



Review of EPAR’s Gender Research
EPAR Research Brief #344

Pierre Biscaye, Audrey Lawrence
C. Leigh Anderson & Travis Reynolds

Professor C. Leigh Anderson, Principal Investigator
Professor Travis Reynolds, co-Principal Investigator

August 10, 2016

This brief presents an overview of EPAR’s previous research related to gender. We first present our key takeaways related to labor and time use, technology adoption, agricultural production, control over income and assets, health and nutrition, and data collection. We then provide a brief overview of each previous research project related to gender along with gender-related findings, starting with the most recent project. Many of the gender-related findings draw from other sources; please see the full documents for references. Reports available on EPAR’s website are hyperlinked below.

Contents

Key Takeaways from Gender-Related Findings 3
(1) Relating Seasonal Hunger, Coping and Prevention Strategies, and Household Nutrition: A Panel Analysis of Malawian Farm Households. EPAR Technical Report #337. June 22, 2016. 5
(2) Financial Pathways out of Poverty: Evidence from Bangladesh and Tanzania. EPAR Technical Report #333. March 29, 2016. 5
(3) Respondent Bias in a Ugandan Household Time Use Survey. EPAR Technical Report #331. June 22, 2016. ... 6
(4) Polygamous Households and Intrahousehold Decision-Making: Evidence and Policy Implications from Mali and Tanzania. EPAR Technical Report #330. June 13, 2016. 6
(5) Gender in DFS - Summary of FII Report Findings. EPAR Technical Report #311. August 5, 2015..... 7
(6) Self-Help Groups in Development: A Review of Evidence from South Asia and Sub-Saharan Africa. EPAR Technical Report #283. December 5, 2014. 7
(7) Do Common Yield Measures Misrepresent Productivity Among Smallholder Farmers? A Plot-Level Analysis of Rice Yields in Tanzania. EPAR Research Brief #252. November 6, 2013. 8
(8) Why Attitudes Matter: Measuring Farmer Attitudes in Agricultural Development. EPAR Research Brief #205. January 29, 2013. 8
(9) Crop Value Chain Series. EPAR Technical Reports #202, 203, 204, 206, 207, 211, 217, 220, 223, 239. June 2012 - August 2013. 9
(10) Tanzania National Panel Survey LSMS-ISA: Gender. EPAR Research Brief #190. March 30, 2012. 10
(11) Tanzania Living Standards Measurement Study Series. EPAR Technical Reports/Research Briefs #160, 161, 163, 164, 166, 167, 184, 190. September 2011 - March 2012..... 11

EPAR uses an innovative student-faculty team model to provide rigorous, applied research and analysis to international development stakeholders. Established in 2008, the EPAR model has since been emulated by other UW schools and programs to further enrich the international development community and enhance student learning.

Please direct comments or questions about this research to Principal Investigators Leigh Anderson and Travis Reynolds at epar.evans.uw@gmail.com.

(12) *Tanzania Comparison and Analysis: LSMS-ISA and Farmer First Data. EPAR Technical Report #140. March 17, 2011.* 12

(13) *Gender and Agriculture in Tanzania. EPAR Technical Report #134. April 10, 2011.*..... 12

(14) *Agriculture and Diet Diversification: Evidence and Pathways to Improved Nutrition. EPAR Technical Report #100. September 28, 2010.*..... 13

(15) *The Impact of Export-Driven Cash Crops on Smallholder Households. EPAR Technical Report #94. August 17, 2010.* 14

(16) *Gender & Contract Farming in Sub-Saharan Africa: Literature Review. EPAR Research Brief #67. March 8, 2010.* 14

(17) *Gender and Cropping in Sub-Saharan Africa Series. EPAR Research Briefs #27, 32, 33, 36, 38, 39, 40, 51, 55, 64. May 2009 - March 2010.* 15

(18) *Labor Constraints in the Sub-Saharan Agriculture Market. EPAR Technical Report #18. April 15, 2009.* ... 16

EPAR Gender Research in Progress..... 18

EPAR Confidential Research Related to Gender 18

EPAR Research that Controls for or Briefly Mentions Gender..... 18

Key Takeaways from Gender-Related Findings

Labor and Time Use

- In Tanzania, adult men and women work a similar amount of time on farm activities, but women spend far more time than men on non-agricultural unpaid household activities (almost 3 times as much), indicating greater potential labor constraints
- Technology for improving yields (or any new farm or non-farm opportunity that requires an investment of time, or ongoing time) can increase women's overall labor requirements depending on her ability to substitute out of other tasks such as post-harvest processing, childcare and other domestic work.
- It is difficult to understand the net welfare effects on a household from an intervention that targets a single individual, without knowing how time and financial results are re-distributed within the household.

Hypothesis: At the margin, adult men are less likely to take over women's domestic activities than women's farm or off-farm income generating activities. Situations or opportunities that require an additional hour of women's time can therefore add to her total labor burden, or possibly to that of other women or children in the household, particularly when labor markets are weak.

Hypothesis: If women are labor and time constrained, they may experience greater benefits from new technologies or interventions designed to save time and labor on household tasks than from technologies designed to increase agricultural output.

- Agricultural labor frequently divides along gender lines, although this varies by crop. For wheat and cassava for example, men are generally responsible for land preparation and planting while women are responsible for weeding, processing, and storage.

Hypothesis: Technology targeted at the stage of crop production typically involving women (e.g. a technology that reduces food processing time) is more likely to reduce women's overall time burden.

Technology Adoption and Demand

- Our understanding of the primary drivers of smallholder demand is limited, particularly for female farmers. Most studies focus on women's constraints or barriers to adoption, very few focus on the equally relevant perceived returns, or net benefits, from moving from the status quo.
- In addition to traditional drivers of demand, including price and income, attitudes such as risk perceptions, agency, and control over household resources, matter for smallholder female farmer's uptake of interventions and new technologies.
- In some domains, women have different attitudes towards risk-taking and competition than men, which can influence their uptake of interventions or new technologies.

Agricultural Production

- After adjusting for the size of female-headed households, which are smaller on average than male-headed households, agricultural yield per household member is similar (statistically so in Tanzania).
- In Tanzania, calculations of yield and productivity for women farmers are complicated by women's greater likelihood to intercrop.
- Female-headed households are less likely to participate in the agricultural value chain, i.e. to sell crops or to use various inputs, including hiring labor.

Hypothesis: Over time, women-owned plots will have different planting patterns and use than male-owned plots, and different than women-managed, male-owned, plots, all else equal.

Health & Nutrition

- For rural households in Tanzania and Mali, the wife's health relative to her husband's is significantly associated with her control over household decision-making; having children under 10 is significantly associated with less control.
- Having a female household head is significantly associated with experiencing between 0.1 and 0.25 more months of seasonal hunger in the period before first harvest. Seasonal hunger is associated with early harvesting, which in turn has negative yield and nutritional consequences.
- A common denominator for "successful" nutritional programs is an educational component.

Hypothesis: Women farmers in particular - because of labor constraints, smaller households, and fewer opportunities to market - may benefit more initially from consumption smoothing rather than yield increasing interventions.

Data Collection

- Gender-disaggregated data are essential for answering male/female questions.
- Intra-household survey data are essential for understanding the distribution of resources within a household, and intergenerational gender effects.
- Time, labor, and financial resources may be reallocated among household members as a result of new technologies or interventions, such that looking at changes for individual household members or averages across men and women (in different households) may have different policy implications than taking the household as a unit of analysis.
- The gender of the respondent matters in a household survey, especially when they are reporting on behalf of the household or other household members as opposed to just answering questions about themselves. Our research has shown significant differences between husbands and wives responses for household time use and for control over household decision-making.
- Changes in household composition, notably having children, changes constraints and preferences for both men and women.

Hypothesis: The household and family is the optimal unit of analysis for understanding and improving outcomes for women, girls, and families.

Hypothesis: Some detrimental practices towards daughters (e.g. less education or nutrition) relative to sons is driven by differential economic returns rather than innate preferences. All else equal, fathers would choose for their daughters to have more opportunities in life than did their wives or mothers.

(1) [Relating Seasonal Hunger, Coping and Prevention Strategies, and Household Nutrition: A Panel Analysis of Malawian Farm Households](#). EPAR Technical Report #337. June 22, 2016.

Overview

This report evaluates seasonal hunger - defined as hunger in the months before harvest and distinct from chronic hunger over the course of a year - in Malawi, drawing on two waves of panel data (2010-2013) from the Malawian Integrated Household Panel Survey (IHPS), part of the LSMS-ISA. It investigates the prevalence of seasonal hunger in Malawi, factors associated with seasonal hunger among farm and non-farm households, and evidence of recurring and longer term outcomes (early harvest and stunting) driven by seasonal pressures.

Gender-Related Findings

- Having a male household head is significantly associated with experiencing between 0.1 and 0.25 fewer months of seasonal hunger.

(2) [Financial Pathways out of Poverty: Evidence from Bangladesh and Tanzania](#). EPAR Technical Report #333. March 29, 2016.

This report explores the literature on pathways out of poverty via improved and expanded access to financial services, focusing on South Asia and sub-Saharan Africa, and considering empirical evidence from Bangladesh and Tanzania. We review 56 studies that link poverty reduction in Bangladesh or Tanzania with one or more of five financial intervention categories: remittances; government subsidies; conditional and unconditional cash transfers; credit; and combination programs. The resulting empirical evidence from these sources reveal a high share (61%) of positive reported associations between a financial intervention and outcome measure related to our five chosen financial interventions. The remaining studies found insignificant or mixed associations, but very few (3 out of 56) indicate that access to a financial mechanism was associated with worsened poverty. The heterogeneity of study types and interventions makes it difficult to draw conclusions about the efficacy of one intervention over another, and more research is needed on whether such approaches constitute a durable, long-term exit from poverty. Some studies report on outcomes for women specifically.

Gender-Related Findings

- Nguyen et al. (2012) find that payments of pregnant women who receive healthcare vouchers are 34 percent lower than control groups in Bangladesh as a result of the Demand-Side Financing Program.
- Gine et al. (2015) find improved outcomes for women in villages that received interventions designed to improve targeting of Tanzania's National Agricultural Input Voucher Scheme (NAIVS) subsidies, compared to women in villages that did not receive such interventions.
- Son (2008) argues that since payments through Conditional Cash Transfers (CCTs) are often directed to the female head of recipient households, they have helped raise the status of women in households. Kessy (2014) notes that making cash transfers to women may also have increased the bargaining power of women.
- Chliova, Brinckmann & Rosenbusch (2015) conduct a meta-analysis of 97 studies on microcredit. They catalog the effect of credit reported by each study on business development, income, health, education, women's empowerment, and social capital. They find that the effects of microcredit are small but statistically significant across each of the aforementioned categories. The strongest association is with women's empowerment, which encompasses women's ability to negotiate gender barriers, control resources, and gain confidence.

- A meta-analysis of 25 studies by Vaessen et al. (2013), however, finds no consensus that microcredit improves women’s ability to control resources, which the authors conclude makes it “very unlikely that microcredit has a meaningful and substantial impact on empowerment processes in a broader sense” (p. 82).
- Khandker (2005) finds that female borrowing has a significant and positive effect on per capita consumption, while male borrowing has no significant effect. Khandker & Samad (2013a, 2013b) find that microcredit helps increase income, consumption, and assets for borrowers, slightly more for women than men, and further report that in Bangladesh, girls’ school attendance increases by 6.6 percentage points due to women’s participation in microcredit programs, and slightly less with men’s participation.

(3) [Respondent Bias in a Ugandan Household Time Use Survey](#). EPAR Technical Report #331. June 22, 2016.

Overview

This report evaluates the quality of time-use data in three waves of the Ugandan LSMS-ISA Household Survey collected in 2009/10, 2010/11, and 2011/12. Issues that may affect the data quality include the survey’s reliance on respondent recall, particularly long periods of recall, and reliance on a single respondent, generally the “most knowledgeable” household member. Overall, findings suggest that the identity of the respondent is an important consideration for survey design.

Gender-Related Findings

- Male respondents underreport - relative to female respondents - the time female household members spent in the previous week, particularly in domestic activities.
- The estimated effects of two household shocks - the birth of a baby and droughts or floods - depends on the gender of the respondent. Male respondents report large differences in the effect of these shocks on time allocations over the past week for male and female household members, whereas female respondents report almost no differences.

(4) [Polygamous Households and Intrahousehold Decision-Making: Evidence and Policy Implications from Mali and Tanzania](#). EPAR Technical Report #330. June 13, 2016.

Overview

We use a unique dataset that surveys husbands and wives separately to evaluate how the characteristics of monogamous and polygamous households in Mali and Tanzania affect women’s share of decision-making authority. Findings suggest that the most effective policies to improve household outcomes may differ for polygamous households than monogamous households, and that effectively targeting women requires an understanding of the types of decisions that women are most likely to have influence over.

Gender-Related Findings

- Husbands and wives reported separately on control over decision-making for themselves and for their spouse. Based on the wife’s reports of her own control over decision-making, polygamy is significantly

and negatively associated with the wife's share of decision-making control across multiple types of decisions. Using the husband's reports of the wife's control over decision-making, polygamy is only significantly associated (at the 95% confidence level) with reduced control over decisions related to information and training.

- While men do not report having more decision-making authority in polygamous households, women report having less authority, suggesting that while wives perceive reduced personal control over household decision-making authority as a result of sharing control over decisions with other wives in polygamous households, husbands do not perceive this effect.
- The wife's health is generally positively associated with her self-reported decision-making authority, especially in matters related to livestock. Inversely, women allocate less authority to themselves when their husbands are healthier, and this association is significant for decisions related to farming, information, and training.

(5) [Gender in DFS - Summary of FII Report Findings](#). EPAR Technical Report #311. August 5, 2015.

Overview

This report provides a summary of findings from six Financial Inclusion Insights (FII) data analysis reports conducted by various agencies for the Bill & Melinda Gates Foundation (BMGF). These reports investigate barriers to financial inclusion and use of digital financial services (DFS) in Bangladesh, India, Kenya, Nigeria, Pakistan, Tanzania, and Uganda, with women a key demographic of interest.

Gender-Related Findings

- The studies find a generally consistent gender gap across the six countries in women's indicators related to use of DFS, as measured by awareness of DFS, mobile phone ownership, mobile phone access, DFS/mobile money account registration, and bank account registration.
- The gender gap in mobile phone access is lower than that for mobile phone ownership, suggesting that women who do not own phones are able to borrow or pay for access to mobile phones.
- Two studies find that literacy and numeracy are significantly associated with women's use of DFS.
- Two studies find that gender in Tanzania and Uganda is not a significant determinant of mobile money use when controlling for other socio-economic factors. Houshmand et al. (2015), however, find that in Bangladesh the effect of being a woman on mobile money use is significant and negative even when controlling for other variables.
- In Bangladesh, Houshmand et al. (2015) find that employment is significantly associated with active use among females who have already registered for a mobile money account.

(6) [Self-Help Groups in Development: A Review of Evidence from South Asia and Sub-Saharan Africa](#). EPAR Technical Report #283. December 5, 2014.

Overview

This report synthesizes available evidence on the effectiveness of using Self-Help Groups (SHGs) to deliver interventions aiming to promote health, finance, agriculture, and empowerment objectives in South Asia and Sub-Saharan Africa. Women's health groups are one of the three main types of SHGs identified, though women are strongly represented in savings groups and to a lesser extent, farmers' groups.

Gender-Related Findings

- Interventions delivered through SHGs appear to be effective for reducing infant and neonatal mortality and morbidity in rural areas, but the evidence on maternal health outcomes are mixed.
- Studies that included measures of empowerment reported generally positive outcomes for women who participated in SHG activities. However, a few studies noted that empowerment outcomes may be limited in communities with more conservative gender norms.

(7) Do Common Yield Measures Misrepresent Productivity Among Smallholder Farmers? A Plot-Level Analysis of Rice Yields in Tanzania. EPAR Research Brief #252. November 6, 2013.

Overview

Yield measurement methodologies are the focus of this report. Using data on rice yields from the 2008-09 LSMS-ISA in Tanzania, EPAR finds that different demographic and management-related drivers of yield gains surface depending on the yield measurement used, leading to different implications for policy and economic development interventions. Productivity measures that fail to account for losses may miss opportunities to increase the agricultural productivity of the poorest farmers.

Gender-Related Findings

- Measuring rice yield by area harvested indicates no association between yield and gender of household head, but measuring rice yield by area planted results in a negative association between yield and female-headed households.
- Intercropping complicates the calculation of female farmer productivity because women are more likely to intercrop.

(8) Why Attitudes Matter: Measuring Farmer Attitudes in Agricultural Development. EPAR Research Brief #205. January 29, 2013.

Overview

This brief provides an overview of how farmers' attitudes affect their willingness to adopt new technology, and how knowledge of farmer attitudes can improve program design and implementation.

Gender-Related Findings

- In countries with imperfect markets, interventions that subsidize inputs and methods to increase yield may not be adopted if labor availability, including one's own effort, is a concern. Especially for women, innovations may be better targeted at labor-saving, rather than yield-increasing productivity measures (EPAR Technical Brief #201).
- Different levels of spousal risk-taking was a significant predictor of disagreement between spouses on who holds decision-making authority in a household survey in Mali and Tanzania, possibly leading to unanticipated conflict over decisions arising from development programs. Accord over decision-making - be it in the husband or wife's hands - is positively associated with the wife's willingness to make changes and the husband's satisfaction with farming (Anderson, Reynolds, & Gugerty, 2012).

- An attitudinal survey in Vietnam found differences between women and men in risk-taking and willingness to compete. Women tended to underestimate their ability to win and were less willing to compete, though they were more willing to compete with each other than with men. The results may help to explain failures to “mainstream” women into market-based activities (Fletschner, Anderson, & Cullen, 2010).

(9) Crop Value Chain Series. EPAR Technical Reports #202, 203, 204, 206, 207, 211, 217, 220, 223, 239. June 2012 - August 2013.

Overview

EPAR analyzed different crops in this report series, including trends in crop consumption, production, and trade policy, varieties and nutritional content, and the crop value chain. Though gender was not the primary focus of these reports, most analyses mentioned gender. The following reports discussed gender in greater detail:

- Wheat Value Chain:
 - Report #202: [Ethiopia](#)
 - Report #203: [Bihar, India](#)
 - Report #204: [Bangladesh](#)
- Yam and Sweet Potato Value Chain:
 - Report #206: [Ghana](#)
 - Report #207: [Nigeria](#)
 - Report #211: [Tanzania](#)
 - Report #217: [Uganda](#)
 - Report #220: [Nigeria](#)
- Cassava Integrated Value Chain, Report #223: [Global Analysis](#)
- Banana and Plantain Value Chain, Report #239: [West Africa](#)

Gender-Related Findings

Wheat

- Gender has been found to influence adoption of improved wheat varieties and other technologies in the central highlands of Ethiopia, where male-headed households were more than twice as likely to adopt improved varieties than female-headed households (30% and 14% respectively).
- The division of labor in wheat production differed across gender in Ethiopia and in South Asian areas neighboring Bihar, India. For both areas, men did the majority of labor for land preparation, planting, and fertilizer application, while women did the majority of crop weeding and storage.

Yam/Sweet Potato

- Most yam farmers are male smallholders in Ghana with low levels of education, while most retailers, wholesalers and cross-border traders are women.
- There is some evidence that traditional gender roles in yam production and marketing are changing, with more women taking on male-centric yam production activities in some parts of Nigeria due to the migration of rural men to urban areas in pursuit of other jobs, and women playing a smaller role in yam trading than in the past.
- Women in Nigeria also grow most of the sweet potatoes, though the role of women is expected to diminish as demand increases and more men adopt larger-scale, intensive production systems.

- In Tanzania, women do the majority of sweet potato production and decision-making around the crop. A survey of 200 households found that most farmers interviewed perceived sweet potato as a female crop because the market value was not as high as maize or cotton (Mmasa, Msuya, and Mlambiti, 2012).
- Though information is limited on the characteristics of sweet potato farmers in Uganda, Bashaasha, et al., (1995) found that women represented a majority of respondents in most districts surveyed. According to Hall, Bockett, and Nahdy (1998), although sweet potatoes have been increasingly cultivated as a cash crop, when they are cultivated for subsistence they are considered a women's crop.

Cassava

- Labor for cassava production is frequently divided along gender lines, with men often specializing in land clearing, ploughing, and planting, and women performing the weeding, harvesting, transporting, and processing. Bananas & Plantains
- Though plantain production is dominated by men, women in West Africa play a significant role in the marketing and sale of plantains. In many locations female market supervisors, often known locally as "market queens," manage every market and regulate the quantity, price, and new entrants.

(10) [Tanzania National Panel Survey LSMS-ISA: Gender](#). EPAR Research Brief #190. March 30, 2012.

Overview

This report presents summary statistics on gender from the LSMS-ISA for Tanzania. In households designated "female-headed" a woman was the decision maker in the household, took part in the economy, control and welfare of the household, and was recognized by others in the household as the head. This report summarizes gender findings, but several reports in the EPAR LSMS-ISA series (Report Nos. 184, 196, 216) also provide gender-disaggregated statistics.

Gender-Related Findings

- Female-headed households appear to participate less in the agricultural value chain. The data indicate that this limited participation may be due in part to smaller or non-existent surpluses produced by female-headed households.
- Female-headed households were not significantly less productive per hectare than male-headed households in spite of being less educated and using fewer inputs. However, the median yields for both male- and female-headed households were much lower than the 90th percentile.
- Labor constraints may be an important factor contributing to low input adoption and yields for female farmers. While adult men and women worked similar amounts of time on farm activities, averaging 16-18 hours/week, adult women in agricultural households worked an additional 25 hours or more on non-agricultural unpaid household activities – almost triple the time of adult men.
- Female-headed households had a smaller household labor pool to draw from. Female-headed households were smaller on average than male-headed households and 61% of female-headed agricultural households did not have even one adult male.
- Female-headed households were less likely to sell their crops and on average sold smaller quantities, earning less than male-headed households.
- Female-headed households were less likely to use fertilizer, pesticides, herbicides, fungicides, improved variety seeds, and hired labor than male-headed households.

- Plots with a female decision-maker or shared decision-making were more likely to be intercropped than plots where a male made the planting decision.

(11) Tanzania Living Standards Measurement Study Series. EPAR Technical Reports/Research Briefs #160, 161, 163, 164, 166, 167, 184, 190. September 2011 - March 2012.

Overview

EPAR analyzed different sections of the 2008-2009 Tanzanian LSMS-ISA in this series. Most analyses included gender as a variable, but the following reports discussed gender in greater detail:

- Report #160, Section C: Household Characteristics and Education
- Report #161, Section D: Farm Characteristics, Crops, and Productivity
- Report #163, Section F: Inputs
- Report #164, Section E: Livestock and Livestock By-Products
- Report #166, Section H: Nutrition
- Report #167, Section B: Profile of the Median Farming Household
- Report #184, LSMS Highlights
- Report #190, Gender - Separate entry above

Gender-Related Findings

- Women are more likely to head non-agricultural households (29%) than agricultural households (25%).
- Adult men in agricultural households were significantly less likely to have attended any school (17%) than those in non-agricultural households (3%), and 35% of women in agricultural households have not attended school, compared to 9% in non-agricultural households.
- Adult men in agricultural households completed, on average, 6 years of education compared to 4.7 of adult women in agricultural households.
- Crops cultivated were relatively similar between male- and female-headed households, although male-headed households were more likely to grow cassava, millet, and mangos than female-headed households.
- With the exception of sorghum and cowpeas, yields during the long rainy season were highest on plots where decision-making was shared between men and women, compared to plots where decision-making was controlled by a man or a woman only.
- Plots where decision-making was exclusively male were significantly more likely to be treated with at least one kind of input than either female or shared decision-making plots. Some of this difference may arise from differences in crops cultivated by male versus female plot-owners.
- A higher proportion of male-headed households than female-headed households produced both traditional cow milk and eggs, while a slightly higher (though not statistically significant) proportion of female-headed households produced improved cow milk and eggs.
- A higher proportion of children in female-headed households experienced stunting (46% versus 42% in male-headed households) and were underweight (19% versus 16% in male-headed households). Boys under the age of five were also more likely to experience stunting and be underweight than girls in this age group.
- Compared to median male-headed households in Tanzania, median female-headed households have smaller landholdings and fewer plots, cultivate the same median number of crops (4), but harvest less per acre across maize, rice, and cassava.

(12) [Tanzania Comparison and Analysis: LSMS-ISA and Farmer First Data](#). EPAR Technical Report #140. March 17, 2011.

Overview

This report explores agricultural data for Tanzania from the 2008-09 LSMS-ISA and 2010 Farmer First survey. Gender-specific data are collected on risk perception, time allocation and decision-making.

Gender-Related Findings

- Overall, men and women in Tanzania had significantly different risk perceptions for 23 of the 38 types of queried risk: men are more likely to perceive frost, climate variability, and scarce inputs as major risks, while women are more likely to worry about community relationship and poor yield.
- There is very little difference between men and women in the time they spend on income generating activities, though women spend greater time (8.87 hours) than men (3.47 hours) on other non-leisure activities, such as housework and tending children or the elderly.
- The share of decision-making power in Tanzanian households averaged 65.4% for men, and 33.5% for women, though women on average report a slightly higher share of decision-maker power for men than men do.

(13) [Gender and Agriculture in Tanzania](#). EPAR Technical Report #134. April 10, 2011.

Overview

This literature review discusses gender issues in Tanzania related to land policy and administration and division of labor in economy and households.

Gender-Related Findings

- Lack of land access and customary laws that constrain women's land rights make it difficult to empower women as farmers. Although the statutory framework prohibits discrimination, customary laws are deeply ingrained, and women often do not know their rights to land nor their ability to protect these rights through village councils and the judicial process.
 - Women own about 19% of titled land in Tanzania, and their average land holding size is less than half that of men, ranging from 0.21-0.3 ha, compared to 0.61-0.7 ha for men.
 - By some estimates, 82% of land in Tanzania is administered under customary land tenure.
 - Women's land rights and access vary across Tanzania. Women have lower inheritance and property rights in ethnic groups that are Muslim and greater access to land in ethnic groups that are traditionally matrilineal (about 20% of Tanzanian societies).
- Women generally have higher domestic and other unpaid responsibilities, often made more challenging with a lack of basic infrastructure, especially in water and transportation. Division of labor appears highly gendered in Tanzania.
 - Women's unpaid domestic tasks are continuous and time-intensive and include: caretaking for children, the sick and elderly; preparing food and producing food crops; transporting fuel and water; and supporting men's income-generating activities.

- Men control nearly all cash income. although women have more control over income from their domestic activities, such as sales of surplus food crops and beer and pottery-making.
- Men are more likely than women to make personal consumption a spending priority over household food and other needs.
- Women are likely to resist production decisions that require reallocating their labor away from household and food crop production tasks that meet the basic needs of the household and towards tasks that result in increased income.
- Categorizations of men’s and women’s crops are fluid, largely because whether men or women farm a certain crop depends on the crop’s profitability. Men tend to move into activities considered female when they become profitable.
- Categorizing of agricultural responsibilities by gender is also difficult. Tanzania is one of several cases in sub-Saharan Africa in which men and women farmers jointly grow food and cash crops to some extent, and the heterogeneity of tribal societies further complicates attempts at generalizations.
- Women face significant cultural and practical obstacles in entering the cash crop market. Increased marketing by women can create household conflict and defies prohibitive cultural norms in Tanzania.
- One-third of extension agents are women, but extension services to women are still underprovided.
- Studies suggest that advancements in production technology and other economic opportunities at the household level may actually make women and children worse off. Attempts to increase income in rural households face complex challenges that are inextricably linked to women’s role in farming and in the household economy.

(14) [Agriculture and Diet Diversification: Evidence and Pathways to Improved Nutrition](#). EPAR Technical Report #100. September 28, 2010.

Overview

This literature review relied on 125 sources, 92 of which were peer-reviewed, to address the following questions: (1) Do diversified diets improve nutritional status and other health outcomes? (2) Can agricultural interventions change production and consumption behavior (3) What are the pathways from changes in production to changes in diet? (4) Are agricultural interventions cost-effective methods to improve nutrition? (5) What are the constraints to dietary diversification?

Gender-Related Findings

- The agricultural interventions with the most robust evidence of success are multi-platform, combining training and inputs with food preparation and nutrition education. The addition of a marketing component can support project effectiveness and sustainability if it is sensitive to the community context, particularly when the intervention targets a traditionally gendered crop.
- Local norms for a crop production system are an important determinant in the ultimate outcomes for women, particularly in cases where a target crop is traditionally managed by one gender.
- There have been observed cases in which income from a formerly “women’s” crop is taken over by men following a successful agricultural intervention. To mitigate the overtaking of a crop in this manner,

the World Bank provides a case study of a marketing program in Togo where soy was marketed as a legume (traditionally a female crop) rather than as a cash crop (traditionally male production).

- There is a need for more data around the effects of agricultural and nutritional interventions on a woman's time; interventions may have negative effects if they increase women's time or labor inputs without increasing energy intake or dietary quality.

(15) [The Impact of Export-Driven Cash Crops on Smallholder Households](#). EPAR Technical Report #94. August 17, 2010.

Overview

This report summarizes the available literature on the impact of smallholder participation in cash crop and export markets on household welfare and rural markets in sub-Saharan Africa. Overall, it is challenging to draw strong policy conclusions from the available evidence due to the heterogeneity of crops and production structures across the continent, and relatively weak empirical data.

Gender-Related Findings

- The potential benefits of cash crop production on overall household welfare, especially children, is mitigated due to women's relative disadvantage in access to cash crop production opportunities and influence on how income from cash cropping is allocated.
- Benfica (2006) finds that both the size of landholders and gender of the household head were significant factors in higher profit earnings for tobacco and cotton.

(16) [Gender & Contract Farming in Sub-Saharan Africa: Literature Review](#). EPAR Research Brief #67. March 8, 2010.

Overview

This report summarizes findings from the literature on gender and contract farming in sub-Saharan Africa across two main themes: the determinants of participation in contract farming schemes, and the impact of contract farming on women's welfare within the household.

Gender-Related Findings

- Involvement in contract farming often prompts a shift in household production strategies, but the literature suggests that women's direct participation in contract farming is limited. Limited access to land and control over the allocation of labor and cash resources are key constraints hindering women's ability to benefit from contract farming. The impact of contract farming on women is often mediated by their relative bargaining power within the household.
- Women are generally not involved in contracting with agro-industrial firms and are disadvantaged in contract schemes, particularly where the scheme involves land redistribution.
- Studies that do identify high participation rates of women in contract farming include several from the 1980's: non-traditional vegetable exports in Zimbabwe and French beans in Kenya.
- The literature suggests that farming contracts can cause intra-household conflict through the reallocation of productive resources, changes in labor burdens, and decisions about control over cash

income. Studies identify payments made to men for work carried out largely by women and conflict between contract requirements and women's subsistence farming priorities as two key challenges to contract farming.

- Women's lower rate of land access and ownership is mentioned throughout the literature as a critical barrier to their ability to engage in contract farming.
- Collecting gender-disaggregated data and developing a better understanding of women's roles in rural labor markets may contribute to improved program design and implementation.

(17) Gender and Cropping in Sub-Saharan Africa Series. EPAR Research Briefs #27, 32, 33, 36, 38, 39, 40, 51, 55, 64. May 2009 - March 2010.

Overview

This series of 10 literature reviews explores various aspects of gender and agriculture in sub-Saharan Africa. Gender-related takeaways from the following reports have been combined in the findings section below.

- [Executive Summary - EPAR Research Brief #64](#)
- [Overview - EPAR Research Brief #33](#)
- [Rice - EPAR Research Brief #27](#)
- [Cassava - EPAR Research Brief #32](#)
- [Wheat - EPAR Research Brief #36](#)
- [Maize - EPAR Research Brief #38](#)
- [Sorghum - EPAR Research Brief #39](#)
- [Millet - EPAR Research Brief #40](#)
- [Yams - EPAR Research Brief #51](#)
- [Cotton - EPAR Research Brief #55](#)

Gender-Related Findings

- Critical dimensions of gender and cropping in agriculture:
 - Land: ownership & access
 - Finance: cash, credit, income, savings
 - Information, training, & markets
 - Division of labor
 - Time demands: childcare, household chores, farming
 - Intrahousehold and community cultural dynamics
- Collecting gender-disaggregated statistics and feedback throughout implementation is vital for understanding pathways and potential roadblocks to adopting technology. Until now, gender-disaggregated statistics have only been collected sporadically.
- Women are often less able than men to access important farming inputs, while simultaneously contending with greater demands on their time, cultural norms, and other restrictions that can decrease their productivity.
- Increasing women's access to income, technology, and paid work has been shown to improve their children's welfare more than similarly increasing men's access.
- Studies from Burkina Faso, Cameroon, and Kenya estimate that increasing women's control over inputs and income could boost farm yields by up to 20 percent.

- Female farmers in sub-Saharan Africa are less likely than male farmers to adopt productivity-enhancing technologies such as improved seeds, fertilizer, pesticides, or small machinery.
- Gender is not the only limiting factor affecting technological adoption in agricultural settings. Differences like age, marital status, education level, role in production (e.g., wage vs. subsistence farming), and size of landholding may dominate or interact with the male/female dichotomy. Addressing differential access to assets can help both men and women smallholders acquire and adopt technologies.
- In addition, labor constraints, low education levels, cultural inappropriateness, and asymmetric access to resources all contribute to low adoption of agricultural technology by women.
- Because of their reliance on informal channels and limited access to extension, women farmers in sub-Saharan Africa are often unaware of improved seed varieties. Distributing new varieties through local seed markets, seed fairs, and women's groups could potentially increase adoption.
- Maximum benefits from technological innovations cannot be realized when upstream factors like education, power, and land tenure heavily influence outcomes. Addressing these more basic upstream causes of gender inequality may be even more important in helping households increase productivity and maximize the benefits of technological interventions.
- Understanding how women can maintain control over benefits when technology is introduced is a persistent difficulty. When women's crops become more profitable, men tend to assert more control over that crop. Further, improved technology can increase women's labor requirements since they are typically involved in more time-consuming and arduous tasks of post-harvest processing in addition to their childcare and household tasks, which can tax women's labor capacity and adversely affect their health.
- When developing technology, participatory and site-specific research improves technological appropriateness. Introducing processing technology can be a tremendous time-saver but the technology must meet users' preferences, most clearly revealed through participatory research. Imported millet mills, for example, often require the grain to be dry, but households traditionally prefer to soak the grain before grinding to improve taste. One participatory research study in four countries of West Africa found that farmers' preferred local varieties over improved varieties because they generally performed better on "adaptation," defined as good germination, stout growth, resistance to lodging, tolerance to drought and pests, and resilience to damage by livestock. In another study, women complained that new varieties of maize were more difficult to pound than traditional varieties and required more time to process because the required hammer mills were not available locally. If women are not involved in plant breeding trials, cooking and taste traits may be overlooked, compromising household and farm adoption.

(18) [Labor Constraints in the Sub-Saharan Agriculture Market](#). EPAR Technical Report #18. April 15, 2009.

Overview

This report reviews literature from 1990 to 2008 and focuses on the supply-side effects of labor constraints on agricultural productivity in sub-Saharan Africa. Key themes in the literature are discussions of the types of agricultural labor in sub-Saharan Africa, the most critical types of labor constraints, and specifically how labor affects cropping decisions and productivity.

Gender-Related Findings

- Labor constraints differ by country, region, and gender (women tend to be occupied in more

- household and other unpaid work which reduces their labor supply for paid work).
- The most critical types of labor constraints are seasonal, those related to HIV/AIDS, migration and technology. HIV/AIDS disproportionately affects male labor supply and could have long-term impacts on agricultural productivity.
 - Yamano and Jayne (2004) found that the effect of HIV-related mortality in Kenya is sensitive to the gender, position, and age of the deceased family member, where male head-of-household deaths are associated with a 68% reduction in the net value of household crop production. Grain crops were more adversely affected by female mortality and cash crops were more affected by male mortality.
 - As more men migrate and seek off-farm employment, women have taken on more agricultural tasks, increased their wage earnings and role in household decision making. They generally retain their household tasks and work harder, which can result in adverse health effects.

EPAR Gender Research in Progress

- Gender and Adoption of Digital Financial Services. EPAR Technical Report #317
- Gender Attitudes Toward Risk: Evidence from Mali EPAR Technical Report #340

EPAR Confidential Research Related to Gender

- Gender Grand Challenge Portfolio Review. EPAR Technical Report #334
- Women's Time Use. EPAR Research Brief #308
- Fresh from the Field: Female Autonomy, Labor Market Opportunities, and Domestic Violence: Recent Research in India and Bangladesh. EPAR Research Brief #272
- Fresh from the Field: Lessons in Labor Supply. EPAR Research Brief #270
- Review of Gender in the Legumes Portfolio Catalog. EPAR Research Brief #264
- Review of the Gender Portfolio Catalog. EPAR Research Brief #263
- Gender and Agriculture: Summary of EPAR's Previous Research. EPAR Research Brief #262

EPAR Research that Controls for or Briefly Mentions Gender

- [Food Security Measurement Background Briefs](#). EPAR Research Brief #319. January 29, 2016.
- [Measuring Time Use](#). EPAR Research Brief #318. January 29, 2016.
- [Review of Human Development Indices](#). EPAR Technical Report #309. September 17, 2015.
- [Crop Diversity Amongst Smallholder Farmers in Tanzania: What are the Important Factors?](#) EPAR Technical Report #237. June 9, 2013.
- [LSMS-ISA Tanzania: Intercropping](#). EPAR Research Brief #216. August 8, 2013.
- [LSMS-ISA Tanzania: Market Access](#). EPAR Research Brief #196. June 12, 2012.
- [LSMS-ISA Tanzania, Legumes](#). EPAR Research Brief #189. April 9, 2012.
- [LSMS-ISA Tanzania: Paddy](#). EPAR Research Brief #188. March 30, 2012.
- [LSMS-ISA Tanzania: Maize](#). EPAR Research Brief #187. March 30, 2012.
- [LSMS-ISA Tanzania: Input Use](#). EPAR Research Brief #179. March 30, 2012.