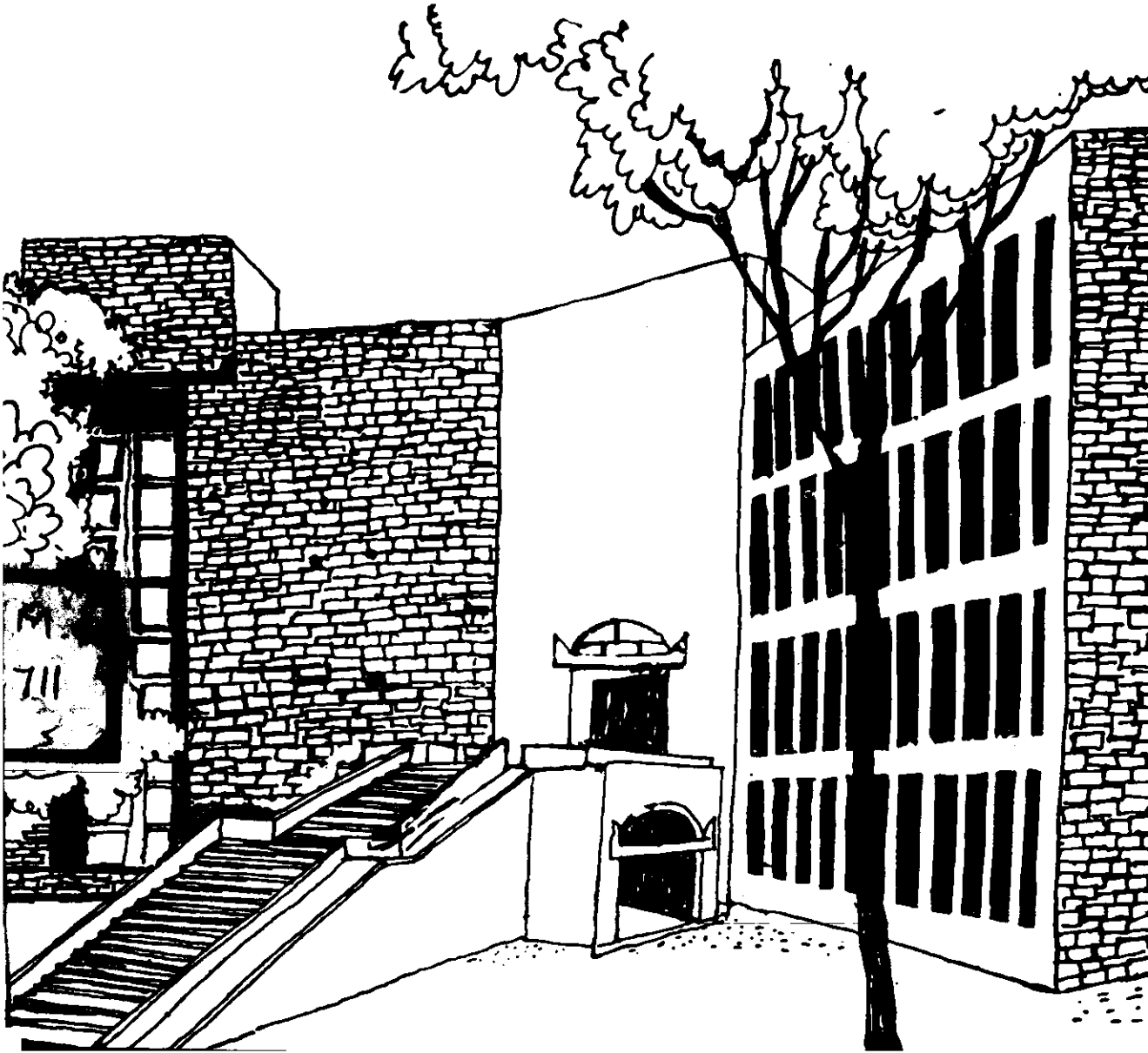




Working Paper



W. D. B. S. I. I.

W. P. No. 711

OCT. 1987

WAGE DIFFERENTIALS BETWEEN SEXES
IN INDIA - AN EXPLANATION

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WP711

WP
1987
(711)

W P No. 711

October 1987

The main objective of the working paper series of the IIMA is to help faculty members to test out their research findings at the pre-publication stage.

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AHMEDABAD-380015
INDIA

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IN INDIA - AN EXPLANATION

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ABSTRACT

Persistent wage differential between male and female workers in any economy is generally sought to be explained by the hypotheses of job-discrimination or sex-discrimination. In the conditions prevalent in the Indian labour market, these two hypotheses do not appear to be convincing. Alternatively, labour market imperfection and segmentation of labour market into male and female labour with distinct supply characteristics are considered to be the main factors behind the wage differential between the sexes. It is the profit maximizing behaviour of the wage discriminating monopsonists rather than personal preferences and prejudices of employers against females that gives rise to the persistent wage differential between equally skilled and experienced men and women workers. If such an explanation is accepted, then the policy prescriptions for tackling the male-female wage differentials are totally different from the ones based on the hypotheses of job discrimination and sex-discrimination.

WAGE DIFFERENTIALS BETWEEN SEXES IN INDIA

- AN EXPLANATION

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1. Introduction

Perfect S. Kill attributed the labour market segmentation to the existence of non-competing groups created out of the imperfections in capital market. Institutional barriers resulting from the imperfections in capital market give rise to substantial differences in acquisition of human capital by certain groups in the society. Such a concept of labour market segmentation has been systematically replaced in the modern literature by the differing earning functions of the workers. Two distinct concepts of market discrimination and market segregation have emerged. The former refers to the incomes received by different groups ignoring their distribution in employment, whereas the latter refers to their distribution in employment ignoring their incomes. (Becker, 1957).

Becker's (1957) model of labour market discrimination treats the discrimination as resulting out of the employer's preferences and prejudices for and against certain groups of workers. In the context of the racial discrimination, Becker's model was modified and expanded by several economists like Arrow (1972), Alexis (1973), Krueger (1963), etc. The model, however, remained neoclassical in its structure. Perfect competition in the labour market with homogeneous factors of production was assumed. The employers practising such discrimination were assumed to deviate from the profit maximizing behaviour inasmuch as they were taken to be willing to sacrifice some profit for the sake of their prejudices/preferences.

In the context of sex-discrimination, on the other hand Bergmann and Adelman (1973) argue that wage discrimination is less likely than the job discrimination. Strong notional demarkation between the "men's occupations" and "women's occupations" results in segmentation of labour market between the two almost non-competing groups - men and women. Since women's occupations are relatively less in number, there occurs overcrowding which pulls down their wages. Such an argument in the back-drop of the perfectly competitive labour markets would imply that the marginal productivity of female workers is lower, than the one for the male workers. The

national income accountants and other researchers interested in measuring the changes in quality of labour over time, therefore, rely on wage differentials to reflect the productivity differentials, for instance, Denison, 1985; Auer, 1979; Denison and Chung, 1976; Dholakia, B.H., 1974 and 1980, etc. The contribution of changing sex-composition of labour force to the growth rate of the economy is thus estimated by using the male-female wage differentials.

The conditions of Indian labour market when examined in the context of sex-discrimination clearly reveal that wage differential between male and female workens is a casually observable phenomenon. Differences in the skill, qualification, experience and nature of the job for male and female workers do not fully account for their wage differential. Recently, it is also argued that statistically significant difference in the marginal productivities of male and female workers does not exist in India (Dholakia, R.H., 1986). Thus, the Bergmann-Adelman hypothesis of job discrimination also does not provide full explanation to the male-female wage differentials in India. Does this imply that the explanation lies only in the Becker-Arrow type of model? If it is so, we should conclude that the females are discriminated against^{by} the employers in India even at the cost of their profits. If it is a question of only prejudices and beliefs, the government is fully justified in intervening the market with detailed list of laws

and regulations. However, there is an alternative explanation of the male-female wage differential in India which is consistent with the profit-maximizing behaviour of employers, and hence, raises serious doubts about the efficacy of such government interventions. In the present paper, we propose to discuss this alternative explanation.*

2. Discriminating Monopsony

The conditions of labour market in India do not justify the strong assumption of perfect competition among employees. For a given type of labour, the employers are relatively too few. The employers are, therefore, not an insignificantly small part in the market. They cannot employ as many workers as they wish at the going wage rate. They have to effectively offer higher wages for employing more workers. In other words, the employers do not face an infinitely elastic supply of labour. An upward sloping supply curve for labour implies that the marginal expense of employing labour is greater than the average wage rate. (Koutsoyiannis, 1985). The empirical finding that wages are not paid according to the marginal product in India (Dholakia B.H. & Dholakia R.H., 1975) can be reconciled with the monopsonistic competition in the labour market.

* In the context of racial discrimination, Thurow (1969) had pointed to somewhat similar explanation.

To see that the male-female wage differentials can also be explained by the profit maximizing monopsonistic competition in the labour market, let us assume for the sake of simplicity in exposition that there is a monopsony in labour market. In other words, let us assume that there is only one employer in the market. Let us also assume that he is interested in maximizing his profits. Moreover, let us take the labour market to be distinctly segmented into two groups, say, males and females. We hold the other things constant as a result of which we would consider that male workers and female workers are homogeneous in all other respects. The labour market is segmented in the sense that cross-membership in the two groups is ruled out. The two groups are not strictly non-competing, but they have distinct supply (of labour) curves. Under such conditions, the monopsonist may find it profitable to pay different wage rates to male and female workers.

$$\text{Let } TC = W_1L_1 + W_2L_2 + TFC \quad - \quad (1)$$

be the cost of function of the monopsonist where L_1 and L_2 represent the employment of male and female workers respectively W_1 and W_2 are the respective average wage rates and TFC is the total fixed costs. Let us also take his total revenue function

$$\text{as : } TR = p.X \quad - \quad (2)$$

where p is price of the product and X is output.

$$\text{Also, } X = f(K, L) \quad - \quad (3)$$

is the production function and,

$$p = g(X) \quad - \quad (4)$$

is the demand function for the good X.

Now, the profit function of the monopsonist is :

$$R = TR - TC$$

$$\text{i.e. } R = p \cdot X - W_1 L_1 - W_2 L_2 - TFC \quad - \quad (5)$$

In order to determine the equilibrium values of L_1 and L_2 , let us consider maximization of R with respect to L_1 and L_2 in equation (5).

$$\therefore \frac{\partial R}{\partial L_1} = p \cdot \frac{\partial X}{\partial L} \cdot \frac{\partial L}{\partial L_1} + X \cdot \frac{\partial p}{\partial X} \cdot \frac{\partial X}{\partial L} \cdot \frac{\partial L}{\partial L_1} - W_1 - L_1 \frac{\partial W_1}{\partial L_1} \quad - \quad (6)$$

$$\text{and } \frac{\partial R}{\partial L_2} = p \cdot \frac{\partial X}{\partial L} \cdot \frac{\partial L}{\partial L_2} + X \cdot \frac{\partial p}{\partial X} \cdot \frac{\partial X}{\partial L} \cdot \frac{\partial L}{\partial L_2} - W_2 - L_2 \frac{\partial W_2}{\partial L_2} \quad - \quad (7)$$

Since, $L = L_1 + L_2$, $\frac{\partial L}{\partial L_1} = \frac{\partial L}{\partial L_2} = 1$ in both (6) and (7).

In order to maximize R with respect to L_1 and L_2 , the necessary condition is that equations (6) and (7) should equal zero.

\therefore The necessary condition for profit-maximizing equilibrium is :

$$MRP = W_1 + L_1 \frac{\partial W_1}{\partial L_1} \quad \text{and} \quad MRP = W_2 + L_2 \frac{\partial W_2}{\partial L_2}$$

$$\text{i.e. } W_1 + L_1 \frac{\partial W_1}{\partial L_1} = W_2 + L_2 \frac{\partial W_2}{\partial L_2}$$

$$\therefore W_1(1 + \frac{1}{e_1}) = W_2(1 + \frac{1}{e_2})$$

$$\text{i.e. } \frac{W_1}{W_2} = \frac{(1 + \frac{1}{e_2})}{(1 + \frac{1}{e_1})} \quad \text{---- (8)}$$

where e_1 and e_2 are wage elasticity of supply for male and female workers respectively. Assuming that the second order conditions for equilibrium are fulfilled, the implications of the equation (8) is that the monopsonist would find it profitable to pay different wage rates to male and female workers if the elasticities of supply for male and female workers are different at a given wage rate. Moreover, it is also clear from equation (8) that the group with higher elasticity of supply gets the higher wage rate.

Thus, with monopsony element present in the labour market, the profit maximizing behaviour of the employer would necessarily lead him to pay lower wage rate to female labour if the elasticity of their supply is lower than the male labour although their marginal productivity is the same as that of male labour. If imperfection of labour market is the cause of wage differentials between the two sexes, it does not become the case of sex discrimination. There may not be any prejudices or beliefs against employing the female workers on the part of the employer. It may be only due to his monopsony power and ability to exploit

differing elasticities of supply of male and female workers which might explain the differences in the wage rates. Such a situation cannot be easily remedied by passing detail laws and imposing regulations. Rather, it calls forth an indepth examination of the causes for the relatively low elasticity of supply of female labour as compared to the male labour with the same skill, qualification and experience.

3. Causes of Less Elastic Supply of Female Labour

The role of females in the Indian society is central to the family system. The households without a female member are seldom considered families. Whether the female is a mother, daughter, sister or wife, she occupies the central position in the family. Several household responsibilities are traditionally discharged by the women in the family. The males are usually the bread-winners in the family. In several cases, women are also required to supplement the efforts of men in earning for the family. The women carry out their bread-winning role by and large in addition to their normal role of looking after the household work. The participation of females in economic activities is, therefore, largely out of economic compulsion. It should be mentioned here that the females in the middle and upper-middle income families participate in economic activities not out of economic compulsion but on account of a number of complex socio-psychological reasons. Their case is certainly

different from those whose labour force participation is out of economic compulsion. However, the proportion of women workers from the middle and upper middle income group is very low in the total female labour force.

If economic compulsion is an important cause for entering the labour market, wage elasticity of **supply** is bound to be low for majority of female workers. Moreover, the decision to join labour force is an important decision for females. They traditionally have a natural option of not joining the labour force and that in itself is not locked down upon by the society. A male on the other hand is naturally expected to be in the labour force and his not being in the labour force is matter of great concern for the family and the relatives. Such a male is looked down ^{on} by the society. The decision to join labour force for the males is **therefore** **crucially** dependent on the level of the wage rate rather than **on any of the** other facilitating factors. The wage elasticity of labour supply for males is, therefore, most likely to be very high. The case of females is different, however. Their participation in the labour force depends more on the other facilitating factors than the level of the wage rates. These facilitating conditions would include several factors like number of alive children, their age, type of family, size of the family, health of family members, nature of the job, timings of the job, distance of the work place, etc. If these factors are favourable

the level of the wage rate is almost irrelevant for the decision to enter the labour force in the sense that minor variations in wage rate are not likely to affect the decision. It is natural, therefore, that the wage elasticity of labour supply for females is lower than that of males.

Another important cause for the lower supply elasticity for female labour is the constraints on mobility of women. Since women have to look after the household activities, their geographical mobility is severely restricted. The spatial specificity explicitly enters their supply function which further reduces the importance of wage rates. Males, on the other hand, being the bread-winners enjoy more freedom and flexibility on account of geographic mobility. The spatial specificity is not so dominant in their supply function. Similarly, the occupational mobility-wise also the females are at disadvantageous position as compared to males because there are social taboos attached with females' association with certain types of occupation.

Another constraining factor on women's mobility is the family system itself. Inasmuch as the supply of labour of male and female is a family decision based on consideration of welfare maximization for the family, the two supply functions are ^{inter-}dependent. As it usually happens, if the male member of the family gets a very lucrative offer from some other city

or region, the family may find it profitable to sacrifice female's job and settle in the new city or region where the female may not get as good a job as before. Although the female might have been individually worse off, the family might have been better off. These are again the casually observable phenomena. In the rural sector also such decisions are frequently taken. The case of migrant families is an illustration. For a migrating family, the wage bargain is by and large for both the husband and the wife. Since the bargaining power and skills are limited with such families, usually the employer who is invariably the monopsonist in such situations finds it profitable to discriminate wages for males and females. It is not out of any prejudices against females that they get paid less, but it is because their supply is much less elastic as compared to males.

Finally, we may briefly consider the case of women workers belonging to the middle and upper middle income groups. Their labour force participation is not out of economic compulsion but on account of several socio-psychological factors. Wages, therefore, do not matter. They are certainly not considered very important factor except their magnitude determining the social status for the women. To some extent, therefore, the supply of this category of women may be more wage elastic than the rest. The wage-differentials between male and female workers in such categories are, therefore, not very substantial in the

first place, and whatever exist can be explained in terms of skill, qualification, experience and the nature of the job.

4. Concluding Remarks

Imperfections in labour market and the wage discriminating monopsony model can very well explain the male-female wage differentials in the Indian labour market. The hypothesis of sex-discrimination based on prejudices of employers against women workers needs serious scrutiny particularly because it implies implausible objective function for the entrepreneurs. If the root-cause of the problem is the labour market imperfections, the remedy is not in imposing laws and regulations (which could be flouted in practice) but to systematically plan to remove/reduce such imperfections. In order to increase the supply elasticity of female workers apart from making special efforts to improve their skills and qualifications, their mobility both - geographic and occupational - should be facilitated. Better and efficient transport network can go a long way in this regard. Finally, we may note that if economic compulsion ^{were} absent, the elasticity of labour supply of females would in all probability be more or less equal to the one for males in which case, the problem of male-female wage differentials does not remain as pressing as it is now.