[Academic Script]

Monopsony, Bilateral Monopoly and Economic Rent

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1. Introduction

The factor market analysis highlights two important market structures that are less prevalent in the analysis of product markets. They are monopsony and bilateral monopoly. In many markets the demand and supply of labour is affected by the actions of trade unions and the government. Such interventions produce imperfections in labour market. Thus, under conditions of monopsony, a strong trade union can raise the wage rate by bargaining with the employer.

Monopsony

Under monopsony in labour market, a single employer faces a large number of workers who are unorganized. Monopsony also prevails when many big employers form a cartel and decide not to compete in the labour market. In labour market, the monopsonist faces an upward facing supply curve of labour. Accordingly the monopsonist can affect the wage rate by changing the level of employment.

Wage Determination in Monopsony When Monopoly Exist in Product Market

When there is monopoly in product market, the marginal revenue product (MRP) curve will differ from the value of marginal product (VMP) curve. Also the MRP curve will lie below the VMP curve, as marginal revenue is less than average revenue in case of monopoly in product market. The supply curve of labour S_L (or

wage curve W) slopes upward and the marginal factor cost (MFC) of labour will lie above the S_L curve. At the equilibrium point in monopoly, the MRP will be equal to MFC of labour.

In Fig.1, a monopolist achieves equilibrium at point E where wage rate LH or OW is fixed and OL number of labour is employed. Apparently, the wage rate LH is less than marginal revenue product (LE) as well as value of marginal product (LF). The difference EH between marginal revenue product (LE) and wage rate LH is due to the existence of monopsony in labour market. Mrs. John Robinson termed it as 'monopsonic exploitation'.

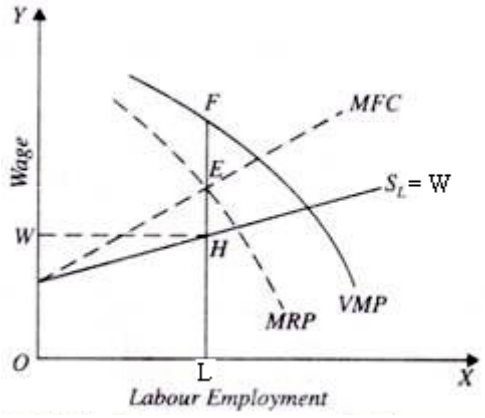

Fig.1: Wage determination in monopsony when monopoly in product market

But the difference FE between the value of marginal product LF and the marginal revenue product LE is due to the existence of monopoly in the product market. A worker gets FE amount less than his value of the marginal product due to monopoly in the product market.

2. Bilateral Monopoly

A combination of monopsony and monopoly in the same market generates bilateral monopoly. Under bilateral monopoly a seller is the monopolist of his product or input or he may be a single buyer of that product or input. Thus, in bilateral monopoly, both the buyer and seller will have to negotiate an acceptable price. A market that is dominated by a profit-maximizing monopolist tends to charge higher price while a market dominated by a monopsonist would pay lower price. However, the negotiations between the monopolist and the monopsonist would lead in fixing the price at a level between the high price demanded by the monopolist and the low price offered by the monopsonist. Therefore, the level of real price agreed upon will be determined by the negotiating power of each side.

Consider fig.2 where DD is the demand curve of the buyer, depending upon his marginal utility for the product. Since there is a single buyer, his demand curve DD would be confronting the monopolist supplier. Therefore the demand curve DD of buyer (monopsonist) would also be average revenue AR curve of the seller (monopolist). MR is the marginal revenue curve of the monopolist supplier that corresponds to the AR curve or DD curve. Similarly MC is the marginal cost curve for the monopolist supplier.

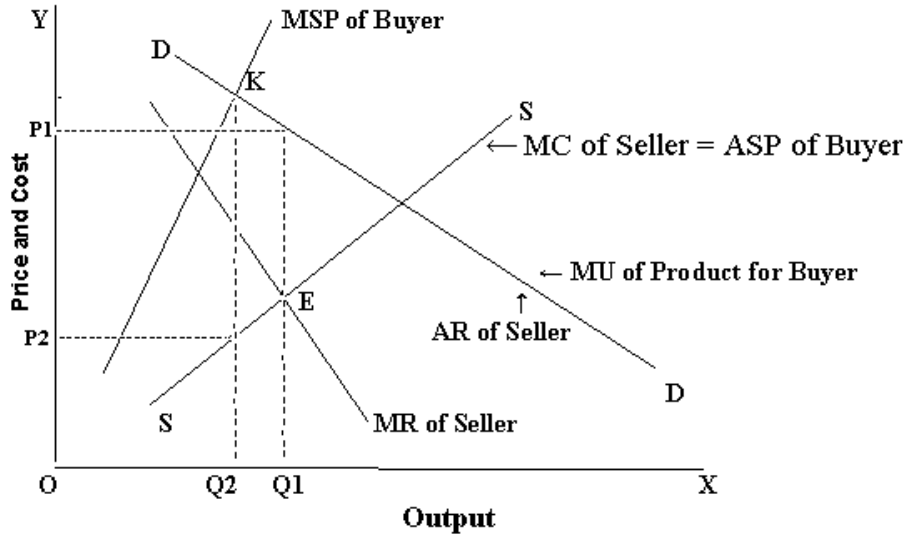

Fig.2: Price and output decisions under bilateral monopoly

The monopsonist considers the marginal cost curve MC of the monopolist as his supply curve. If the monopsonist has complete control over price, the marginal cost curve MC of the monopolist seller will indicate average supply price at which various corresponding quantities of the product would be offered to him. Hence, marginal cost curve MC of the monopolist seller is the supply curve or average supply price ASP to him. Since the average supply price ASP for the monopsonist rises as he procures more quantity of the product, marginal supply price MSP (which is also called marginal supply cost MSC) will lie above the ASP curve.

A monopolist (seller) would aim at equating his marginal cost with the marginal revenue in order to maximize profits. Therefore, he will produce or supply OQ1 where MC equals MR and fix sale price at OP1. On the other hand, the monopsonist (buyer) will equate the MSP with his own utility in order to maximize his satisfaction. As his demand curve DD indicates his marginal utility or the price he is prepared to pay, he will maximize satisfaction by purchasing OQ2 at price OP2. Fig.2

shows that price OP2 is much lower than OP1. Clearly the price OP1 that the monopolist wants fix is higher than price OP2, which the monopsonist wants to fix.

Fig.2 shows that there is considerable different between the prices and quantities offered for transaction by the monopolist and the monopsonist. Since both of them know that they have to trade with each other, they will have to reach at some mutually agreeable price through negotiations and bargaining with each other. At the end, the price that would be fixed would be somewhere between OP1 and OP2 which is called 'negotiating range'. However, the final price at which the transactions take place depends upon their bargaining skill and dominating power in the market.

3. Labour Union

Labour union (also called trade union) is an association of workers formed to protect the interests of member workers at their work place. Labour unions perform various functions such as protection and improvement of the real incomes of workers, providing job security, protecting workers against unfair dismissal, lobbying for better working conditions and securing compensation for the injuries sustained by member workers at the work place.

Role of Labour Union in Wage Determination

Labour unions have been recognized to play a significant role in negotiations with employers for enhancement of wages,

improvement in working rules, complaint procedures, rules governing hiring, firing and promotion of workers, worker benefits, workplace safety and policies, etc. The efforts of labour unions to influence government policies related to fixing of minimum wage rate always help those workers who work at lower wage rates. However, the negotiating powers of the trade union vis-à-vis the employers in their periodic revision of wage are governed by the following important factors:

1. Supply of labour: The shortage of labour tilts the balance of power towards the unions.
2. Product market competition: If a firm achieves monopoly position and earns high levels of super-normal profit, the labour unions put pressure for a generous wage settlement.
3. Globalization: Globalization of the product markets has increased the import and export of products and reduced the bargaining power of labour unions.
4. Macroeconomic conditions: During the period of recession there is fall in product demand which causes in decline in labour employment. A fall in the demand for labour weakens the negotiating power of labour union for wage revision.

4. Economic Rent

Classical (Ricardian) theory considered rent as the payment for the use of land, which has fixed and inelastic supply. Land was also considered as a free gift of nature, which is non-reproducible. As the supply of land is given, with every rise in its demand, the price of land use rises. On the other hand, if the price of land use falls to zero, total availability of land will remain

unchanged. Therefore, the classical theory regards any price for use of land as 'economic rent'.

The neo-classical economist like Mrs. John Robinson, say that a part of total income from any factor of production can be considered as rent. The neo-classical concept of rent is based on the principle of opportunity cost or transfer earning of the factor of production. It is argued that since each factor of production like labour, land and capital have several uses; each factor can be used to earn maximum income in any use

The opportunity cost of a factor is that price which it can earn by working in the next best use. Such a price is also called 'transfer earning'. The excess of actual earnings of a factor over its transfer earning is called 'rent'. Thus

Rent = Actual Earnings - Transfer Earnings

The modern view of economic rent is based on two facts viz.

(i) Supply of land for a particular use is not perfectly inelastic because there are many users and industries that make use of land. Therefore, for any use, a part of the payment made for getting the land would be necessary for retaining it in its present use.

(ii) All the factors, including land, often earn some surplus over and above what is necessary to keep the factor in its present use (transfer earnings). This surplus earning is called economic rent.

Determinants of Rent

Modern theory considers three different situations in which economic rent is determined. They are discussed blow.

1. Rent when supply of factor is perfectly inelastic

The supply of a factor is perfectly inelastic when an increase or decrease in its demand is not followed by any change in its supply. Therefore its transfer earnings (opportunity cost) will be zero. Then the difference between actual earnings and transfer earnings (zero) will be equal to actual earning only. Therefore, in this situation actual earnings will be treated as economic rent. Fig.3 illustrates the situation in which the supply of the factor (land) is perfectly inelastic.

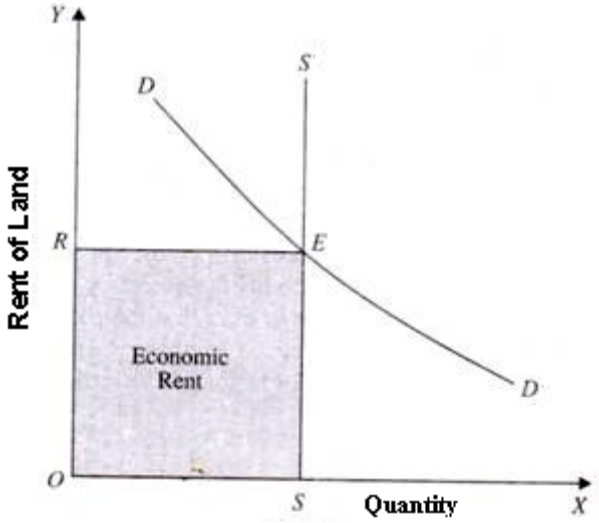

Fig.3: All Earnings are Economic Rent

Let OS be the total land available. The society confronts a perfectly inelastic supply curve SS of land which show that even if the price of land falls to zero, its supply will remains unchanged at OS. Thus the transfer earning of land will be zero. Curve DD represents the total demand for land by the entire society. An intersection of the demand and supply curves determine the rent

at OR. Since transfer earnings are zero, price OR will be the economic rent of each unit of land and total earnings of OS quantity of land i.e. ORES, will be treated total economic rent.

2. Rent when factor supply is perfectly elastic

The supply of a factor (land) is perfectly elastic when its availability is abundant and a change in its demand will lead to proportionate change in supply at the existing price. Hence actual earnings and transfer earnings will be same. As the difference between actual earnings and transfer earnings will be zero, the economic rent will be zero.

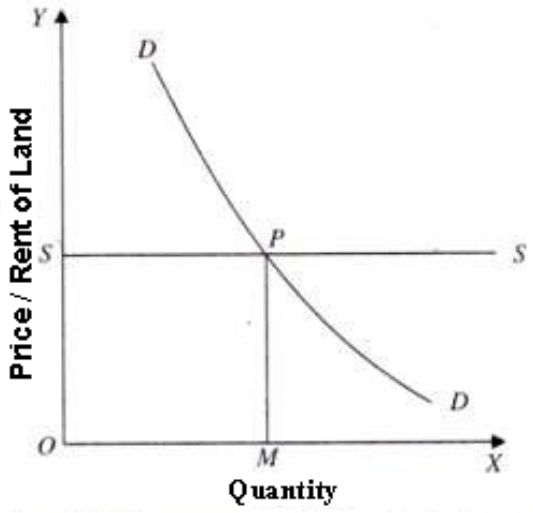

Fig.4: No economic rent when supply of factor is perfectly elastic

Fig.4 shows that in a situation of perfectly elastic supply of the factor (land), its every unit will have same transfer earnings and therefore its supply curve will be perfectly elastic i.e. horizontal straight line as shown by SS curve. The transfer earnings of each unit of land employed are OS. If factor demand increases or decreases, actual earning (rent) will remain constant. Since for all the units of land the transfer earnings and actual earnings will be equal, there will be zero surpluses. Hence economic rent will also be zero.

3. Rent when factor supply is less than perfectly elastic

The supply of a factor (land) is less than perfectly elastic when an increase in its demand is followed by a relatively less increase in supply. In this situation when demand rises, its supply does not rise in the same proportion. Therefore, its actual earnings would be more than the transfer earnings these surplus earnings are called economic rent.

In fig.5 a unit of land at point A has a supply price equal to AQ. Thus AQ represents its transfer earnings. Similarly a unit B of land must be paid BR, if it is to be retained in present use. Therefore, BR is the transfer earnings of unit B. Similarly the transfer earnings of other units C, D, E, F and G are CT, DU, EV, FW and GN respectively. The demand curve DD and supply curve SS intersect at point N and their intersection determines the equilibrium price/rent as OP.

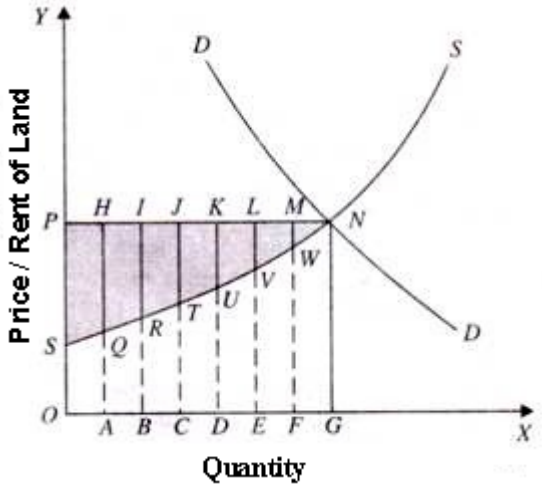

Fig.5: Rent when supply of factor is less than perfectly elastic

Suppose all the units of land are equally productive. Then each unit will earn price OP. But when different units of land are differentiated on the basis of different uses, they will fetch different supply prices. A unit of land, which provide higher

earnings in other uses will get higher price (rent) and vice versa. Thus the supply curve will be upward sloping.

Fig.5 shows that the marginal unit G of land is employed at price OP. Thus the transfer earnings unit G is GN. According to classical theory, all the units of land are identical and equally productive, hence every unit must get price OP. Therefore, the intra-marginal units A, B, C, D, E and F will also receive price OP. But Price OP is the transfer earnings GN of the marginal unit G that is higher than the transfer earnings of other intra-marginal units. Thus the actual earnings of the intra-marginal units are more than their transfer earnings. Hence, all the intra-marginal units of land receive economic rent.

Fig.5 shows that economic rent earned by intra-marginal unit A, B, C, D, E and F will be equal to HQ, IR, JT, KU, LV, and MW. As stated earlier the economic rent of marginal unit G will be zero. Total actual earnings of all the units of land OG are OPNG, which are equal to the price OP multiplied by OG number of units and their total transfer earnings is OSNG as shown by the area under the supply curve up to unit G. Since economic rent is calculated by deducting transfer earnings from actual earnings, total economic rent earned by all the OG units of land will be SNP.

It is important to note that the difference between the classical and the modern thoughts on rent arise due to the fact that Ricardo viewed rent from the perspective of economy or society as a whole (macro level), while the modern economists view it from micro level i.e. demand by a firm or an individual producer only.

5. Quasi Rent

Marshall introduced the concept 'quasi-rent', which is an extension of the Ricardian concept of rent. According to Marshall the supply of capital equipment (machinery) is perfectly inelastic in the short run, and the cost of its production becomes irrelevant once it is produced. Thus the short run earnings of capital equipment also depend upon the demand conditions, which are similar to land. Since capital equipments are not permanently in fixed supply like land and their supply is elastic in the long run, Marshall called the short run earnings of capital as 'Quasi-rent'.

Thus quasi-rent is only a temporary surplus earned by the owner of the capital equipment in the short run due to unexpected increase in its demand. Since some maintenance costs are incurred even in the short-run to keep the machinery in working order, therefore, quasi-rent may be defined as the short-run earnings of a machine minus its maintenance costs. Thus quasi-rent is the excess of total revenue earned by capital (machinery) over and above its total variable costs in the short run. Since capital equipments are produced, their supply is elastic in the long run. Therefore, quasi-rent will disappear in the long run. Fig.6 illustrates the earnings of quasi-rent.

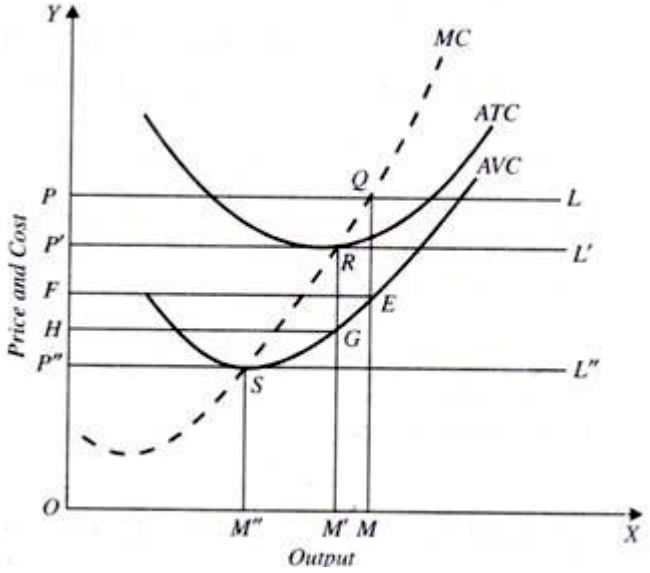

Fig.6: Quasi-Rent

In fig.6 output is measured on X-axis and the price and cost of output is measure on Y-axis. ATC represents the average total cost and AVC represents the average variable cost in the short run. The AVC includes all the variable costs of production like labour, raw material, etc. as well as the maintenance costs of a unit of machinery during the short run. Now suppose the demand for machinery (capital) determines its price OP. At price OP, the price line is PL, which also represents marginal revenue MR as well as average revenue AR. With price line PL the entrepreneur is in equilibrium at point Q where MC curve is equal to price OP. Thus the firm produces OM level of output and earns OMQP as total revenue while its total variable cost incurred is OMEF. The area FEQP represents the surplus of total revenue over total variable costs, which is quasi rent.

If the demand for machines declines and the price falls to OP", then the price line confronting the firm will be P"L". Price line P"L" also represents marginal revenue MR as well as average revenue AR. Hence, equilibrium position will be attained at point S where the firm will produce OM" quantity of machines. Note

that point S is also the minimum level on the average variable cost AVC curve. Therefore, at point S the total revenue earned OM"SP" is just equal to cover the total variable cost which is also OM"SP". Therefore the quasi-rent earned by capital (machinery) will be zero. The entrepreneur will stop production if the price falls below OP" due to which total revenue earned will be less than the total variable costs. Thus quasi rent cannot be negative.

6. Summary

The analysis of factor market highlights monopsony and bilateral monopoly market structures prevalent in labour markets. Monopsony situation arises when a single employer or a collusion of many employers confront a large number of workers who are unorganized and geographically immobile. In monopsony market, a worker is subject to exploitation because he gets less than his marginal revenue product. To escape exploitation the workers join labour unions.

The neo-classical economists argue that each factor of production can be employed for several uses and in every use it can earn maximum income. The opportunity cost of a factor is that price which it can earn by working in the next best use. The amount by which the actual earnings of a factor exceed its transfer earning is called 'rent'. Marshall introduced the concept of 'quasi-rent', which refers to short run earnings of capital only.