

## CONTESTED HISTORY OF NEO-CLASSICAL ECONOMIC MODELS OF HOUSEHOLDS IN DEVELOPMENT

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### ABSTRACT

The models outlined in this essay were basically put together to help economists analyze household behavior and subsequently propose government policies for poverty reduction. From the arguments posed in the above text, it is clear that government policies should not be based solely on the unitary model because of its failure to analyze intra household relationships and resource distribution.

**Key words:** Economic models, households, developments.

### I. INTRODUCTION: THE CONCEPT OF HOUSEHOLD IN DEVELOPMENT

*“Don’t ask me what poverty is because you have met it outside my house. Look at the house and count the number of holes. Look at the utensils and the clothes I am wearing. Look at everything and write what you see. What you see is poverty”* (Poor Man in Kenya, cited in Todaro and Smith, 2003, pp:10). In order to address, reduce and abolish poverty the concept of “development” has emerged as a discipline which is concerned with enhancing the lives and freedom of people-people like this poor man in Kenya (Sen, 1999). The fundamental goal of development is to generate sustainable social and economic progress. The ways in which this can be done have been subject to much debate and research for many years, resulting in some improvement in interpreting the connections between *development projects* and *development itself* (Rogers, 1990). This progress has built on the simpler model of the relationship between economic growth of a country and the well being of its citizens and there is an increasing recognition of the importance of addressing inequalities by specifically targeting disadvantaged groups (see World Development Report, 2000). One step in this progression has been the questioning of conventional approaches to describing one of the most important units of development analysis- the household.

Households, considered to be the smallest social units, play a vital role in the organization of information in case of census, surveys for

collection of technical and socio-economic data, diagnosis and solutions of farming problems and most importantly, in the planning and targeting of poverty and nutrition interventions (Evans 1989). Household information is increasingly being recognized as having central importance within the field of development. Power, positions, relationships, asymmetries, inequalities, dependence within a household are all fundamental aspects of issues such as access to resources, their allocation and control, decision making and bargaining. Household relations are predominantly culture-specific, essentially constructed by society in accordance to expectations and practices connected to factors such as gender, generation, kinship or an individual’s relationship to the household head (Roberts, 1991). They are therefore dynamic rather than static, changing with time and in response to external influences, developments and shocks. Only by understanding these dynamics, practitioners accurately identify who will be the ultimate beneficiaries of certain developments and who will lose out.

### II. DEFINING NEO CLASSICAL ECONOMIC MODELS OF HOUSEHOLD

In order to study the features of actual households for a wide range of diagnostic and predictive purposes (e.g. household responses to market wage rate, household demand for commodities and public services), economists and development experts have come up with different household economic models. Through these models, human behavior is analyzed for different contexts, so that

the *closest possible representation of reality* can be achieved.

The models were developed with the ultimate objective of working out what constitutes a household, how and why resources are allocated between the members, how individual utilities are satisfied and how social welfare can be maximized as it is believed that intra-household interactions can eventually have impacts on the overall economy and social welfare of people and economists can subsequently suggest government policies for development based on the models formulated. In the process, it has been assumed that the household is a single unit and that resources are shared fairly within it - an idea based on neo-classical economics, which conceptualized households as rational actors. Households were modeled as optimizers who were led to "better" outcomes. The neoclassical economic models are based on three assumptions 1. People have rational preferences among outcomes. 2. Individuals maximize utility and firms maximize profits. 3. People act independently on the basis of full and relevant information (Weintraub, undated). Such interpretation of households dominated developing thinking for decades. The major reason for such domination is the fact that, prior to the 1970s, development was nearly always seen as economic phenomenon in which overall growth will trickle down to the masses in the form of employment and other economic opportunities. To get the growth job done, the micro and macro economic theories of traditional neo classical economics were applied and households were also part of this widespread treatment (Todaro and Smith, 2003)!

If the household models of micro-economic theory are looked at, they mostly consider the household to have a single utility function, which obscures the fact that, in households, some lose and others gain even where aggregate utility increases e.g. selling the car for eldest child's university education. However, such economic approaches towards and assumptions about the household have been the basis upon which policies have been designed and implemented for years, which as Kabeer (1994) highlights "*explains why women's needs and interest have so often been overlooked by policymakers*" (p:16). Although, in time, as development changed its focus from quantitative to qualitative progress due to failure of economic approaches to change the lives of the masses of people, the refinement of the models recognized

the underlying that inequalities between gender exist within households. However, it has been seen that new the models still lack the ability to fully examine intra-household relationships, particularly those related to gender differences.

The focus and primary concern of the chief criticism directed towards the neo classical household models is the weak interaction between economic theory, genuine problems, and the policies formulated to solve these issues. Often the models have no contact with actual events thus making them useless in extreme cases. The theoretical lenses of these models are often based on inaccurate assumptions. They shape and limit the insights of the practitioners working on development into the nature of social reality thus preventing them seeing the full picture with clarity. By not anticipating the dynamics of intra-household relations and their implications, practitioners risk the development of the beneficiaries both directly and indirectly. This triggers negative consequences such as increasing male bias in agricultural policy and the consequent subordination of women, keeping them isolated in reproductive work and economically dependent.

The aim of this paper is briefly to describe the neo-classical economics of household models outlining both those of unitary behavior and that of collective nature. Then empirical studies will be used to assess whether the models are effective representations of real life household behavior. This paper will pursue a critical approach to the basis in which unitary models have been created and how subsequent collective models, mainly bargaining models, have questioned the credibility.

Through this paper, some of the controversial issues regarding neo-classical economic models of households will be reviewed, using mainly feminist approaches as it is from this point of view that neo classical household models have been most extensively challenged (Folbre, 1989). In spite of the critique, a well-designed alternative to the traditional model is yet to be presented by economists but this paper will focus on the imaginative consequences of a critical analysis.

### III. CONVENTIONAL FEATURES OF HOUSEHOLDS

Before embarking into the debates surrounding household modeling, it is important to briefly

define the conventional features of households. In order to provide “a radical solution to the problem of general applicability of conclusions from one area to another” the concept of household has arisen (Guyer and Peters, 1987, cited in Johnson, 1988:2). Although there does not exist a universally accepted definition of households, they can be described as units of biological reproduction, as property owning entities or as initiators of a labor process. Whichever the description, its product become inputs into household consumption which, according to Becker (1979), centers around ‘one pot’ and under ‘one roof’ (Edholm, Harris and Young, 1977, cited in Johnson, 1988:3). However, it is very difficult to define the boundaries of a household. For example, how can all consumption be accommodated into the one pot and how can the heterogeneous members with individual natures and utility functions be described under one roof? The diversity of household structures within a given society is moreover, essential to be noted (Gastellu, 1987, cited in Johnson, 1988).

In the economic sense, households may be defined as units of production and consumption although much of the definitions can be subject to cultural interpretation (Crehen, 1992). Essentially, households are not static over time, culture and communities; they evolve in response to the availability and allocation of resources and activities. In reality, the household fosters socio-economic relationships between members so that both intra-household and inter-household relationships lead to economic and social benefits in the current location (Crehen, 1992).

The different defining characteristics of households give modelers a choice over their assumptions about households (Evans, 1989). Models are often applied to learn how (or whether) individual utilities are fulfilled in households and what collective goal is binding the members together. The goals of these models are to portray the characteristics of *collective choice* within the households because this type of choice offers simplicity to policy makers. The model of collective choice can be used to examine a wide variety of issues without collecting large amount of time consuming and costly additional information about each individual’s preferences. The models enable policy makers to leave the issue of internal distribution often assuming that it will take place fairly, collectively and equally or that

interventions have equal impacts on both men and women (Bruce and Dwyer, 1989).

#### IV. UNITARY MODEL OF HOUSEHOLDS

The simplest form of a hypothetical household is the unitary model which is very easy to define and has prevailed as a widely applied representation of resource and labor time distribution within a household. There are no complications involved with this form of modeling as all members are assumed to have *common preferences*, thus resulting in a conflict-free family.

The unitary household model assumes that all household members jointly make decisions to maximize their collective interest (Ellis, 1988). Every individual has exactly the same preferences and utility function as the other members of the household, thus making it act as a single unit. Such households are characterized by the pooling of resources, the absence of conflict and overall collective utilities-which enable complete social harmony (Matilla, 1999).

#### Beckerian New Household Economic Theory: A Critical Outlook

Based on the unitary model, Gary Becker conceptualized the New Household Economic (NHE) Theory as an alternative model to the traditional consumer theory<sup>1</sup>. The Beckerian household is said to be the most complete presentation of the unitary household model (Matilla, 1999). Becker (1979) used an economic approach that take into account the nature in which human behavior is driven by a rich set of values, norms and of course, the basic urge to live collectively. Household decision-making regarding marriage, divorce, the division of labor, investment in children and so on, is done using the rational choice approach<sup>2</sup> in this model. It treats the household as a *consumption unit* with a defined

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1. Consumer theory is the starting point of all neo-classical household economic theories. It is based on the hypothesis that one individual -one consumer unit of analysis maximizes his utility by using market goods and services, subject to his income constraint and all economic preferences are guided by self interest (Matilla, 1999).

2. This approach assumes that people engage in maximizing collective benefits and approach all things in the same way, evaluating costs and benefits and acting as to maximize their net benefits (Becker, 1979).

joint utility function, thus moving away from the more familiar domain of individual utility maximization in traditional consumer theory. In fact, Becker argues that the rational choice approach is a comprehensive method applicable to all human behavior (Matilla, 1999). Although the model offers straightforwardness in understanding the household, over the years, absence of certain 'real world' elements of household behavior in the model has led to major criticism about Becker's theory. Folbre (1986) claims that the unitary economic models are rarely, if ever, validated in any way or based on any empirical research. As a result, they constantly fail to differentiate the activities that go on within the household mainly by gender and power inequalities.

In Becker's model, a household is presented as a contained social and economic entity with clearly defined boundaries. It is organized independent of other households and actors in the economy. The family is considered the basic labor unit and the household has a strong connotation of co-residence (Evans, 1989). In reality however, households are more often shifting flexible structures with boundaries that are difficult to discern. Micro studies from Sub-Saharan Africa show a great diversity of family and household composition and social relations, mediated through marriage and kinship, creating a variety of residential arrangements (Evans, 1991). Furthermore, important information concerning variations in household composition, for example, by gender, age and kinship, is lost where households are considered a single legal union and unified economic entity. For example, polygamous households will probably comprise of a number of separated but inter-related household units in which many decisions are taken by co-wives with or without the involvement of their husbands (Evans, 1989).

The model suggests that the production activities of the household are based on household labor alone, but this is not necessarily true. Whitehead and Kabeer (2001) underlined the importance of kinship obligations in providing labor to households. Within the households, there may also be different labor groups. For example, Crehen (1992) found among the Kaonde in north-western Zambia that the labor unit was a woman and her dependent children, who were not necessarily her biological children. Roberts (1991) in an anthropological study in Sub-Saharan Africa

observes "*households do not necessarily comprise persons recruited solely through kinship and marriage.....*" (pp: 32).

Regardless of how the household members are related / associated, Becker's model indicates that there exists a single household utility function framed to fulfill a joint set of preferences as a unitary entity (Haddad and Kanbur, 1990). How can the joint utility be mapped from different individual choices? The solution can be to 'calculate' aggregate preferences or *an average utility function* so that the new indicators show the level of wellbeing of the household as a whole, thus becoming a social welfare function. Even if multiple utility functions exist, they can each be labeled with a pre-determined weight and the welfare of the family can be equaled to the weighted sum of the net utility of all members (Sen, 1976, cited in Alderman 1995).

Becker's account is premised on each family acting as an economic unit, and this extent of harmony is possible when the household actions are being dictated by a *single rational agent* (typically, the male breadwinner), who optimally allocates resources among family members. Becker, in effect, proposes a tenet which is opposite to that which holds in the marketplace: *the rational agent or dictator, in the family is perfectly altruistic and benevolent* while in the marketplace, he is self interested (Wooley, 1996). However, he does not offer any answer to this question - *why does altruism work at home and not in society at large, in which case social organization other than the free markets could achieve maximum social welfare* (Ellis, 1988)?

Becker in his theory talks about a common set of preferences, *determined by the head of the family that lead to a joint utility function* (Evans, 1989). However, the very assumption that household members have a common set of preferences is in reality, *impractical*. The fact remains that were a dictator to make the household decisions, the members could not behave voluntarily in preference maximization. Certain factors like *violence*, or its fear, maybe the means for forcing subordinate members to accept an assumed *common good*. In line with the saying, "*the ends justify the means*", if violence becomes the means of acquiring the common good of the household, economic theories and models do not condemn it! Galbraith (1973) concluded very clearly that

although neo-classical economics resolves the problem of non-expression of individual personality and preferences, it does so by ignoring the subordination of individuals (mainly women) and inner relationships within the households.

Becker's assumption that the person controlling household income and resources is irrelevant (due to common preferences) is challenged by the fact that where women control income, the probabilities of child survival may rise by nearly twenty times (Study in Brazil by Thomas, 1990). Different household members have different preferences and obligations and therefore allocate the resources accordingly. For example, as part of a development project in Zambia, farmers were asked to intercrop beans (female crop) with maize (male crop) using machinery and oxen to prepare the land. Although the intention was to help women by saving their labor time and increasing their production, the female farmers contravened this practice because an increase in production made beans a cash crop and hence the income would fall completely into the hands of men (Feldstein and Poats, 1990, cited in Abbas, 1997). It is very interesting how the Zambian women preferred less production to "efficient" farming because the prevailing social circumstances would allow them to be in control only if their success is not significant enough to capture the male's attention! This study once more, contradicts the theory of similarity of interest among the genders. *Therefore, as opposed to the assumption of complete social harmony through which maximization of joint utility is attained within the household, this conflict of interest can even lead to inefficiencies in the household allocation of labor, with a corresponding failure to maximize agricultural intensification (Abbas, 1997).*

Folbre (1986) argued that joint utility functions disregard any form of inequality within households but in practice, household members do not necessarily enjoy equal access to resources and the benefits of production. Excess female infant and child mortality in South Asia, and higher enrolment and schooling completion rates of boys than girls in many African and Asian countries can be partly explained by the fact that in many societies, resources are preferentially directed to male members of the household (Hunte and Sulatan, 1987, cited in Goudge and Govender, 2000). Often this is motivated by greater market opportunities for men because of enhanced levels

of human capital, girls being more costly to raise and societal preferences. Therefore, evidence from Asia suggesting sex-bias in the distribution of food, health care and education within the household seriously questions the applicability of such notions of equitable distribution (Sen, 1987, cited in Johnson, 1988). Contrary to Becker's (1979) assumption, Rogers (1990) states that incomes are not pooled or spent equally to meet the household's needs, rather than they are spent in accordance with the earner's weighted preferences. Furthermore, issues of intra-household inequalities, conflict or difference in household decision-making are completely ignored and bypassed when focus on distribution is across and not within households, even though the 'within-household' distribution is central to individual welfare (Chiappori, 1992).

Work carried out by Whitehead (1981) on poverty in North East Ghana found considerable differentiation in the poverty status of different women within a single household dependent on factors such as age and health status. The study found that, although some women were able to build up independent incomes and protect their assets, their chances were highly contingent on obtaining resources from their husbands. Essentially, the study revealed that it was possible for women to be poor in relatively rich households (cited in Baden 1992). Therefore, under biased availabilities of resources, including food and access to health care, even if the household was above the income poverty line, when disaggregated, it would be classified as below the poverty line in terms of consumption (Kabeer, 1994). The household unitary model, due to its dependence on aggregate joint utility, fails to capture such reality.

Although Becker (1979) recognizes the conflicts that exist between household members, the methodology and tools he uses to study material behavior are incapable of including this aspect. Nevertheless, according to him, altruism solves the various problems of distribution within a household. Despite the repeated emphasis on the notion of altruistic behavior within the Beckerian Household, many doubt his model is an accurate one because it fails to tally with women's individual and collective experience. They point to studies that demonstrate how women throughout the world are short-changed within the family on a systematic basis; in times of famine, women suffer

more from malnutrition than men and, on average women receive less of the household income without the compensation of greater leisure time. Feminist experts view these harsh realities as proof that perfect altruism within the family is anything but universal (Wooley, 1996), because women's altruism is always taken for granted and listed among their obligations to the family.

In Zimbabwe the fact that a man pays bride price gives him a claim to his wife's labor as if she were his own 'bought' property (Kanji, 1995). Women in Nigeria and Ghana give more importance to their husbands' crops than to their own fields, therefore decrementing their own productivity by leaving their fields unattended even at optimum times (Vankoppet, 1990, cited in Abbas, 1995). In all these case studies it is revealed that women are being altruistic and have no confusion about their utility functions. However, *are these truly their own individual preferences or is it because they have absolutely no other alternatives in their male-dominated societies?* While being trapped within the imposed framework of social duties, the women may never even know whether the decisions are serving their own interest or not. Such circumstances contradict Becker's hypothesis that decisions are made jointly to maximize collective interest.

The developmental consequences of his theory are that although Becker (1979) has always recognized women's subordination in patriarchal households within his argument of comparative advantage<sup>3</sup>, it is shocking how he provides no ideas or suggestions for improving the situation. Instead he relies on the power of patriarch as the main decision-maker to distribute labor time of the household members. The lack of attention to detail and inequalities within the household led to concerns regarding these assumptions, casting doubt on the validity of the unitary model of the household. Rogers (1990) states that worthwhile development projects that are based on such models can be rendered ineffective because their benefits can be lost by targeting the wrong person.

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3. The household division of labor is explained in terms of comparative advantage. Given market differentials between men and women, a household division of labor in which women work within the household while men work for a wage outside, it is considered to be both functional and efficient for household welfare maximization (Evans, 1989).

There are many examples of projects which failed, or even had negative impact, due to an ignorance of what goes on inside the household and a presumption that benefits will be evenly distributed. Ellis (1988) states that agricultural development policy is largely biased towards men, with male household members always being approached to discuss new crops, new seeds and new technologies. For example in Gambia, rice production was traditionally under female control. However, with the introduction of new technologies, women became excluded from rice production, leaving men to take advantage of the higher returns to labor on the crop. So, as a result of considering that targeting men will benefit the entire household when introducing this technology, women lost control of the crop, the land it was grown on, the income it produced and also their labor rights, as they became obliged to work under the control of men (Abbas, 1997). UNDP (1995) claims that the focus on the male as the head of the household, prime decision-maker and therefore the target of agricultural policies is at fault for leaving females to be the last to benefit from projects or even be negatively affected.

It is obvious that the non-transparent or 'Black Box' outlook of the unitary model ignores power position, asymmetric gender relations, inequalities and dependences within a household, all of which are fundamental aspects which contribute to the dynamics of a household (Kabeer, 1991). The justification for the tendency of many economists to use such models and create their own '*unreal world*' is that the application of the unified model leads to simplicity and offers the policy makers flexibility through ignorance of issues within the households which they consider insignificant (Kurien, 1996) and which I have shown to be quite the opposite here. Apart from being simple, the unitary model is more practical in the sense that collective decisions are indeed made although *how they are made and what internal distribution rules exist* is not the concern of the analyst.

## V. COLLECTIVE MODELS OF HOUSEHOLDS

If the house is indeed viewed as a Black Box, it will be necessary for analysts to avoid the generalizations associated with the model and consequently drift towards more accurate representations to cover the 'highly diverse' real world. The neo-classical refinement would

consider the household welfare function but with the modification that different household members may (and most probably) will have different preferences. The solution would be to use “collective models” as opposed to unitary ones so that households are not looked upon as a single decision making unit and the black box can be ‘opened’ to study the actual proceedings of a so-called ‘united’ household.

Collective models (also called pluralistic decision-making models within families) encompass factors that characterize individuals living collectively in a household (Bergstrom, 1997). In order to ensure the end result is realistic, the collective models of household behavior try to capture the different preferences, conflicts and inequalities evolving among the members of a household. This is a contrast to the ‘black box’ scenario prevailing in the Beckerian model.

Although both unitary and collective models aim towards the same goal- *collective choice*, the means by which it is achieved is more precise in the latter school of models, which also strive to illustrate the influence of social parameters, institutional variables and other external factors. Therefore, the collective models explicitly consider the household as a collective entity, but with more than one decision-making unit. These models concentrate on the question- *how can individual, dissimilar preferences lead to a collective choice?* (Alderman 1995:5) Nevertheless these models are still explicitly neo-classical ones and have descended from Becker’s theory of household behavior. They make use of the unitary models’ structure and just change some decision-making rules from those apparent in the joint decision-making models (see figure-1 for a comparative illustration).

**Figure 1: Households’ Situations in Terms of Neo-Classical Economic Models**

| Sample Household  |  |
|---|--|
| <i>No of Members: Two key players (and x subordinates e.g. children)</i>  | <i>Products in Market: Bread and Wine</i>  |
| <i>Relationship between key players: Husband and Wife</i>   | <i>Monthly Income: 100 pounds</i>  |
| <i>Recent Government Policy: To direct child allowance to the wife instead of the husband.</i>  |  |
| <p><b>UNITARY (BECKERIAN) MODEL:</b></p> <p>Husband decides that 70 pounds are to be spent on wine and the rest on bread.</p> <p>Wife: has no say and becomes altruistic although she prefers bread. This expenditure distribution applies for the child allowance as well.</p> | <p><b>BARGAINING MODEL:</b></p> <p>The wife is not happy with only 40 percent of income and wants 50% now, or she will not heat the bread or serve the wine. The husband bargains too and they decide on a 55:45 sharing rule now. If they get child allowance, they will bargain with each other on what to spend it for.</p> |

Collective Models can be classified into two categories: cooperative and non-cooperative. The cooperative models can again be of two main types- efficient cooperative and bargaining models.

**Bargaining Models**

Bargaining models<sup>4</sup> recognize the probable

conflict among the household members due to difference in preferences and aims but assume that

bargaining model. The other forms of collective models are not addressed as they are beyond the scope of the essay- they have been excluded due to lack of space and in order to expand the developmental implications of the models chosen. For more information on models not covered in this paper see Chiapori (1988), Chiapori (1992), Fortin and Lacroix (1997), Landberg and Pollak (1994).

4. In this essay, the comparison of collective models and unitary ones will be carried out on the basis of the

the individual members had formed the household because social situations ensure that it is beneficial for each party to be a part of a family rather than being unattached (McElroy, 1990). The models also assume there are two actors within a household, thus contradicting the unitary model. Taking into account the difference in interest of the two members, bargaining models suggest the resultant bargaining which is stylized in terms of game theory<sup>5</sup>. Nash was the first to formulate the bargaining problem and provide a corresponding bargaining solution which can be applied to relationships like marriages. The members are undoubtedly willing to bargain because marriage is depicted here as a static bilateral monopoly with potential gains for both parties to remain united rather than to divorce (McElroy, 1990).

In simple terms, two people ‘cooperate’ in order to improve each of their position as compared to a situation in which they do not cooperate at all (Sen, 1985). In the absence of a dictator the differences in individual utility functions in a marriage are resolved through the bargaining process as if it were a cooperative game of two players. There are many determinants to the bargaining power including the manner in which both internal and external resources are controlled by each person. When individuals fail to cooperate, this situation is called the ‘fall back position’ which can indicate the termination of marriage or other relationships and in turn, lead to the ‘threat point’ of the model (McElroy, 1990).

The fundamental difference between bargaining models and unitary models is that the former give a ‘transparent’ view of decision-making within a household. However, it is also a fact that couples do not threaten each other with divorce every time they have a disagreement (Phipps and Burton, 1995) and although women have always been responsible for a significant proportion of activity in household production this does not confirm equal decision making and bargaining power for them. According to Dreze and Sen (1995),

*women’s relative capability deprivation*<sup>6</sup> can in reality, account for their relative weak bargaining power by inhibiting their freedom to exploit opportunities, for example, to enhance their human capital. The capability deprivation holds back their ability to be responsible for their own lives and able to perform their own decision-making (e.g. their labor and leisure allocation (Dreze and Sen, 1995)).

Nevertheless, bilateral monopoly situation can be conceptualized in all households (except when there are lots of members and generations) and the split of benefits can undoubtedly be solved to some extent by bargaining. As in the case of Jones’s (1983) study in North Cameroon, men and women have individual fields which they cultivate separately. Apart from that, the rice fields are mostly cultivated jointly by both spouses although the income from that is given to husbands for control and distribution. The first impression derived from this arrangement is that women are being exploited since they have limited or no bargaining power. However, as Jones (1983) discovers, women were bargaining over the level of wage that their husbands rewarded them. Women mainly used their ability to withdraw labor, either to their own sorghum field or to the labor market, as a bargaining tool. However, economic and non-economic factors limit the extent to which bargaining can be performed. After all, it is not to women’s advantage to work on sorghum because the returns are lower and working too much as a wage labor is likely to produce a beating. This shows how non-economic factors in the terms of intra-household relations play a vital role in the economic position of women, making them unable to gain control of resources (Johnson, 1988). Such circumstances, where bargaining exists but never provides long term advantage to the weaker member, have been ignored by the model. Furthermore, women are seen to be ‘allowed to bargain’ only on limited areas of decision making. For example, they may have complete power to choose and bargain what will be served as the next meal but will the power have the same weight when deciding to give daughters’ education? In such a combination of cooperation and conflict, it is not only the economic factors but EEPs (extra environmental

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5. Game Theory is the mathematics of strategy. The primary theory is the Minimax Theorem which basically says that if all the players of a game play the best, using most rational strategy, the resulting outcome of the game is predictable (Turocy and Stengel, 2001). In case of bargaining models it is assumed that the result of such a game will be increased utility for both members.

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6. Refers to the alternative combinations of functioning from which a person can chose (Dreze and Sen, 1995: 10)

parameters) like social mobility of women which influence the bargaining outcome (Haddad and Kanbur, 1990).

The development implications of this model is that in order to empower women with bargaining power, projects need to be launched to create employment opportunities for them. This can help them acquire skills and a better fall back position. One such example of a project is the *micro credit program* for women. It is assumed that access to credit can help them become self employed in activities of their choice. However, critics put forward the inability of micro credit programs in improving the bargaining power of women because although it is them who take loans, the men take decisions (Joshi, 1998). Where cash is culturally a male resource, it does not matter who brings it into the household-control rests in male hands (Johnson and Rogaly, 1997). Failure to hand over the loans to the husbands can result in domestic violence and even divorce. In such situations, although women contribute to the household income by obtaining the loan, it does not necessarily improve their bargaining power as the theory suggests. Therefore, there is no doubt that the customary determinants go hand in hand with the economic factors to determine the bargaining power of women.

Bargaining models have also been criticized by Sen (1987) for assuming that the individual is in full command/knowledge of his/her independent utility function. Sen implies that individuals have 'perceived' notions of interests and about their position in the bargaining process. He suggests that "*conventions often act as barriers to seeking a more equitable deal and sometimes mitigate against recognizing the spectacular lack of equity in the ruling arrangements*" (cited in Johnson, 1988:3). In Burkina Faso, women have customarily one out of five days to attend their own fields but even that day maybe devoted to the husband's field if he requires extra labor (Vankoppet, 1990, cited in Abbas, 1995). This means that cultural inhibitions in highly patriarchal societies confine women mainly in fulfilling obligations to their husbands and women hardly consider bargaining with the belief that the arrangement is for their own benefit (Ellis, 1988).

Nevertheless, bargaining models of household behavior cater for those social aspects which are not analyzed through the unitary model. These

include the nature of intra-family decision-making, elaboration of individual preferences and the existent multiple utility functions within one household. It is recognized that all human beings are unique and their individuality can be analyzed to study the economics that prevail inside a household. Bargaining models have in particular, addressed the gender perspective in household operation which has linked the representation better to the real world.

## VI. CONCLUDING REMARKS

The models outlined in this essay were basically put together to help economists analyze household behavior and subsequently propose government policies for poverty reduction. From the arguments posed in the above text, it is clear that government policies should not be based solely on the unitary model because of its failure to analyze intra household relationships and resource distribution. It assumes that all decisions will have equal impact on both men and women, in spite of the fact that households represent an arena of unequal material exchanges (Whitehead, 1981). On the other hand, bargaining models have been criticized for containing highly economist notions of bargaining and cooperation (i.e. through the game theory) ignoring non economic factors such as perceived notions of interests and cultural conventions.

As evident in this essay, empirical findings of the contested history of neo-classical household economic models do not provide sufficient evidence in favor of one particular model. Each household model describes particular utility functions which are applicable in certain contexts and are geared towards specific purposes. In isolation, none of them can give us the complete representation of reality due to incorrect and unrealistic assumptions.

Information overlooked by the household models regarding complex dynamics within the unit have huge bearing on poverty reduction strategies and ignoring them can result in reduced efficiency in attacking poverty, targeting of the least needy and failure to bring benefits to the whole household and society at large. A household is never a complete entity unless the cultural context is taken into account but models fail to integrate these aspects in the description of households. However, failures of development projects based on the models cannot suggest the ruling out of the

advantages of using households as units of study-it will remain the best measure for development if the intricate features of intra household interactions are studied deeply and included in its definition. In fact, if the relevant assumptions of different household models are picked and combined keeping the limitations of the models in mind, one can gain a better understanding of how households function and interact. After all, the proper simulation of a household through a holistic approach can lead to the working out of a 'full video' of the intra household activities and this will in turn, help in increasing social welfare by enabling the most suitable targeted policy to be applied to relevant samples.

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