# Household Decision-Making in Agricultural Labour Household: A case study of West Bengal

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# Household Decision-Making in Agricultural Labour Household: A case study of West Bengal

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**Abstract:** This paper focuses on theoretical issues of gender related to household decision making and examines its empirical validity on agricultural labour households in the context of a particular region of West Bengal. The study suggests that a woman's choice and rationality differ significantly from a man's. The loci of patriarchal power determines how, where, when and who make the choice. Unlike unitary household model, collective household model, in which a household consists of individuals each of whom is characterized by particular preference, and among whom a collective decision making takes place, seems to be more general. Further, a large unexplained component of intra-occupational wage difference between man and woman is likely to indicate gender discrimination in the intra occupational labour market in which both men and women of a household participate.

**Introduction**

The area of gender studies has of late attracted the attention of scholars primarily as a result of the national and international resurgence of the women's movement. The analysis of household decision making undertaken here focuses on intra-household gender role based on some important aspects like 'the issue of choice', 'unit of analysis' on intra-household allocation of resources, concept of 'market work', particularly, on intra-occupational wage differential between men and women in a labour market in which both men and women of a household participate, in the context of a particular region of West Bengal.  As regards household gender inequality, Sen (2001) argues that the reach of this inequality includes not only unequal relations within the family but also derivative inequalities in employment and recognition in the outside world.  But gender is not perceived to be a central concept in classical economics and neo-classical or among Marxist economics (Blau, 1989: 95). The central figure of all economic theory and activity is a "Homo Oeconomicus" flattened to such a degree that all class and gender differences are obliterated from analysis.  This class neutral, gender neutral (as well as caste, ethnic, race etc. neutral) model postulates a single universal rationality totally out of keeping with reality  (Kalpagam, 1986: WS-59: Dewan, 1999:312-113).  Their conceptual basis is the impersonal market functioning in a capitalist situation, which supposedly automatically brings about an efficient allocation of resources with each individual seeking maximization of profits as a producer and of utility as a consumer.  The dominant paradigm in economics at present is Neo-classical; this is accepted as 'Mainstream' economics. Some issues – the role of rationality as the unit of 'choice', the

household model as the 'unit of analysis', the concept of market work, market wage as the concept of 'work' – central to the mainstream economic theory, have been questioned. The contribution of modern neo-classical economics has been subject to greater scrutiny and more rigorous analysis with women's economic roles within the family and the causes of gender inequality in economic outcomes (Blau, 1989: 96). 'Mainstream' economics assumes men and women to be abstractly equal, both making 'rational', good choices regarding not only work but even marriage. Mainstream macroeconomics is gender blind. It is based on an incomplete understanding of how economics work. This promotes the introduction of policies which disadvantage women, especially poor women (Elson, 2004: 6). To whatever extent neo-classical economics has incorporated the concept of gender, it has tended to trivialize it. However, due to the vastness of the broader issue of the general relevance of neo-classical economics as a whole, this paper focuses on intra-household gender issues based on the role of rationality as the issue of choice, the unitary household model as the unit of analysis, the concept of wage differential between men and women as an explanation of human capital approach in 'mainstream' economic theory and examines its empirical validity in the context of household decision making on agricultural labour household in a particular region of West Bengal in Indian perspective.

## II

### Theoretical Framework

The issue of 'choice' is crucial to 'mainstreatm' economics, as is the role of 'rationality'. The standard neo-classical economist's functional kind of explanation is that because of their domestic responsibilities, women enter the

labour market with relatively poorer endowment of human capital – education, skill, experience – than man. Hence women receive poorer work experience. Besides, the fact that women are less well prepared for the job market is because men and women in a family rationally decide on who is to do what work. In this, women choose to do domestic work. As a result of that choice, women get less time to learn skills or receive education. Thus the sexual division of labour is a matter of 'rational choice' by the families as a part of the household work strategy (Becker, 1981).

These explanations of the issue of 'choice' of mainstream economics are far from satisfactory on several grounds. Some grounds seem to be relevant in the context of our empirical studies. **1st**, as is done in the indifference curve analysis, posing a choice-decision between work and leisure simply does not either describe or integrate the alternatives for a women. The women's 'choice' and rationality differ significantly from a man for the existence of gender based division and segmentation of labour in particular, and patriarchy in general, because the society has historically assigned women different roles both as a producer and as a consumer. The allocation of authority and control within household structures by social norms and values produce unequal gender relation where men command authority and resources (Kabeer, 1995: 224-28). According to Amartya Sen, women are less likely to secure favourable outcomes for themselves in household decision-making process; women feel that their long-term security lies in subordinating their well being to that of male authority (cited in Pant, 2000: 94). The loci of patriarchal power, which are structured by social norms, values and practices within household, determines how, where, when and who

make choice, **2nd**, the sexual division of labour within household becomes both an indicator of gender inequality and a major obstacle to the path of gender equality on other counts (Agarwal, 2004: 51). Much of the cost of caring labour (a term coined by feminist economists) is borne by women. For example, most women at considerable economic cost to themselves provide caring labour like unequal sharing of domestic work, childcare, and care of elderly. A growing body of studies, so far mostly in the west, reveals that women face a significant reduction in average lifetime earnings as a result of their childcare responsibilities ( Waldfogel, 1997 ,cited in Agarwal, 2004: 51). This would leave women in the home with a weaker bargaining position. Similarly, domestic work is perceived as being less valuable than work, which brings monetary income with the result that this would also reduce women's bargaining power within the family. Moreover, women's primary responsibilities for childcare restrict their participation in collective or political activity (Ibid: 51-2). **3rd,** the analysis of consumer's choice is irrelevant to women; this is because the income women spend accrues mainly because of their patriarchal power relation or total dependence on male earnings and the lack of control over their own earnings (Bell, 1977). Moreover, the better economic position of women in some cases suppresses the 'rational choice' of women from their strong ideology of portraying these women mainly as nurturers of the family, and so any change in the family based image of women is avoided (Banerjee, 1999, Mehta, 1976). **4th**, Labour market studies anywhere show that the differential in male and female work experiences comes about not so much through men getting better conditions than women in identical jobs. It comes about through women being allotted separate jobs,

which are then treated as inferior (Banerjee, 1999). Further, it has been shown that whether an occupation is defined as skilled or otherwise is largely a matter of decisions being influenced by more powerful groups, usually male workers (Cockburn, 1983). **5th** the economic role of producer and consumer combined for a women is unpaid labour at home. Society assigns her the role of wife and mother and in doing so decrees the feminine productive function as that of providing services to the household itself. As consumer, women acts as purchasing agent for the family and in effect buys the raw materials that she uses in household production. Neither as producer nor as consumer does she have the freedom of 'choice' allotted to a man (Bell, 1977). **6th,** the uniform notion of rationality of neo-classical paradigm is questionable, since individuals are differently placed. Individuals in household on the verge of subsistence find that their work and consumption do not maximize their utility but maximize the survival chances of the household as a whole (Kalpagam, 1986:WS59).

Another issue central to the 'mainstream' economic theory is the 'unit of analysis', taken generally as the firm in the context of the working of the market in a capitalist system. 'The household model' is a reformulation of the standard neo-classical consumer demand theory and is based on the seminal work of Becker (1965) who introduced a unit set of models, referred to here as unitary models, wherein the household welfare function is considered to be identical to that of the benevolent dictator who heads the household and ensures that welfare resources are optimally allocated between household members (Becker 1981: 192). More specifically, Beckerian model, as in the case of neo-classical consumer theory, assumes a common utility function for

all members of the household; there is no scope for conflict of interests within the family. Further, the income or resources of all members of the family are assumed to be pooled and allocated based on the common preference function and the underlying assumption is that the household is a 'homogeneous unit'. As many of the commodities produced at home are substituted for purchased goods, what is maximized is a common utility function in which the household and not the individual is the unit of inquiry. Becker (1981) assumes that the 'altruistic' head of the family acts in the joint interest of all, and everybody else in the family has exactly the same rational perception of the family's joint interest, which they all want to maximize in a rational and systematic way (cited in Sen, 1995:260).

The neo-classical explanation of unit of analysis is also subjected to criticism. Sen (1995) is of the view that Beckerian model avoids the problem of conflict in cooperative conflicts by making everyone pursue the same objectives with the result that they have no disharmony of interest, or of objectives. With an example he argues that if women (or girls) die in much larger numbers than men (or boys) for differential medical attention and health care, then this unitary model requires that such differentials are what every member of the family (including the relatively more-stricken women) rationally promotes and their consequences are what they jointly seek (Ibid, 261). Different family members are observed to have partly divergent interest and the existence of conflicts is fully acknowledged in game theoretic discussions of the 'bargaining problem' inside the family (Manser and Brown, 1980, cited in Sen, 1995:261).

Household Bargaining Model acts as a challenge to Gary Becker's unitary household model in that household bargaining models have a strong potential for formalism and empirical testing, and they can have strong efficiency and equity effects inducing policy shifts (say, in resource transfers) in a more gender equal direction (Agarwal, 2004: 4). According to Agarwal (2004), the application of bargaining theory to explain gender-differentiated intra-household outcomes have provided the most effective challenge to the standard assumptions of neoclassical economics in theoretical as well as empirical terms (Ibid: 4-5). A framework based on Nash – bargaining co-operative game theoretic framework[1] generates a demand system that is more general. (Duraisamy and Duraisamy 2001). The bargaining models explicitly address the question of how individual preferences lend to collective choice. To find a solution of a bargaining problem, two approaches-co-operative and non co-operative-have been used. For the presence of public goods within the family and companionship, loving and caring etc., the family bargaining problem can be viewed as a two-person, non-zero sum game. Since the family decision involves to some extent a degree of co-operation, a co-operative game approach is more appealing and is widely used. A number of researchers, among others, have applied the bargaining approach in empirical studies of household decisions in the context of labour supply of men and women (Schultz, 1990), resource allocation within the household to child survival (Thomas, 1990), child health (Bolin and Bjorn, 2001), intra-family allocation of consumption. The bargaining approach seems to be more appropriate in the case of intra-family allocation of resources among boys and

girls for schooling, health, food distribution etc. (Duarisamy and Duraisamy, 2001).

Although within the household model Mincer (1962) pointed out the importance, especially for women, of the three-way decision among market-work, non-market work and leisure, Becker (1981) eliminated the distinction between non-market work and leisure. Some recent approaches, termed as collective models, treat the household as a collection of individuals who have 'heterogeneous preferences'. It seems to be relevant to mention that within the collective models, which treat the household as a collection of individuals who have heterogeneous preferences, the household behaviour has been analysed in two frameworks – cooperative (some contracts are binding and enforceable) and non-cooperative. Out of two sub-classes of cooperative collective models, Bargaining and Pareto efficient Bargaining models of marriage treat marriage as a cooperative game: spouses with conflicting interests or preferences are assumed to resolve their differences in a manner prescribed by the Nash or some other explicit bargaining models in which total family resources and the resources controlled by each spouse play a significant role (Manser and Brown, 1980 and McElory and Horney, 1981, cited in Lundberg and Pollak, 1993:993). Individual's control of resources depends on threat point and on the feasible consumption set. The non-cooperative models assume that individuals cannot enter into binding and enforceable contracts with each other within household; within an existing marriage a non-cooperative equilibrium corresponds to a utility maximizing strategy in which each spouse takes the other spouse's strategy as given (Wooley 1993; Lundberg and Pollak, 1993; Kanbur and Haddah, 1991). Under some

circumstances the non-cooperative equilibrium within marriage more accurately represents the outcome of marital non-cooperation than does the costly and time-consuming alternative of divorce (Lundberg and Pollak, 1993).

What is needed, according to Sen, (1995) is a combination, which acknowledges possibility of real conflicts of interests (unlike in Becker's framework) coexisting with a socially conditioned perception of harmony (unlike in standard game theoretic model). In making people with divergent interests feel united around shared perception of common objectives, implicit theories of justice and traditional understandings of what is 'natural' and 'proper' can play a major part (Sen, 1995: 261).

The issue of the concept of "work" is also crucial to 'mainstreatm' economics as work in economics is generally equated with 'market' work or 'paid' work, that is, labour power, which has a exchange value. Neo-classical economic theory depends mainly on models of perfect competition where wages are equal to value of the workers' marginal product. Neo-classical economic theory also states that as wage increases, supply of labour will also increase. Moreover, the wage differential between men and women under neo-classical theories can be explained by 'human capital' approach. This competitive model explains wage and productivity differentials through differences in the quality of labour between men and women. 'Human Capital' is acquired by workers who invest in themselves through education, on the job training, experience etc. The cost of acquiring the skill is compared with the expected return on the investment made in terms of higher wages. This theory

thus concludes that as men have invested more in themselves, they have more human capital than women, and so receive higher wages. This approach assumes 'freedom of choice' without taking into account the restrictions imposed by society on both a woman's freedom and her 'choice'. According to Becker (1981), women's role in reproduction makes it rational for women to specialize more in family skill and men more in labour market skills and parents make a rational choice for their children by preparing them for different careers. Women's ability for the labour market increases when women's reproductive role is reduced due to the decline of birth rates. However in countries with low fertility, women begin to invest more in the labour market skills than in the case in countries with continued high fertility. Thus sex-related differences and types of human investment and availability provide the explanation for the difference in wages, types of work and promotion.

The issue of 'concept of work' of mainstream economics is far from satisfactory for several grounds. **First,** non-market activities have remained, in the main, out of the scope of neo-classical economics. In underdeveloped, semi-feudal economies the primary production unit is the household where non-commodity characteristics are retained alongside commodity production. Thus in underdeveloped subsistence economy where majority of women work in the non-market sector, according to the neo-classical explanation they are classified as non-worker, non-producers and hence are invisible in the data. This leads to an underestimation of the labour force as well as to the devaluation and non-recognition of women's economic contribution. **2nd,** as mentioned earlier, various studies on explanations of wage differentials

suggest that a significant percentage of total wage gap between men and women remain unexplained. Even neo-classical theories are not able to explain wage differential fully even within a capitalist system. (Bergmann, 1986). **3rd,** it is also said that women are distinct separate section of the employed; they have been hired for their so-called special qualities. And yet they are being paid lower wages than man even when demand for this segregated section of the labour forces are increasing faster than for male labour. Even if they are fully absorbed in the work force, their wages have remained inferior to those of man (Banerjee 1999). **4th,** the main instrument for maintenance of patriarchy is occupational segregation which reinforces the traditional division of labour resulting in lower wages for women which in turn maintains their economic dependence on man. Simultaneously, the domestic division of labour reinforces occupational segregation by weakening women's status in the labour market. The 'specialization' Principle of Beckerian Model has been questioned on different grounds. Such a division of labour may not be as advantageous for women as for men. When there are conflict of interests or even pronounced differences in tastes between the husband and the wife, the concept of family utility function itself becomes less meaningful (Blau, 1989:99). Moreover, women's comparative advantage for household production may stem not only from the impact of biology and gender differences in upbringing and the tastes, but also from the effect of labour market discrimination in lowering women's earnings relative to men's.

**III**

**Survey Design and Methodology**

Our survey was carried out with data pertaining to 150 households from 4 villages of Habra Block-I in the district of North 24 Parganas in West Bengal. In selecting the villages, a list of different villages located in the Block was first obtained from the Agricultural Development Office and then 2 villages were selected having the higher incidence of irrigational and HYV facilities[2] and the rest of the villages were selected having no irrigational facilities except rain-water. For the selection of households in the second stage, the lists of households were prepared separately for owner-cultivators, tenant cultivators and agricultural labourers from the Gram Panchayet Records of each village. Detailed lists of each category available from each gram Panchayet Records were then used to draw the sample of households for our study following the method of simple random sampling without replacement. Our sample covered 50 owner-cultivating households, 50 tenant cultivating households and 50 agricultural labour households consisting of 50 per cent in each type of household from each type of villages (Villages having irrigational and HYV facilities, and without irrigational facilities). We surveyed the villages throughout the year 1995-96.

This exercise is based on 50 sample agricultural labour households because, among others, of the availability of data on individual source of income of male and female of each household. More importantly, like male working members, female working members of those households were agricultural labour and their earnings (in Rs.) would usually come from wage-labour. So, individual-specific source of income of agricultural labour

households was hardly difficult to calculate. On the other hand, owner cultivating and tenant cultivating household's income were mainly based on their own-farm income. The female members of those households were also engaged in household farm and non-farm works. Consequently, the individual specific source of income of male and female members of owner and tenant cultivating households were unexplored in this survey.

Regarding the first issue – 'the issue of choice'-crucial to 'mainstream' economics, simple proportions, averages etc. are used to assess empirically the extent of women workers' active involvement in decision-making relating to general domestic issues and the extent of male members' active involvement in household workload-sharing.

Turning to the second issue of 'mainstream' economics, 'the household model' as the 'unit of analysis' assumes common utility function for all members of the households; the demand system contains a common family household income effect. In contrast, collective household model takes into account individual-specific income effect in the demand function. We estimate income effects of husband and wife for all children on Health expenditure and Educational expenditure separately.

$$H_i = \alpha_1 + \beta_1 Y_i + e_i \ldots\ldots\ldots\ldots\ldots (1)$$

$$E_i = \alpha_2 + \beta_2 Y_i + e_i \ldots\ldots\ldots\ldots\ldots(2)$$

H and E represent Health expenditure and Educational expenditure for all children respectively. Y is the spouse-specific income and i, households. E is the random-error term.

We also estimate spouse-specific labour force participation on spouse–specific income.   The labour force participation was estimated using maximum likelihood probit model.

To understand the model, let us assume that there exists a theoretical continuous index $I_i$ (unobservable utility index) that is determined by an explanatory model Y.

Thus we may write the index $I_i$ as

$$I_i = \alpha + \beta_{Yi}$$

Where $Y_i$ is the spouse-specific income of $i^{th}$ household.   The unobservable index ($I_i$) is related to the actual decision in the following:

Z = 1, If husband (wife) participate in the labour force and Z = 0, if he (she) does not.   Hence it is reasonable to assume that there is a critical or threshold level of the index, $I_i^*$, such that if $I_i$ exceeds $I_i^*$ the husband (wife) participates in the labour force, otherwise she will not.

$I_i^*$ is assumed to be normally distributed random variable.   Given the assumption of normality, the probability $I_i^*$ is less than or equal to $I_i$ can be computed from the standardized normal CDF as

**$P_i$ = Prob (Z = I/Y) = Prob ($I_i^* \leq I_i$)=F($I_i$)**

$$= \frac{1}{\sqrt{2\pi}} \int_{-\alpha}^{I_i} e^{-t^2/2} dt = \frac{1}{\sqrt{2\pi}} \int_{-\alpha}^{\beta_1+\beta_2 y_i} e^{-t^2/2} dt \dots\dots\dots\dots(3)$$

Where t is a standardized normal variable, i.e. t~N(0,1)

To obtain information on $I_i$, the utility index, as well as $\beta_1$ and $\beta_2$, we take the inverse of (3) to obtain

**$I_i = F^{-1}(P_i) = \beta_1 + \beta_2 Y_i$**

Since the normal equivalent deviate (n, e, d) or $I_i$ will be negative whenever $P_i < 0.5$, in practice, the number 5 is added to n.e.d and the result is called a probit.

As regards the issue of concept of 'work' of neo-classical economics for a given occupation, we may estimate the individual monthly earnings in terms of worker's characteristics-education, experience, marital status (married/unmarried)- for male and female separately. In doing so, the coefficients of each characteristic are determined by individual equation. The variable 'experience' is the 'potential experience' and is defined as age minus years of schooling and 6.

Extending the Blinder-Oaxaca decomposition approach, Brown et al. (1980) developed an approach, which decomposes the total wage differential between men and women into components related to intra-occupation wage differences and inter-occupational differences. This approach has often been used to study the wage effect of occupational segregation (e.g. Miller, 1987; Gabril and Schmitz, 1989, Moll, 1992; Terrell, 1992; Kidd and Shannon, 1994; Meng and Miller, 1995; Sung et. al. 2001).

Let the wage of individual i in occupation j be expressed as

$$\mathbf{W_{ij} = \alpha_j + X_{ij}\,\beta_j + U_j, \ J = 1,2\ldots\ldots j\ldots\ldots\ldots.(4)}$$

Where X represent the workers characteristics (education, marital status, experience). W is the money wage, $\alpha$ and $\beta$ are parameters to be estimated. U is a random error term.

As our exercise is based on data relating to 50 agricultural labour households which are entirely dependent on the occupation of wage-earning as

agricultural labour, the inter-occupational components is absent. Hence equation (4) may be expressed as

$$W_i = \alpha + \beta X_i + E_i \ \dots\dots\dots\dots\dots(5)$$

Brown et al. (1980) show that the gender wage differential can be decomposed as follows.

$$\overline{W}^m - \overline{W}^f = \sum p_j^f \hat{\beta}_j^m \left( \overline{X}_j^m - \overline{X}_j^f \right) + \sum \overline{W}_j^m \left( P_j^m - \hat{P}_j^f \right)$$

$$\underbrace{\qquad\qquad}_{\textbf{A}} \qquad \underbrace{\qquad\qquad}_{\textbf{B}}$$

$$+ \sum P_j^f \left( \hat{\alpha}_j^m - \hat{\alpha}_j^f \right) + \sum P_j^f \overline{X}_j^f \left( \hat{\beta}_j^m - \hat{\beta}_j^f \right)$$

$$\underbrace{\qquad\qquad\qquad\qquad\qquad}_{\textbf{C}}$$

$$+ \sum \overline{W}_j^m \left( \hat{P}_j^f - P_j^f \right)$$

$$\underbrace{\qquad\qquad}_{\textbf{D}} \ \dots\dots\dots\dots(6)$$

Where a bar over a variable denotes the mean value, superscripts m and f refer to males and females respectively, the term $p_j^f (p_j^m)$ is the observed proportion of females (males) in occupation j, and the term $\hat{P}_j^f$ represents the hypothetical proportion of women in the sample who would be in occupation j if women faced the same occupational structure as men. The summation is over j from 1 to j.

The above decomposition of the gender wage differential can be conveniently illustrated as the sum of four terms, A, B, C and D as follows:-

- Intra-occupation (explained): A

- Inter-occupation (explained): B

- Intra-occupation (unexplained): C

- Inter-occupation (unexplained): D

The terms that are explained (A and B) capture the wage differential due to differences in characteristics between men and women, while those that are unexplained (C and D) reflect the wage differential due to differences in estimated coefficients (i.e. differential treatment in the labour market) and may be a result of discrimination.

Terms A and C are similar to the explained and unexplained terms in a conventional Blinder-Oaxaca decomposition approach, except that the occupation distribution is now accounted for explicitly. Our analysis relating to the gender wage differential is also based on A and C components of Brown et al. (1980) approach following conventional Blinder-Oaxaca decomposition model.

## IV

## Empirical Analysis

With a view to understanding the existing pattern of power in a household it is essential to assess the influence of different members in making household decisions. Two broad areas of decision-making were selected, namely, general domestic issues (such as those relating to children, domestic expenditure, medical care, festivals, gifts/donations and marriage) and household asset management issues.

It is usually believed that female members in a household would dominate in household decision-making. But the findings of our survey show

that the dominant role in both the decision-making areas was occupied by male members (Table-1). In more than half of the sample labour households (54.00 percent) women did not participate in household decision-making. Non-participation in the decision-making of household asset management issue worked out to about four-fifths of the households (78.00). Turning to the joint participations, high level of joint participation was dominant (28 percent of households) in relation to others (low and medium) in general domestic issues. An analysis of women workers' active involvement in decision-making relating to general domestic issues indicates that since they contribute their earnings to household subsistence and are responsible for household maintenance, they have some influence only in the 'nitty-gritty' decisions of the household. Their negligible participation in decisions relating to household asset management points to the general gender bias against women who are considered unable to take any crucial decisions which are related directly or indirectly to the 'market'. Obviously, our findings seem to contradict the issue of 'choice', crucial to neo-classical economics, as in the role of rationality suggesting that the loci of patriarchal power determines who makes the choice. Our empirical observations are almost in conformity with Pant (2000) who observes that men, who took almost all crucial decisions relating to household asset management, are associated with public domain and women who are capable of making only general household related decisions are associated with the private domain, that is the household. Her study points to gender bias against women within the society whereby women are denied power and autonomy. Narasimhan (1999) observed that participation in decision-making in the control villages was negligible.

Traditionally, women have relied on man of the household for decisions, even those affecting their own lives. She also found that joint decision making (among men and women) rose from 21 per cent in the control villages to 87 per cent in villages which had been exposed to awareness campaigns, testifying to a considerable improvement in women's participation in decision-making and showing an impressive curtailment in male monopoly of assets in AWARE (Action for Welfare and Awakening in Rural Environment) villages.

The intra-household power structure that restricts the 'freedom of choice' of women might also emerge from the extent of household workload sharing between men and women. Three broad areas were selected to measure overall household division of labour – Housework, Childcare and Marketing. **Housework** includes the task related to sustenance of the household, such as fetching water, cooking, cleaning, washing and laundering. **Childcare** includes child rearing, feeding, bathing and teaching. **Marketing** includes task related to the purchase of household provisions from the market. It is quite common that main responsibility of household and childcare falls on women members; male members and elderly women are usually involved in purchasing daily provisions (Pant, 2000). Results of our study relating to household duties- housework, childcare and marketing-also support this traditional phenomena (Table 2). Moreover, in almost all cases marketing duties (shopping) were executed by female members as also household cooking and childcare. This study, thus, suggests that patriarchal power structure determines unequal division of labour within household duties that restricts the 'freedom of choice' of women. Our empirical observation seems to support the findings of Nararasimhan (1999) who observed that

participation in housework by men was very poor in the control villages. But a perceptible change in the extent of work sharing by men was noticed within 5(five) years in AWARE villages constituting an improvement in the status of women within the family. As the impact of her study observed in the control villages, resources and services were mainly male dominated, whereas AWARE villages showed a curtailment of male monopoly and shift towards joint direction, joint ownership and control, joint sharing of duties and an improvement in the status of women in the family. It leads to a considerable improvement of the restrictions imposed by society on both a women's 'freedom' and her 'choice'. But no perceptible change of patriarchal power structure that restricts the 'choice' of women's decision-making or work sharing by men was noticed in our study during a time very close to 21st century.

Turning to the second issue of mainstream economic theory – the 'unit of analysis', unlike unitary household model which assumes a common utility function for all members of the household and pooling of resources among family members, Cooperative household models share a premise that a household consists of individuals, each of whom is, characterized by particular preference and among whom a collective decision making process takes place. The latter model takes into account individual specific income effects in the demand functions. It seems to be more appropriate in the case of intra-family allocation of resources among boys and girls for schooling, health, food distribution etc. (Duraisamy and Duraisamy, 2001). In our study, the estimated income effect of father and mother on educational expenditure and health expenditure is positive and statistically significant (Table 3). It also

suggests that husband's income effect is different from wife's. Here a related issue is: do men fritter away this additional earning on their own expenditure like alcohol etc. so that the income of mother on educational expenditure and health expenditure given in Table 3 is positive and significant?  As our study relates to cross sectional data, the change of the proportion of father's outlay on goods like alcohol etc. can not be obtained.   Nevertheless, the cross-sectional study shows that fathers' outlay on goods like alcohol, cigarette etc. possess a very negligible portion of their (fathers') total expenditure (about 0.96 per cent of total expenditure).  However Table 3 might suggest that an increase in individual-specific income would improve education and health care measures for all children.

Equation of labour force participation (spouse – specific), calculated on the basis of working days using maximum likelihood probit model, shows that income effects for both wife and husband are of expected (negative) sign and statistically significant (Table 4).  Although this study does not lend support for Household Bargaining Approach, unlike common preference function for all members of the family, individual control of resources and the question of how individual preferences lead to collective choice seem to be more appropriate.

We may now attempt to examine the empirical validity of neo-classical concept of work, generally equated with 'market' work or 'paid' work which supports that as women have lower incentives to invest in market-oriented formal education and on-the-job training than men, the result of smaller human capital investment by women will lower their earnings relative to those of men.   Following equation (4) the estimated values of workers

characteristics (intra-occupational) reveals that for each individual workers characteristics, both men and women are equally significant (Table 5). It is important to mention that instead of considering single equation separately for male wages and female wages on all workers' characteristics – education, marital status and experience, we regress male or female wages on each characteristic separately because the influence on male and female wages of individual characteristic seem to be more meaningful (Sung et al, 2001). The results of the decomposition model based on intra-occupational wage differential between men and women (equation 6) suggest that the explained wage differences due to education, marital status and experience are negligible[3] (Table 6). The explained gender wage differential possesses negative sign indicating that explained wage differential for men is not so important as women. Table 6 also shows that the intra-occupational gender wage differential is due to unexplained component of decomposition model. It seems to indicate high gender discrimination in the intra-occupation labour market. However, in order to judge the relative importance of individual characteristics, we regress male or female wage on all the characteristics combining with three (beta) coefficients and one (alpha) coefficient for male or female wage equations respectively (Table 7). It shows that the estimated t values of all the workers' characteristics along with their constant terms are significant in both the equations although the level of significance differs in both the equations. It might suggest that the influence of male or female wage of all the combined workers' characteristics is significant. The decomposition model based on male and female wages on combined workers' characteristics is portrayed in Table 8. The results given in Table 8 are in conformity with

that of Table 6. However, it may be stressed that the unexplained part of the gender gap may be partly due to factors other than discrimination. Part of the unexplained gap may be due to variables that are not included in the model. For instance, intensity of effort is a very important variable explaining earnings, but this variable is absent from almost all data set because it is very difficult to observe and measure[4]. Thus if it is assumed that the intensity of work effort accounts for a significant part of the unexplained gap of this intra-occupational gender wage differential, wage differential due to gender discrimination cannot be avoided.

It should be noted that despite ranking first out of a total of 36 Asian countries by the Index of Women's Advancement (IWA): Asia and the Pacific, Hong Kong experiences gender discrimination in her labour market mostly due to the intra-occupational component of gender wage differential (Sung et al, 2001). It is also found that most of the intra-occupation wage gap is unexplained and has increased over the year; but the unexplained earnings differential due to occupational differences (inter-occupation) favored females in all years.

Regarding the issue of non-market activities, indeed, the majority of women in a country like India still work in the non-market sector and thus they are classified as non-worker and non-producer according to neo-classical concept of 'work'. Table 2 also suggests that the household workload duties almost executed by women are usually non-market activities, which have also remained outside the scope of neo-classical economics.

**V**

**Conclusion**

'Mainstream' economics apparently the most 'scientific' of all social sciences, does not have much to offer either conceptually or methodologically in terms of gender. To whatever extent neo-classical economics has incorporated the concept of gender, it has tended to trivialize it. What neo-classical economics ignores is that patriarchy is fully integrated with production relations and productive forces. Thus a beaconing clue arising from our empirical findings based on the evidence in a particular region of West Bengal is that the role of rationality as the issue of 'choice', the household model as the 'unit of the analysis', the concept of 'market' work, 'market' wages as the 'concept of work' are fully integrated with patriarchal production relations and productive forces. The results of our analysis might suggest that the choice of decision making relating to 'household domestic affairs' and 'household asset management issues', and 'workload sharing' in different household duties which are usually non-marketable, women are denied power and autonomy; rather patriarchal power, social and traditional norms in subordinating women's well-being to that of male authority determine women's choice which reflects unequal division of labour within household that restricts the freedom of choice of women. The reach of this inequality includes not only unequal relations within the family, but also derivative inequalities in employment and recognition in the outside world (Sen, 2001). Relating to the second issue, unlike the household utility function as the unit of analysis usually based on common utility preference and pooling of resources among family members, the question of how

individual preferences lead to collective choice, seems to be more appropriate. It has been shown that spouse-specific income effect has significant influence in intra-family allocation of resources relating to educational expenses, health expenditures of the children and specific labour force participation implying individual control of resources seems to be more promising. Furthermore, neo-classical concept of work, generally equated with 'market' work or 'paid' work, is unable to explain intra-occupational wage difference between men and women. Our findings suggest that the intra-occupational wage difference is due to unexplained component of decomposition model. It indicates, likely, a significant gender discrimination in intra-occupational labour market.

It would be simplistic to say that mere access to and control over resources would guarantee autonomy and 'freedom of choice' to women. There is plenty of evidence to suggest that improvements in status and access to resources have not enabled women to become the equals of men. What is necessary is not just 'freedom of action' but also 'freedom of thoughts' in determining their bargaining power. The perception of self-worth of women members within the household is an important component in determining their bargaining power. Women who generally have a low sense of worth have weaker bargaining and fallback positions (Young 1992). Greater involvement of empowerment strategy like education, participation in community affairs, decision-making ability and autonomy, access to government functionaries, overcoming fear of authority etc. are necessary for generating the perception of high sense of self-worth of women members within and outside the household. An enhancement of women's active agency is important in combating inequality of every kind. Added to it, the findings that the intra-

occupational gender wage differential is unexplained may call for, as in Brown et al (1980) and Miller (1987), a more adequate anti-discrimination legislation aimed at promoting equal pay for equal work within same occupation.

**Notes**

1.  Under the Co-operative approach, Nash Bargaining Solution is one approach, which satisfies 5 desirable properties – strong individual rationality, Pareto optimality, symmetry, independence of irrelevant alternative and invariance.  Nash demand functions explicitly takes into account individual specific income effects in the demand functions.  It is possible to test whether the husband's income effect is different from wife's income effect or they are equal by empirically estimating the demand functions using appropriate econometric methodology.

2.  82 per cent and above of the net cultivable area in each village is irrigated as well as under HYV crop cultivation.

3.  Sung et al (2001) took two more extra explanatory variables – widow, china (country) – in the equation.  In our sample we had only two agricultural labourers who were widow.  Further, as all the sample households are taken from 4 villages within a particular Block in West Bengal ranging between 10 to 15 kilometers, the wage differential due to place does not become relevant here.  So the wage equation has taken in linear form instead of semi -log model.

4.  Becker (1985) argues that married women do most of the household chores and thus have less energy available for the market than do most

husbands. When women spend less energy per hour of work, they earn less. Moreover, their household responsibilities induce occupational segregation because women seek occupations and jobs that are less effort-intensive and otherwise are more compatible with the demands of their home responsibilities.

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Table 1: Levels of Participation in Household Decision-Making

**(in Percentages)**

| Levels of Participation | General Domestic Issues | Household Asset Management issues |
|---|---|---|
| Non-Participation | 54.00 (27) | 78.00 (39) |
| Joint Participation | 46.00 (23) | 22.00 (11) |
| Low | 6.00 (3) | 12.00 (6) |
| Medium | 12.00 (6) | 6.00 (3) |
| High | 28.00 (14) | 4.00 (2) |

Figure in brackets represent number of household

Table 2: Percentage of Women saying 'Yes' to Work-Sharing by Men:

| Household Duties | Percentage of Total Household |
|---|---|
| Cooking | 8 |
| Fuel-wood Collection | 6 |
| Getting Water | 12 |
| Shopping | 10 |
| Looking after children | 8 |
| Caring for sick child | 16 |

Table 3: Spouse – Specific Income effect on Educational Expenditure & Health
Expenditure for All Children

| Equation | Husband's (Father's) income effect | Wife's (Mother's) income effect |
|---|---|---|
| Health | 0.1154* (45.27) | 0.1764* (54.62) |
| Education | 0.15* (68.11) | 0.23* (65.88) |
| Adj.R$^2$ | 0.77 | 0.89 |

Note: (1) The dependent variable is the health expenditure or educational
expenditure for all children and the explanatory variable is the
spouse – specific income.

(2) Figures in Parentheses represent t values.
*Signification at 1 percent level.

Table 4: Spouse-Specific Income Effect on Labour Force Participation:

| Income Effect | Equation Labour Force Participation | Adj.R$^2$ Value |
|---|---|---|
| Husband | -8.2555* (-7.916) | 0.55 |
| Wife | -1.764* (-0.326) | 0.47 |

1) The dependent variable is binary and gender (Male/Female) specific. The
independent variable is spouse-specific income.

2) Figures in Parenthesis represent t values.
*Significant at 1 percent level.

Table 5: Estimated Values of Male/Female Wage (in Rs.) on Individual (Male/Female) Workers' Characteristics (Intra-Occupational)

| Works Characteristics | Estimated Values | | | | | |
|---|---|---|---|---|---|---|
| | Constant | | Slope | | Adj.R$^2$ | |
| | Male | Female | Male | Female | Male | Female |
| Education | 14.11 (4.25) | 5.64 (3.25) | 38.68 (4.36) | 24.05 (3.54) | 0.93 | 0.91 |
| Marital Status | 12.74 (3.82) | 5.62 (2.98) | 39.12 (3.92) | 25.28 (3.32) | 0.94 | 0.92 |
| Experience | 22.17 (4.79) | 14.18 (4.12) | 38.69 (3.39) | 27.55 (4.10) | 0.92 | 0.95 |

Figures in brackets represent t values.  All t values are significant at 1 percent level.

Table 6: Decomposition of Earnings-differential (Intra-Occupational):

| Wage Differential | Value | % |
|---|---|---|
| Total wage-differential | 20.0194 | 100 |
| Explained (A) | - 0.6860 | - 3.427 |
| Unexplained (C) | 20.7054 | 103.427 |

Table 7: Estimated Values of Male/Female Wage (in Rs.) on Combined (Male/Female) Workers' Characteristics (Intra-Occupational)

| Dependent Variable | Estimated Values | | | | Adj.$R^2$ |
| | Constant | Slope | | | |
| | | Education | Marital Status | Experience | |
|---|---|---|---|---|---|
| **Male wage(Rs.)** | 11.02 (3.21) | 19.56 (2.30)** | 8.28 (3.15)* | 15.63 (2.96)* | 0.88 |
| **Female wage(Rs.)** | 7.05 (3.84) | 26.04 (3.93)* | 6.36 (2.51)** | 21.25 (3.15)* | 0.82 |

Figures in brackets represent t values. * Significant at 1 per cent level.
** Significant at 5 per cent level.

Table 8: Decomposition of Earnings-differential (Intra-Occupational)

| Wage Differential | Value | % |
|---|---|---|
| Total wage-differential | 17.401 | 100 |
| Explained (A) | 2.953 | 5.874 |
| Unexplained (C) | 14.448 | 94.126 |