



“Summary of article by Duncan Thomas: Incomes, Expenditures, and Health Outcomes: Evidence on Intrahousehold Resource Allocation” in Frontier Issues in Economic Thought, Volume 5: The Political Economy of Inequality. Island Press: Washington DC, 2000. pp. 194-197

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The author of this article is particularly interested in whether development policies which increase income for families would have different impacts if targeted to male or female heads of households. Traditional economic theory holds that resources are distributed within households in such a way as to maximize the utility of the entire household. According to this theory, it would not matter which household member controlled and allocated resources because each one would operate according to the same principle of maximization.

Critics of this theory suggest that different household members have different preferences and they engage in various strategies to arrive at decisions about household resources. The article presents an empirical test of the traditional theory using data from a large scale, detailed survey of households in Brazil. If the allocation of the household budget is sensitive to whether the male or female head of household receives an increase in income, then the traditional model of unitary household decision making should be rejected.

Modeling and Measuring Welfare in the Household

The welfare of a household depends on the satisfaction (utility) each member gains from his or her share of the goods, services and leisure consumed or produced by the household. Household demand for these things is constrained by the household budget, composed of members' labor and non-labor income. Demand is likely to depend on such characteristics as age, gender or education of household members..

The traditional theory of intrahousehold allocation views the household as a black box with a unitary set of preferences. This theory does not attempt to explain how those preferences are determined; rather it assumes that some mechanism exists which aggregates the preferences of individual family members. It may be that all members share the same utility function, that all are perfectly altruistic (i.e. each prefers to fulfill the preferences of others), or that one member makes all economic decisions. A more general model of economic decision making in the household would allow for the possibility that preferences, degree of altruism and power within the family differ, and that intrahousehold allocation is determined by a collective decision making process.

One of the difficulties of testing intrahousehold allocation is that earned income (or household production of goods and services) is not an exogenous factor which can be viewed as

independent of household demand for goods and services. Income from labor depends on the willingness of household members to reduce their leisure, which is an element of utility. “Intuitively, household members are likely to negotiate over the allocation of resources to goods..., home production..., and leisure..., simultaneously.” [145] To address this problem, the analysis examines the effects of non-labor income (from physical and financial assets, pensions, social security, workers compensation, gifts, etc.), and total income (which is instrumented with non-labor income). Slightly over half of all households report some non-labor income and it accounts for a quarter of total income.

Data for this analysis came from an urban subset of the *Estudio Nacional da Despesa Familiar* (ENDEF), a survey of household budgets conducted in Brazil in 1974-75. The urban sample contained 38,799 households. For each household a male and/or female head were identified. Eighteen percent of households were headed by single women and six percent by single men. The rest had both male and female heads. Virtually all male heads reported some income, averaging Cr\$28,000 per month. Slightly less than half the female heads had some income, averaging Cr\$8,700 per month. The survey gathered information on incomes and their sources, and on consumption at a very detailed level. Expenditures on 300 different goods, were reported. Interviewers weighed and measured food prepared in the home for a week to determine levels of specific nutrients and measured the height and weight of all household members..

Differences in Consumption

The analysis tested for differences in the impact of income attributed to either the male or female head of household on the share of the budget allocated to specific goods and services. Because income from wage labor is not necessarily independent of the household’s decisions about leisure and consumption, the main thrust of the analysis concerns the effect of non-labor income on household demand.

Additional non labor income, whether received by a woman or a man, changes budget shares in the same direction - the percentage spent on food, adult clothing, alcohol, and tobacco goes down, and everything else goes up. But all these effects are larger - often three to five times larger - when the income is received by a woman. The share of the budget spent on investments associated with human capital accumulation (health, education, and household services) increases when both a man’s and a woman’s income increases, but the increase is well over four times greater for a woman. Similarly, the share of the budget spent on leisure (an aggregate of recreation and ceremonial expenditures for birthdays, weddings, etc.) increases over three times as much when a woman’s income increases relative to the income of a man. The budget share of food declines, as would be expected with a rise in income, but to a much greater extent when a woman’s income increases. Yet, as discussed below, the nutritional value of food intake improves when a woman’s income increases. In only one category, “adult” goods (tobacco, alcohol and adult clothing) is there little difference between men and women in the effect of income on the budget share. Essentially the same results emerged when the effect of total income (treated as endogenous) were examined.

Differences in Nutrients and Child Anthropometrics

The ENDEF survey reports consumption of particular nutrients and anthropometric measures. The study examines the effect of income on these outcomes. Although the budget share of food declines as income increases for both men and women, expenditures on food increase in absolute terms, and per capita consumption of calories and protein increase. Again, the increase in nutrients is much higher as a woman's income increases in relation to a man's income. In Brazil higher intakes are associated with improved health, so an increase in a woman's income appears to result in better health for members of her household.. Two measures the health of children under eight, height-for-age (a longer term measure), and weight-for-height (a shorter term measure) show a similar pattern. Both measures increase more as mother's income rises relative to the effects of father's income.

The study directly addresses the fact that it is difficult to measure income, particularly at the individual level. In an attempt to address this issue, part of the analysis examines differences in the effects of parental income on siblings. In this case, measurement error in parental income would affect siblings in the same way and thus differential effects on sons and daughters will not be biased. If an increase in income to either a mother or a father produces different outcomes for sons or daughters, the unitary allocation model would be rejected.

The results show that an increase in a mother's income improves height-for age and weight-for height of both sons and daughters, but the effect on daughters is much greater. An increase in a father's income has a much smaller effect on the health measures for both sons and daughters; in this case the effect is larger for sons. (In fact, the estimated effect of fathers' incomes on daughters' health is not significantly different from zero at conventional significance levels.) The difference-indifference between the effect of maternal paternal income on sons and daughters is significant. This indicates the unitary model of the household should be rejected. The test is robust to correlations between parental incomes and unobservables that affect child outcomes (including measurement error in income) as long as those correlations are not gender-specific.

To complete the analysis, tests based on the consumption, nutrition, and child anthropometric data were carried out on two subsets of the sample: one containing only intact couples with both male and female heads (75% of the total sample); and one in which both male and female heads reported some income (29% of the total). The results for intact couples generally reflect the same pattern as the tests described above, although the male/female differences are now smaller for many variables. For households where both male and female heads report some income, differences in income effects for men and women tend to be even smaller and most are not statistically significant. That is, only in the case of two-parent, two income families is the data consistent with the unitary or common preference model of household decisions. However, this test suffers from the problem of endogeneity - the decision to be a two-income household is not independent of other family choices concerning resources.

The study indicates that the unitary model of household decision making proposed by traditional economic theory is not supported by the ENDEF data. Male and female heads of households do not share common preferences in all cases. Increases in women's income are associated with a higher share of the household budget for expenditures on human capital and leisure. The share

going to food expenditures declines, but “food composition also changes, with nutrient intakes rising faster as women’s income increases.” [164] Moreover, indicators of children’s health are more responsive to maternal income relative to paternal income.