

**INTRA-HOUSEHOLD CONSUMPTION PATTERNS:
ISSUES; EVIDENCE; AND IMPLICATIONS FOR HUMAN DEVELOPMENT¹**

INTRODUCTION

Since the mid-1960s, the process of intra-household resource allocation has been increasingly studied by both academics and policy-makers (Becker 1965, Sen 1990, Haddad et al 1997). The persistence of gender inequalities (higher rates of illiteracy among women, gender wage differentials, high numbers of "missing" women in some parts of the world) and the close correspondence between the well-being of women and that of their children² has required an analysis of what has been till recently a blackbox in economic analysis: the household. Furthermore, policy-makers in many countries have typically directed resources to male household heads, assuming equitable intra-household sharing of resources. But, the persistent relative deprivation of women and children in substantial parts of the world despite policy attempts have also pointed to the need to closely examine the mechanisms by which resources are allocated among household members (Agarwal 1997).

The objective of this paper is to review the evidence on the (a) determinants and (b) extent of disparities in intrahousehold consumption patterns. The paper is organized as follows: section one examines the theoretical literature on decision-making within the household and identifies the determinants responsible for the intrahousehold allocation of resources; section two presents the empirical evidence on disparities in intra-household consumption patterns with respect to food, health and education resources; section three examines the implications of the empirical literature for human development issues.

SECTION ONE: DETERMINANTS OF INTRA-HOUSEHOLD RESOURCE ALLOCATION

Economic theories concerned with intra-household resource allocation generally fall into two broad categories: in the first

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² The phenomenon of "missing women" points to the underlying excess mortality of women vis a vis men, despite medical reasons to expect exactly the opposite. There is reason to believe this is linked to inequalities within households with respect to the division of medical care and other resources (Sen 1995). For the positive correlation between women's well-being and those of their children, see Blumberg 1988, Mahony 1995.

category are household models that axiomatically rule out the possibility of conflict and power in their analysis of intra-household resource allocation; and in the second category are theories where conflict and power play a central role in determining how resources get allocated among individual members of the household.

Households as Sites of Altruism

These models of the household follow the work of Becker (1965) who brought the economics of households into the mainstream of standard economic theory. The essence of Becker's approach is that, in accordance with **a single set of preferences**, the household combines time, goods purchased in the market, and goods produced at home to produce commodities that generate utility for the household. Fundamental to this model is the assumption that there exists a household welfare function and that **all resources** -- capital, labor, land and information -- **are pooled**.

The household welfare function reflects either an altruistic consensus within the household (regarding the distribution of resources) or else an absolute but benevolent dictator who heads the household and ensures altruistic decision-making outcomes³. As Becker (1981) puts it: "In my approach, the 'optimal reallocation' results from altruism and voluntary contributions, and the 'group preference function' is identical to that of the altruistic head, even when he does not have sovereign power" (p. 192).

Thus, by assumption, this conception of the household rules out any possibility that individual members might have different and possibly conflicting objectives regarding the distribution of resources as well as different and possibly conflicting ideas about how best to ensure their individual well-being.

Households as Sites of Bargaining and Negotiation

An alternative approach to households challenges this picture of "seamless altruism" within the household⁴ (Sen 1990, Folbre 1984; McEroy & Horney 1981). Instead, different members are seen to have different, possibly conflicting preferences, and decision

³ Others have assumed that somehow or other -- in ways unspecified -- an "optimal" distribution of commodities and provisions takes place within the family permitting us to see families as if they were individuals (Sen 1990)

⁴ Also contested is the assumption that income is pooled within households (Haddad 1996, Katz 1997). Indeed, in many Sub-Saharan countries husbands and wives do NOT pool resources and do not have a common housekeeping or child-rearing budget (Whitehead 1981).

making occurs through bargaining and negotiation (Sen 1990, Chiappori 1992, Katz & Carter 1997; Kanbur 1991; Ott 1995; Woolley 1988).

The basic hypothesis underlying bargaining models is that there is likely to be a positive relationship among an individual's bargaining power, his/her influence on family decision-making, and his/her share of family resources. Thus, the central issue addressed by this class of models is what determines an individual member's bargaining power.

Generally, it has been argued that bargaining power is a function of the relative strength of the **breakdown** and **fallback** positions of individual members. Although early versions of this approach conceptualized the fallback/breakdown position in terms of the relative earnings and wealth of different members, more recent versions have seen a broadening of the concept to include a range of "extra environmental parameters" (EEPs), many of which do not normally figure in conventional economic analysis. McElroy (1990), for instance, in her analysis of household bargaining among married couples suggests that among the EEPs which may bear on bargaining outcomes are sex ratios in the relevant marriage markets; laws concerning alimony settlements and child support and, drawing on evidence from Third World countries, on women's ability to return to their natal homes after marital breakdown as well as the cultural acceptability of outside work.

Although different versions of bargaining models emphasize the relative importance of one or another factor in affecting an individual's fall-back position, there is a remarkable consensus on the fact that the following are critical determinants of an individual's ability to negotiate and bargain for a greater share of household resources.

- (A) **Size and Composition of Household**
- (B) **Actual & Perceived Contribution to Household**
- (C) **Control Over Income**
- (D) **Other Fall-Back Positions**

(A) **Size and Composition of Household:** The well-being of individual household members and their relative bargaining power depends on the specific characteristics of their household: whether female-headed or male-headed; the number of dependents versus the number of income-earners; the age-cycle of household members (elderly versus younger) and in many instances on the existence and number of girl-children (Dey-Abbas 1997, Lloyd 1997).

(B) **Actual and Perceived Contribution to Household:** Many scholars have argued that a member **perceived** to be making a greater contribution to household prosperity enjoys greater bargaining power (Sen 1990, Folbre 1997). The distinction between actual and perceived contribution is especially significant when considering

women's contribution to the household. Given the gender division of labor in most societies, the actual contribution of women in securing their household's well-being is rather obvious. Data on time spent in domestic labor indicates that from the more developed to developing economies, women spend a much greater time performing domestic labor (including child-care)⁵. Yet, it is far from obvious that their actual contribution guarantees them more power regarding intra-household allocative decisions.

As noted by Sen and other scholars, a member's perceived contribution is closely associated with the **visibility** of that contribution. In Sen's analysis, contributions are more likely to be visible if they are performed outside the household and if they are remunerated. Thus, it is not so much the actual value of productive contributions which matter for bargaining power as much as its orientation (market exchange versus subsistence consumption); form (cash versus kind) and location (outside versus inside) (Kabeer 1995, Acharya & Bennett 1983).

(C) Control Over Income: However, even in instances where an individual's contribution to the household is significant and indeed necessary for ensuring the household's survival, they still lack bargaining power because they do not control that income and so do not have much decision-making power regarding its allocation⁶ (Whitehead 1981, Maher 1981, Land 1980). The degree to which an individual can establish control over income depends most significantly on whether they earn independent income and secondly on whether that income is pooled or retained by them.

Indeed, much of the literature from industrialized countries on intra-household resource allocation has focused on the issue of how each spouse's resources (labor time and income) are allocated, the decision making process underlying this and the consequent effects of these decisions for the bargaining power of individual members. Ott's study (1995) using German data showed that women's bargaining power increased when they had access to independent income. The same correlation was found by Land (1981) and Pahl (1983) for England and by Woolley for Canada and the US.

(D) Other Fall-back Positions: A member's bargaining power is also circumscribed by other fall-back options open to them. The basic premise here is that the greater a person's ability to physically survive outside the household, the greater would be his/her

⁵ In 1990, the average Russian woman spent nearly 48 hours more than men on housework and childcare each week (Fong 1993); for the U.S. see Mahony (1995); for the U.K. see Himmelweit & Mohun (1980); for developing economies see Beneria (1980).

⁶ See Mies study on the lace-makers in Narsapur (1980); also Kabeer (1995)

bargaining power within the household. Thus, other fall-back positions include the full range of laws governing for instance, property rights⁷, family law, and public policies regarding child-care⁸ and income transfers, but also included are the social support systems of patronage, kinship, caste-groupings and even friendships.

Several authors⁹ have noted that fall-back options such as property rights and child-support laws are themselves a reflection of social norms (that is, accepted notions concerning the division of labor) and social perceptions (about needs, contributions and thus about who deserves what). This is why Folbre states, "social norms play an important role in family allocation" (1997, p. 266).

In what follows, the empirical evidence regarding disparities in intra-household resource allocation is presented: section A examines disparities in food consumption; section B considers disparities in non-food consumption, mainly of health and education resources. In both sections, the results are presented by region and intra-household disparities between (a) men and women, (b) adults and children/adolescents, (c) boy and girl children are considered.

Several points regarding the empirical evidence should be noted:

(1) studies **measuring** disparities in **food** consumption have focused essentially on households in developing rather than industrialized economies, and within developing economies, there appears to be a special focus on the South Asian countries. The data used in these studies is based on household surveys (conducted by respective national governments) and the field surveys of independent researchers. The more recent literature examining the impact of stabilization and structural adjustment policies on household consumption patterns, particularly for countries in Latin America and Sub-Saharan Africa, is bringing into view more evidence on

⁷ In many areas in Sub-Saharan Africa, widows lack even the basic rights to inherit marital property (Potash 1986) and in many countries, women have restricted rights to own assets as individuals. Clearly, factors such as these constrain an individual's fall-back position and so also constrain their bargaining power.

⁸ Since mothers are more likely to assume custody of their children (in some countries), poor enforcement of child support responsibilities of fathers can reduce women's bargaining power. The same can be said of high child-care costs which lower the disposable income of the parent with custody (Folbre 1997).

⁹ See Sen 1990, Agarwal 1997, Folbre 1997.

disparities in intra-household food consumption patterns as are studies examining the impact of economic restructuring on household consumption in Eastern European countries and in the countries of the ex-Soviet Republic.

(2) studies examining intra-household disparities in the consumption of education resources for developing countries tend to focus much more on the differential access of boy and girl children to these resources as opposed to the differential access of adult men and women.

SECTION TWO: EMPIRICAL EVIDENCE ON INTRAHOUSEHOLD CONSUMPTION BIAS

A: DISPARITIES IN FOOD CONSUMPTION

Generally, most studies of intra-household food allocation have relied either on anthropometric indicators such as weight-for-age and height-for-age, standardized by measurements from a health reference population¹⁰, or on measurements of diet adequacy, which assess the degree to which the caloric/nutrient intakes of individuals meet established requirements.

When diet adequacy is used as the measure of food consumption, the method most frequently used to estimate each individual member's food consumption is as follows: a member's actual food intake (measured by converting food intake into its caloric or nutrient equivalent using the recall method or through direct observation) relative to that individual's required intake of food is estimated. And in order to measure disparities in food consumption between different member's of the household, such as between males/females; adults/children; and girl/boy children, the ratios of actual to required food intake of individual member's are compared.

In other words, if all individuals required identical amounts of nutrients regardless of age, gender, physiology and activity pattern, and if all individuals had identical preferences and knowledge of their nutritional requirements, it would be relatively easy to measure inequality in the intrahousehold distribution of

¹⁰ Note that both anthropometric and diet adequacy measures pose problems. The use of anthropometric measures pose the following problems: (1) the assumption that low weights and heights are primarily the result of poor nutrition. This is problematic because sub-standard growth can be attributed to factors other than undernourishment such as unsanitary living conditions and inadequate health care (Haaga & Mason 1987, Osmani 1990); (2) the reference population that serves as the basis for the "desired" physical measurements is assumed to be biologically representative of the population being studied (Ross 1992).

foods. Favouritism in the allocation of a particular food or nutrient could be determined using the following expression:

X_i / X_i

$1/n$

where

n = the number of household members

X_i = consumption by the i th household member of food or nutrient X

X_i = total household consumption of food or nutrient X .

Here, $1/n$ may be interpreted as the index of an individual's "fair share" of household consumption (Bouis & Pena 1997).

The difficulties associated with measuring both actual intake as well as recommended intake (i.e. an individual's "fair share") have been repeatedly noted by scholars: Accurate measures of actual food intake are notoriously difficult to obtain due to (i) meals eaten outside the home; (ii) snacking behaviour (Harbert & Scandizzo (1982) found that when this behaviour was accounted for, it could have a large impact on measured nutrient intake, especially for children); (iii) modification of diet due to being observed; (iv) the uneven visual comparison between household utensil volumes and standard measures carried by the enumerators, especially when food is eaten from a common bowl.

Furthermore, the accurate determination of individual energy and nutrient requirements is also difficult. For energy, problems include those related to activity patterns, weight changes, and individual variation in basic metabolic rates, to name but a few (Kumar & Bhattarai 1993). This lack of consistency in estimating intakes as well as requirements and the fact that such estimation processes are controversial and undergoing constant revision¹¹ implies that results of the empirical studies on intra-household food allocation need to be cautiously interpreted (Chen et al. 1981).

EMPIRICAL RESULTS

The data presented below is organized by region and intra-household disparities between men and women, adults and children and boy and girl children are considered. See appendix 1 for a summary of studies that **measure** biases in intra-household food consumption patterns.

¹¹ Indeed, given variations in the concepts of needs and adequacy, and also the kinds of foods consumed in different cultures and countries, recommended daily intakes in 41 countries differ substantially (Wheeler 1991, Harriss 1990).

ASIA

The studies reviewed are for the following countries: Bangladesh, Pakistan, India, Nepal, Phillipines.

Adult Men and Women

With respect to disparities in food consumption between men and women, six studies indicated a pro-male bias in food allocation whereas only one study (for Pakistan) indicated a pro-female bias. Five other studies indicated no bias in food consumption between the genders.

Adults and Children

Five studies (2 from Bangladesh and 3 from the Phillipines) indicated a pro-adult bias but one study from Bangladesh showed that adults (men more than women) rather than children were subjected to higher levels of seasonal caloric stress (Rosenweig, Pitt & Hassan). Four studies indicated no bias between consumption patterns of adults as compared to children.

Boys and Girls

Significantly, eleven studies showed a clear preference in the food consumption patterns of boy children as compared to girls.

In summary, there appears to be evidence of a (slight) pro-male, pro-adult and (significant) pro-boy bias in intra-household food consumption patterns in South Asia. Reasons for these biases vary with different authors focusing on different explanations. For instance, in Nepal, while small children are not discriminated against, adult women are discriminated against in terms of meeting requirements for energy, beta-carotene, riboflavin, and vitamin C and the reasons cited for this include a late position in serving order (i.e. women eat after men and small children), the channeling of special foods to men, and lower overall food intake. In India and Pakistan, boys are also favored by being given first priority in breast-feeding and in food supplementation (Pettigrew 1986, Sabir & Ebrahim 1984); and in Bangladesh, while the risk of dying from diarrhea is higher among the severely malnourished, the risk of dying from severe malnutrition is more than twice as high for girls than for boys (Faveau et al. 1990).

On the other hand, the fairly even distribution of nutrients among family members in the Phillipines, regardless of age and sex, are attributed to relatively egalitarian household structures in that country (Medina 1991).

The results in South Asia also run counter to the trend of decreasing inequality as incomes rise, although inequality increases among the poor during the lean season (Behrman 1988). In

India, upper-middle caste groups favor sons more in food allocation than lower status groups and tribal groups (Warrier 1992). Indeed, Miller's (1992) review of intrahousehold food distribution in South Asia also finds that greater disparities and malnutrition are found among the propertied groups and among the more educated. Discrimination against daughters may reflect the additional financial stress on families as a result of dowry and marriage costs, and not from food consumption of the daughter, per se.

LATIN AMERICA

Six studies were surveyed for the following countries: Mexico, Chile, Peru, Guatemala.

Adult Men and Women

The only country for which a pro-male bias in food consumption was found was Chile. In Peru, there was a slight pro-female bias but the evidence from Mexico and Guatemala did not indicate a bias in food consumption between the genders.

Adults and Children

As far as food consumption between adults and children was concerned, children fared better than adults in Chile and Peru. These results support those of Pitt, Rosenzweig & Hassan (1990) for a study from Bangladesh: adults (males more than females), rather than children, are subjected to higher levels of seasonal caloric stress.

However, in Guatemala, a pro-adult male bias was found. More protein was allocated for the male heads of households and adolescents were slightly underfed (Engles & Nieves 1993).

Boys and Girls

With respect to food consumption patterns between boy and girl children, all of the studies found that sex differentials in the dietary intake or physical status were not apparent among children (aged 12 and under).

AFRICA

Four studies for Madagascar, Morocco, Ghana and Algeria were surveyed.

Adult Men and Women

For Morocco and Algeria, a pro-male bias was found in food consumption patterns but no gender bias was found in Madagascar or Ghana.

Adults and Children

As far as adults and children were concerned, a pro-adult bias was found only in Morocco. The studies did not indicate a pro-child bias for the other three countries.

Boys and Girls

In Algeria, a pro-boy bias was found in food consumption patterns but the other studies did not indicate a similar pattern for Ghana, Madagascar or Morocco. In a study of subsistence slash and burn cultivators in Madagascar, Hardenbergh (1992) found no evidence of sex bias in mortality, anthropometry or nutrient intake and the author argues that this was likely on account of a more explicit and obvious economic value to households of girls in SSA than is the case in Asia.

In conclusion, the empirical research measuring food distribution within the household suggests that, while there is some pro-male bias in food intake, this seems to be primarily located in South Asia (with considerable variation within the region) and in the Maghrebian countries. The pro-boy bias was more pronounced not only for countries in South Asia but also for Algeria. Finally, a slight pro-adult bias was found in South Asia and also in Morocco and this stands in contrast to the pro-child bias found in Latin America.

According to the authors of the studies surveyed above, the reasons for disparities in food consumption patterns are due to a combination of (1) an unequal distribution of food within the household, (2) the unequal nature of food requirements within the household, (3) and the unequal nature of the perceived requirements by age and sex. But, as many scholars have argued, the empirical results also depend on the particular methodology used by individual researchers. For instance, several studies found that not adjusting individual requirements for activity levels or body weight levels totally altered the results¹². For example, in the Phillipines, of the 16 male-female studies (unadjusted for activity and body weight), 8 showed a pro-male bias, none show a pro-female bias, and 8 showed neither sex as favored. The pro-male bias disappeared once body weight and activity are considered. In general, the adjustment for body weight and activity tends to support gender-neutrality of intrahousehold food distribution and also shows the importance of taking energy requirements and activity into account.

Recent studies, particularly from Latin America and Sub-

¹² The majority of studies (70 comparisons) did not adjust for activity or body weight levels, whereas a smaller number of studies (33) did make the adjustments.

Saharan Africa examining the effects of stabilization and structural adjustment policies have argued that austerity conditions¹³ associated with adjustment policies¹⁴ have adversely impacted poor households in developing economies and that in country after country, women and children have borne a disproportionate burden of their household's adjustment to austerity. In many countries, adjustment policies have been associated with cuts in food subsidies¹⁵, falling real wages¹⁶ and declining social expenditures in education and health services (Stewart 1995).

Cuts in food subsidies and the consequent rise in food prices have "caused a widespread deterioration in the nutritional status of children and pregnant and lactating mothers... Mothers are unable to buy enough food of the right type to feed the entire family, and in many cases priority is given to the feeding of adult males" (Elson 1989). Another reason cited for increased malnutrition rates, particularly for some countries in Latin America and Sub-Saharan Africa are policies which favor promoting export crops at the expense of food crops¹⁷. Thus, in Zambia, the increase in rural children's malnutrition status has been attributed to pressures to grow maize for the urban market and export markets at the expense of food crops (War on Want 1989). Indeed, infant mortality rates have risen significantly, with the proportion of child deaths in hospital due to malnutrition doubling

¹³ See Stewart 1994 ; Beneria & Feldman 1990; Bakker 1994.

¹⁴ Stabilization policies aim to constrain aggregate demand, using the traditional demand-side fiscal and monetary macro-policy tools, including taxes, spending, monetary and exchange-rate policy. Structural adjustment policies are seen as complementary to stabilization with an emphasis on supply-side measures at the micro-level.

¹⁵ Several countries in southern Africa removed food subsidies (ex: Zambia and Mozambique), causing a real increase in food prices. In Mozambique, food prices rose 400-600 percent (Loewenson 1993; also see Stewart 1995).

¹⁶ Between 1981 and 1989, Sub-Saharan Africa witnessed a cumulative decline of over 21% in real GNP per capita, with average real wages declining in 26 of 28 African countries. The countries most severely affected were Mozambique, Gabon, Cote D'Ivoire, Niger, Nigeria, Zambia, Zaire and the Congo; in Chile and Mexico, it is estimated that by 1990, the minimum wage had lost around 65% of its estimated 1980 value (Veltmeyer 1993; also Horton, Kanbur & Mazumdar 1994).

¹⁷ See Patnaik 1997, Stewart 1995, Katz 1997.

since 1981¹⁸. It has also been noted that female headed households cultivating less land are at greater nutritional risk than others.

Further evidence from Zambia reports reduced food consumption, especially of expensive foods like meat, poultry and milk -- foods high in proteins critical to good nutrition (Muntemba 1989).

Evidence from Tanzania also indicates that female consumption of food has declined, with a survey reporting that 58% of the sample respondents noted that they had reduced the number of meals taken from three to two and that their consumption of meat and fish had gone down (War on Want 1989).

Data from Latin America also shows evidence of worsening nutrition among children in Peru and Nicaragua in the 1980s, and an increase in second and third degree malnutrition in the highlands of Guatemala, in Panama and in Uruguay. In Uruguay, "the number of children admitted to the National Nutritional Programme almost doubled between 1982 and 1984" (Stewart 1995:189). There is also evidence of a rising incidence in the proportion of babies born with low birth weights for Barbados, parts of Brazil, Columbia, Dominican Republic, El Salvador, Mexico and Surinam. This seems to indicate a bias against women in their consumption of food and health inputs (Stewart 1995).

B. DISTRIBUTION OF NON-FOOD INPUTS

Most of the empirical studies on disparities in the intra-household consumption of non-food resources reviewed in this paper have focused on the consumption of health and education inputs. However, compared to food inputs into good nutrition, economic studies have not examined the allocation of health inputs closely for gender bias. Largely, this is due to the difficulty of measuring health inputs. The main problem is that self-reported measures of health and morbidity are routinely used by economists in behavioural models. There is, however, considerable evidence that self-reported measures do not accurately reflect clinical assessments of health status. More importantly, the differences between clinical and self-reported morbidity measures are not random (Butler et al. 1987). Often, self-reported morbidity increases with household income and educational status. The very poor only report "illness" when ill-health is severe; the less poor will report milder episodes of ill-health as "illness". One way around this is to focus on more specific self-reported limitations on functional activity such as walking, going to work, or undertaking "normal activities" (Schultz & Tansel 1995).

¹⁸ The hospital mortality rate for malnutrition increased from 14.7% in 1981 to 19% in 1986 (War on Want 1989).

Appendix 2 presents a summary of some studies from the literature. The results are organized by region and disparities in the consumption of education and health inputs between adult men and women and between boys and girls are examined.

ASIA

Most of the studies look at the consumption patterns of health and education resources between boy and girl children. The countries surveyed are India, Pakistan, Bangladesh and the Phillipines. Except for the Phillipines where gender did not affect the probability of seeking alternatives to traditional health-care providers, in every other country, the authors found a pro-boy bias.

Indeed, relative to studies on the intrahousehold allocation of food, the results of studies examining the consumption of health inputs appear to have stronger and more consistent results. Reasons cited for the pro-boy bias are duration of breast-feeding, quantity and quality of health care, and survival probabilities after diarrhea episodes all of which are reported to **favor boys**. Indeed, in India and Pakistan, breast-feeding duration is longer for boys, partly because there is less urgency to have another child after a boy (Miller 1981). DasGupta's study on the Indian Punjab (1987) found that wider sex differentials existed for medical care than for food allocation. And in Nepal, mothers were more frequently concerned about the adequacy of their milk for boys (Levine 1987). In Pakistan, lower income households, sought care more often for boys than for girls, and were likely to use higher quality providers for boys although this difference in frequency and quality of care disappeared as income increased (Alderman & Gertler 1996).

LATIN AMERICA

Heller & Drake's study for Columbia (1979) reports no boy-girl differences in terms of the degree of incidence and severity of diarrhea or age at weaning.

AFRICA

Haddad and Hoddinot (1994) found that in the Cote D'Ivoire, improvements in access to public health services were gender-neutral in their effects on child health. However, in Algeria, female mortality between the ages of 0-35 was higher compared to mortality rates for men and this was attributed to different nutritional standards and parental care in the first 15 years of life and then to risks in pregnancy and child-birth, indicating both a bias against women and girls in receiving health-care (Vallin 1975).

As far as education was concerned, Maher's study from Morocco

(1981) showed that boys vastly outnumbered girls in receiving an education.

Earlier, we noted that structural adjustment policies have been associated with cuts in government spending on health and education services. Furthermore, in many countries of Latin America and Sub-Saharan Africa, education and health services have been privatized, with the introduction of user fees (Stewart 1995).

For example, data from Zambia shows that capital spending on health in 1986-87 was only 35% of such expenditure in 1980-81 and data on the consumption of health inputs indicates that women's use of ante-natal clinics has declined since 1978. Since ante-natal clinics and delivery care is the only care specifically oriented towards women's health through which broader health problems for women may be picked up (especially malnutrition, anaemia and STD's), this decline has alarming implications for women's health in Zambia.

The introduction of user fees for health and education have also disproportionately affected women and children's access to health care services. In Zaire, where women and children make up 90% of the health centre clientele, a rapid increase in the price of health-care sharply decreased the demand for curative services, prenatal visits and clinics for children under the age of five. A similar trend has been reported for Ghana, Swaziland, Lesotho and Nigeria (Turshen 1994).

In Zambia and the Cote D'Ivoire, the introduction of user fees in schools have led to declining enrollments in primary schools with girls being more severely affected than boys. A similar pattern is seen in Tanzania where the drop-out rates from school were higher for girls than for boys (Palmer 1992, Stewart 1995).

Although the focus of much of this empirical evidence has been on the experience of developing economies, it is not only developing countries that are experiencing a profound restructuring of their economies, but economies in transition (i.e. Eastern Europe and the ex-Soviet Republic) have also experienced profound changes (Aslanbeigui et al. 1994). Furthermore, the 1980s have also seen industrialized countries restructuring their economies¹⁹ (Brodie 1994).

¹⁹ The neo-liberal policies adopted by many OECD countries during the 1980s focused on demand restraints as the main way of dealing with budget deficits. These initiatives "represented a break from the post-war macroeconomic Keynesian consensus on the role of the government in maintaining full employment and a shift to the classical Smithian position of the "night watchman state" (Bakker 1994).

As has been noted by several studies, the restructuring of these economies have significant implications for the well-being of women and children since they affect women's bargaining position within households. And indeed, much of the literature examining the impact of restructuring in OECD countries and in countries in transition on women has focused on two central issues: the effect of restructuring on female labor supply and female wage rates²⁰; (2) the shifting of childcare costs from the state onto households.

For instance, data from countries in Eastern Europe shows that privatization has led to higher rates of unemployment for women as compared to men: in East Germany, women are 60% of the unemployed and underrepresented in training programs (Rudolph et al. 1992); in Romania, of the more than one million persons unemployed in October 1993, 55% were women (Bacon & Pol 1994) and in Russia, by the spring of 1993, women comprised about 80% of the unemployed (McMahon 1994). In Poland, where women are only slightly more than half the unemployed, the possibilities of finding employment appear to be rather limited for women (Tarasiewicz 1991)²¹ and in Hungary, the chances for promotion have decreased more for women than for men (Szalai 1991).

Higher rates of unemployment for women signify a reduction in their intra-household bargaining power since their access to income earning opportunities is jeopardized. Indeed, several authors have remarked that rising rates of female unemployment in Eastern European countries have been accompanied by an explicit rebirth of the ideology of women's primary role as mother (Einhorn 1991, Antic 1991, Kligman 1992, McMahon 1994). As Tarasiewicz (1991: 183) states, "it is generally accepted in Poland that a man needs a job more than a woman".

The removal of subsidies on child-care also has important implications for the well-being of women and children²²: in fact, the first subsidy to be removed in many East Central European countries was that on children's clothes. Because women are responsible for feeding and clothing the family, they are the ones most affected by the removal of subsidies (Einhorn 1991). One study estimated that childcare costs in Poland amounted to 81% of of the

²⁰ See Leven 1991

²¹ The fact that men have greater prospects for re-employment has also been made for East Germany (Appelbaum & Maier 1994).

²² In Russia, legislation from 1990 to 1992 transferred the responsibility of financing benefits (paid maternity leave, extended leave for mothers with small children and other benefits) from the state to local enterprises (McMahon 1994).

average salary for urban women²³ (Leven 1991) and as various scholars have argued. because women are responsible for children, the trade-off between work and child-care or staying home is made based on women's income not men's. Childcare costs come out of women's paychecks and when the cost of childcare goes up, a woman's share of household income goes down. Her ability to support herself and her child alone is eliminated and her bargaining power within the family falls (Hopkins 1995).

Within OECD countries, the impact of restructuring on women's well-being has also been examined in terms of how restructuring will affect their position in the labor market (their employment and income options) and consequently their intra-household bargaining position²⁴ (McDonald 1994, Brodie 1994).

For instance, in Canada, it appears that "restructuring associated with the Free Trade Agreement, may be slowing down the acceleration of women's participation in the labor force or even causing it to decrease: female unemployment rates in manufacturing rose from 10.2% in 1988 to 14.6% in 1991, whereas for men, unemployment rates rose from 6.2% in 1988 to 11.1% in 1991" (Brodie 1994).

According to an OECD study, there is a strong correlation between women's labor-force activity and the size and growth of the public sector (OECD 1993). Thus, cuts in public-sector expenditures maybe particularly damaging to women's labor-market position, given that the public sector provides relatively more job opportunities and higher salaries for women than does the private sector. Also, the majority of these jobs offer better employment protection and social security. But, the recent development in public-sector employment (keeping in mind the variation across OECD countries), indicates a trend towards greater reliance on part-time positions and lower wages compared to the high-growth period of the public

²³ Following market reforms and the elimination of state subsidies, the average monthly day-care costs for pre-schoolers in Poland rose from 130,000 zlotys in July 1989 to 550,000 zlotys in July 1990 (Leven 1994).

²⁴ The labor market effects on women of restructuring have also polarized around issues of race and class: for example, immigrant women and women with less education have been adversely affected by deindustrialization in the clothing and garment industries and cuts to job-retraining programs discourage their successful re-entry into the labor-force. At the same time, however, there has been an increase of women in the managerial and professional occupations. This has led some to argue that in the "core" economies, the burden of restructuring has largely been carried by working-class, less educated, immigrant women (Brodie 1994).

sector (Bakker 1994).

Furthermore, unemployment benefits and maternity benefits increased little in real terms in the 1980s in OECD countries. The EC noted that in 1989, for the whole of the European Community, 26% of female job-seekers as compared to 34% of male jobseekers received unemployment benefits or welfare (Commission of the European Communities 1992).

Insofar as women's access to and control over income is threatened and insofar as gender wage differentials remain in place and insofar as the gender division of labor assigns women primary responsibility for child-care, withdrawal of the state from this arena coupled with women's vulnerability in the labor market is not likely to enhance their intra-household bargaining power.

An important conclusion arrived at by the literature examining the relationship between macroeconomic restructuring and women's bargaining position is that the consequences of macroeconomic policies have not been equally distributed among household members. And the experience of restructuring during the 1980s in developing economies, economies in transition as well as in the OECD countries points to how women and often children have been disproportionately affected by recent economic policies. Macroeconomic policies can restrict the fall-back positions open to women and thus can constrain their bargaining power.

Earlier, we noted that (a) size and composition of households; (b) access and control over income; (c) other fall-back position were critical determinants of women's intra-household bargaining power and thus were significant in establishing the well-being of women and children. Indeed, the empirical literature tends to confirm the importance of all three of these factors in maintaining and promoting the well-being of women and children.

(A) Thus, Lloyd and Gage-Brandon's study (1993) for Ghana found that on average female headed households spent a higher proportion of income on food than male headed households, even at higher income levels and they argue that this indicated a tendency for women to allocate a larger share of their own resources to the food needs of their children. The authors also found that households with older heads were poorer (indicated by a high percent expenditure on food) and that female headed households (headed by a married woman) were best-off but if headed by a widow were worst-off and households with married male heads appear to be worse-off on average as compared with married female headed households.

Roger's study (1996) comparing food expenditures of female and male headed-households in the Dominican Republic found that although female headed households (FHH) allocated the same amount or less of their budgets to food than male headed households (MHH) in absolute and proportional terms, FHH consumed higher quality,

more expensive and protein-dense foods (more animal products, less of beans and rice) than MHH. And even though, the average caloric adequacy per adult-equivalent was equal or lower in FHH, children's anthropometric status was the same or higher, possibly due to an intra-household allocation of food which favored children.

Katz's study from rural Guatemala (1995) also showed the importance of household composition in determining the distribution of resources. The existence of girl-children freed women from their domestic responsibilities and enabled them to earn incomes which were mainly spent on consumption goods for the household.

(2) Many scholars have noted that when women contribute to household income and retain some control over its disbursement, their bargaining power increases and the nutritional intakes of household members (especially those of children) are more adequate than when women have no control over how household income is spent (Blumberg 1988). This is mainly on account of the fact that male and females tend to spend their incomes in different ways, with women spending on consumption goods for the entire household and men spending a higher proportion on male items (entertainment, cigarettes) (Blumberg 1988; Phipps & Burton 1992, Thomas 1990, Katz 1997).

That women in a variety of households are more child-oriented in their expenditures has also been noted by studies comparing consumption patterns between male and female headed households. For instance, recent evidence from Jamaica indicates that female-headed households consume foods of a higher nutritional quality and spend a larger share of their income on child goods and a significantly smaller share on alcohol (Horton & Miller 1989). In Kenya and Malawi, despite lower household incomes in female headed households, a smaller percentage of children are moderately to severely malnourished than in male headed households (Kennedy & Peters 1992). And when households with similar resources were compared in 7 Sub-saharan African countries, children in female headed households had higher school enrollment and completion rates than children in male headed households (Lloyd & Blanc 1997).

Furthermore, data from the Phillipines showed that the female wage rate had a positive and significant impact on children's and female's share of household calories (Senauer 1988). And, Hoddinot & Haddad (1991) show that in Cote d'Ivoire, a doubling of the income under women's control would lead to a 2 percent rise in the budget share going to food and a dramatic decline in the budget share going to alcohol (-26%) and cigarettes (-14%). Engle's (1991) study in Guatemala also showed that the higher the share of total household income earned by a child's mother, the higher the child's nutritional status (also see Elson 1988, Bhatta 1980, Acharya & Bennett 1982).

It should be noted that several studies have shown how women

have resisted policies that would undermine their bargaining power by reducing their control their income. For instance, a project in Cameroon encouraged women to grow rice (considered to be a "male" crop). Income generated from it would have been controlled by men, even if the crop had been produced by women. Consequently, few women entered into rice cultivation; they continued to grow sorghum despite lower returns because women controlled the harvested product. Similarly, in Zambia, households were encouraged to intercrop maize (a male crop) with beans (a female crop). However, women opposed this idea because if maize was planted on land normally allocated to beans, they would lose ownership of beans and the men would benefit from the cash generated by the sale of maize (Dey-Abbas 1997).

(C) Also well known is the fact that if the legal, political, and ideological structures in society do not reinforce women's rights to say, own land, get access to credit and to family planning, the fall-back positions for women get restricted. In this context, many scholars have emphasized the strength of gender ideologies in governing the distribution of resources and responsibilities within the household and in governing fall-back positions (Aggarwal 1994, Kabeer 1995). Thus, Cass noted that while paid employment may constitute a base for independence, the wife's inclination towards deference may not be affected by her work experience, particularly if she is involved in a relation of authority and deference in the work place (Cass 1978). And Whitehead's study on British households (1981) found that the relative power of husbands and wives did not simply mirror their relative wages in the market, because familial ideologies about roles and responsibilities intervened to differentiate how male and female access to resources was translated into control and hence into the disposal of resources (also Sen 1990).

SECTION THREE: IMPLICATIONS FOR HUMAN DEVELOPMENT

The preceding review of the empirical literature examining disparities in intra-household consumption patterns can be summarized as follows:

(1) With respect to discrimination in food consumption patterns, there is considerable variation across regions and it is difficult to establish a **consistent** pattern of discrimination against women and children, although a slight pro-male and significant pro-boy bias exists in South Asia and in the Maghreb. However, as stated earlier this conclusion should be interpreted cautiously given the wide variation in measurement techniques used by the different studies. Recent studies examining the effects of adjustment policies have pointed to rising rates of malnutrition for women and children, especially in Latin America and in Sub-Saharan Africa.

(2) With respect to disparities in the consumption of health and

education resources, a more **systematic** bias against girl children is found in practically all developing countries. Adjustment policies have not only exacerbated these existing inequities but in some cases, adult women's health is being adversely affected.

(3) Economic restructuring in Eastern Europe, the ex-Soviet Republic and also in the OECD countries appears to have impacted women and children's well-being via changes in the labor market position of women and via declining state expenditures on child care.

What is striking in the empirical review is that insofar as there is evidence of intra-household disparities in consumption, it is invariably women and children who are discriminated against²⁵. Biases against women and children affects the objective dimensions of their well-being but it also has significant implications for human development issues. For instance, adult female undernutrition constrains the ability of women to earn income, which can impair the nutrition status of their existing children. And differences in nutrition outcomes for young children have implications for their cognitive development and for their labor capacity and productivity as adults, since nutritional status contributes to the stock of potential resources in terms of the quality of human resources.

Studies have also pointed out the relationship between fertility patterns and women's educational and income status. For instance, a study from Puerto Rico found that when women entered the labor market, their household decision-making power rose, and initiating contraception was one of the first ways in which they exercised their greater control (Weller 1968). Similarly, a study from Mexico found that the higher women's contribution to the household pool, the more leverage they had over fertility decisions (Roldan 1987) and a similar result was found for Guatemala (Blumberg 1988).

POLICY IMPLICATIONS

The most significant issue to note is that policies that treat the household as a site of cooperation and that assume that targeting the household will automatically ensure the well-being of all its members will most likely be unsuccessful. As Alderman states, "ignoring the identity of the (policy) recipient could lead to serious policy failure" (Alderman 1997:).

In this context, note food security policies that are often targeted towards the entire household, the assumption being that if low-income household's can secure food, the nutritional

²⁵ Data on discrimination against adult men is rare and the very few studies that find this to be the case focus solely on **food** consumption. See Appendix one.

requirements of all household members will be met. However, the undernourishment rankings of various socio-economic and geographic household groups can change when individual-level food consumption information is used instead of household-level information. For example, although individual-level data might indicate that individuals from certain households (such as rural, landless households) are an important food poverty group, a reliance on household-level data might imply that they are not an important group (Haddad & Kanbur 1990).

Thus, the identity of the recipient can play a key role in ensuring successful food security policies. For example, food stamps have been found to influence spending in a manner different from cash. Although, food stamps are not directed at women per se, the fact that women are the main food purchasers allows this delivery mechanism to create an entitlement for women and enhances the food security possibilities of their households as compared to delivery mechanisms based on cash transfers. Similar considerations are at play, for instance, in deciding whether labor should be remunerated with cash or food in a public works scheme. When the nature of work and the level of wage offered are such that the participants are predominantly male, some have argued that remuneration should be in the form of food owing to differences in male and female expenditure patterns.

On the other hand, ignoring the identity of the recipient can lead to policy failures, one instance of which are the social safety nets designed to counteract the negative effects of adjustment policies. For example in Bolivia, it was found that the social fund had only a 2% female participation rate. The assumption having been that income would trickle down to wives, mothers and children.

Several authors have argued that in the context of industrialized economies, the assumption that households are altruistic sites has had the effect of creating both the ideal of the single breadwinner who will bring home and share the "family wage" and also of providing few remedies for dependents who do not receive their share of the household income (Pahl 1980). These assumptions have been significant insofar as they have informed social security legislation (in England) and as Land has demonstrated, social security legislation, by assuming the financial dependence of the married woman, has had the effect of prolonging and intensifying that dependence (Land 1981).

Since the well-being of women and children is fundamentally dependent on the relative bargaining position that women can exercise within their households, it is clear that policies concerned with eliminating intra-household disparities will have to focus on ways to enhance their bargaining and fallback positions.

Policies that impinge on women's capacities to contribute to

income or that undermine women's ability to control income can be detrimental to the well-being of women and children. Countries adopting adjustment and restructuring policies should take note of the differential impact of these policies on different household members.

Several studies have shown how policies that expand the fall-back positions for women can improve the well-being of household members. For instance, it has been found that programmes which raise the equality of access to credit also have an impact on intra-household resource allocation. Pitt and Khandker's (1995) analysis of Grameen Bank type programs in Bangladesh (targetted specifically towards women) showed that credit supplied to women had a discernably different impact on family spending than credit supplied to men. Similarly, Lundberg's study (1995) showed that the decision in Britain to send child allowance checks directly to mothers rather than fathers in the late 1970s was associated with a shift towards relatively greater expenditures on women's and children's goods.

It has also been argued that such credit extension programs should be seen as mechanisms for creating property rights for women as individuals rather than as wives or trustees for minor children (Dey-Abbass 1997, Aggarwal 1997).

Other authors have argued that changes in the legal environment are necessary if fall-back positions for women are to be assured. Thus, changes in family law (such as divorce and child support laws) as well as public policies regarding child-care and income transfers have been advocated as they affect the relative bargaining position of women (Folbre 1997).

To conclude, eliminating disparities in intra-household resource allocation will require policies that enhance women's bargaining power. The greater her relative bargaining power, the greater her control over a variety of other life options, including marriage, divorce, sexuality, overall household authority, and various types of household decisions. And finally, improving women's bargaining power will enhance the well-being of their children.

APPENDIX I

SUMMARY OF STUDIES OF FOOD DISTRIBUTION RELATIVE TO REQUIREMENTS WITHIN THE HOUSEHOLD

- (1) Study: Ahmed et al. 1977
Country: Rural Bangladesh
Measure of Food Consumption: Food Intake
Sample Type: 1,200 individuals

Main Conclusion: Male & females about same in kilocalories and protein in all age groups, although pregnant & lactating women had a low % share of the recommended daily allowance (RDA). Younger children (4 - 9 years old) had low kilocalories shares but high protein shares.

- (2) Study: Pakistan (nationally representative sample)
1978
Country: Pakistan
Measure of Food Consumption: 24 hr. recall of food intake
Sample Type: 1,236 households

Main Conclusion: The male head of household and a woman of child-bearing age were asked separately about their individual food intakes. These data indicate that male heads of households met 98% of their activity-unadjusted calorie requirements. The corresponding figure for women was 101%.

- (3) Study: Evenson, Popkin & King-Quizon
1980
Country: The Phillipines
Measure of Food Consumption: Combination 24 hr. recall & record method
Sample Type: 357 individuals

Main Conclusion: At all age levels, male children have more adequate diets than female children, and the diets of adults are more adequate than those of children.

- (4) Study: Chula, Karangka & Onate
1980
Country: The Phillipines
Measure of Food Consumption: Food Intake
Sample Type: Rural preschoolers in 58 households

Main Conclusion: No large differences by sibling order, although boys fare better in the intake of nine nutrients.

- (5) Study: Aligaen & Florencio
1980

Country: The Phillipines
Measure of Food Consumption: Food Intake
Sample Type: 100 urban households

Main Conclusion: Sex differences insignificant for calories but significant for protein. Adults fare best relative to RDA's, while adolescents are worse off.

(6) Study: Chen, Huq & d'Souza
1981
Country: Rural Bangladesh
Measure of Food Consumption: Food Intake
Sample Type: 135 families

Main Conclusions: After correcting for body weight and activity levels, they found child calorie adequacy ratios to be significantly higher for boys compared to girls.

(7) Study: Carloni
1981
Country: Primarily rural Bangladesh
Measure of Food Consumption: Food Intake
Sample Type: Review Paper

Main Conclusion: Review of nutritional surveys in rural Bangladesh suggests that females tend to be at a disadvantage, relative to males, leading to higher rates of female undernutrition. Increasing the supply of food is not enough to ensure the equitable distribution of resources within the family -- the perceived economic value of females must be increased in rural societies in Bangladesh.

(8) Study: Harbert & Scandizzo
1982
Country: Chile
Measure of Food Consumption: Not explained
Sample Type: 400 households

Main Conclusion: The distribution of nutrients across members of the household appears to be skewed in favor of adult males when the three main meals are measured. However, when additional snacks are taken into account, the results show that food allocation to family members closely conforms to nutritional requirements, and tends to favor younger children.

(9) Study: Brown, Black & Becker
1982
Country: Bangladesh
Measure of Food Consumption: Food Intake

Main Conclusion: Cross-sectional study of bangladesh data provides evidence that boys in the 0-4 age-group consume more food

relative to their requirements than girls.

(10) Study: Fabella
1982
Country: The Phillipines
Measure of Food Consumption: Food Intake
Sample Type: 100 households

Main Conclusion: Both female and male children get higher proportions of food, the higher the income of the family. Increased education of the mother results in girls being better-off than their male siblings.

(11) Study: Chaudry
1983
Country: Rural Bangladesh
Measure of Food Consumption: Food Intake
Sample Type: 1975-76 Rural Nutrition Survey

Main Conclusion: Fathers over 45 yrs. had the highest reported calorie adequacy; calorie adequacy for females was higher than for males in all age-groups, except 0-1 and 15-29 years. For families with over 8 children, male calorie adequacy is significantly higher than females in the 3-30 year age groups.

(12) Study: Kennedy
1983
Country: Mexico
Measure of Food Consumption: Preschooler calorie intake

Main Conclusion: Children do not seem to be favored or disfavored in terms of the allocation of extra calories received by the household.

(13) Study: Cowan & Dhanoa
1983
Country: Rural Punjab (India)
Measure of Food Consumption: Individual Food Consumption
Sample Type: 911 Children (2-3 yrs. old)

Main Conclusion: More than three times as many girls as boys from priveleged families are malnourished. Twice as many girls as boys from underpriveleged families were reported as undernourished.

(14) Study: Hassan & Ahmad
1984
Country: Bangladesh
Measure of Food Consumption: 24 hr. food weighing
Sample Type: 4000 households

Main Conclusion: On an overall household level, it was

found that just under 50% of the households in the study had intake levels below 80% of the recommended levels.

(15) Study: Abdullah & Wheeler
1985
Country: Bangladesh
Measure of Food Consumption: Three-day recalls of food intakes
Sample Type: 53 households with at least one preschooler

Main Conclusion: No evidence that women and older girls receive a lower share of household calories, based on calorie requirements that are adjusted for body size and activity levels. However, young children do not receive the share of household food which theoretical calculations of the requirements would prescribe; and that young girls receive a lower share than young boys.

(16) Study: Basu et al.
1986
Country: Nepal
Measure of Food Consumption: 1 day recall of dietary intakes as reported by wives/mothers
Sample Type: low-caste migrant tea laborers & a landed caste divided into high, medium and low economic subgroups.

Main Conclusion: Found mixed results for distribution of food, depending on the region studied -- in some areas, there was no difference; in others, there was a bias towards either males or females.

(17) Study: Pettigrew
1986
Country: India
Measure of Food Consumption: Breast-feeding, weaning practices, and illnesses around weaning time
Sample Type: 55 children from rich, average, and poor households

Main Conclusion: Boys were fed first in all types of households, although girls were breast-fed longer. In weaning, supplementary milk is not willingly supplied to girls, though it is more likely to be provided for boys. The level of income and ownership of land are important variables associated with child health.

(18) Study: Levine
1987
Country: N.W. Nepal

Measure of Food Consumption: Child care measured by infant feeding
Sample Type: 10 men & 10 women from 3 villages

Main Conclusion: Boys were given supplementary food sooner than girls, and mothers were more frequently concerned about the adequacy of their milk for boys.

(19) Study: Haaga & Mason
1987

Country: Review
Measure of Food Consumption: Various
Sample Type: Review

Main Conclusion: The authors do not find any generalizations emerging from the empirical literature (for example, preschoolers are not always the losers in intrahousehold food allocation), although it seems that misallocation of food is most likely to be an important cause of malnutrition in South Asia.

(20) Study: Behrman
1988a
Country: India village-level studies data
Measure of Food Consumption: 24 hour recall
Sample Type: 400 pairs of children < 15 yrs. from households with at least two kids

Main Conclusion: During the surplus season, nutrients are distributed among children within the household, regardless of individual endowments; in the lean season, however, later-born and less well-endowed children are more vulnerable.

(21) Study: Behrman
1988b
Country: India
Measure of Food Consumption: 24 hr. recall
Sample Type: children < 13 yrs. and from households with at least 2 kids

Main Conclusion: A male child parental preference bias of 5% was found only during the lean season.

(22) Study: Senauer, Garcia & Jacinto
1988
Country: The Phillipines
Measure of Food Consumption: Food Intake
Sample Type: 140 households

Main Conclusion: Female wage rate has a positive and significant impact on children's and females' share of household calories and a negative impact on husbands' share of household

calories. Male wage rate has a positive and significant impact on male and female share of household calories, but a negative significant impact on children's calorie share. The allocation of food seems to favor adults. Husbands fare better than wives in terms of unadjusted protein and energy adequacy ratios.

(23) Study: Brahman, Sastry & Rao
1988
Country: India
Measure of Food Consumption: Food Intake
Sample Type: 1,878 households in 10 states

Main Conclusion: No sex discrimination in the intrahousehold allocation of food was found. Literacy level of the adult woman had a significantly positive influence on the energy consumption of the preschool children in a household.

(24) Study: Behrman & Deolalikar
1990
Country: India village level studies
Measure of Food Consumption: Food Intake

Main Conclusion: Little or no evidence from this data that gender discrimination exists, such as a lower average nutrient consumption level for females, or greater variance in female and male nutrient consumption levels.

(25) Study: Pitt, Rosenzweig & Hassan
1990
Country: Bangladesh
Measure of Food Consumption: Food Intake
Sample Type: 345 households from 15 villages

Main Conclusion: Consumption disparities reflect gender differentiation in the energy intensities of activities undertaken by men and women.

(26) Study: Ely et al.
1991
Country: Mexico
Measure of Food Consumption: Food Intake
Sample Type: Children > 7 yrs.

Main Conclusion: The basic conclusion is that those household members with larger calorie shortfalls eat less because they choose or are permitted to do less, not because their caloric intake has been restricted.

(27) Study: Gittelsohn
1991
Country: Nepal
Measure of Food Consumption: Quality & quantity of food

Sample Type: consumed, food serving process
767 individuals from 115
households in 6 villages

Main Conclusion: Adult women discriminated against (late position in serving order, channeling of special foods, lower overall food intake), but no sex difference in small children.

(28) Study: Bouis
1991
Country: The Phillipines
Measure of Food Consumption: Food Intake
Sample Type: 448 households

Main Conclusion: A much lower iron adequacy for females; vitamins A & C are reasonable equitably distributed across types of household members (based on age-sex adequacy ratios).

(29) Study: Leonard
1991
Country: Peru
Measure of Food Consumption: Food Intake & anthropometric data
Sample Type: 101 individuals from 26 households of lower socio-economic status

Main Conclusion: Adults (males more than females) rather than children, are subjected to higher levels of seasonal caloric stress. Sex differentials in dietary intake or physical status are not apparent among children (< 12 yrs.)

(30) Study: Warriar
1992
Country: India
Measure of Food Consumption: Food Intake
Sample Type: Individuals disaggregated based on household income and ethnicity.

Main Conclusion: Upper/middle caste groups favor sons more in food allocation than lower status groups and tribal groups.

(31) Study: Hardenbergh
1992
Country: Madagascar
Measure of Food Consumption: Food Intake, Anthropometry, Mortality

Main Conclusion: No evidence of gender bias against girls in mortality, anthropometry, or nutrient intake.

(32) Study: Miller
1992
Country: South Asia
Measure of Food Consumption: Review
Sample Type: Review

Main Conclusion: Primary conclusions from this review of case studies: daughter discrimination does not most characterize the poor, anywhere in India. If anything, greater disparities and malnutrition are found among propertied groups and among the more educated.

In addition, there are many misunderstandings of the issues as a result of differences in approaches and findings. Even so, from the evidence that exists here, while there tend to be higher child mortality rates among the poor, it is not the case that female child mortality rates are consistently higher than those for males; in fact, a number of studies show more gender-egalitarian mortality among the poor. It does seem that daughters, especially in some countries, do put additional financial stress on families as a result of marriage and dowry costs, and not from food consumption.

(33) Study: Engle & Nieves
1993a
Country: Guatemala
Measure of Food Consumption: Food Intake at Midday Meal
Sample Type: 45 women with at least 1 child

Main Conclusion: When mothers expressed a preference for males or for equality with regard to food allocation, these preferences were significantly associated with the actual allocation patterns, although those who stated a preference for equality tended to give a higher proportion of food to children.

(34) Study: Engle & Nieves
1993b
Country: Guatemala
Measure of Food Consumption: Food Intake
Sample Type: 45 households; 230 individuals

Main Conclusion: Slight underfeeding of adolescents, more protein for male head of household, and that the effect of snacking is to diminish the differences between adult and child dietary adequacy. Both male and female heads of household were more likely to have adequate diets compared to other household members.

(35) Study: Haddad, Kanbur & Bouis
1993
Country: The Phillipines
Measure of Food Consumption: 24 hr recall
Sample Type: 448 households

Main Conclusion: Once energy expenditures are accounted

for, calorie intake shortfalls are equally borne within the family, irrespective of overall calorie adequacy.

(36) Study: Ahmed
1993
Country: Bangladesh
Measure of Food Consumption: 24 hr. food weighing/adjusted
calorie requirements for body
weight and activity levels.
Sample Type: 553 households

Main Conclusion: Calorie adequacy for male and female preschoolers is identical. The only statistically significant male-female differences were found among adults, with females having lower calorie adequacy levels.

(37) Study: Rao & Bloch
1993
Country: Rural South India
Measure of Food Consumption: Food Intake
Sample Type: 149 households

Main Conclusion: There is a statistically negative association between wife-beating and the caloric consumption of the children in the household.

(38) Study: Harriss-White
1996
Country: India village level studies
Measure of Food Consumption: Food Intake
Sample Type: 240 households from 6 villages

Main Conclusion: The authors assess the conclusions of four studies of intrahousehold nutrient distribution, all of which use data collected from the same set of study households in southern India. The studies differ in their conclusions for a number of reasons: the individual classifications of data (for ex., different age-group classifications), different treatments of seasonality, different nutrients studied, different aggregations of households and different groups of individuals studied.

(39) Study: Kumar & Bhattarai
1993
Country: Bangladesh
Measure of Food Consumption: Food Intake
Sample Type: 7112 households

Main Conclusion: For the majority of individuals of all ages and sex, the degree of individual adequacy matches the degree of household adequacy. Females over the age of 18 appear to be better favored; and areas with better infrastructure development tend to have a better level of caloric adequacy for all age-groups

and for both males and females.

(40) Study: Senauer & Garcia
1993
Country: The Phillipines
Measure of Food Consumption: Food Intake
Sample Type: 840 households

Main Conclusion: Women of childbearing age are most likely to have inadequate levels of iron intake and that teenagers are the most likely to poorly nourished, overall. After adjusting for activity levels, the calorie adequacy of adults is lower than that of children.

(41) Study: Bouis & Pena
1996
Country: The Phillipines
Measure of Food Consumption: 24 hr recall
Sample Type: 448 households

Main Conclusion: Preschoolers tend to be favored in terms of the patterns of intrahousehold allocation of food. This result is different when only the energy adequacy levels patterns are examined (both corrected and uncorrected). It was found that nutrients were generally fairly evenly distributed among the family members, regardless of age and sex.

(42) Study: C. Lloyd & A. Gage-Brandon
1993
Country: Ghana
Measure of Food Consumption: Food Expenditures

Main Conclusion: Authors compare consumption patterns between female headed households (FHH) and male headed households. They conclude that (a) on average FHH are no worse-off and indeed may be better off than MHH; (b) FHH's spent a higher proportion of income on food than MHH, even at higher income levels, which suggests that factors other than income may be important in determining the proportion of income allocated to food. The tendency of women to allocate a larger share of their own resources to the food needs of their children has been documented in other studies.

(43) Study: B. Rogers
1996
Country: Dominican Republic
Measure of Food Consumption: Food Expenditures

Main Conclusion: FHH allocate the same amount or less of their budgets to food than MHH in absolute and proportional terms. FHH consume higher quality, more expensive and protein-dense foods (more animal products, less of beans and rice) than MHH. Average

caloric adequacy per adult-equivalent is equal or lower in FHH, but children's anthropometric status is the same or higher; it is significantly higher in low-income FHH, possibly due to intrahousehold allocation of food which favors children.

APPENDIX II

SUMMARY OF STUDIES OF THE INTRAHOUSEHOLD ALLOCATION OF NONFOOD INPUTS

- (1) Study: Heller & Drake
1979
- Country: Columbia
Measure of Nutrition Input: Degree of diarrhea, age at weaning, per capita for expenditures
- Sample Type: 1270 preschoolers
- Main Conclusion: There does not appear to be parental discrimination against girls with respect to the probability of illness.
- (2) Study: Miller
1981
- Country: India
Measure of Nutrition Input: Breast-feeding duration
Sample Type: Preschool children
- Main Conclusion: Breast-feeding duration is longer after a boy, in part, because there is less urgency to have another child after a boy.
- (3) Study: Sabir & Ebrahim
1984
- Country: Pakistan
Measure of Nutrition Input: Breast-feeding, anthropometry
Sample Type: 151 households
- Main Conclusion: Longer breast-feeding for boys, boys are relatively heavier, girls are more stunted and wasted.
- (4) Study: DasGupta
1987
- Country: Indian Punjab
Measure of Nutrition Input: Food Intake & Utilization of medical care
Sample Type: 400 households
- Main Conclusion: Wider sex differentials existed for medical care than in food allocation.

(5) Study: Faveau et al.
1990
Country: Bangladesh
Measure of Nutrition Input: Diarrhea prevalence

Main Conclusion: This study showed that the potential for death due to diarrhea among children who are severely malnourished was much greater than for those who are not severely malnourished. In addition, the risk of dying from severe malnutrition was more than twice as high among girls as among boys.

(6) Study: Alderman & Gertler
1994
Country: Pakistan
Measure of Nutrition Input: Utilization of Health Services
Sample Type: 3430 individuals from 5 regions

Main Conclusion: Lower income households seek care more often for boys than for girls. There is a tendency to use high quality providers (private doctors) more often for males than for females. Differences disappear as income rises.

(7) Study: Bouis et al.
1993
Country: The Phillipines
Measure of Nutrition Input: Health care utilization
Sample Type: Adolescents from 448 households

Main Conclusion: Gender did not affect the probability of seeking any of the alternatives to traditional health care providers. However, compared to children, both male and female adolescents seem less likely to be brought to formal health care providers.

(8) Study: Haddad & Hoddinot
1994
Country: Cote d'Ivoire
Measure of Nutrition Input: Health Infrastructure (doctors per person, distance to health services)
Sample Type: Preschoolers < 72 mths.

Main Conclusion: Improvements in access to public service are gender-neutral in their effects on child health.

(9) Study: D. Thomas
1997
Country: Brazil

Main Conclusion: The author concludes that an additional crusado in the hands of a woman raises the share of the household budget spent on education, health and household services (mainly domestic

services) by a factor of between 3 and 6 compared with an additional crusado in the hands of a man. Thus, placing additional resources in the hands of women results in a bigger, positive effect on child nutritional status.

(10) Study:

E. Katz
1995

Country:

Rural Guatemala

Main Conclusion: The author argues that examining the gender-based division of expenditure responsibilities shows that as far as non-food expenditures are concerned, increases in male agricultural income is largely spent on male goods (land; men's clothes & shoes; agr. inputs & equipment; house construction) affecting women's ability to purchase female goods (food; domestic technology).

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