Intrahousehold Welfare

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1. Introduction

There is a voluminous economic literature on intrahousehold issues. This is hardly surprising given that the many critical functions that households fulfill. They are the locus where most consumption decisions and human capital investments are made. By pooling resources, households generate economies of size and shelter members against unemployment and health shocks. Furthermore the formation and dissolution of households play a crucial role in the long-term distribution of income and wealth. Here we focus on intrahousehold welfare which, as Haddad and Kanbur (1990) have shown, is important to our understanding of inequality in general.

Becker was the first economist to become seriously interested in what happens within the household. Becker's contribution, which is nicely summarized in his Treatise on the Family, emphasized three things: the organization of production within the household; the way decisions are made within the household; and the formation of couples. All three

have a bearing on intrahousehold welfare.

2. The household as a production unit

The household is a production and consumption unit, self-providing many services such as food preparation, child care, and house chores. In developing countries, households also produce much of their own food and housing and fetch their own fuel and water. Becker (1981) pointed out that the organization of production within the household ought to follow economic principles, such as the equalization of marginal returns across activities and the allocation of tasks across household members according to comparative advantage.

These simple observations have far reaching implications because seemingly small differences between household members can have dramatic consequences. To see why, consider the allocation of wage work and household chores between husband and wife. Assume that the tasks are non-divisible and that the return to education is positive in work outside the home and zero in house chores. It follows that the husband will work outside the home if he is slightly better educated than his wife. Anticipating this, parents may in turn decide not to invest in daughter education but rather emphasize the learning household chores among girls. This results in a self-fulfilling equilibrium in which women receive less education and are confined to household chores. To the extent that education and independent income affect bargaining within the household, such traditional division of labor may have dramatic consequences on intrahousehold welfare.

The recent empirical literature has cast some doubt on the efficient organization of production within the household. Using data from West Africa, Udry (1996) showed that

households do not equalize returns to labor and organic fertilizer across fields managed by different members. Duflo and Udry (2004) provide similar evidence, showing that household labor resources are not optimally reallocated across activities in response to weather shocks. Fafchamps and Quisumbing (2003) show that comparative advantage alone cannot explain the allocation of tasks within Pakistani households. Their evidence also suggests that most household tasks are easy to learn, contradicting Becker's conjecture that learning-by-doing locks men and women in specific work patterns. Gender differences in career choices and intrahousehold division of labor may reflect different preferences, possibly shaped by social norms, or result from differences in intrahousehold bargaining.

3. Intrahousehold bargaining

Most consumption takes place within households sharing a common budget.[1] Certain consumption goods are rival in the sense that consumption by one precludes consumption by another. Food is an example of a rival good. Other consumption goods – such as a house – are non-rival: they are consumed jointly by the members of the household. In the context of intrahousehold welfare, non-rival goods are usually referred to as (household) public goods.

When choosing how to allocate a limited budget to various rival and non-rival goods, the household takes into account the preferences of its members. Formally, let x_i denote a vector of rival goods consumed by individual i and let X denote household public

[1] In some societies, such as the coastal region of West Africa, spouses keep separate finances. However, whenever they both contribute to a household public good, they can be regarded as deciding consumption jointly.

goods. The household's consumption choices can be represented as the solution to an optimization problem of the form:

$$\max_{\{x_1,\ldots x_N,X\}} \sum_{i=1}^{N} \omega_i U_i(x_i, X) \text{ subject to } \sum_{i=1}^{N} p x_i + qX = y \tag{3.1}$$

where ω_i is a welfare weight, N is the number of household members, p and q are prices, and y is income. Consumption choices depend not only on individual preferences $U_i(.)$ but also on welfare weights ω_i: individuals with large ω_i have more weight in the household's decision and hence achieve a higher individual welfare. Understanding intrahousehold welfare thus boils down to understanding the factors that affect ω_i.

In two seminal contributions, Manser and Brown (1980) and McElroy and Horney (1981) model intrahousehold bargaining as depending on threat points: when negotiating over how to allocate consumption expenditures, spouses can threaten to walk away from the couple. How much welfare they can achieve on their own determines how much bargaining power they have within marriage. Intrahousehold welfare is predicted to be determined by rules determining the devolution of assets upon divorce (including alimony, child support, and welfare payments).

Lundberg and Pollak (1993) argue that the threat of divorce is too extreme to be credible in most everyday situations. Non-cooperation within marriage is a more realistic threat. In this cases, intrahousehold welfare is expected to depend on the financial autonomy of spouses, such as rules determining who receives welfare payments or whether married women have independent access to credit. Lundberg, Pollak and Wales (1997), for instance, show that consumption of women and child clothing increased when the UK

transferred a substantial child allowance from husbands to wives. McElroy (1990) provides a useful discussion of various factors thought to affect intrahousehold bargaining.

The empirical literature has explored these ideas in terms of 'unitary' versus 'collective' models of the household. A household model is said to be unitary if choices do not depend on bargaining power; otherwise it is collective. A household may be unitary for a variety of reasons, for instance because all decisions are taken by the household head, or because all household members have the same preferences over household consumption $\{x_1, ...x_N, X\}$. A simple way of testing the unitary model is the income pooling test: if welfare weights do not depend on bargaining power, consumption choices should only depend on total income, not on bargaining weights. This yields a simple exclusion test that has been widely applied in the literature, often to identify variables affecting intrahousehold bargaining.

Chiappori (1988) has proposed a way of testing the efficiency of the intrahousehold bargaining process. The basic idea is that the solution to optimization problem (3.1) can be written as a two step process. The household first decides how much to allocate to household public goods X and to the rival expenditures $y_i = px_i$ of each household member, with $pX + \sum_i y_i = y$. Then each member maximizes his or her own utility U_i subject to $px_i = y_i$. Intrahousehold bargaining only affects how total expenditures are shared among members, that is, it only affects the share of rival expenditures that goes to each member. This observation yields testable restrictions on cross-equation parameters in a demand system. This is called the sharing rule approach. Browning, Bourguignon, Chiappori and Lechene (1994), for instance, apply this approach to Canadian couples without children and show that allocation of expenditures on each partner depend on their relative incomes.

Both the sharing rule and the income pooling tests raise empirical difficulties. One difficulty arises whenever utility is transferable and all household members contribute to a household public good. In this case, Bergstrom (1997) has shown that changes in individual incomes do not affect intrahousehold welfare allocation. The reason is fungibility: reducing the income of a household member simply reduces his or her contribution to the household public good.

Another empirical difficulty is that individual preferences are not directly observable. Hence in order to identify the effect of bargaining power on household choices, we must assume that different categories of household members have systematically different preferences over joint household consumption. The empirical literature has relied on two types of identification strategies to deal with this issue. The first strategy is to rely on stereotypes, such as 'men prefer alcohol and cigarettes' or 'women care more about children'. This strategy permits identification whenever the stereotype is correct. For instance it has been shown that, when the bargaining power of the wife increases, the household spends more on child nutrition and schooling (see Behrman (1997) and the references cited therein). Based on this evidence, it has been argued that increasing the bargaining power of women is a way to improve child welfare. Such evidence is a double-edged sword, however. It also reinforces a stereotype that could be used to argue that, since women care for children, it is alright for society to relegate them to a reproductive role. What we need is empirical evidence based on actual preferences, not stereotypes.

The second identification strategy is to focus on individual consumption of rival goods such as food or clothing. While this is a better strategy, it also has problems. Browning et al. (1994), for instance, show that households in which the wife earns more spend more

on female clothing. They interpret this result as evidence that higher income raises a woman's bargaining power. The problem is that a spouse with a higher income probably occupies a higher position and needs better clothes to go to work. This may generate a reverse causation between income and clothing expenditures, thereby weakening inference.

Spouses probably derive utility from each other's consumption of rival goods. This point was initially made by Becker who discusses two possible cases, one in which individuals are altruistic – someone else's *utility* enters their preferences – the other in which they are paternalistic – someone else's *consumption* enters their preferences. An example of paternalistic preferences is when a parent does not want a child to smoke, although the child wishes to. In poor countries, differences in health or nutritional status between spouses have sometimes been interpreted as the result of intrahousehold bargaining (Behrman 1997). Yet, it would be quite foolish for even the most despotic husband to starve his wife to death as she would be of no use to him once gone. Hence such a husband would care about his wife's consumption.

An interesting illustration of how altruism can affect intrahousehold welfare is the so-called Rotten Kid theorem. In this theorem, Becker imagine a parent who, for altruistic reasons, transfers money to a child. The child can try to capture part of the household income, for instance by refusing to work or by diverting household resources. Becker shows that, as long as the parent decides the size of the transfer after capture has taken place, capture only leads to lower household income and hence to a lower transfer. As a result, the child chooses not to capture because doing so ultimately reduces his consumption.

4. The marriage market

The marriage market is discussed in a separate entry in this volume and need not be discussed in detail here. What is important to realize for our purpose is that if sufficient commitment mechanisms exist, intrahousehold allocation of welfare can be negotiated up front at the time of marriage. For instance, future spouses may anticipate that a wife who earns an independent income has more say in household decisions. As a result, the groom may insist that the bride will never work before agreeing to marry her. Similarly, if devolution of assets upon divorce affects bargaining power, the newlyweds may sign a pre-nuptial agreement that shapes how assets will be divided.

As first pointed out by Lundberg and Pollak (1993), this observation has deep implications regarding policy intervention. If intrahousehold welfare is entirely decided at the time of marriage, then changing the rules applying to married couples only affects those who are already married. Changes to what happens after marriage (e.g., devolution of assets upon divorce) have no long run effect because, once they have been introduced, they are anticipated in the marriage market.

Provided that this reasoning is empirically correct, the policy implication is that the best policy handle to influence intrahousehold welfare is the marriage market itself. The share of household consumption that women can (implicitly or explicitly) negotiate for themselves depends on the assets they bring to marriage. If this is true, helping women then is best achieved in the long run by improving female education and by changing inheritance rules in their favor.

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