the same occupation.
- Higher pay may be given as compensation or reward for risk-taking, working in poor condition and having to work unsocial hours.
- Discrimination is other factor for wage differential. Female workers get low wage rate on average as compare to male workers even in the same occupation. That discrimination can be taken place on the basis of colour, age and region.

- Demand for or Supply of Labour also effect the wage rate. If demand increases more than the Supply of workers ~~than wage rate~~ in an occupation, or region or industry wage rate will be increased due to an excess demand. On the other hand if there is an excess supply of labour due to rise in supply wage rate falls or low.

- In such organization which have strong trade union will pay higher wages as compare to those which ~~donot~~ have trade union. Trade union ~~increa~~ influences wage rate by controlling the supply of Labour through 'closed shop' policy.

- Those workers get higher wages which earn more of the economic rent as compare to transfer ~~earing~~ earning. Workers who have low elasticity of supply due to unique talent or highly skilled will get higher wages, where as, workers who donot have more skills or unskilled worker have high elasticity of supply will get low wage rate.

- Sometimes due to lack of information workers get different wages even in the same profession. Workers who donot know the existing wage rate in the industry ready to work at low wage rate.
- Some workers work to derive satisfaction only, hence they are willing to work even at low wage rate e.g; nurses, voluntarily employed workers. etc.
- Although fringe benefits (non-monetary), like free education, free housing, medical facilities etc are associated with higher wages but in public sector, workers are willing to work at low wage rate to get these perks.