

Intrahousehold bargaining and resource allocation in developing countries

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2019

Based on Doss (2013) article of the same title, World Bank Research
Observer 28 (1): 52-78

“A central question [in the bargaining literature] is how different outcomes are affected by women’s bargaining position.” – Doss 2013

Empirical research on intrahousehold issues falls into 4 categories

- Tests of the unitary model of the household
- Tests of efficiency in household allocations
- Empirical estimates of the determinants of resource allocation within the household
- Experiments that are designed to provide an understanding of the processes of intrahousehold decision making

Tests of the unitary model of the household

| | Bargaining | Non-Bargaining |
|--|---|--|
| Cooperative- Pareto efficient | <p>Bargaining power is a function of the outside options of two individuals.</p> <p>Outside option – welfare if not a member of the household.</p> <p>Key policy insight – policies that change outside options affect bargaining power within household. E.g. women’s wages.</p> | <p>Unitary – preferences are identical, and resources are pooled</p> <p>Collective – preferences are different, and modelled</p> |
| Non- cooperative, Not Pareto- efficient | <p>No enforceable contracts – but actions are conditional on actions of others. HH is the site of largely separate gender-specific economies linked by reciprocal claims on individuals resources (land, goods, labour, income)</p> <p>Net transfers of income (only link) are treated as given; based on that, individual utilities are maximized.</p> | |

Research that tested the predictions of the unitary model

- E.g. Unitary model predicts that outcomes of household decisions will be affected only by total income and will not be affected by the distribution of individual shares of income within the household.
 - Large body of research proved otherwise, leading Alderman et al. (1995) to argue that it was “time to shift the burden of the proof.”
- Collective models with efficient allocation supported (Bobonis 2009; Chen 2009; Quisumbing and Mallucio 2003)
- Noncooperative bargaining models supported (Udry 1996; McPeak and Doss 2006; Katz 1995).

Research that examines determinants of resource allocation within the household

- Empirical papers, which do not necessarily use a theoretical model of household bargaining to frame question
- Explore influence of gender-linked variables, i.e. indicators of women's bargaining power on intra-household resource allocation
- Land rights (Allendorf 2007)
- Asset ownership (Beegle et al. 2001; Quisumbing 1994).

Experimental games

- Explore decision-making processes – test how different levels of resources and communication affect decisions.
- Uganda (Iversen et al. 2006) – households do not maximize surplus. A greater proportion of surplus is maximized when women are in charge of the cooperative account. **Find original and expound?**
- Philippines (Ashraf 2009) – spouses exhibit strategic behavior
- Policy implications – households may not necessarily make decisions that maximize total household resources.

Who is bargaining?

Who is bargaining?

- Most models typically assume a two-member, husband-wife bargaining model, other members are assumed to be passive or unimportant to the bargaining process
- Doss and Morris (2000) find important consequences of including (not dropping) female headed households in Ghana
 - Females in male headed households are able to bargain for complementary inputs and adopt improved varieties of maize and fertilizer
 - Females in female headed households do not adopt improved varieties of maize and fertilizer – because they cannot.
- Intergenerational bargaining
 - Jensen (2004) in South Africa

Preferences are not observed

- Ideally, would like to observe if individuals with more bargaining power are able to obtain their preferred outcome
- Preferences are not observed; assumption that men and women have different preferences regarding outcomes
- Gender differences used as a proxy for differences in preferences

Broader structures of constraint that shape the choices that men and women make

- “Constraints are defined here as the assets, rules, norms and preferences that delimit what people want and how they can go about getting what they want.” Folbre (1994)
 - Rules and norms are important to understand the choices that people make.
- Agarwal (1997) – 4 dimensions that have been missed in the bargaining literature
- Goldstein and Udry (2008) – Community norms and institutions matter in household decisions
 - Power affects whether an individual has secure tenure to land/whether the land is fallowed at efficient levels

Identifying bargaining power

Approaches used to identify causal effects of interventions (that are related to bargaining power) on outcomes in order to guide policy / identify good policy instruments

Establishing causality

- Natural experiments
- Instrumental variables
- Randomized experiments

Institutional changes – natural experiments - laws

- Change in marriage law in Brazil redistributes alimony rights and obligations to couples in consensual unions - Rangel (2006) treats this as an increase in women's bargaining power. Comparing hours worked and children's education of married couples and cohabiting couples, before and after, finds the change in law resulted in more leisure and a reallocation of resources towards schooling of older girls.
- Inheritance laws changed in Maharashtra and Karnataka. Comparing women whose father's died before the law with those who died after the law, Deininger et al (2010) found a positive impact on their educational attainment.
- Change in family law reform in Ontario Canada which improved women's position after divorce reduced suicide rates among older women though not among younger women and men (Adam et al 2011).

Institutional changes – natural experiments – prices and exogenous incomes

- Qian (2008) compares sex ratios and educational attainment of cohorts of boys and girls in tea-planting communities and non tea-planting communities in China before and after the agricultural reform. Tea planting counties (where women had higher incomes and therefore more bargaining power) had higher survival rates for girls.
- Post-apartheid pensions scheme with eligibility for men >65 and women >60
 - Duflo (2003) found health status of children in household with an eligible woman better than in hhs without eligibility, but no effect for men.
 - Jensen (2004) found that adult children reduced transfers to parents after they received this benefit (intra-hh sharing of benefit).

Instrumental variables approach

- Rainfall patterns as an instrument for agricultural production (Doss 2001b Duflo and Udry (2004)
- Effect of dowry size on intrahousehold time use and share of spending on women's goods (Brown 2003).
 - To account for confounding factors between dowry and women's bargaining position in the hh, grain shocks in preceding year used and sex composition of siblings in both bride's and groom's families as instruments for dowry.
 - Larger dowries were associated with more leisure time.

Randomized experiments

- Conditional cash transfer programs with randomized roll out in Mexico (Behrman and Hoddinott 2003; Bobonis 2009), India (Lim et al. 2010) and Nicaragua (Maluccio and Flores 2005)
 - Find a positive impact of transfer on health and education outcomes of children

Indicators and Proxies for Bargaining Power

Bargaining power is unobservable, so proxies are used – methodologies may not imply causation, but causation cannot be rejected – gender linked policies and variables associated with good outcomes

Income and employment-women's earned income

- Luke and Munshi (2011) use variation in tea-estate elevation (in India) to predict women's income because (women pluck tea) and the value of tea is higher at higher elevations and finds that higher women's income reduces the likelihood that children will marry a relative or be schooled in an ancestral location.
 - Recall also Qian (2008).
- Work outside the home can increase bargaining power – Connelly et al. (2010) study migrant returnees (from city) in China – statistically significant results – but sign is ambiguous.

Income and employment-issues related to women's earned income

- Women's participation in the LF changes the value of time – more money may be spent on transportation, prepared food, clothing – not necessarily an increase in women's bargaining power
- Work can be empowering ...
 - Greater income, new information, new experiences
- or disempowering...
 - A greater total time burden of work
 - Put them in unsafe situations

Unearned income

- Individuals unearned income reduced his/her labor supply but less of an effect on spouse's labor supply (Schultz 1990)
- But there may be selection in who receives unearned income, especially among women
- Households in which women received CCTs improve children's health care and school attendance compared to HHs which did not receive CCTs (Behrman and Hoddinott 2005, Maluccio and Flores 2005, Bobnis 2009, Lim et al. 2010), but not compared with HHs where men received the transfers.

Assets – land and housing

- Land provides bargaining power by providing better options / income (through rents and through use in productive activities) / sense of security
- Most important asset in developing countries
- Concept of land ownership is complicated
 - No formal titling
 - Full legal bundle of rights may not be held by one person (Bomuhangi et al. 2011)
 - Formal rights to land may not equal control over the land (especially for women)
- Datta (2006) women in squatter settlements who received joint titles to housing were able to negotiate better intrahousehold outcomes.

Assets – broadly defined

- Women's asset ownership (farmland, savings and business) is associated with a higher budget share spent on food and education in Ghana (Doss 2006).
- Wife's perception of share of assets owned by her and husband (house, vehicle, appliances, jewelry, furniture and utensils) were associated with obtaining prenatal care (Beegle et al. 2001).
- Friedemann-Sanchez (2006b) consider social networks in addition to physical assets

Assets

- Current ownership of assets can be the result rather than the cause of bargaining power
- Quisumbing and Maluccio (2003) use current assets as well as assets at the time of marriage to analyze expenditure patterns in Bangladesh, Ethiopia, South Africa and Indonesia
 - Women's assets at marriage increase shares of expenditures on education
 - Men's on food
- Doss et al. (2011) demonstrate extent of (intrahousehold) gender asset and wealth gaps in Ecuador, India, and within India, Karnataka.
- Strong associations between assets and BP, but econometric challenges to prove causation.

Human capital

- Empirical analyses that use women's education as a RHS variable may do so
 - Within a unitary framework because consumption patterns between educated and non-educated women will differ
 - But women's education also increases outside options and bargaining power
- Thomas (1994) includes education of both husband and wife and finds that women's education levels have a greater effect on daughters and the opposite is true for father's (which country?)

Other proxies

- Men's consumption of alcohol as a determinant of marital violence – and indicator of women's low bargaining power (Rao 1997).
- Mother's of sons or firstborn sons have better health and nutritional status (Wu and Li 2011)
- Women's decision making ability
 - Whether to sell key assets (Reggio 2011)
 - About food preparation and consumption Patel et al. (2007)
- Women's perceptions about appropriate social norms may be correlated with bargaining power and outcomes
 - Women's attitude to gendered institutions (Mabssout and Van Staveren).

Bargaining over what? Measuring outcomes.

Literature – instrumental approach to bargaining power. Uses, limits and challenges of measures used in the literature. Needed: More research to understand causal links.

Inferential approach to bargaining power

- Direct information on women's bargaining power is rarely available.
- Inferential approach is used – when the proxy for bargaining power has a significant effect on an outcome, it is assumed that this is the preferred outcome.
 - E.g. if women own more household assets and more of the household budget is spent on food, then the inference is that women prefer this outcome, and used their increased bargaining power to obtain it.
 - Necessary condition for this to be true is that men and women have different preferences.
 - If this is not the case, the impact of women's bargaining power will be underestimated.

Direct approach – measuring preference heterogeneity

- Couples in Malaysia asked how they would spend an additional US 40 across 13 expenditure categories – and a measure of preference heterogeneity within the household calculated, which improves estimation of expenditure decisions (Kusago and Barham 2001).
- Husbands and wives are asked about preferred number of children (DHS) and used in analyses of fertility decisions (Bankole 1995).
- Information elicited on husbands and wives willingness to pay for malaria vaccines, eliciting different preferences (Prabhu 2010)

Consumption

- Expenditure used as a measure of well-being and preferable to income as such.
- Used as direct/indirect evidence of resource allocation.
- Endogeneity – measures of bargaining power (especially income and asset ownership) may be related to consumption in many ways in addition to their relationship to bargaining power.

Consumption expenditure

- Expenditure on private goods
 - Dunbar et al (2010) categorize clothing expenditure as men's, women's and children's and find a bias in favor of boys in Malawi.
 - Deaton (1989) uses adult clothing as a private good to analyze expenditure patterns for children – finds no gender bias in Cote d'Ivoire or Thailand.
- Expenditure on public goods
 - Women's bargaining power affects household budget shares spent on food, education, recreation, health, private adult goods or other categories of goods (Quisumbing and Maluccio 2003; Duflo and Udry 2004; Doss 2006).

Transfer payments, and Direct consumption (services)

- Women with more bargaining power are more likely to make transfers to their own parents but not to the parents of their husband (Khemani 1999).
- Direct consumption – services received
 - Women with greater share of household assets are more likely to receive prenatal care and give birth in a hospital or private doctor's office (Beegle et al. 2001).

Production

- (A wide range of) production decisions have been modeled as the outcomes of intrahousehold decision making.
- HH's production decisions have effects on total household production/surpluses and its distribution among household members
- Much of the work is in agricultural production
- Understanding Intrahousehold dimensions of transition – labor patterns changing within agricultural sector as members move to non-farm and off-farm will be important.

Testing the Unitary model in agricultural production

- In a unitary model of the household, agricultural inputs would be allocated across plots based on marginal output rather than on identity of the household member controlling the plot.
- Udry (1996) finds that fertilizer and labor are not allocated efficiently across men's and women's plots in Burkina Faso – reallocating from men's to women's would increase total output.

Intrahousehold bargaining and inputs

- Amount of time individuals allow fields to be fallow used as an indicator of power within households and communities by Udry and Goldstein (2008).
- They find that the “intensity of investments on different plots cultivated by ... an individual corresponds to that individual’s security of tenure over those specific plots and...position in political hierarchy relevant to those specific plots.” [p. 98]

Intrahousehold bargaining and location

- McPeak and Doss (2006) find that among pastoralists in Northern Kenya in a region where traditionally men decide where to locate each season and women control the use of milk, whether and how much milk to sell in the market is contested between husbands and wives.
- The presence of market opportunities leads husbands to locate household farther from town to limit milk sales.

Technology adoption

- Allocation of labor across crops when new crops or technology adopted – inefficient allocation in rice fields and millet and sorghum in Cameroon – women do not allocate labor to men's fields, even when it would have resulted in higher HH yields (Jones 1983)
- When women have insufficient bargaining power within the household, the benefits of new technologies may be taken over by men, even when designed specifically to target men (Von Braun 1988)

Labor allocation

- Related measures: labor force participation, labor allocated to agricultural production/household production, household labor earnings, income distribution, types of labor, leisure (indicator of well-being).
- Ambiguity: women's hours worked in the LF – gives them more bargaining power (through income and networks), but may also reduce well-being for those who do so because no other option (poor women).
- Schultz (1990) finds that given the opportunity (increased unearned income) individuals prefer to work fewer hours (in LF).

Labor allocation – unpaid work and leisure

- Allocation of labor to household chores may be result of intrahousehold bargaining.
 - Dowry and bride price in Taiwan affect number of hours husbands spend doing chores (Zhang and Chan 1999, Hersch and Stratton 1994).
- Individuals with more bargaining power are expected to have more leisure – good measures of leisure not available. **See Dominique's paper on water.**

Children's outcomes

- Resources in the hands of women have a larger positive impact on outcomes for children than the same resources in the hands of men.
- Outcomes:
 - Anthropometric measures height for age (H/A), weight for height (W/H) and body mass index (BMI);
 - Educational attainment, especially of girls; Enrolment and expenditure on education also capture measures of intention for children to obtain education (appropriate in the short-term).
- Girls W/H was higher in households with a woman eligible for pension among black South Africans (Duflo 2003).

Decision making and perceptions - Process indicators – measures that affect outcomes

- Who makes key decisions within the household
 - Tricky, because they may be constrained or conflicted by preferences of their husbands;
 - E.g. may have control over food budget spending, but amount of budget may be determined.
- Individuals perceptions of gender roles
- Perceptions of social norms

Decision making and perceptions

- Women's land ownership increases the probability that women have the final say on their own health care and that they make decisions on large and small household expenditures (Allendorf 2007).
- Female migrant returnees to Chinese households made different decisions to those who had not migrated in relation to children's education, family planning, large purchases, investments and women's own migration (Connelly et al. 2010), though in different directions.

Other outcomes – violence against women

- Land ownership reduces women's experience of domestic violence in India (Panda and Agarwal 2005)
- An increase in household income decreases, but an increase in women's share of hh income increases the probability of domestic violence among former slave castes in India (Luke and Munshi 2011)
- Inadequate dowry is correlated with violence against women in India (Rao 1997)

Other outcomes – ownership of assets

- Land ownership is most often used as a proxy for bargaining power
- But it is an outcome variable as well.
- Studies focus on identifying determinants of women's land rights, though not explicitly in a bargaining framework (Deere et al. 2004)

Other outcomes – women's health

- Women's health outcomes are improved by increasing women's bargaining power; direct outcomes as well as women's role within household decision making (Beegle et al. 2001; Wu and Li 2011).

Last words

- Rigorous analysis, to show unambiguous causal relationships
 - Natural experiments – very specific and usually very limited settings
 - RCTs – more needed to focus explicitly on women's bargaining power
- Policy evaluation
 - Design implementation so that it can be evaluated
 - Collect data before and after the change
 - If ethically possible, with and without, so that DID is possible
 - Randomize implementation
 - Where not possible, have data for instruments
- Qualitative information to supplement
 - Interviews and focus group discussions