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THE IMPACT OF THE VALUE OF WOMEN'S TIME ON FOOD AND NUTRITION IN DEVELOPING COUNTRIES

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Boserup's (1986) classic study examined the economic role of women in different cultures and stages of development. This paper focuses on the implications of the economic status of women, particularly as reflected in their value of time, for behavior within the household. Research done within the framework of rigorously defined economic models of the household provides important insights into the crucial role of women in the household economy. The value of time of household members plays a key role in the empirical analyses carried out in the context of these household economic models. Three recent studies were conducted by the author with colleagues at the International Food Policy Research Institute. Our work found some very interesting empirical results, especially concerning the impact of the value of women's time on food consumption patterns, intrahousehold food allocations, and children's nutritional status.

The next section in this chapter provides a brief overview of the economic approaches to modeling the household. The following sections discuss the three empirical studies. Each is discussed in terms of related work on the topic and the broader implications of the research results. The first study examines the impact of the value of women's time on urban food consumption patterns in Sri Lanka (Senauer, Sahn and Alderman, 1986). This analysis focuses on the household consumption of rice and commercially baked bread. The former requires more time-intensive preparation in the household than the latter. The second study analyzes the intrahousehold allocation of food in the rural Philippines

(Senauer, Garcia and Jacinto, 1988). This analysis utilizes individual food consumption data and examines the factors influencing the distribution of calories among household members in relation to their caloric requirements. The third study looks at the factors influencing the nutritional status of preschool children, also in the rural Philippines (Senauer and Garcia, 1988). This analysis focuses on the children's height for age and weight for height as measures of their nutritional status.

In each of these studies, the wife's and/or mother's value of time is found to have a major impact. The opportunity cost of time is a significant factor influencing the role of women and behavior within the household. The value of time is measured by an individual's estimated wage rate, which is the standard approach used by economists. The final section of this chapter draws together some overall conclusions from these studies and discusses the policy implications of the empirical results. The central policy-related conclusion is that behavior within the household can be modified by improving women's economic opportunities outside the household.

ECONOMIC MODELS OF THE HOUSEHOLD

Considerable controversy currently exists between two schools of thought concerning the conceptual modeling of the household by economists. One school assumes the existence of a single household utility function, which reflects the household's tastes and preferences (Pitt and Rosenzweig, 1985, 1986; Strauss, 1986). Becker (1981) analyzes the assumptions

necessary for this approach, which would allow a multiperson household to be treated as a single utility maximizer. Two obvious situations are if all household members had the exact same preferences or if one individual imposed his or her preferences on the other household members. Becker coined the term "altruistic dictator" in referring to the situation where the household head, typically the patriarch, is the ultimate authority in the household. He is supposedly a benign master, who considers the welfare of other family members in his decisions.

The other school of thought challenges this view of the household. It assumes preferences vary among family members and sees a bargaining process as reconciling those differences (Manser and Brown, 1980; McElroy and Horney, 1981; Folbre, 1984; Jones, 1983). The bargaining model approach draws on the work on cooperative game theory by Nash (1953). An individual's bargaining power in reconciling differences in preferences with other household members is determined by how well that person would do if a bargained solution is not achieved. If household cooperation breaks down completely, income is no longer pooled and a common food supply is no longer shared. In terms of the Nash bargaining model, how well an individual would do in the absence of a bargained solution would be largely determined by the person's wage rate or potential wage rate if he or she entered the labor force. Hence, the economic status of women outside the home affects their influence on household decisions.

Although many do not agree with all its premises, the theoretical model proposed by Gary Becker (1965) did much to awaken the interest of economists in the analysis of the household. In his model, Becker specifically visualized a single set of household preferences. His

conceptual framework, which has been extended and refined by other economists, has been referred to as the "New Household Economics" (Michael and Becker, 1973; Pollack and Wachter, 1975; Gronau, 1974, 1977; Evenson, 1976; Nerlove, 1974). The major contributions of Becker's model are two fold. First, that time is limited and hence has a value as does any scarce factor. Second, that households engage in production, not just consumption activity. In the Becker model the actual consumables which satisfy human wants and needs are produced in the household in a production process, which combines goods purchased in the market place with household members' time and household capital. The final consumables can conceivably include anything from meals ready for consumption to good health or the quantity and quality of children. The majority of household production activities are typically carried out by women (Boserup, 1986:163).

In addition to the traditional monetary budget constraint imposed by economists, which states that a household's expenditures cannot exceed its income, Becker imposed a time constraint. The time constraint states that allocations of household members' time to various activities can not exceed their total available time. The most basic allocations of time typically considered are: work in the labor force, household production activity, and leisure. Money income is generated by employment in the labor force or from non-labor income, such as rent. The budget constraint and time constraint can be combined into a single "full income" constraint. The household's "full income" equals the sum of any non-labor income and the total time allotment of each household member valued at his or her opportunity cost of time. This "full income" is allocated to

leisure, household production activities, and via the budget constraint to expenditures on goods and services in the marketplace.

Economists utilize demand functions to empirically analyze how much of a particular good a household will consume. With the Becker model, a household's demand for a particular good is dependent on the market price of itself and other goods, the value of time of household members, and the household's "full income" (Pollack and Wachter, 1975:267; Deaton and Muellbauer, 1980:245-250; Senauer, Sahn and Alderman, 1986:921).

In the current economic modeling of the household, irregardless of the approach, the value of individuals' time plays a key role. There are conceptual, technical, and pragmatic questions concerning the calculation of a value of time, particularly for women (Smith, 1980). A major conceptual issue relates to whether time spent by an individual in different activities should be valued at the same rate. Because of constraints, productivity might vary by activity plus some work may be more enjoyable, or at least, less onerous than others. Nevertheless, an individual's wage rate is the best empirically derivable measurement of that person's value of time. If not employed in the formal labor force, the individual's estimated or potential wage, if employed, is utilized.

Derivation of estimated wage rates is a technically complex undertaking, especially for women since only a small proportion earn a wage or salary in most developing countries (Heckman, 1974, 1979; Smith, 1980; Senauer, Sahn, and Alderman, 1986). Boserup (1986:106-118) discusses both why so few women are employed in the formal labor force in developing countries and why those employed are typically restricted to low wage jobs. A basic practical problem also exists. The calculation of wage

rates as a measure of the value of time requires the necessary data on employment and earnings by individual, which are rarely available.

The distribution of food and other resources among household members can be modeled either in the context of a bargaining model or a single household utility function model, in which an individual's labor output is affected by his or her food consumption. In either model, the value of an individual's time, as measured by his or her estimated wage rate, is a crucial factor. In the bargaining model, individuals with a higher value of time might be favored in the intrahousehold distribution of food because of their increased bargaining power. In the latter model, reallocating food to household members with a higher value of time could increase their ability to work and hence augment the total goods and services available to the household. Within the approach of either school, it can be assumed that household members care about each other's welfare and are not simply motivated by maximizing their own personal consumption.

Altruism undoubtedly influences the distribution of household resources to children, since parents typically care deeply about the welfare of their children. Additionally, though, expectations of future intergenerational transfers may affect the allocation of resources to children. In developing countries, parents frequently look to their children, especially their sons, for old age security (Folbre, 1984:308). Current investment in a child's human capital, which would include food consumption, will influence that child's future economic earning potential. Finally, children can start making a significant economic contribution to their families at remarkably early ages in poor households in

developing countries, which could affect within-household allocations (Pernia, 1979:30; Evenson, Popkin, and Quezon, 1980:335-343).

THE VALUE OF WOMEN'S TIME AND FOOD CONSUMPTION PATTERNS

One of the major changes in the food consumption patterns in many developing countries is a shift away from the traditional grains and root crops and the increased consumption of wheat products, particularly in the form of commercially supplied bread. Wheat consumption increased at an average annual rate of 2.3% per capita between 1961-65 and 1975-77 in developing countries, whereas rice consumption increased by only 0.4% annually and coarse grain consumption, other than maize, declined by 1.3% per year (CIMMYT). Many factors have contributed to this shift, including rising incomes, relative price changes, urbanization, food aid and the westernization of tastes.

However, one potential factor which has been overlooked are increases in the value of women's time. As Boserup (1986:164) noted, the preparation of many of the traditional foods is very time consuming for women, who are the primary food preparers for their households. Many wheat products, particularly commercially baked bread, offer significant time savings in comparison to many traditional foods.

The Becker model of the household provides a conceptual framework within which to analyze the potential impact of the value of women's time on food consumption patterns. Previous studies have utilized the Becker model and the rising value of women's time to explain the increasing consumption of food-away-from-home in the United States (Prochaska and Schrimper, 1973; Fletcher, 1981; Kinsey, 1983). The possible effect of

the opportunity cost of women's time on food consumption in developing countries had not previously been empirically analyzed, though. Our research tested the specific hypothesis that the bread consumption of urban Sri Lankan households increases and their rice consumption decreases as the estimated wage rate of the primary woman in the household increases, ceteris paribus (Senauer, Sahn, and Alderman, 1986). The primary woman was defined as the female household head, either with or without a spouse present.

The data used in the empirical analysis were from the 1980-1981 Sri Lankan Labor Force and Socioeconomic Survey, conducted by the Sri Lankan Department of Census and Statistics. This nationally representative survey collected data on labor force participation and earnings for individuals, as well as on household food consumption. Only the subsample representing urban households was utilized. Rice is the major staple in Sri Lanka. However, bread consumption has become increasingly important in the urban areas. Average annual per capita consumption was 203 pounds of rice and 77 pounds of bread in 1980/81 in urban areas.

Wages were estimated for women 15-65 years of age in the urban sector. Below age 15 and above age 65, labor force participation declines sharply. The Sri Lankan survey contained the necessary data on earnings and employment to calculate hourly wage rates for those women who were employed in the labor force. However, only 15% of the women were employed in formal labor force jobs. For this reason, a woman's value of time was predicted from a wage determination equation that was estimated for those who were formally employed. The key explanatory variables in the wage regression for employed women were the woman's age, education, and ethnic

group. The results from that regression were then used to estimate a value of time for each primary woman based on her age, education, and ethnic group. The wage rate of women increased with their age and years of schooling. Furthermore, the relationship between the wage rate and age was non-linear. In terms of ethnic groups, European women received a higher wage than Sinhalese or Tamil women.

Because a woman's employment is partially self-determined, the subsample of women in the labor force does not represent a random subsample. The Heckman procedure was used to correct for any possible sample selection bias introduced by the non-random nature of the subsample of employed women (Heckman, 1974, 1979; Senauer, Sahn, and Alderman, 1986, pp. 923-924; Smith, 1980). Heckman's approach first requires the estimation of an equation to explain the probability of whether a woman will be employed in the formal labor force.

The factors used to explain a woman's employment status were her age, education, ethnic group, number of children less than age six, the relation of the woman in the household, the household's non-labor income and the wage rate of her husband if one was present. Middle-aged women and more educated women were more likely to be formally employed. Tamils and women with more young children were less likely. The wife or mother of a male household head were less likely to be employed, whereas daughters were more likely. The higher the husband's wage, the greater the probability the woman was in the formal labor force.

The estimated wage rate of the female household head was then introduced as a variable in the household demand equations, which sought to explain the amount of rice and bread a household consumed. In addition

to the woman's value of time, the other explanatory factors were the household's income, the number of persons in the household and their age and gender, the ethnic group, and the prices of rice, bread, and flour. The demand equations were estimated separately with both "full income", in accordance with the Becker model, and with "observed money income".

In terms of the central hypothesis, the value of time of the primary woman had the expected positive impact on bread consumption and negative effect on rice consumption. With the other explanatory factors held constant, households in which the female household head had a higher estimated wage rate consumed more bread and less rice. On average, a 10% rise in the woman's estimated wage led to a 1.3% increase in the household's bread consumption and a .7% decrease in rice consumption (Senauer, Sahn, and Alderman, 1986:926).

More generally, as the employment opportunities for women expand and their education levels rise, the value of women's time is likely to play an increasingly important role in the determination of worldwide food consumption patterns. It will be economically rational for households to shift away from traditional foods which require time-intensive preparation to less time-intensive foods. In some situations, this shift could have unfortunate nutritional consequences. The more processed, time-saving foods are likely to be more expensive than the traditional foods. Unless food expenditures increase sufficiently, the nutritional quality of the diet may suffer. In the specific Sri Lankan case analyzed here, the relative nutrient content and price of bread and rice, at least in 1980/81, were such that the observed shift would not be a major nutritional concern.

THE INTRAHOUSEHOLD ALLOCATION OF FOOD

Increasing attention is being given to the intrahousehold allocation of food in developing countries (Haaga and Mason, 1987; Lipton, 1983; Piwoz and Viteri, 1984; Rogers, 1983; USDA, 1983). Many previous studies have found considerable inequality in the distribution of food among household members in relation to their nutritional needs. When the food available to a household is inadequate to meet nutritional needs, an inappropriate intrahousehold allocation can worsen the situation for certain household members. Even when household food availability is adequate, at least to fulfill caloric requirements, some household members may still be malnourished because of the pattern of food distribution within the household. At least in some cultures, the intrahousehold allocation of food exacerbates the incidence of malnutrition among women and children (Haaga and Mason, 1987; Piwoz and Viteri, 1984; USDA, 1983).

Much of the previous research on this topic has been conducted by nutritionists and anthropologists and has focused on the effect of age and gender on intrahousehold allocation (Piwoz and Viteri, 1984; USDA, 1983). In South Asia, the pattern of intrahousehold food distribution typically discriminates against females, both women and girls (Carloni, 1981; USDA, 1983:55-61). An age-related distribution pattern has been found in other studies, which favors the household adults (Hassan and Ahmad, 1984; Abdullah and Wheeler, 1985; Chaudury, 1983; USDA, 1983:29-41). Both an age and gender bias have been found in some cases, with the male household head the most favored individual and young female children receiving the

lowest proportion of their nutritional needs (Evenson, Popkin, and Quizon, 1980:307).

In the past, food consumption studies by economists "have stopped at the door of the household" and not examined the intrahousehold allocation of food (Piwoz and Viteri, 1984:1). Much remains to be learned about the factors which influence the pattern of food distribution within the household. Haaga and Mason (1987) conclude their excellent review of previous work in this area with a call for further research on the topic. Our study examined the determinants of the relative allocation of food among household members using individual food consumption data from three rural provinces in the Philippines (Senauer, Garcia, and Jacinto, 1988). The household, in our study, was defined as a group of individuals who reside together, pool all or most of their incomes, and basically share the same food supply. In the rural Philippines, households are typically nuclear families composed of a husband and wife and their children.

The data used in our analysis were from household surveys conducted in three rural provinces of the Philippines in 1983-84 by the National Nutrition Council and the Ministry of Agriculture of the Philippines, with the assistance of the International Food Policy Research Institute. The three provinces surveyed were Abra, an upland subsistence corn and tobacco area on Luzon; Antique, a coastal rice farming and fishing area in the middle of the archipelago; and South Cotabato, a river basin, corn producing region on Mindanao. The data were collected in four separate survey rounds and the same households (approximately 800) were surveyed in each round. The data are not strictly cross-sectional, but longitudinal.

For a subsample of households, individual 24-hour food consumption data were collected for all household members utilizing a food-weighing method. Information on food eaten outside the household was collected by recall. Philippine food composition tables were used to calculate the calorie and protein content of each individual's diet. Calorie and protein adequacy ratios were then obtained by dividing the individual's calorie or protein intake by his or her recommended daily allowance (RDA) for that nutrient and multiplying by 100 to put them in percentage terms. The RDA's specified for Filipinos were used (Claudio et al, 1982:283). There is some controversy concerning the use of the RDA's as a measure of individuals' nutrient needs (Lipton, 1983). The RDA's apply to age and gender categories. They do not reflect possible differences in metabolic rates or physical activity levels among individuals in an age-gender group. However, the RDA's are typically the only practical measure of nutrient needs available.

The average calorie adequacy ratio for the individuals in our study was only 70%. In comparison, the national average for the Philippines was 89%, which indicates the seriousness of malnutrition in the survey areas. The adults (age 18-65) in our sample received 78% of their RDA's for calories. The husbands received 81% and wives 78%. However, children (age 1-17) received only 64% of their calorie RDA's. The overall protein adequacy ratio was 91%. The average protein adequacy ratio for adults was 89%, for husbands 101%, for wives 82%, and for children 92%. The allocation of food appears to favor adults and especially the male household heads (husbands). The calorie adequacy ratio was substantially higher for adults than children and the protein adequacy ratio was

significantly higher for husbands than for wives or children. The protein adequacy ratio was higher than the calorie adequacy ratio for each group, which indicates that overall, energy intake is a more serious constraint in the diet than protein is. For this reason, our empirical analysis focused on calories.

The quantitative measurement of intrahousehold food distribution used in our analysis was obtained by dividing an individual's calorie adequacy ratio by the calorie adequacy ratio for the entire household. This variable is the same as that suggested by Haaga and Mason (1987) and reflects the allocation of the available household calories in relation to each individual's calorie recommendations. A value greater (less) than one indicates that the individual's calorie adequacy ratio is above (below) the average for the entire household. In other words, individuals who are discriminated against in the distribution would have a value below one and those who are favored a value above one. A value of one for every member of a household would suggest an equitable allocation of the available food in relation to the individuals' RDA's. In our Philippine study, the mean value of this variable for husbands was 1.14, for wives 1.10, and for children .90 (Senauer, Garcia, and Jacinto, 1988:1974).

The empirical equations estimated in our analysis could be generated from either a bargaining model or household utility function model in which an individual's labor output depended on his or her food consumption. The purpose of the study was not to determine which model was more appropriate. The husband's and wife's value of time were hypothesized to be key explanatory factors. Wage rates for husbands and wives were estimated using the Heckman technique, as in the Sri Lankan study. In

this case, only 14% of the wives and 55% of the husbands were employed in the formal labor force.

The empirical results showed that as the wife's value of time (estimated wage rate) rose, both she and her children did relatively better in terms of the intrahousehold allocation of calories. Correspondingly, as the wife's estimated wage increased the husband's relative calorie share declined. On the other hand, as the husband's wage rose both he and his wife did relatively better, whereas the relative intrahousehold allocation of calories to the children declined. The wage rates reflected the value of the husband's and wife's time and not just employment status, since a wage rate was estimated for every husband and wife regardless of whether they were employed, as in the Sri Lankan study. Considerable similarities exist between this empirical analysis and that done by Fabella (1982) on the relative nutrient shares of household members with a different Philippine data set from Laguna province. Fabella found fewer strong explanatory relationships, however, particularly concerning the impact of wage rates, perhaps because of certain methodological and data limitations.

Other key findings from our study were that boys and children born earlier in the birth order received a higher allocation of calories relative to their RDA's than did girls and children born later. A bias towards boys was also found in several previous studies (Carloni, 1981; Evenson, Popkin, and Quizon, 1980; USDA, 1983). The relative intrahousehold allocation of calories to women declined during pregnancy. The energy RDA for Filipino women increases by 430 calories per day during the second and third trimester of pregnancy, whereas their consumption

increased by an average of only 130 calories per day. Previous studies also have noted a decline in the calorie adequacy ratio of women during pregnancy (Chaudary, 1983:22; USDA, 1983:69-79). This pattern may result from a lack of understanding concerning the additional nutrient needs of women during pregnancy.

THE NUTRITIONAL STATUS OF PRESCHOOL CHILDREN

Preschool children, infants, and pregnant and lactating women are usually found to be the groups with the most serious malnutrition problems in developing countries. Malnutrition has particularly severe consequences for the young. Both their rate of morbidity and mortality are affected, as well as their pace of physical and mental development. Preschool children account for a disproportionate number of the deaths in developing countries and malnutrition is associated either directly or indirectly with most of those deaths. In addition, children have only a limited capacity for recovering the growth lost due to earlier nutritional deprivation (Austin, 1980; Martorell, 1982).

This study analyzed the determinants of the nutritional status of preschool children (13-83 months of age). A child's health or nutritional status can be viewed as the outcome of a household production process (Strauss, 1987; Senauer and Garcia, 1988). If the child's nutritional status is the output, the major inputs into this production process are the child's food consumption, the observable characteristics of the child, such as age and gender, the child's genetic endowment, the time inputs of other family members to child care and other activities which affect the

child's well-being, and goods and services other than food which affect the child's health, such as safe drinking water, adequate sanitary facilities, basic immunizations, and available medical care. A key point which this approach makes clear is that a child's nutritional status depends only in part on his or her food consumption. In many cases, food (nutrient) intake may not be the most crucial factor affecting the child's nutritional status.

The anthropometric measurements of nutritional status analyzed were the child's height for age and weight for height. The first indicates the child's long-run or chronic nutritional status, and is referred to as stunting. The second indicates the child's short-run nutritional status, and is referred to as wasting.

The same survey data for the Philippines, which were used for the intrahousehold food allocation analysis, were utilized in this study. The heights and weights of all children less than seven years old in the survey households were collected. The analysis revealed a population in which malnutrition among preschool children was a very serious problem, especially in terms of stunting. Some 24% of the preschoolers suffered severe stunting, 27% moderate stunting, 23% mild and 26% had normal height for age. The figures for wasting were 10% severe, 9% moderate, 20% mild, and 60% were normal in terms of weight for height (Senauer and Garcia, 1988).

Estimated wage rates of the mother and father, as a measure of their value of time, were expected to be important determinants of the nutritional status of their preschool children. Wage rates were estimated in the same way as in the two previous studies. Three avenues exist through

which the wage rates of the parents could affect the nutritional status of their children. The first is the impact of the value of time on its allocation among activities. In particular, as the mother's estimated wage rises, she might be expected to devote less time to child care and cooking and more time to labor force activity. However, the possible decrease in the quantity of the mother's time devoted to child care and cooking might be at least partially offset by increases in the quality of that time and the increased participation of other family members in those activities. Second, a rise in wage rates increases the "full income", and possibly the money income, available to the household. Some of the increased household income could be allocated to food and other goods and services, which could raise the nutritional status of preschoolers. Third, changes in the mother's or father's value of time might affect the intrahousehold distribution of food and other resources, as discussed in the previous section.

A major finding from our analysis of the Philippine data is that the estimated wage rates of the parents do have a significant impact on the nutritional status of their preschool children (Senauer and Garcia, 1988). The father's wage had a negative impact on his children's long-run nutritional status. Stunting was more prevalent among children whose fathers had a higher estimated wage, most likely because of an adverse effect on the intrahousehold allocation of food and other goods and services. In general, increases in the mother's value of time tended to improve the nutritional status of her preschool children. This result implies that if mothers with a higher value of time reduced their time input to child care and cooking, that effect was offset by the enhanced

quality of the time input, the increase in the household's "full" and perhaps money income, and the improved intrahousehold allocation of resources. As indicated in the previous section, the mother and children received a higher relative share of the household's available food, when the mother's estimated wage increased.

Additionally, both the mother's and father's education level had a positive impact on their children's long-run nutritional status. The children whose mothers and fathers had more years of schooling suffered less stunting. Previous studies also found that increases in the education level of the parents had a significant beneficial effect on their children's nutritional status (Strauss, 1987). Behrman and Wolfe (1984) emphasized the importance of the mother's schooling, in particular, as a determinant of child nutritional well-being. The overall results from both studies with the Philippine data are consistent with the previous findings of Rosenzweig and Schultz (1982) concerning the importance of women's economic opportunities. In their study with data from India, they found that the survival rate of female infants in relation to male babies was higher in areas where there were better employment opportunities for adult women.

CONCLUSIONS

A major conclusion that can be drawn from these three studies is that the opportunity cost of women's time has significant implications for behavior within households. This finding has important policy implications. The woman's estimated wage rate was found to affect the pattern of

household food consumption, the intrahousehold distribution of food, and the nutritional status of children. As economic development progresses in Third World countries, the increased value of women's time must be considered one of the factors underlying the shift from time-intensive traditional foods to time-saving foods, with the possibility of detrimental implications for nutrition.

In addition, the estimated wage rate of the wife and mother was found to have a significant positive impact on both the relative calorie allocation of herself and her children and on her preschool children's nutritional status. Furthermore, an increase in the mother's education level improved the children's long-run nutritional status. An understanding of such underlying causal relationships is essential, if the ultimate objective is to intervene to alter behavior within the household in order to reduce the incidence of malnutrition among certain individuals.

The household functions as an intermediary between many policies, programs and economic changes, and their impact on individuals. We must go beyond the doorstep of the household to analyze and influence the welfare of individuals. Governments, however, will find it difficult to directly modify the behavior of individuals within the household. The value of women's time can be utilized as a means to indirectly change behavior and resource flows within the household, and thus improve the well-being, in particular, of women and children.

The value of women's time can be raised by improving the economic opportunities and investment in human capital of women. A woman's human capital or potential productivity primarily reflects her education,

training, and health, all of which can be influenced by government policy. The findings of these three studies provide strong additional reasons to make improved education and employment opportunities for women a major policy goal in developing countries. The economic status of women in society and their role and position in the household are formally linked via the value of time. Boserup (1986) in both the preface and concluding section emphasized the importance of education and job opportunities for women for the rate of economic development. Recent research has revealed their significance for the welfare of individuals within the household. Reducing inequalities faced by women in the economy can reduce inequities inside the household.

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