

## Gender Differences in Production and Supply Elasticities

Paper presented at the IFPRI Gender Impact Seminar

November 2 & 3, 2004

The focus of this paper is farm level responses to agriculturally led opportunities. The question is, if a price rises or a market is created for an agricultural output—either raw or processed—does increased production follow? If it doesn't, why? This brings us to the question of elasticities of supply. To increase production requires labor, inputs—(good starting capital in the form of seeds or breed animals; agricultural/livestock requirements in terms of nutrients....), transportation, and information on markets and on best methods for production. Prices and new markets are expected to elicit demand. Where there is a lag in anticipated production: why? Do gender issues play a part?

By 'gender', I mean women and men; boys and girls; often inclusive of other age groups. Inclusion also can be extended to a wider set of stakeholders. Gender does not equal women.

Following the lead of Boserup<sup>1</sup> and then of Cloud<sup>2</sup>, Dey<sup>3</sup> and others, Susan Poats and I undertook to develop teaching cases that would provide data and context to examine specific farming systems with respect to gender issues: i.e. recognizing the roles, assets, etc of women and men, and to demonstrate the value of bringing in women as well as men as informants and experimenters. Our focus was on 'effectiveness and efficiency', that is, with better information (inclusion of all the actors, not just the male head of household), agricultural research would be better targeted and more readily accepted because it fit the preferences and responsibilities of all household members. While we were motivated by the issue of equity as well as effectiveness, we consciously stressed the effectiveness and efficiency arguments because they are valid and they were more appealing to the agriculture research community. We began Gender and Agriculture Project in 1982. Our vehicles for getting these views in front of the agricultural research scientists were published case studies, training, and a series of "methodologies" sessions at each Farming Systems Support Program Conference (1982-1987) Many people have been working with agricultural research institutions, agricultural institutions, donor projects, etc. with the same principles in mind a various degrees of emphasis on equity issues. But progress is extremely slow. A few Ministries of Agriculture have undertaken long term gender training and mentoring: e.g. Philippines, Uganda, Kenya. Barun Gurung and I and two other trainers depart next week for a new training program with the country level programs that make up ASARECA in East and Central Africa which augurs well for focusing gender analysis skills at the national level.

All of this is to say that one of the impediments to improving agricultural production is the principal agricultural institutions unwillingness to do other than give lip service to gender. Too often they equate 'gender' only with equity issues and consider themselves scientific institutions that shouldn't bear the responsibility for achieving equity. The effectiveness argument is ignored.

That is why what is being attempted here is so important. Perhaps with macroeconomic modeling for various scenarios (i.e. like river basins, catchments where the parameters with respect to gender and agriculture are fairly similar), policy makers will see the degree to which, or not, their agricultural productivity in some or many crops is constrained by inattention to gender issues.

Gender issues affect agricultural production in several ways:

- Gender differences in agricultural production.

- The different responsibilities of women and men in agricultural production and the need for scientists and agricultural research and extension institutions to know who has what knowledge? Whose low productivity most impedes a response to price. How do sex-assigned tasks in agricultural production affect the availability of labor with the introduction of new crops or new practices? This is the effectiveness and efficiency argument. Determination of gender differences in responsibilities is likely to be both crop and location specific.
- Different objectives: women may be concerned with crops that provide household sustenance, or from which she will be directly remunerated whereas men will focus on crops for which they receive cash.
- Gender inequities that constrain positive production responses
  - Labor:
    - Women's and men's separate and joint responsibilities for agricultural production including harvesting, processing, and marketing. Where women's crops compete with men's crops for labor or other resources, women may lose out or may labor on men's crops only to the degree necessary for family harmony, reserving some of their labor for their own crops (for food or for sale). Examples include conflict between labor for hybrid maize or for sorghum (made into beer by women)<sup>4</sup>, rice and sorghum production in North Cameroon<sup>5</sup>.
    - Lack of remuneration whether of unpaid household labor or low wages to women or women's groups.
    - Time and fatigue where women have double or triple burden of working on own crops; husband's crops; and domestic reproduction.
    - Lack of productivity enhancing equipment/technologies for women's work whether their agricultural work or their domestic work. Blackden demonstrates with a few technologies that reduce the reproductive burden—better stoves, small plantations of wood for fires.....—more time is available for women's productive activities (though this doesn't assure that this will go to the production of the crops that are most commercially viable)<sup>6</sup>.
  - Information:
    - Extension agents often speak only to male 'master farmers' and hold their meetings at times or in places that make it difficult for women to participate.
    - Market information, e.g. SPSS standards and how to meet them, may be conveyed through men's social gatherings or predominantly male extension meetings.
    - Availability of Information and Communication Technologies for information about crop production, prices, etc. to women varies considerably.
  - Resources:
    - Land. Often women do not own land and are assigned it for production. Assigned land may not be optimal for production.
    - Inputs, such as traction, seeds, and fertilizer, for women's own account farming (whether for sale or domestic consumption) may be unavailable or untimely.
    - Transportation to markets may be limited to those who have bicycles or other means of transportation.

The above examples suggest that the ability of women to respond to market signals with increased production of marketable crops is often constrained by their limited access to information, land, inputs, time, and other resources as a consequence of the social structure in which they are embedded.

---

<sup>1</sup> E. Boserup. 1970. *Women's Role in Economic Development*. New York: St Martin's Press.

<sup>2</sup> K. Cloud. 1985. *Women's Productivity in Agricultural Systems: Considerations for Project Design*. In Overholt *et al.*, (Eds) *Gender Roles in Development Projects*. West Hartford, CT: Kumarian Press.

<sup>3</sup> J. Dey. 1981. *Gambian Women: Unequal Partners in Rice Development Projects?* In: Nelson, N. (Ed.) *African Women in the Development Process*. London: Frank Cass.

<sup>4</sup> C. Chabala and R. Ngiru. 1989. *Intrahousehold Dynamics and FSR/E in Zambia, a Case Study of Traditional Recommendation Domain 3 in Central Province*. In Feldstein and Poats, *Working Together: Gender Analysis in Agriculture*. West Hartford, CT: Kumarian Press.

<sup>5</sup> C.W.Jones. 1986. *Bargaining Processes Among Members of Agricultural Production Units in North Cameroon*. In Joyce Lewinger Mook, *Understanding Africa's Rural Households and Farming Systems*. Boulder: Westview Press.

<sup>6</sup> M. Blackden. 2003. *Gender and Growth: Africa's Missed Potential*. Presentation to Workshop on Engendering PRSPs in Africa. Nairobi, Kenya.