

# Understanding intra-household decision-making processes for agricultural development projects

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#### **KEY MESSAGES**

- Traditional agricultural development studies have relied on unitary household framework, which masks the preferences of different household members and implicitly assumes that one person, typically the household head, makes all the decisions.
- Three conceptual frameworks intra-household bargaining power model, gendered livelihoods framework, and women's empowerment consider differences in preferences of household members and explicitly account for gendered access to resources and how this relates to development outcomes.
- Drawing on, adapting, and combining these three frameworks allows for simultaneously considering both agricultural development outcomes and gender equality or women's empowerment goals and as such can greatly improve our understanding of the ways in which empowerment interacts with decision-making processes to reach development outcomes.

There are increasing demands for agricultural development projects to meet various development objectives, such as reducing poverty (typically through increased productivity and farm incomes), improving nutrition, adapting to climate change, reducing emissions, sustainably managing natural resources, and achieving gender equality. Many agricultural development projects seek to achieve agricultural

development outcomes through new technologies and practices. However, most conceptual frameworks for understanding how such outcomes can be achieved, do not explicitly consider intra-household decision-making processes, which are often critical in determining whether new technologies and/or practices are adopted and implemented. This info note describes a way in which three conceptual frameworks can be adapted and combined to consider how to achieve gender equality and other agriculture development outcomes simultaneously.

## THREE CONCEPTUAL FRAMEWORKS FOR ADDRESSING GENDER EQUALITY AND OTHER DEVELOPMENT OUTCOMES

Agricultural development projects have traditionally relied on unitary household models to determine the factors that facilitate or inhibit adoption of new technologies and farm management practices. These models assume that one person in the household, the household head or the principal farm manager, makes the majority of the agricultural production decisions. Collective (cooperative and non-cooperative) household approaches, including intra-household bargaining power models, overcome this issue. However, even though such models and conceptual frameworks exist, most agricultural surveys still rely on data collection instruments designed based on a unitary household model. Such surveys typically interview the one person in the household

<sup>&</sup>lt;sup>1</sup> See Quisumbing (2010) for a summary of these household models.

who is assumed to be most knowledgeable about agricultural production and as such do not take into account that farms can be managed by multiple people that may have different preferences and who may face different constraints.<sup>2</sup> Nowadays there is a growing number of projects that use intra-household survey questionnaires that interview more than one person in the household, typically spouses to overcome these limitations; examples include the Gender Asset Gap project, Women's Empowerment in Agriculture Index (WEAI), and the CCAFS Intra-household gender survey. The three conceptual frameworks explained below explore the ways that intra-household models and data can be used to better design agricultural development projects to achieve both gender equality and agricultural development goals.

#### **Intra-Household Bargaining Power Model**

Intra-household bargaining power models extend the unitary household model to consider the different preferences of multiple household members (Manser and Brown, 1980; Mc Elroy and Horney, 1981; Sen 1990; Lundberg and Pollack, 1993, Alderman 1995). In these models, one's bargaining power, or the power a person has to influence decisions, is an important consideration. These models typically assume that bargaining power is determined by an individual's fallback position, which is how well off they would be outside the household (or resorting to separate spheres when separation or divorce is not an option). Fallback positions are normally thought to be determined by an individual's ownership or access to different resources; for example, their savings, ownership of land, housing, businesses, or other financial and physical assets, and also the income they could generate outside the home, which may depend on their education as well as contextual factors like a labor market, and transportation. In addition to income and assets, "extra-household environmental parameters" like legal structure, government taxation, social norms etc., can shift the bargaining position of an individual in the household (McElroy, 1990 and Agarwal, 1997).

Bargaining power models are useful for modeling outcomes that may be influenced by different preferences of household members. For example, in the case of household diets and nutrition, different household members may have different preferences for different types of food; in such a model the household members are assumed to negotiate (either implicitly or explicitly) for their preferred food choices and reach an agreement, which is observed by the foods they purchase and consume. Farm management practices can be modeled in a similar way.<sup>3</sup> While this model is useful for modeling how intra-household resource allocations impact outcomes (through bargaining power), it does not explicitly examine the intra-household decision-making processes; instead it considers how an unequal allocation of resources/assets can impact household outcomes.

#### **Gendered Livelihoods Framework**

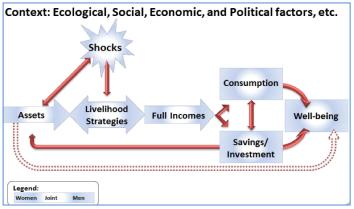
The gendered livelihoods framework, depicted in Figure 1, is an adaptation of the sustainable livelihoods framework, which describes how people use their assets and capabilities to pursue their goals via their choices for livelihood activities (Meinzen-Dick et al. 2011). The gendered livelihoods framework was developed to guide research projects conducted under the Gender Agriculture and Assets Project (GAAP) led by the International Food Policy Research Institute (IFPRI) and the International Livestock Research Institute (ILRI). In this framework, assets refer to six different types of capitals: natural, physical, human, financial, social, and political. One of the main contributions of the framework is that it adds a gender lens to each of the components. It recognizes that assets can be owned individually (by men or women) or jointly (by both men and women), that household livelihood strategies are a combination of activities that can be conducted individually or jointly by men and women, that incomes can be controlled by men and women individually or jointly, and that well-being outcomes may also have gendered implications (Meinzen-Dick et al 2011).

A clear benefit of the framework is that it explicitly recognizes that resources and outcomes are gendered. However, the decision-making processes themselves are not made explicit in the framework and it is not clear if there is a link between how assets are held (individually by man, individually by woman, or jointly) and how the livelihood strategy decisions are ultimately made (and furthermore how decisions about income allocation are made). Nor does it explain what types of decisions are crucial for determining livelihood strategies; would they include all the day-to-day decisions related to farm and household management, or are they mainly focused on strategic decisions?

<sup>&</sup>lt;sup>2</sup> See Deere, Alvarado, and Twyman (2012 and 2018) for a review of such surveys in Latin America.

<sup>&</sup>lt;sup>3</sup> It is important to note that bargaining power is relevant only in cases where individuals have different preferences; if they have the same preferences, there is nothing to bargain over.

Figure 1: Gendered livelihoods framework



Source: Meinzen-Dick et al. 2011

#### Women's empowerment

Kabeer (1999) conceptualizes empowerment as, "the processes by which those who have been denied the ability to make choices acquire such an ability" (437). This idea of empowerment implies that one must have choices and not just any choices, but those that can make a difference in life. Furthermore, she explains that resources, agency, and achievements are interrelated dimensions of empowerment. *Resources* include various types of resources, similar to the capitals included in the sustainable livelihoods framework and the gendered livelihoods framework discussed above, and the claims one can make to them. *Agency* is the "ability to make and act on [one's] own life choices, even in the face of others' opposition" (Kabeer, 2005: 14). *Achievements* are the realization (or not) of desired outcomes.

While the previous frameworks consider the household, this one focuses on the individual. Similarly, to the other two frameworks, it emphasizes the importance of resources and outcomes; it explains how an individual can draw on and use resources to exercise agency and thus achieve desired outcomes. In contrast to the other two frameworks, decision-making is made explicit in the framework through the focus on agency. However, agency is more than decision-making, it also encompasses ideas of (bargaining) power and whether an individual can make a decision. Furthermore, it recognizes that some individuals face limited choice sets; they may not be aware of all the potential options or they may feel some options are not available to them for various reasons.

### THE COMBINED POWER OF USING THE THREE FRAMEWORKS

A quick comparison of these frameworks shows some common elements and one key difference (see Table 1). All

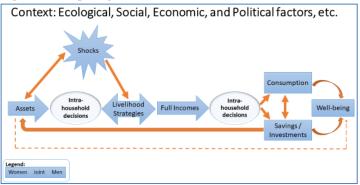
three consider resources, outcomes, and at least implicitly decision-making processes. The key difference is the unit of analysis. The bargaining power model and the gendered livelihoods model are at the household level, or perhaps more precisely intra-household level. Kabeer's empowerment framework focuses on the individual but considers how societal (and household) dimensions may impact on one's choices, and thus access to resources, agency, and overall achievements.

Table 1. Comparison of the three frameworks

	Bargaining Power	Gendered Livelihoods	Empower- ment
Resources/Assets	Yes	Yes	Yes
Decision-mak- ing	Implicit	Implicit	Yes (Agency)
Outcomes	Yes	Yes	Yes
Unit of analysis	Intra- household	Intra- household	Individual

Drawing on each of the frameworks can help us better understand how gender equality and women's empowerment interact with decision-making processes to achieve other well-being outcomes. The three frameworks can be visualized by adapting the figure of the gendered livelihoods framework. Bargaining power and agency can be captured by explicitly adding in decision-making as depicted by the new ovals in Figure 2. In this way we show that resources influence decision-making processes (that are also determined by bargaining power and agency), which together determine livelihood strategies. Furthermore, intra-household decision-making processes (influenced by bargaining power and agency) also determine how income is allocated to consumption and savings to achieve well-being outcomes. The combined framework can be used to explore not only how the gendered division of assets in the household influences outcomes through livelihood strategies and allocation of income, but also how such allocations influence the way decisions are made and how those decisions ultimately influence household level outcomes. Hence, the combined framework makes decision-making process more explicit. Aggregating and modeling such information across households can provide insight about community or national level development indicators. Furthermore, the framework can be used to explore women's (and men's) individual empowerment within an intra-household framework.<sup>4</sup>

Figure 2. Adapted gendered livelihoods framework.



Source: Author's diagram adapted from Meinzen-Dick et al. 2011.

## USING THE FRAMEWORKS TO INFORM AGRICULTURAL DEVELOPMENT PROJECTS

CIAT gender researchers draw on these three conceptual frameworks (as illustrated in Figure 2) to inform the design and implementation of agricultural and rural development projects, as well as designing and analyzing data for project evaluation and impact assessments that consider gender equality, and women's empowerment in addition to other desired development outcomes (i.e. productivity, adoption of technologies, poverty, nutrition, etc.).

For example, on-going research conducted under the CGIAR Research Program on Policies, Institutions, and Markets (PIM), explores how to use quantitative sex-disaggregated data from intra-household surveys as well as qualitative data to understand household decision-making processes. <sup>5</sup> One idea is to create household typologies based on how households make agricultural decisions. The conceptual frameworks and on-going data analyses suggest four potential categories: households in which men make most of the decisions; households in which women make most of the decisions, households in which men and women jointly make decisions, and households where men and women disagree about how decisions are made. <sup>6</sup> We expect the results of this research to inform projects about how to target information and interventions in ways that

support the achievement of various project goals, including increasing agricultural productivity, adapting to climate variability, empowering women, and/or closing gender gaps. For example, this classification could be used for targeting information and technologies to appropriate household members to help achieve desired agricultural outcomes but also to ensure that gender inequalities are not exacerbated, and hopefully are reduced. The key to using the framework for targeting is to consider the types of households and the gender inequalities in each element of the framework and how project interventions may impact them. Thus, in egalitarian households (where assets are owned jointly and equally and decisions are made jointly), targeting men and women with information and technologies makes sense. In male dominated households, were men own more assets and make most decisions, then there may be arguments to target women, specifically if the intervention will impact ownership (or access to) assets/resources to ensure that women have equal opportunities as men to participate if they should choose to. Similarly, in female dominated households with couples, then they may want to target men; however, if it is a female headed household, which often tends to be the most common type of household in this category, then it may still make sense to target women.

Other projects also draw on these frameworks. The "His and Hers, time and income: How intra-household dynamics impact nutrition in agricultural households" project examines household decision-making processes related to time and income allocations and how they relate to household food choices and nutrition (Twyman, et al. 2018). Gender research in the context of rice production in Latin America has also drawn on these frameworks to consider how women's participation in decision-making processes is related to adoption of modern rice varieties (Marín, et al. 2018). Related work also explored how gender norms influence women's participation (and/or recognition of women's participation) in rice production (Twyman, et al. 2015, García, 2015). Other studies have examined the character of spousal disagreement by conducting qualitative re-

<sup>4</sup> The gender parity index (GPI) of the Women's Empowerment in Agriculture Index (WEAI) is an example of how intra-household modeling can be used to explore empowerment in an intra-household framework (Alkire et al. 2012, Malapit et al. 2015).

Slavchevska et al (2016) shows that decision-making about agricultural production and decision-making about the use of harvest (control over output) do not overlap perfectly, and they also do not overlap with land ownership, indicating that concepts of ownership, management and control over output should not be used interchangeably. The implications for gender equality are likely to differ significantly depending on the measure used.

<sup>&</sup>lt;sup>5</sup> See García, et al. (2017); Godek and García (2018).

<sup>&</sup>lt;sup>6</sup> The analysis and classification becomes complex when considering the full range of decisions across different plots and crops managed by farm-households. For example, research by

search on the different meanings that men and women attach to joint decision-making processes in Nicaragua and Colombia (Godek and García, 2018) and Uganda (Acosta, et al. 2018).

Furthermore, the three frameworks have informed how we consider gender in Climate Change, Agriculture and Food Security (CCAFS) projects in Latin America. The CCAFS intra-household gender surveys, were designed to collect sex-disaggregated data from two household members, typically spouses, about asset ownership, decision-making processes, perceptions of climate change, adoption of farm management practices for adapting to climate change, among other topics (CCAFS and IFPRI, 2014). Another example is work that focuses on the livestock sector in the context of climate change, we collect quantitative and qualitative data on intra-household decision-making and labor allocation during a period of severe drought. Drawing on the gendered livelihoods and bargaining frameworks, Arora (2017 and 2019) show how climate-induced shocks affect intra-household allocation of labor and livelihood strategies of the households. These projects all draw to varying degrees on the three frameworks described in this Info Note to explore intra-household gender dynamics in the context of agricultural development projects.

#### **CONCLUSION**

In order for projects to better address gender equality and women's empowerment in the context of agriculture and rural development, it has become increasingly clear that there is a need for both intra-household conceptual models and data collection instruments that consider the household as the main unit of analysis and at the same time acknowledge varying preferences, access to resources, and decision-making power of various household members. Farm-households are often an important unit of analysis for agricultural projects since adoption of varieties and/or farm management practices often make more sense at a household rather than an individual level. At the same time, only focusing on individuals makes it difficult to explore gender equality within projects whose primary focus is family agricultural systems, with household level outcomes. Three frameworks that take into account different household members and gender dynamics are the Intra-household Bargaining Power, Gendered Livelihoods, and Women's Empowerment frameworks. By combining the frameworks we can examine how the gendered division of assets and intra-household decision-making processes influence development outcomes; thus allowing us to simultaneously

consider and model gender equality, women's empowerment, and other development outcomes of interest. CIAT gender researchers are currently drawing on these three frameworks to inform research for development activities across multiple countries to explore how the allocation of resources within the household influences intra-household decision-making processes and ultimately a range of development outcomes. The results inform the design and implementation of future and on-going agricultural research for development projects to better address both agricultural development and gender equality goals.

#### **REFERENCES**

Acosta, M.; van Wessel, M.; van Bommel, S.; Ampaire, E.; Twyman, J.; Jassogne, L.; Feindt, P. (2018). What does it mean to make a 'joint decision'? Unpacking intra-household decision making in agriculture. 2nd Annual Scientific Conference, CGIAR Collaborative Platform for Gender. Addis Ababa, Ethiopia.

Agarwal, B. (1997). 'Bargaining and Gender Relations: Within and Beyond the Household', *Feminist Economics* 3(1), pp. 1–51.

Alkire, S.; Meinzen-Dick, R.; Peterman, A.; Quisumbing, A.; Seymour, G.; Vaz, A. (2012). The Women's Empowerment in Agriculture Index. IFPRI Discussion Paper 1240. Washington, DC, United States: International Food Policy Research Institute.

Alderman, H. (1995). 'Unitary versus Collective Models of the Household: Is It Time to Shift the Burden of Proof?', *World Bank Research Observer*, 10, issue 1, pp. 1-19.

Arora, D; Arango, J.; Burkart, S.; Chirinda, N.; Twyman, J. (2017). Gender [im]balance in productive and reproductive labor among livestock producers in Colombia: Implications for climate change responses. CCAFS Info Note. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

Arora, D. (2019). Extreme weather events (drought) and its impact on assets, livelihoods and gender roles: Case study of small-scale livestock herders in Cauca, Colombia. Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

CCAFS and IFPRI. (2014). <u>Gender Household Survey Phase 2</u>. Harvard Dataverse, V3

Deere, C. D.; Alvarado, G.; and Twyman, J. (2012) 'Gender Inequality in Asset Ownership in Latin America: Female Owners vs Households Heads', *Development and Change*, 43, pp. 505-530.

---- (2018). '¿Dueñas o jefas de hogar? Analizando la desigualdad de género en la propiedad de activos en américa latina', *Cuestiones Económicas*. Vol. 28, Número Especial: Economía y Género, pp. 11-40.

García Otero, M. A. (2015). Desmonte de viuda, Una exploración cualitativa sobre los roles de las mujeres en la producción de arroz en Ecuador. Centro Internacional de Agricultura Tropical (CIAT). Cali, Colombia. 48. p. (publicación CIAT No. 410)

Garcia, M. A.; Godek, W.; and Twyman, J. (2017). A Mixed-Methods Approach to Unpacking Joint Decisions about Agricultural Production in Nicaragua and Colombia. International Center for Tropical Agriculture (CIAT). Cali. CO. 81 p.

Godek, W. and García, M. A. (2018). Unpacking Intra-Household Decision-Making on Smallholder Farms in Colombia and Nicaragua to Foster Climate Change Adaptation. In: Congress of the Latin American studies association, Barcelona, Spain, May 23 -May 26, 2018. 26p.

Kabeer, N. (1999). 'Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment', *Development and Change*, Vol 30, pp. 435-464.

---- (2005). 'Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal'. *Gender and Development*, 13(1) pp. 13–24.

Lundberg, S. and Pollak, R. (1993). 'Separate Spheres Bargaining and the Marriage Market', *Journal of Political Economy*, 101, issue 6, pp. 988-1010.

Malapit, H.; Kovarik, C.; Sproule, K.; Meinzen-Dick, R.; Quisumbing, A.; Alkire, S. (2015). Instructional Guide on the Abbreviated Women's Empowerment in Agriculture Index (A-WEAI). Washington, DC, United States: International Food Policy Research Institute.

Manser, M. and Brown, M. (1980). 'Marriage and Household Decision-Making: A Bargaining Analysis', *International Economic Review*, 21, issue 1, pp. 31-44.

Marín Salazar, D.; Andrade López, R. S.; Labarta, R. A.; and Twyman, J. (2018). 'Participación de la mujer en las decisions sobre el uso y la intesidad de siembra de variedades de arroz en Ecuador', *Cuestiones Económicas*. Vol. 28, Número Especial: Economía y Género, pp. 119-146.

McElroy, M. (1990). 'The Empirical Content of Nash-Bargained Household Behavior', *Journal of Human Resources*, 25, issue 4, pp. 559-583.

McElroy, M. and Horney, M. J. (1981). 'Nash-Bargained Household Decisions: Toward a Generalization of the Theory of Demand', *International Economic Review*, 22, issue 2, pp. 333-349.

Meinzen-Dick, R.; Johnson, N.; Quisumbing, A.; Njuki, J.; Behrman, J.; Rubin, D.; Peterman, A.; and Waitanji, E. (2011). Gender, Assets, and Agricultural Development Programs: A Conceptual Framework. CAPRi Working Paper No. 99. International Food Policy Research Institute: Washington, DC.

Quisumbing, A. (2010) 'Gender and Household Decision-Making in Developing Countries: A Review of Evidence', in Sylvia Chant ed. *The International Handbook of Gender and Poverty: Concepts, Research, Policy*, pp. 161-166. Cheltenham: Edward Elgar.

Sen, A. (1990). 'Gender and Cooperative Conflicts' in I. Tinker (ed.) Persistent Inequalities: Women and World Development. New York: Oxford University Press.

Slavchevska, V.; de la O Campos, A. P.; Brunelli, C; and Doss, C. (2016). Beyond Ownership: Tracking Women's and Men's Land Rights in Sub-Saharan Africa. Global Strategy Working Paper Series.

Twyman, J.; Muriel, J.; García, M. A. (2015) 'Identifying women farmers: Informal gender norms as institutional barriers to recognizing women's contributions to agriculture', *Journal of Gender, Agriculture and Food Security* 1(2), pp. 1-17.

Twyman, J.; Useche, P.; Gonzalez, C.; Talsma, E.; and Lopera, D. C. (2018). Intra-household dynamics regarding nutritional decisions in rural Guatemala. International Center for Tropical Agriculture (CIAT). Cali. CO. 3 p.

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