CHAPTER 26

MONOPSONISTIC EXPLOITATION OF LABOUR

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We must now examine the type of exploitation which arises because the supply of labour is imperfectly elastic to the unit of control. The supply to an industry may be less than perfectly elastic for any of the reasons discussed in Chapter 8. The nature of the limitation upon the supply of labour is not relevant to our inquiry, for our analysis can be applied to limitations of any type, but for the sake of simplicity we will first deal only with one case: that in which all the workers employed are alike in their efficiency in the industry in question, and yet progressively higher wages have to be paid to all in order to attract fresh supplies of labour. This might occur because it was necessary to tempt labour away from better paid occupations, to overcome the cost of movement from more distant regions, or to overcome a preference for other occupations.

The notion of an imperfectly elastic supply of labour presents some difficulties, because the elasticity of supply will vary greatly according to the period of time under consideration. It is likely to be more elastic the longer the period under consideration. And a supply of labour once attracted to a certain area or a certain industry by a rise in wages may not immediately (or indeed ever) cease to be available when wages fall back to their former level. But for the purposes of our formal analysis it is only necessary to postulate that there is a rising supply curve of labour over a period long enough to allow normal equilibrium to be established. In this, as in all the problems with which this book attempts to deal, a very artificial degree of simplification

* Sections 3 and 4 of this chapter contain an argument similar to that of Sections 4 and 5 of the last chapter, and are of the same degree of complexity.

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is necessary to the formal analysis. The most that can be hoped from it is to indicate some of the considerations that have to be taken into account in dealing with actual problems.

When the supply of labour is less than perfectly elastic to any employing agency, that amount of labour will be employed whose marginal cost is equal to its marginal net productivity, and the wage will be equal to the supply price of the amount of labour employed. The demand curve for labour of the employing agency may be of various forms. If it is an isolated monopoly the demand curve for labour must be drawn up on the principles discussed in Chapter 21. But if the employing agency is an industry composed of a number of independent firms they may act in concert in regulating wages although they compete in selling the commodity which they produce. In practice agreements to regulate wages are usually worked in a very rough and ready way, but it is worth while to consider the exact analysis of an agreement which follows some definite principle. It is possible to distinguish two principles upon which the demand curve for labour may be drawn up. First, if there is merely a "gentleman's agreement" not to spoil the market by bidding up wages, the individual firms composing the industry may be conceived to be in perfect competition in every respect except in hiring labour. Then the amount of capital employed with a given number of men will be such that the marginal productivity of capital to the firm is equal to its price, that is to say, the competitive amount of capital will be employed with any given number of men. And each firm will wish to employ that amount of labour whose marginal productivity to the firm is equal to the marginal cost of labour to the whole group, ignoring the effect upon the price of the commodity of an increase in output. The industry's demand curve for labour will then be shown, for any given number of men, by the value of the marginal physical product of labour. Second, a more far-reaching type of agreement amongst the firms, which still falls short of complete monopoly, will be found if the competitive amount of capital is employed with each number of men, but the organised group of
firms take into account the fall in the price of the commodity due to an increase of output, and so employ that amount of labour whose marginal net productivity to the whole group is equal to its marginal cost. In any actual case neither of these principles is likely to be followed exactly, but this fact is not relevant to the analysis, for, however the demand curve for labour is drawn up, the analysis follows the same course once the demand curve for labour is given.

On whatever principle the demand curve is constructed it is necessary to assume that there are a fixed number of firms, that is to say, that the profits due to monopsony do not draw new firms into the industry; for the amount of the monopsony profit depends upon the conditions of supply of labour, and cannot be represented in the demand curve. If the existence of a monopsony profit, or its removal, are conceived to alter the number of firms in the industry, a new monopsony demand curve must be drawn up for each number of firms.\(^1\)

The amount of employment given by the monopsonist organisation will be restricted to the amount at which the marginal cost of labour to the whole group is equal to its demand price for each particular type of organisation. The wage will be equal to the supply price of labour, and this, in each case, will be less than the value of the marginal physical product of labour. Thus exploitation will occur.

Monopsonistic exploitation of this type can be removed by the imposition of a minimum wage.

(Fig. 78.) Let \(D\) be the demand curve for labour of the monopsonist organisation, upon whatever principle it may be drawn up. Then the amount of labour employed (ON) will be that at which \(MC\) (the marginal cost curve of labour) cuts the demand curve, \(D\).

Now, suppose that a trade union or a trade board imposes a minimum wage upon the industry; then the supply of labour to the industry becomes perfectly elastic at the imposed wage, up to that number of men whose supply price to the industry is in any case equal to that wage. Beyond this number the new supply curve of labour must coincide with the old. If the authority imposing the minimum wage is sufficiently strong to be able to choose freely what wage to impose, there are several alternatives before it. If, at the lower limit, the existing wage (NP) is imposed as a minimum everything remains as before. If the wage (NH) is chosen, which is equal to the demand price for the number of men employed in the exploited position, employment will remain unchanged and the wage will be raised. For any higher wage employment will be reduced, and for any wage between NP and NH employment will increase. The maximum increase in employment will occur at the wage (QD) at which the old supply curve of labour cuts the demand curve of the monopsonist organisation.\(^1\) Thus the rise in wages which reduces exploitation and transfers a part or the whole of the monopsony profit to labour will actually result in an increase of employment.

Even when the wage QD, or some higher wage, is imposed, exploitation does not wholly disappear except in the case where \(D\), the demand curve for labour of the group of firms, represents the value of the marginal physical product of labour.\(^2\) The element in exploitation due to monopoly cannot be eliminated.

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\(^1\) This was first pointed out to me by Mr. P. M. Forrester, who was then reading for the Economics Tripos. The case of a competitive industry in long-period equilibrium, in which profits are always normal, is discussed below (p. 296).

\(^2\) I am indebted to Mr. Shove for this analysis, but my presentation of it is slightly different from his.

\(^3\) This will be the case when a number of independent firms, acting in concert for the regulation of wages, arrange their employment of labour on the first of the principles described on p. 293.
merely by removing the inelasticity of the supply curve of labour.

Monopsonistic exploitation can also arise where firms are not acting in concert, but where the supply of labour to each firm is less than perfectly elastic, just as monopolistic exploitation arises where the market for selling the commodity is imperfect. We have seen in what circumstances the supply of a factor to an industry may be less than perfectly elastic. The supply of labour to an individual firm might be limited for the same sort of reasons. For instance, there may be a certain number of workers in the immediate neighbourhood and to attract those from further afield it may be necessary to pay a wage equal to what they can earn near home plus their fares to and fro; or there may be workers attached to the firm by preference or custom and to attract others it may be necessary to pay a higher wage. Or ignorance may prevent workers from moving from one firm to another in response to differences in the wages offered by the different firms.

If the supply of labour to individual firms is less than perfectly elastic and if profits are normal the firms will be of less than optimum size,\(^1\) even though the selling market is perfect. Profits will be normal and the industry in full equilibrium when the wage is equal to average net productivity, and each firm will employ that number of men whose marginal net productivity to the firm is equal to their marginal cost to the firm.\(^1\)

With this analysis we are already familiar.\(^3\)

(Fig. 79.) \(AC\) and \(MC\) are the average and marginal cost curves of labour.

\(ANP\) and \(MNP\) are the average and marginal net productivity curves of labour.

ON men will be employed by each firm at the wage PN when the industry is in equilibrium.

CN is the marginal cost and marginal productivity of ON men to the individual firm.

Exploitation of this type would be removed if the labour market became perfect.

In studying exploitation due to imperfection of the market for the commodity we assumed that the wage remained unchanged and considered the effect on employment of making the market perfect.\(^2\) But in this case it will be more convenient to make use of the other device and to study what would happen to the wage if the same number of men were employed as had been employed when exploitation existed. Both methods of making the comparison must, as we saw, yield the same result, but when we are dealing with an imperfect market for labour, and not for the commodity, the second method is easier to handle.\(^4\)

Suppose that the labour market is made perfect (for instance by breaking down the ignorance and inertia which led to imperfection or by the provision of cheaper transport) and that a new position of equilibrium is attained with normal profits and the same fixed amount of employment as before. The firms will now be of optimum size, and the wage must be given by the industry upon the principle employed when the market for labour is perfect, since the number of firms will be influenced by the monopsony profit, which depends upon the conditions of supply of labour (cf. p. 294).\(^1\)

\(^2\) See p. 250. Fig. 79 is a replica of Fig. 74.

\(^3\) See p. 295.

\(^4\) We will again assume that there are no economies of large-scale industry and that the supply to the industry of factors other than labour is perfectly elastic. When these assumptions are not fulfilled the necessary modifications can easily be introduced into the analysis.
maximum on the curve of average net productivity of labour to the individual firm.¹

If the physical productivity per man is less when the firms are of optimum size, the total output of the given number of men in the new position is less, and the price of the commodity must rise. The curve of average net productivity to the individual firm will therefore be raised, and the wage must necessarily rise. This is analogous to the case where the removal of monopsonistic exploitation necessarily leads to an increase of employment at a given wage (even though the demand for the commodity is perfectly inelastic) if average physical productivity per man falls when the firms become of optimum size.²

But, as we saw, physical productivity per man is likely to increase when the firms grow to optimum size. The output of the given number of men will then increase, and the price of the commodity must fall. The average net productivity curve will be lowered, and it is then possible that the new wage, given by the maximum value on the new curve, may be below the wage (PN in Fig. 79) which obtained when the firms were of less than optimum size. As in the analogous case of monopolistic exploitation, the result will depend upon the elasticity of demand for the commodity. If the cost of other factors per man is the same in the new position as in the old, then (since we are studying the fate of a given number of men) the aggregate of other costs will be the same as before. The aggregate of wages will be equal to aggregate receipts minus aggregate other costs. Therefore if the elasticity of demand for the commodity is less than unity (so that total receipts are reduced by the fall in price) the total of wages (and the rate per man) will be less in the new position than in the old. If the demand is elastic, wages will be greater. If the elasticity of demand is equal to unity, wages will remain the same. This is on the assumption that the cost of other factors per man remains the same. If the cost of other factors per man is greater when the firms are of optimum size, the critical elasticity, at which wages remain the same, is greater than unity. If the cost of other factors is less, the critical elasticity is less than unity.

¹ See p. 249. ² See p. 280.

It is possible to remove exploitation which is due to imperfection of the labour market by imposing a minimum wage, instead of by making the market for labour perfect. But this method is less likely to lead to results favourable to labour. If a minimum wage is imposed at any level higher than that which prevails in the imperfect labour market the average cost curve of labour to each firm (AC in Fig. 79) will be raised. Therefore if normal profits are to prevail, the average net productivity curve of labour to the individual firm must also be raised, so that the two curves remain tangential to each other. That is to say, the price of the commodity must rise and its output be reduced (by the elimination of firms unable to survive when the wage is raised). It follows that, unless the physical productivity of labour is much reduced, the amount of employment at the higher wage will be less than at the lower wage. It is therefore only in the unlikely case where physical productivity falls to a sufficient extent to compensate for the reduction in output that it is possible to impose a minimum wage without causing unemployment; while the removal of market imperfection will, as we have seen, raise wages without causing unemployment in a large range of cases.

The difference between the result obtained by imposing a minimum wage in this case and in the case of an isolated monopsonistic organisation (considered in Section 2) arises from the fact that in this case profits are assumed to be normal; that is to say, the existence of a monopsony profit has led to an increase in the number of firms and in the output of the commodity up to the point at which the earnings of the entrepreneurs (including the monopsonistic element in their profits) are reduced to the normal level; so that the rise in wages, by robbing the firms of part of their profits, must reduce the number of firms and the output of the industry in the long period.

We must now examine cases in which discrimination in buying labour is possible. In the following analysis we shall only
deal with the case of an isolated monopoly, but the possibility of discrimination may be, as it were, superimposed upon any of the cases in which exploitation occurs as a result of imperfection in the supply of labour.

We have so far assumed, for the sake of simplicity, that all workers are alike in efficiency in the industry in which they are employed. It is now necessary to consider cases in which this assumption is not fulfilled. One type of discrimination then occurs even though the same wage is paid to each man. Suppose that the transfer wage is the same for all workers but that individual workers differ in efficiency from the point of view of the industry: then the supply of labour to the monopsonist organisation, measured in efficiency units, is not perfectly elastic, although the supply of men is perfectly elastic. The amount of employment will be so regulated that the marginal net productivity of the least efficient man is equal to the uniform wage. Discrimination will then be perfect, since each man receives his transfer wage and the whole rent of labour is retained by the monopsonist. Different men represent different amounts of efficiency, and though each man is paid the same wage different efficiency units of labour are paid for at different rates. For instance, taking the efficiency of the least efficient man to represent one unit, suppose the wage to be ten shillings. Then a man twice as efficient is providing two efficiency units at five shillings per efficiency unit; a man three times as efficient is providing three units at three and fourpence per efficiency unit, and so forth. This kind of discrimination cannot be remedied by raising the wage, since this would merely raise the whole supply schedule of efficiency units of labour, and would lead to the dismissal of the least efficient men. In the new position one more the least efficient men employed would be receiving a wage equal to the marginal net productivity of an efficiency unit of labour, and more efficient men would still be paid at various lower rates per efficiency unit. Discrimination of this type could only be removed if each grade of labour was paid in proportion to its efficiency, so that men of different efficiency received different wages per day, but each unit of labour was paid at the same rate.  

1 See p. 225.

A different type of discrimination may arise when men of the same efficiency are paid at different rates. This will occur if a separate bargain is made with each man, or with different groups of workers, and if the various men or groups differ in the minimum wage they are prepared to accept.

Let us once more assume that all men are alike in efficiency and that the supply curve of labour to the monopsonist is imperfectly elastic because it is necessary to pay higher wages to some men than to others in order to attract them to the industry. If perfect discrimination obtains, so that each individual man is paid a wage equal to his minimum transfer earnings, the curve of marginal cost of labour to the employer coincides with the supply curve of labour. Employment is then adjusted so that the wage of the most expensive man is equal to the marginal net productivity of the group, but the whole rent of labour is retained by the employer. If, by the introduction of a common rule, the wages of all are raised to equal the wage of the most expensive man, the marginal and average cost of labour become equal to this wage, employment is unaltered (provided that the profit due to monopsony was a surplus above the normal profits necessary to maintain the employer in production), and the rent is transferred from the employer to the workers. If, however, it is merely stipulated that there must be a common rule, without enforcing a minimum wage, the effect is merely to remove discrimination, and employment is reduced. The marginal cost of labour is now shown by the curve marginal to the supply curve of labour to the monopsonist, and the case becomes one of simple exploitation such as we have already examined.

If the supply of labour to the individual employer is imperfectly elastic both because individual men are unlike in efficiency and because they are unlike in the minimum wage which they will accept, the amount of employment will be such that the marginal cost of an efficiency unit of labour is equal to its

and Mrs. Webb upon the "marginal productivity theory" of wages (see Principles, p. 705). It seems to have arisen because Mr. and Mrs. Webb failed to realise the implications of the assumptions of perfect competition, while Marshall failed to recognise the extreme unreality of those assumptions.

1 See p. 229.
Perfect discrimination is probably rare in buying labour, but imperfect discrimination may often be found. For instance there may be two types of workers (for example, men and women, or men and boys) whose efficiencies are equal, but whose conditions of supply are different. It may be necessary to pay the same wage within each group, but the wages of the two groups (say of men and of women) may differ. The amount of labour employed will then be such that the marginal cost of the total amount of labour is equal to its demand price, and is equal to the marginal cost of each type of labour, and the wage of each type will be equal to the supply price of the amount employed.

In Fig. 80, D is the demand curve for labour.
- \( S_m \) is the supply curve of men's labour.
- \( M_m \) is the marginal cost curve of men's labour.
- \( S_w \) is the supply curve of women's labour.
- \( M_w \) is the marginal cost curve of women's labour.
- \( M_t \) is the marginal cost curve of total supply of labour obtained by summing \( (M_m + M_w) \) laterally.

\[ OT = \text{total amount of labour employed} = OW \times \text{(number of men employed)} + OW \times \text{(number of women employed)}. \]

Thus the number of women employed \( (OW) \) will be such that their marginal cost is equal to the minimum wage of the men, and the number of men \( (W_t) \) will make up the difference between the number of women employed and the total amount of labour employed \( (OT) \). Any rise or fall in the demand curve for labour would be met by fluctuations in the employment of men, the employment of women would remain constant at \( OW \) until the demand curve for labour fell so low that no men were employed at all.

This analysis of exploitation is highly simplified, but a cursory view of existing conditions seems to suggest that it may have some bearing upon actual cases. In order to analyze any actual case many refinements and complications would have to be introduced into our simple analysis, and at best it can only indicate a first approximation which may be a useful though inadequate guide to the intricacies of the real conditions of the labour market.

1. See p. 224. The analysis of this and the following cases is analogous with the analysis of price discrimination under monopoly, discussed in Chapter 18. Various problems, for instance, the effect upon total employment of instituting a common rule as between men and women, can be solved by the methods there developed.

$D$ is the demand curve for labour.
$S_m$ is the supply curve and marginal cost curve of men's labour.
$S_w$ is the supply curve of women's labour.
$M_w$ is the marginal cost curve of women's labour.
$M_c$ is the marginal cost curve of total supply of labour.
$OT =$ total amount of labour employed.
$OW =$ number of women employed.
$WT =$ number of men employed.