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UNEMPLOYMENT AND THE DEMAND FOR LEISURE

R. M. MOHANA RAO*

Research Scholar
Department of Co-operation and Applied Economics
Andhra University, Waltair

The purpose of the paper is (i) to distinguish unemployment from leisure preference[1] and, (ii) to identify the factors that determine the demand (or preference) for leisure.

I

Equilibrium employment *a la* Keynes is measured at the point where the marginal utility of the wage is equal to the marginal disutility of labour or work. In Figure 1[2] the marginal utility of wage and the marginal disutility of labour are separately measured on the vertical axis and the supply of and the demand for labour are measured separately on the horizontal axis. The curve labelled MUW is a locus of the points of co-relationship of the marginal utility of the wage and the demand for labour. The basic assumption of setting up such a functional relationship is that the income of labour increases with the demand for labour, *i.e.*, the demand for labour is relatively elastic. In other words, it is assumed that a given percentage fall in the wage rate (marginal product of labour) is accompanied by a more than proportionate increase in the demand for labour.
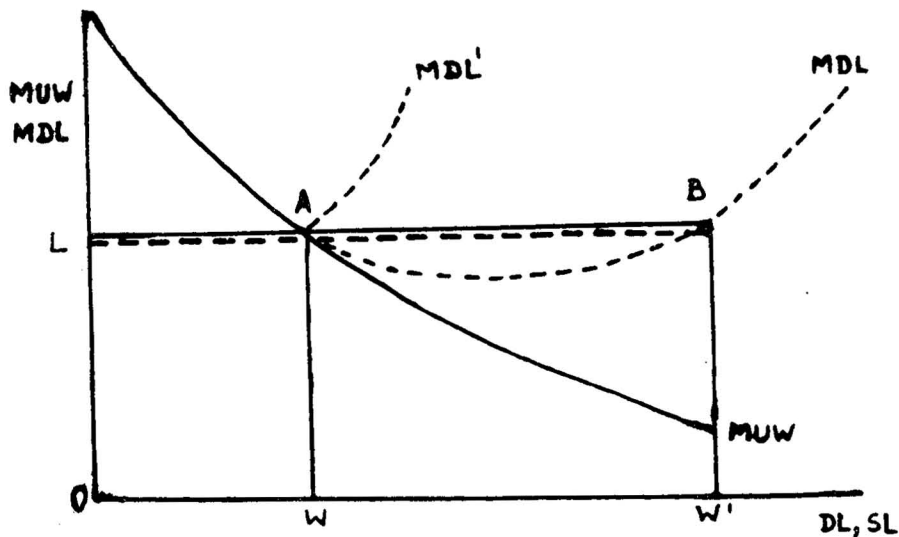

Figure 1

* This work was done under the guidance of Prof. D. V. Ramana, Head, Department cf Co-operation and Applied Economics, Andhra University, Waltair.

1. Deceptively, "unemployment" and "leisure preference" look alike. It appears plausible to think that unemployment which is rather continuous and considerable might in course of time get transformed into leisure preference. This of course is not the case. A point to the contrary is made in this paper.

But, voluntary unemployment is identical with leisure preference. The particular way in which leisure is expended is beside the point. Leisure or voluntary unemployment may be treated as a commodity which the individual demands with a view to maximize his satisfaction.

2. Figure 1 may be viewed as pertaining to the entire economy or to a "representative" individual as a small scale replica of the entire economy.

The curve labelled MDL denotes a functional relationship between the marginal disutility of labour and the supply of labour. From point B onwards in Figure 1, as the supply of labour increases the marginal disutility of labour increases. Upto point B however, increasing quantities of labour are supplied at the same marginal disutility of labour (or the wage rate). Point A in Figure 1 represents equilibrium employment while point B represents equilibrium full employment. The distance between points A and B as measured on the horizontal segment of the curve labelled MDL is a measure of the extent of unemployment, involuntary and enforced by the market.[3] If, however, MDL were to represent the supply curve of labour equilibrium full employment will be reached at point A. The question of leisure preference arises only from the point of equilibrium full employment or from the point at which the supply curve of labour starts rising, given the intersection of the supply curve of labour and the demand curve of labour at that point. Leisure preference is a matter of choice while involuntary unemployment is not. As the marginal disutility of labour rises it is open for labour to exact a higher wage for additional supply of labour. It is expected that at least after a point such as B in Figure 1 the supply of labour becomes less than infinitely elastic.

The volume of equilibrium employment and equilibrium full employment may change with shifts in the schedule of the marginal utility of wages and the schedule of the marginal disutility of labour. The factors that may cause a shift in the marginal utility of the wage are : (i) non-neutral inventions resulting in a change of the capital-labour proportion and therefore, a change in the marginal productivity of labour ; (ii) a change in the already existing pattern of minimum wages ; (iii) sudden fluctuations in the value of money, or what amounts to the same thing, sudden fluctuations in the purchasing power of wages. This factor has operational significance even where the decisions relating to supply of labour are beclouded by the money illusion on the part of labour.

The factors that cause a shift in the marginal disutility of labour, or what is the same thing, the factors that cause a shift in the scale of preference[4] of labour, as between work and leisure are : (i) a change on the part of labour in the elasticity of demand for income in terms of effort due to changes in the aspirations of labour, etc ; (ii) the activities of trade unions and other labour organisations in improving the conditions of labour ; (iii) a sudden breaking down of the barriers among the non-competing groups. For example, the Government may act to bring about increased mobility of labour by incentives by a programme of improving the skill of labour, etc.; (iv) institutional factors such as consolidation of holdings of land in agriculture and guaranteed tenure of employment in industry.

It may be seen from the foregoing that a decision to supply more labour implies a decision to accept a cut in the amount of leisure. The demand for leisure and

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3. In some cases, the points A and B might get connected not by means of a straight line segment, but a U-shaped segment as in Figure 1. The significance of the U-shaped segment of the MDL curve is the labour that cannot get employment at the going wage rate, OL, will tend to be self-employed, *i.e.*, disguisedly under-employed. The marginal disutility of self-employment might decline at first owing to the application of the latent entrepreneurial ability of the self-employed. But since it is very likely that the entrepreneurial ability is quite limited the marginal disutility of work will rise to the level of OL and even beyond after reaching the point B.

4. As the demand (preference) for leisure increases the marginal disutility of labour rises sharply ; and as the marginal disutility of labour remains constant the demand (preference) for leisure too remains constant. (LB in Figure 1).

the supply of labour are thus competitive ; the greater the one, the smaller the other.   But labour is supplied only with a view to earning an income.   The supply of labour, therefore, may be treated as the demand for income.   Income and leisure (chosen) together would determine the standard of life of the individual. In what follows an attempt is made to derive the demand for income and thereby the demand for leisure.

<div align="center">II</div>

It is assumed in Figure 2 that an individual's scale of preferences as between leisure and income is represented by an indifference curve which has the usual properties.[5]   Income is measured on the vertical axis of Figure 2 and leisure on the horizontal axis.   The gradient of the straight line joining the maximum income that could be obtained by the individual and the maximum leisure he could command in exchange for income represents the wage rate.
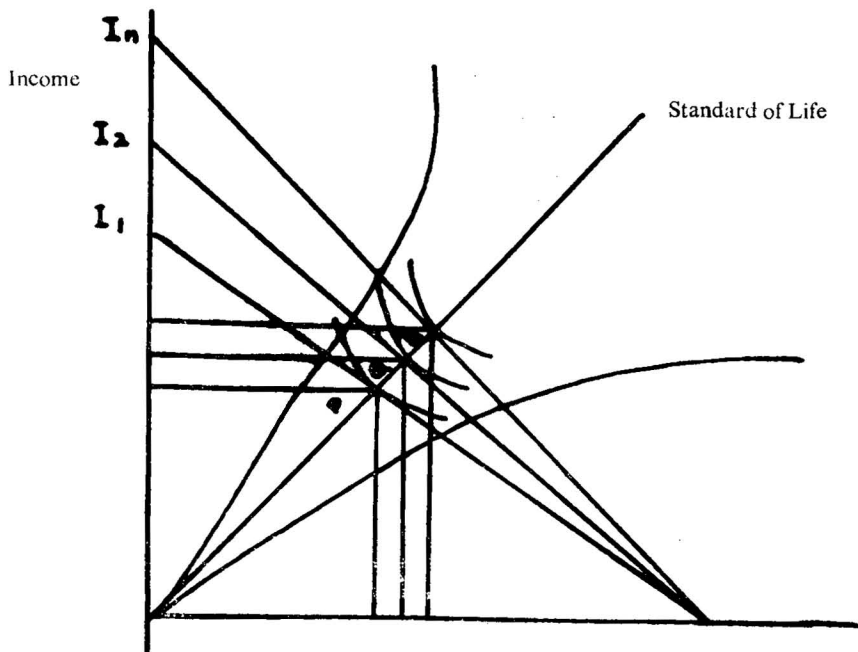

Figure 2—Leisure (or the potential for work)

The family of the straight lines ranging from points I_1 to point I_n are drawn to signify a rising wage rate or falling price of income in terms of effort.

The equilibrium of the individual is denoted by the points such as P or Q or R.   At each of these points the individual marginal rate of substitution between income and leisure is equated to the market (social) marginal rate of substitution between the two.   If the locus of these positions of equilibrium were to be a vector (linear) from the origin the individual will be deriving constant returns to the standard (scale) of his life by the increase in the amount of his income as well as by the increase in the amount of his leisure both brought about by a rise in wages.   The

5.   (i) It is convex to the origin. (ii) It is downward sloping. (iii) It does not intersect with another member of the same family.

former may be known as the "standard of life effect" of the rise in wages, and the latter as "the substitution effect" of the rise in wages.[6]

If the locus of the positions of equilibrium were to be on a radial vector the elasticity of demand for income with respect to a change (rise) in the wage rate is unity. But, if the locus were to be a curve tending to become asymptotic to the vertical axis the elasticity (in the relevant range) of the individual's demand for income with respect to a rise in wages is more than unity. If, on the other hand, the locus of the positions of equilibrium were to be a curve tending to become asymptotic to the horizontal axis the elasticity (in the relevant range) of the individual's demand for income with respect to a change (rise) in wages is less than unity.

As the demand for income in response to a change in wages is now known it becomes possible to derive the demand for leisure which together with income is assumed to determine the standard of living of the individual.

Let

η_L =   Demand for leisure ;

KS   =   Proportional contribution of income to the standard of life ;

(1—KS)=   Proportional contribution of leisure to the standard of life ;

ES   =   Elasticity of demand for income with respect to a change in the standard of life ;

EWL   =   Elasticity of substitution of work for leisure with respect to a change in the rate of wages ; then

η_L = $\{KS(ES) + 1—KS (EWL)\}$

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6. The distinction between the "standard of life effect" and the "substitution effect" of a rise in wages can be made in the usual sort of way by employing the stratagem of keeping the standard of life constant. Thus, from S to T in Figure 3 is measured the extent of the "substitution effect" and from T to U is measured the extent of the "standard of life effect."
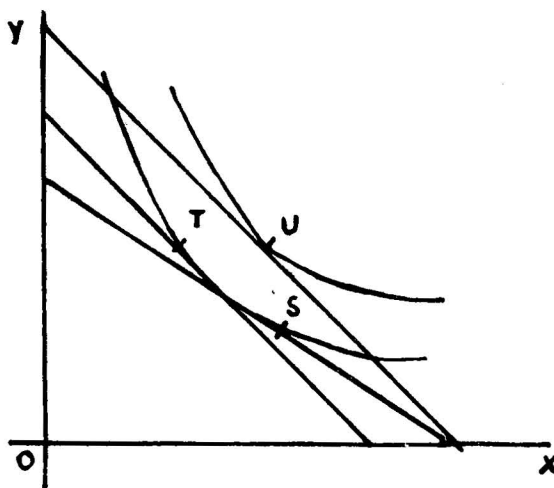

Figure 3

For small changes in the wage rate both the Hicks and Slutsky methods of distinguishing between the "standard of life" and the "income effects" of a rise in wages would yield the same results.

In Figure 4 EWL is explained in terms of the reciprocal of the wage rate and the proportion of income to leisure. That is,
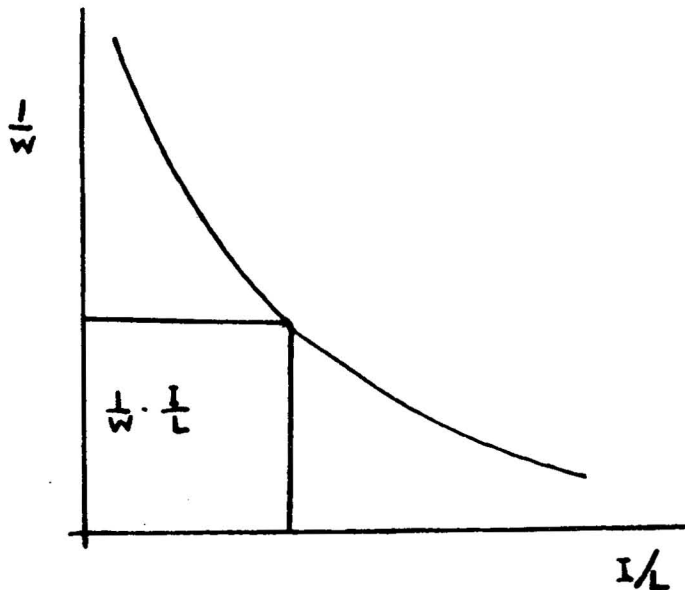

Figure 4

EWL is given by
$$\frac{d \log I/L}{d \log 1/W}.$$

The area of the rectangle in Figure 4, $1/W.I/L$, denotes the proportion of income earned to income foregone by leisure, *i.e.*, income that might have been earned by labour or effort now withdrawn from work. This proportion will remain constant if EWL were to be unity. If, in addition, ES also were to be unity, the demand for leisure will have an elasticity of unity with respect to a change (rise) in the wage rate.

But, what are the factors affecting KS, ES and EWL in terms of which the demand for leisure has been explained ? The extent to which a rise in wages would induce a desire on the part of the individual to earn more income (the magnitude of KS) may be said to depend upon two sets of factors—the objective and the subjective. Among the objective factors may be included (i) the size of the individual's family ; (ii) the burden of taxation ; (iii) changes in the rate of time discounting , *i.e.*, in the ratio of exchange between present goods and future goods ; and, (iv) changes in expectations of the relation between the present and the future level of incomes. The subjective factors affecting KS are (i) a desire for a larger volume of material goods or desire to save from the precautionary and the speculative motives ; (ii) a desire for distinction ; (iii) a desire to bequeath a fortune ; (iv) a desire to enjoy a sense of independence ; and, (v) a desire for power to do things, though without a clear idea or definite intention of specific action.

The factors affecting the ES, the elas´icity of demand for income with respect to a change in the standard of living are identical with the above.

The factors affecting EWL, the elasticity of substitution of work for leisure with respect to a change in the wage rate may possibly be :

(i) Social and cultural values and preferences which may limit the desires of people for consumption and for possession of material goods.[7]

(ii) Occupational immobility caused by the presence of non-competing groups as under the caste system.[8] Social prestige of a particular occupation in the scale of occupations of the community makes people prefer leisure to work[9] in other occupations. Occupational immobility is sometimes caused by the nature of work ; e.g., certain types of work are considered to belong to women; men are considered to be unfit for such work as grading of tobacco and trans-plantation of paddy. Immobility of labour may also be due to social reasons; some people may prefer work inside their home or village to work outside. Social status of the family like the "middle class morality" sometimes forces people to prefer leisure to work.

(iii) Economic status : the wealthy people prefer leisure to work as they may have no need to earn an income.

(iv) Climatic factors : these also play their role in determining the leisure preference as in the case where an ordinary labourer refrains from work during the hot season.

(v) Institutional factors such as joint family with its adverse effect on spatial mobility ; by guaranteeing a minimum level of consumption to each member of the family it encourages laziness and irresponsibility.

7. In fact, the point of Dr. Mellor's limited aspirations model is the operation of the cultural and social factors. He points out that in low income societies people convert their leisure into goods even at low wages till the subsistence minimum required is acquired and show no inclination for work afterwards. This subsistence minimum is culturally defined and varies from society to society. See J. W. Mellor, "The Use and Productivity of Farm Family Labour in Early Stages of Econo-mic Development," Journal of Farm Economics, Vol. 45, No. 3, August,1963, pp. 520-521.

Mr. Boudin's narration of his conversation with a native Indian of a South American Village who refuses to offer more flutes illustrates the same point. Vide Louis Boudin, "Traditionality in Economics," Quarterly Journal of Economics, Vol. LXVIII, November, 1954, pp. 488-489.

Mr. Weber's observation with regard to the East German farmers' failure to induce workers for a speedy harvest through higher wages is another example of the same category. Refer Max Weber : The Protestant Ethic and the Spirit of Capitalism, Translated by Talcott Parsons, Butler and Tannel Ltd., Fromer and London, 1930, pp. 59-60.

8. Dr. Madhukar Desai's explanation of sub-division of work among the Vaddars of Rural Karnatak is illustrative of the same point.

Dr. Desai distinguishes between Bandi Vaddars who carry earth or stone in a cart, Mann-Vaddars who dig earth and Kala Vaddars who blow up or break stones and point out that the Kala Vaddars would starve and perish but would not carry stone in a cart or dig earth from the ground. He fur ther says that among the Harijans the Holeya removes the hides from dead animals, the Dhor tans them and the Samagar prepares shoes out of them. If an individual who belongs to one group has no work he would not do the work done by the two other groups. Refer Madhukar Desai, "The Influence of Social Factors in Rural Economy," Indian Journal of Agricultural Economics, Vol. 1, No. 2, October, 1946, p. 87.

9. In the Antigua workers prefer leisure to work in the canefields for, canefield work for wages in Antigua ranks low in the occupational prestige of the community. Vide Simon Rottenberg, "Income and Leisure in an Underdeveloped Economy," Journal of Political Economy, Vol. LX, April, 1952, p. 100.