

Income Transfers, Intra-Household Resource Allocation and Marriage Markets in Rural Mexico

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Extended Abstract

Unequal ‘power’ among household members and conflict over resources allocation is a common phenomenon in less developed countries. Moreover, the idea that improving women’s status in the household is beneficial to the household as a whole is often advanced as an argument in favor of social policies targeted towards women. Consistent with this argument, recent empirical evidence has suggested that the level of unearned income received by a female in the household leads to an improvement in children’s health; evidence which is inconsistent with the unitary household model of resource allocation (Thomas, 1990; Duflo, 2000).

However, previous tests of the income pooling hypothesis may not be credible. Using observational data, Thomas (1990) finds a correlation between the share of unearned income obtained by the woman and children’s health, controlling for total household income. To the extent that household decisions on the level of unearned income may be simultaneously determined with the goods consumption decisions, this may lead to simultaneity bias and omitted variables bias due to heterogeneity in tastes by households. Duflo (2000), on the other hand, uses exogenous variation in income levels from the expansion of the South Africa pension program in the early 1990s, finding that unearned income under control of the grandmother improves granddaughters’ health. However, using this research design may lead to confounding of the intra-household redistribution effect from a pure household income effect. Others (Attanasio and Lechene, 2002; Rubalcava et al, 2003; Rangel, 2003) have used similar identification strategies as Duflo (2000) to identify the independent effect of woman’s income share in the household on intra-household resource allocation outcomes. Lastly, Lundberg,

Pollak, and Wales (1997) use a change in a child allowance policy in the UK during the late 1980s that increased the share of women's income while keeping total household income fixed to estimate whether this lead to a redistribution of resources allocated within the household. However, their design is limited by the lack of a valid comparison group.

The ideal experimental design to test the income pooling hypothesis, as attempted by Lundberg et al (1997), would be the random assignment of income shares to partners in the household holding total income fixed; a design of this sort may be infeasible. In this paper, I propose a quasi-experimental design that uses exogenous variation in two factors that manipulate men's and women's income such that we observe variation in income shares of household members holding total income fixed. Using rainfall variation, which affects the agricultural production of poor households in rural Mexico, and increases in the unearned income obtained by women as a result of an experimentally-designed conditional cash transfer program, I show that total household income does not vary in these households, but the income share under the woman's control is (arguably) exogenously increased as a result of the cash transfer.

In 1997, the Mexican government initiated the Progresa Program, a large-scale human development conditional cash transfer program for marginalized households in rural areas.¹ It consists of cash transfers *provided to mothers* contingent on certain requirements in terms of children's school attendance and family-level visits to health services. 506 communities were selected to participate in an experimental evaluation of the program; the communities were randomly divided into two groups, the treatment group being phased into the program in March-April 1998 and the control group in November-December 1999. This randomized design, coupled with the variation in rainfall shocks in these communities, allows for clear estimation of the effect of changes in unearned income share of women on intra-household allocation and marital decisions.

¹ Progresa was renamed Oportunidades under the Fox Administration. For consistency, I will refer to the program as Progresa in this text.

I present evidence that rejects consensus in the allocation process in terms of changes in intra-household resource allocation and marital turnover. Expenditures shares in girls' and boys' clothing increased by 10 percent in households where women received cash transfers but suffered a rainfall shock, relative to a comparison group with equivalent income levels. Second, marital union dissolution rates among cash transfers recipients increased by 40 percent over a two-year period, a substantial increase in separation rates among eligible women. Estimates are robust to identification designs; matching households on pre and post- program and rainfall shock-induced incomes; using the discontinuity in policy-determined household eligibility within a community to participate in the program; and allowing for non-linearities in the effect of total household income on resource allocation and marital dissolution, give similar results.

Estimates suggest that behavioral responses vary substantially between indigenous and mestizo populations. Expenditures shares in girls' clothing among indigenous women increased by 15 percent in households where women received cash transfers but suffered a rainfall shock, relative to a comparison group with equivalent income levels, whereas there is no observed effect among mestizo women. In addition, marital union dissolution rates among cash transfers recipients increased by 75 percent among indigenous women over a two-year period, whereas there is no observed effect for mestizo women; these sub-group differences are substantial and statistically significant.

A review of qualitative and quantitative evidence suggests that social norms and property rights that favor women in indigenous communities may help explain these observed differences. While the available data prevent a formal test, a body of ethnographic evidence suggests that variation in gender inequality and 'power' between indigenous and mestizo communities is evident. Whereas in mestizo households, the role of *machismo* enforces highly unequal gender disparities within the household, social scientists have found in traditional indigenous cultures a

striking lack of it (Chiñas, 1992; Elmendorf, 1972; Wolf, 1959, 1964).² In addition, certain indigenous communities tend to have much more fluid marriage markets; for example, the existence of trial marriages and cohabitation is very prevalent (Carpena-Méndez, 2004). In addition, Robichaux (1994) finds evidence that indigenous women in Mesoamerica are more likely to inherit land, which potentially improves their socio-economic position outside of marriage and may lead to separation being a credible threat in household bargaining processes. These patterns are validated with the use of survey qualitative measures of decision-making patterns and landownership among indigenous versus mestizo households. The existing evidence suggests that communities with lower degrees of social stigma and greater degrees of gender equality will lead to greater renegotiation and a higher incidence of movement in the marriage market as a result of these changes.

² A formal definition of *machismo* refers to “a sense of exaggerated masculinity or a cult of virility whose chief characteristics are extreme “aggressiveness and intransigence in male-to-male interpersonal relationships and arrogance and sexual aggression in male-to-female relationship” (Stevens, 1972, p.315)” (Elmendorf, 1977, p.141).