

FIELD Report No. 12: Behavior Change Perspectives on Gender and Value Chain Development

A FRAMEWORK FOR ANALYSIS AND IMPLEMENTATION

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FIELD-Support LWA



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Executive Summary

Upgrading is key to creating competitive agricultural value chains and, in turn, providing a primary source of income for rural agricultural households. Upgrading in response to changing market conditions or new market opportunities can take many forms: adopting new products or production processes, adding new functions that add value, or selling through new market channels. Upgrading is supported by access to lump sums of money for investment, the adoption of new technologies, and the development of new business relationships.

Women in rural households play a key role in agriculture and can be instrumental in upgrading. However, gendered patterns in generating, allocating, controlling, and spending household income makes it difficult for women to accumulate lump sums required for upgrading. Gendered patterns in money management also limit the benefits that accrue to women, and thus their incentives to upgrade. This in turn affects their access to and use of new technologies. Social norms further determine how women are able to build the social and commercial networks and relationships necessary to adapt to changing market conditions and/or new markets.

From a gender perspective this report considers three areas of behavior related directly to upgrading:

- **Money management** behaviors that allow for the accumulation of lump sums and the control of money. These behaviors facilitate or impede the ability of farmers to pay for upgrading and benefit from the returns.
- **Business practices** related to the adoption of new business/agricultural practices and participation in new business models that facilitate access to inputs, services, and information necessary for upgrading.
- **Value chain relationships** that support the development of effective commercial networks, entry into new marketing channels, and improved information flow and trust. The quality of relationships between actors in the value chain influences whether individuals or groups trust each other, cooperate, and share information.

These behaviors have direct implications for program strategies to promote upgrading—money management relates to financial services, payment systems, and financial education; business practices relate to the promotion of new technologies, and the design of new business models for delivering inputs, services and information; value chain relationships relate to improving information flow, strategies for horizontal cooperation among small farmers, and ways to build more efficient, trusting commercial networks among value chain actors, from producers to end market consumers.

Value chain upgrading requires that actors do something different, in other words, that they change behavior. While there are many factors that influence behavior change, this framework focuses on four factors: the desire to change, the know-how, the conducive climate for change, and the rewards. These factors reveal differences in the behaviors of men and women in value chains. The relationship between these factors and the constraints or incentives to upgrade are noted throughout this document.

Methodology

The initial draft of the framework was developed through a review of secondary literature and discussed with global practitioners through an e-consultation.¹ The next step was to test and refine the variables and propositions in the draft framework through qualitative field-based research. The fieldwork involved exploratory research on the citrus value chain in Ghana (in collaboration with ACDI/VOCA's ADVANCE project), and the sweet potato value chain in Kenya (in collaboration with FINTRAC's Horticulture Development Project). It involved individual and paired interviews and focus group discussions with men and women engaged at all levels in these value chains: producers, service providers (agricultural services, financial services, etc.) input suppliers, processors, brokers, traders, wholesalers, retailers, and exporters.

Key Findings

I. Money Management

The research examined two behaviors that improve women's ability to accumulate and control lump sums for upgrading: access to and use of financial services, and participation in payment systems. The findings revealed a number of factors that impede or facilitate women's access to and use of financial services. Many women lack basic knowledge about what financial services are available, how to choose which ones to use, and how to improve the management of their money through the use of financial services (know-how). Rural women often lack the time and mobility to go to banks if they are located at a distance. In Ghana, women save regularly through susu savings accounts where agents visit women at their doorstep or market stalls on a daily basis to collect small deposits. This allows women to put aside very small amounts on a regular basis without having to take the time to travel to a bank. In Kenya, proximity to rural banking agents and the mobile money service M-Pesa facilitates women's money management. This saves time and reduces the transactions costs for women to save (conducive climate). In both Ghana and Kenya, women are active in group-based credit and savings while, for the most part, men are not. These systems build largely on social networks that reinforce regular saving and disciplined loan repayment. Peer pressure provides a low-cost alternative to conventional collateral (desire). Access to individual savings and credit products that are designed to meet the needs and preferences of women is a way to improve control over investment decisions and rewards related to upgrading (rewards).

The methods through which payments are made also influence people's ability to accumulate and control lump sums for upgrading. Direct participation in the cash or non-cash payment system is an important incentive to upgrade. In both Kenya and Ghana, women and men said that whoever receives the income and has it in their hands controls it. Putting cash payments in the hands of women farmers can improve the distribution of benefits within households and be an incentive for women to upgrade by giving them more say in the allocation of lump sum investments (rewards). Proximity to the farm at harvest time is closely related to the control of the income. On jointly-owned farms, both men and women deal with the traders and other buyers. If payments are made on the farm, men often receive and control the income if they are there on a more regular basis. Women are often left out of non-cash payment systems when they involve selling under contracts that are in the name of the household head (which is typically the man). When payments are made through direct deposit to bank accounts, these accounts are often in the name of the male contract holder and women have less incentive to invest time and money in upgrading (conducive climate).

¹ Manfre, Cristina and Jennefer Sebstad. 2010. Behavior Change Perspectives on Gender and Value Chain Development: Framework for Analysis. Draft. Prepared for ACDI/VOCA. May 12 2011.

Upgrading strategies that are inclusive of women need to consider money management behaviors of men and women. Improved design and access to financial services and payment systems can help women to save, accumulate lump sums, and control income. The results from fieldwork in Kenya and Ghana suggest that addressing proximity issues could nudge women to use formal financial services and save regularly. For example, doorstep savings accounts could allow women to save small amounts on a regular basis. Expansion of rural branches and rural banking agents at the village level also could bring savings, credit, and other financial services closer to women. Mobile money services can put a money transfer service directly into the hands of women through cell phones. Linking mobile money to savings accounts and other bank services could further encourage women to save discretely, accumulate savings, and control lump sums. Another avenue for financial inclusion is through payment systems that target women as individual contract farmers or as joint farmers with their husbands. Establishing contracts and payment accounts that are inclusive of women farmers could provide an incentive for women to upgrade. Payment accounts linked to savings accounts or loans could benefit both men and women. Financial education can improve women's knowledge and skills about financial services—what they are, why they are important, and how to use them to improve personal and farm money management and to accumulate lump sums. Financial education also can help all farmers understand what types of payment methods are right for them (cash, advance payment, payments through banks) as they enter new value chain relationships. It also can address specific issues related to upgrading, for example, equipment rental/leasing services or upgrading opportunities that can be adopted through incremental investments.

2. Business Practices

Business practices can be defined as the customary way of doing things in an economic activity. In agricultural value chains, business practices refer to behaviors and practices related to production, harvesting, processing, and marketing as well as business management. Social norms shape, drive and enforce gendered business practices. These include women's time constraints, mobility constraints, and limited bargaining power due to a lack of alternatives. Socio-cultural norms may limit women's ability to interact with male commercial actors in the value chain, deal with formal institutions, or cross boundaries of class or ethnicity in transacting business. Differences in women's age, marital status, education level, and the type of economic activities in which they engage further influence business practices and interactions in commercial networks.

The research focused on differences in women's and men's access to information and access to inputs and services that affect the adoption of new technologies. The interviews revealed a number of different behaviors that may support or impede the adoption process. For example, knowing the outcome of changing a business practice may be particularly important for women, whose limited access to income relative to men may make them hesitant to try something new if it risks their ability to meet basic household needs (desire). Women often demand more detailed information about how to use a product, which takes time and effort on the part of input suppliers or agents. However, once they have the details, women are more likely than men to follow the proper protocols for use (know-how). Time and mobility constraints make it difficult for farmers to access services at a distance. Increasingly, mobile phones are playing a role in bringing services closer to farmers (conducive climate). Finally, price and profit margins play an important role in women's decisions. A key disincentive to upgrading for women, as evident in Ghana, is their greater dependence on hired labor since it adds cost and reduces their gross margins relative to men (rewards).

Understanding gendered behaviors can improve the design of program strategies to promote the adoption of new technologies and practices. Many of the program strategies suggested through this research are not new, but remain important for promoting value chain development that is inclusive of

and benefits women. These include increasing face-to-face interaction between women farmers and information providers (e.g., input suppliers, processors), identifying suitable timing and location of group meetings for women to attend, and using women's networks for information dissemination. Interviews revealed that input suppliers are a key source of information about new products and greater efforts should be made to hire women input suppliers. Given the importance of hired labor in value chains, especially for women farmers, projects that facilitate value chain development should address the situation of both men and women hired laborers as well as the extreme vulnerabilities they face in rural areas.

3. Value Chain Relationships

Value chain relationships refer to the interactions between firms and individuals distributed horizontally and vertically within a value chain. Building cooperation and trust in value chain relationships is important for forming commercial networks that support upgrading, allowing chains to function more efficiently and respond more effectively to market demand. The fieldwork in Ghana and Kenya drew on the concepts of social capital and trust in examining value chain relationships and identifying factors that influence women's relationships and participation in broader commercial networks.

In the field research in Ghana and Kenya, women and men in the two value chains were asked to discuss and rank the quality of their relationships with other value chain actors. The ranking was based on factors including trust, cooperation, frequency of interaction, location, and social norms regarding interactions between men and women. These discussions revealed the strong influence of other people's behavior. People are motivated to "follow the herd" when they see other people doing something. In Ghana, farmers followed other community and farmer group members to a new buyer. Women did not participate actively in these farmer groups, so many continued to sell primarily to brokers (desire). Receiving training and technical assistance from new buyers increased cooperation and was a way for processors to ensure quality and volume. In Kenya, cooperation between men and women farmers and one processing company was strengthened through visits by field managers every ten days, written feedback to farmers, and follow-up with phone calls or SMS to discuss actions to improve the products (know-how). Increasingly, cell phones are improving information flows in value chains and reducing the amount of time between the delivery of goods and the receipt of payments, which fosters trust and cooperation between farmers and buyers (conducive climate). In Ghana, advance purchase agreements between processors and farmers have improved cooperation, but this has mainly benefited men farmers so far (rewards).

Value chain programs should start by assessing the current roles of men and women and the nature and quality of their value chain relationships. Strategies to improve women's value chain relationships need to focus on ensuring women are more exposed to value chain stakeholders; facilitating outreach to women by input suppliers, processing companies and other buyers; and establishing more formal agreements between buyers and women farmers.

Conclusion

The research concludes with several thoughts. First, the three categories of behavior in the framework—money management, business practices and value chain relationships—are interlinked. To encourage upgrading, practitioners need to consider how changing practices in one category of behavior can support or impede a move toward desired behaviors in another area.

Second, no single behavioral factor (desire, know-how, conducive climate, or rewards) is responsible for promoting or impeding change related to upgrading. That said, some behavioral factors appear to have

greater spillover effects than others. For example, reducing the geographic distance between service providers and women can change women's access to services and inputs, and enhance trust by increasing the frequency of face-to-face interaction between them.

Finally, we still do not have enough data on which factors provide the best leverage points for changing women's participation in the value chain. Factors related to a conducive climate such as the availability of time, geographic distance, and access to communication technologies are well-known gender-based constraints. Addressing these factors is likely to make it easier for women to participate but taken alone may not promote change. Social norms regarding gender roles routinely frustrate women's desire to change. Women's incentives to go against the norm and participate in value chains is likely to come from addressing multiple factors, such as the influence of others whom women trust, better knowledge of possible outcomes, or breaking down complex decisions into steps that are easier to understand.

In applying this framework in the future, the broad categories defined here may be generally applicable for understanding behaviors (money management, business practices, and value chain relationships) and behavior change (desire, know-how, conducive climate, and rewards) relevant to upgrading. They provide a useful structure for considering gender differences in value chain behaviors. However, the overall framework encompasses a broad set of variables and relationships, and should be adapted to fit specific objectives. This suggests room for future research and experimentation. Furthermore, the findings allow that there are no universal gendered "behaviors." Gender drives behaviors, norms of behavior, and norms of economic participation. It shapes how individuals use and invest their income, conduct business, and maintain and develop relationships with other economic actors. These practices play out differently in different places and there are exceptions to the norms everywhere. A better understanding of current practices in the context of specific value chains or geographies is perhaps most useful for addressing gender-based constraints to upgrading.

I. Introduction

The successful integration of women into wealth-creating activities requires an understanding of the degree to which gender defines constraints to participation in and benefits from activities throughout the value chain. Effective value chain programming requires an understanding of how people respond to different kinds of incentives in value chains and how gender affects this response.

Insight into the social dimensions of markets within which value chains operate reveals significant differences in the participation of men and women—in their jobs and roles, in their knowledge and skills related to upgrading, and in the opportunities they have to act on this knowledge in value chains. In sum, the behaviors of men and women are different. In considering what drives these differences, it is important to recognize that behaviors are not purely individual choice but take place in the context of gendered social structures and institutions. Here, we posit that these differences influence incentives to upgrade, the distribution of benefits to men and women, and ultimately the competitiveness of value chains.

Gender describes the socially constructed characteristics of women and men in a given society or culture. Through interaction, socialization, and work and family roles, women and men learn to be different in behavior and attitudes. These characteristics vary greatly within and between cultures and over time. Gender is learned, dynamic, and changes over time.

The purpose of this paper is to improve understanding of how gender influences behaviors in agricultural value chains with a particular focus on behaviors related to upgrading. Current behaviors of men and women offer a window for identifying gender-based constraints to upgrading, and approaches to promoting upgrading that is inclusive of and benefits both men and women.

Upgrading involves changes in production processes, products, functions or market channels within a value chain that respond to changing market conditions and new market opportunities. Upgrading helps to create value chain competitiveness. To bring a behavior change perspective to upgrading, it is important to specify the types of behaviors that we are talking about. In this paper we consider behaviors of men and women farmers in three categories related to upgrading: money management, the adoption of new business or agricultural practices, and value chain relationships.

These behaviors have direct implications for program strategies to promote upgrading—money management relates to financial services, payment systems, and financial education; business practices relate to training, adoption of new technologies, and the design of new business models for delivering inputs and services; value chain relationships relate to improving information flow, strategies for horizontal cooperation among small farmers, and ways to build more efficient, trusting commercial networks among value chain actors, from producers to end market consumers.

Gender shapes the behaviors of men and women in each of these areas. Gender-defined roles and responsibilities in value chains and within households affect access to financial services, control over income, and direct participation in payment systems. They also influence access to and use of new technologies, inputs, and services. Social norms regarding gender further influence people's participation in social and commercial networks that enable information flow, relationships of trust, and cooperation within value chains.

Value chain upgrading implies doing something different, in other words, changing behavior. While there are many factors that influence behavior change, our framework draws on the work of others and focuses on the desire to change, the know-how to change, the climate for change, and the rewards for

change. These categories are used to consider differences in the behaviors of men and women in value chains and in the factors that may drive these behaviors and influence behavior change.

This approach diverges somewhat from other approaches to gender and value chain analysis in that it narrows the focus to three categories of behaviors specific to upgrading. It is intended to complement other gender analysis handbooks and frameworks, which are much broader in scope.² The approach also departs from conventional value chain analysis by considering gendered social and institutional structures within value chains and linking them to behavior and behavior change related to upgrading.

This approach is not intended to stand alone, but to be used in conjunction with other efforts to design, plan, and evaluate value chain projects. The objective is to engage both women and men in upgrading, with the aim of making value chains competitive and the distribution of benefits equitable.

² See for example Mayoux, Linda and Grania Mackie (2007). “Making the Strongest Links: A Practical Guide to Mainstreaming Gender Analysis in Value Chain Development.” Geneva: ILO; and, Rubin, Deborah, Cristina Manfre and Kara Nichols Barrett (2009). “Promoting Gender Equitable Opportunities in Value Chain Development: A Handbook.” Washington, D.C.: USAID.

2. Methodology

The initial draft of the framework was developed through a review of secondary literature and discussed with global practitioners through an e-consultation.³ The next step was to test and refine the variables and propositions in the draft framework through qualitative field-based research. The fieldwork involved exploratory research on the citrus value chain in Ghana (in collaboration with ACDI/VOCA's ADVANCE project), and the sweet potato value chain in Kenya (in collaboration with FINTRAC's Horticulture Development Project). It involved individual and paired interviews and focus group discussions with men and women engaged at all levels in these value chains: producers, service providers (agricultural services, financial services, etc.) input suppliers, processors, brokers, traders, wholesalers, retailers, and exporters.

The fieldwork enabled us to narrow the scope of the framework to focus on specific behaviors within the three categories—money management, business practices, and value chain relationships—that proved important for upgrading. The findings revealed some differences in the value chain behaviors between men and women, and confirmed the importance of gendered social and institutional context factors in shaping behaviors within value chains. Perhaps more important, however, we found that many of the assumptions and perceptions of gendered roles did not always pan out, although they do influence the behaviors of certain value chain actors.

A limitation of the fieldwork was that there was less actual experience with upgrading in the two value chains than expected. Incentives for citrus farmers to upgrade in Ghana were limited because the costs outweighed the benefits. In Kenya, sweet potato farmers were considering growing a new variety of sweet potatoes (i.e., orange flesh sweet potatoes) but local demand for this variety was minimal so very few farmers had planted any. This suggests room for more research to further refine the variables and relationships in the framework and improve it. Despite this limitation, the fieldwork provided good information on gender differences in current activities, behaviors and incentives to upgrade in the two value chains.

³ Manfre, Cristina and Jennefer Sebstad. 2010. Behavior Change Perspectives on Gender and Value Chain Development: Framework for Analysis. Draft. Prepared for ACDI/VOCA. May 12 2011.

3. The Framework: Gender, Behavior Change, and Upgrading

The literature on behavior change is expansive and consists of a range of theoretical models from economics, psychology and sociology that have been applied in various fields, from health and the environment to financial and consumer decision-making. In the context of development programs in poor countries, there is growing interest in bringing a behavior change perspective into the design of programs beyond the health and nutrition sector. Models of individual behavior change are drawn upon to improve household food security, promote sustainable agricultural development, encourage technology adoption, and extend financial services to unbanked populations. In this framework, we consider behavior change in the context of value chain development, specifically related to upgrading. Our interest is exploring upgrading behaviors and some of the factors that drive or constrain women and men farmer's behaviors and the choices they make.

A. Value Chain Upgrading

Upgrading is necessary to create value chain competitiveness. Entry into broader regional and international markets has required value chains to meet new standards for product quantity, quality, size, safety and other characteristics. Upgrading involves changes in production processes, products, functions, or market channels within a value chain to respond to changing market conditions and new market opportunities. In agricultural value chains, upgrading may include:

- *Process upgrading*: an increase in the efficiency of production processes, resulting in reduced unit costs. Process upgrading can involve improved organization of the production process or improved technology.
- *Product upgrading*: an improvement in the quality of a product or variety that increases its value to consumers.
- *Functional upgrading*: entry into a new function in the value chain that generates higher returns.
- *Channel upgrading*: entry into a marketing channel that leads to a new end market in the value chain, for example, from the domestic to the export market for the same product.

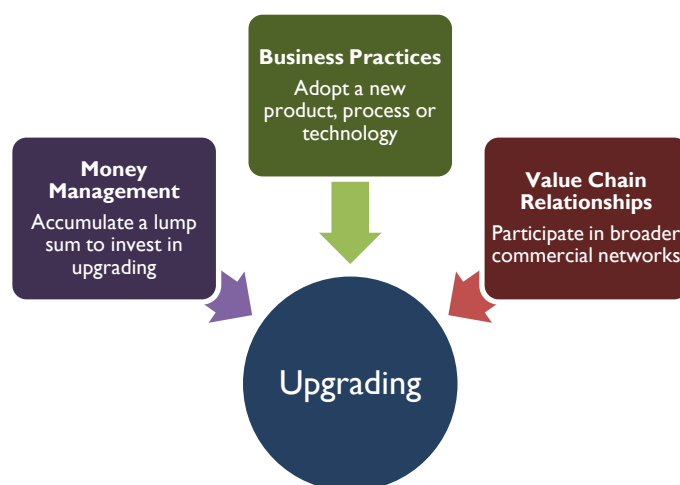
B. Behaviors That Support Upgrading

The research identified money management behaviors, business practices, and relationships as three categories of behavior in the value chain that relate to upgrading.

- **Money management** behaviors include those that allow for the accumulation and control of lump sums of money for upgrading;
- **Business practices** include those related to the adoption of new business/agricultural practices and technologies, and participation in business models that support access to inputs, services, and markets; and
- **Value chain relationships** include both vertical and horizontal relationships that allow for development of broader commercial networks, entry into new marketing channels, and improved information flow and trust.

The literature review and field research helped to narrow down and validate the importance of the above behaviors and relationships in value chains. As detailed in the following sections, we also were able to identify some gender differences in current behaviors, with implications for behavior change related to upgrading.

Figure 1: Behaviors Related to Upgrading in the Value Chain



C. Factors that Influence Behavior Change in Value Chains

Behavior change is not a simple thing. There are many potential factors that can support or impede the move from current behaviors to desired behaviors in value chains. Models focus variously on decision making of individuals, their current behaviors, their intentions and attitudes, and their readiness to change. Notwithstanding, behaviors are not driven by purely individual choice; they take place in the context of social structures and institutions, and gender is embedded in these structures and institutions. Typically, no single factor is responsible for supporting or impeding a move away from current behaviors; instead, a range of factors influences the process and some factors may be more important than others. Drawing on ideas from the health and economics fields and earlier work on behavior change in value chains we considered a range of factors.⁴

Desire to change: People’s behaviors are strongly influenced by other people’s behaviors (herd mentality) as well as the tendency to do things the way they always have been done. Because gender roles are often thought of as “the way things have always been done” they are hard to change. The desire to change also depends on the degree to which outcomes are unknown, especially if the results do not manifest themselves for a long time. Men and women also tend to be more resistant if the decision to change is complex. Finally, a critical factor related to the desire to change is trust, or “*confident reliance by one party about the behavior of other parties.*” While trust often takes a long time to build, it can be easily broken. In commercial relationships it can grow out of multiple prior transactions, knowledge of or exposure to someone else’s experience, or access to information channels, formal agreements or contractual arrangements. Gendered relationships often put women at a disadvantage here.

Know-how to change: Relevant knowledge and skills strongly influence behavior change. Access to information through social and commercial networks, participation in training, and exposure to the media, as well as the opportunity to practice new knowledge and skills all contribute to behavior change.

⁴ See Thaler, Richard H. and Cass R. Sustein, 2008. Nudge Improving Decisions About Health, Wealth, and Happiness. Yale University Press; and Boquiren, Marian and Ivan Idvoro. 2008. Facilitating Behavior Change and Transforming Relationships. USAID FIELD. Washington D.C.: USAID, October.

Conducive environment for change: Many environmental factors condition behavior change in value chains. The geographic proximity of inputs, services and markets is especially important for women's access, given time constraints and social norms regarding mobility. The availability of financial tools, payment systems, information technology, and communication channels all have a direct influence on upgrading behaviors. The socio-cultural environment regarding gender further influences women's participation and relationships in value chains. Policies, regulations and the rule of law further condition behaviors and the development of trust.

Rewards for change: A driving force for behavior change in value chains is access to benefits, such as income that accrues from upgrading. Access is conditioned by the distribution and control of benefits within the household and across value chain actors. In both cases, women producers often are at a disadvantage.

The relationship between these factors and the constraints or incentives to upgrade are noted throughout this document.

D. Gender Differences in Behaviors Related to Upgrading

In the context of gendered economies, women and men participate at multiple levels in value chains, often in different tasks, and with different opportunities for upgrading. In agriculture in Africa, the participation of both women and men is critical to production and growth, however, there is limited understanding of the gender dynamics related to upgrading. While men and women may face similar constraints to upgrading, their capability and incentives to overcome them often differ. Understanding these gender dynamics can help to get the right incentives to the right actors to promote upgrading.

The following sections describe in more detail how gender influences the three categories of behaviors related to upgrading—money management, business practices, and value chain relationships—with examples from exploratory research in Ghana and Kenya. This is followed by a discussion of factors that influence behavior change (Table 1) and implications for programming.

Table 1: Behaviors and Behavior Change Related to Upgrading

Category	Behaviors related to upgrading in value chains	Incentives to change	Factors that support or impede behavior change
<i>Money management</i>	Accumulate a lump sum for investment in upgrading	Access to and use of financial services Participation in payment systems	Influence of other people's behaviors Knowledge of financial services Proximity of financial services Social norms regarding gender and money management Rewards
<i>Business practices</i>	Adopt a new product, process, or technology	Access to information Access to inputs and services	Known outcome of changed practice Other people's behavior Proximity of inputs, services or information Social norms regarding gendered business practices Benefits that accrue from upgrading Complexity of the product, process or technology
<i>Value chain relationships</i>	Participate in broader commercial networks	Social capital Trust	Other people's behavior Social norms regarding gender roles Proximity of actors within the network Availability of time Distribution of benefits

4. Money Management

Money management is a key factor in determining the level of success that poor households have in improving their lives and ensuring basic economic security (Stuart, et al, 2011; Collins et al, 2009; Rutherford, 2000). At any one time, households have multiple ongoing financial relationships and use complex strategies to 1) manage day-to-day expenses; 2) cope with emergencies and unexpected losses; and 3) accumulate “usefully large” lump sums to deal with expensive life cycle events and take advantage of opportunities, including upgrading. In this context there often is a hierarchy of financial priorities in poor households; making ends meet and coping with emergencies often take precedence over investing in farms, businesses or assets. This is especially true if the farm or business activities are new, the outcomes are unknown, or the chance of a loss is high. The priority given to basic household economic security has implications for accumulating lump sums for upgrading, especially for women.

Gendered patterns in generating, allocating, controlling, and spending income affect the capability of men and women to accumulate lump sums for upgrading (Johnson 2004). For women in rural Africa, financial behaviors are strongly influenced by their central role as caregivers and their concern for household economic security. The priority that women give to managing day-to-day cash flow to make ends meet and cope with risks often affects their business decisions and behaviors.

Rural women in Africa often work in activities that generate smaller, more regular streams of income, which are used for day-to-day needs of households. Diversification of income streams enables women to move these small amounts around to meet the cash flow needs of the households. Women’s responsibility for meeting immediate needs and managing risks, combined with their small and irregular income streams, makes it more difficult for them to accumulate lump sums for upgrading. To do so, they often use complex strategies to pull together small amounts from savings, loans, gifts, and diversion of household cash flow.

This is in contrast to men’s income streams, which tend to be lumpier than women’s. This enables men to make larger lump sum expenditures related to asset purchase, farm inputs, school fees, and health care. When it comes to investing larger amounts for upgrading, men are more likely than women to have access to and control lump sums.

Given these differences, rural women in Africa typically have less independent control than men over decisions about large lump sums needed for upgrading. While at the household level men and women often consult each other on the allocation of income they earn, in the words of a male farmer in Kenya, “ultimately, whoever receives the money in their hands controls it.”

It is important to note that the degree of control over income also varies depending on household status of women. The fieldwork found that women with the least amount of power are those in married households. Women *de facto* household heads may have more control; women *de jure* household heads have the greatest amount of decision-making power.

A. Accumulating and Controlling Lump Sums for Investment in Upgrading

Two behaviors that improve women’s ability to accumulate and control lump sums of money for upgrading include the use of financial services and direct participation in agricultural cash and non-cash payment systems.

I. Access to and Use of Financial Services

The use of credit, savings, or remittance services can help value chain actors gain access to and control lump sums for upgrading. Despite the rapid expansion of financial services for the poor over the past

decade, many people interviewed in the citrus and sweet potato value chains remain unbanked; and those who are banked generally lack access to loans for farming or farm upgrading. This is especially the case for rural women. The few who are banked use financial services primarily for savings and money transfers. Those who borrow often do so through groups rather than as individuals and the terms and conditions of loans most often do not meet their needs for agriculture.

In general women are less banked than men. Several factors limit women's use of financial services. The size of loans and timing of loan repayments do not always fit women's income streams (desire). Many women lack information on the range of financial services available and skills to decide which ones to use (know-how). Lack of time and mobility may limit women's access to services located at a distance (proximity), and the complexity of juggling multiple income streams may limit women's desire to obtain financial services by making it more complicated (desire). While many women do have access to small loans through credit groups, they have less access to larger loans for agricultural investment (rewards).

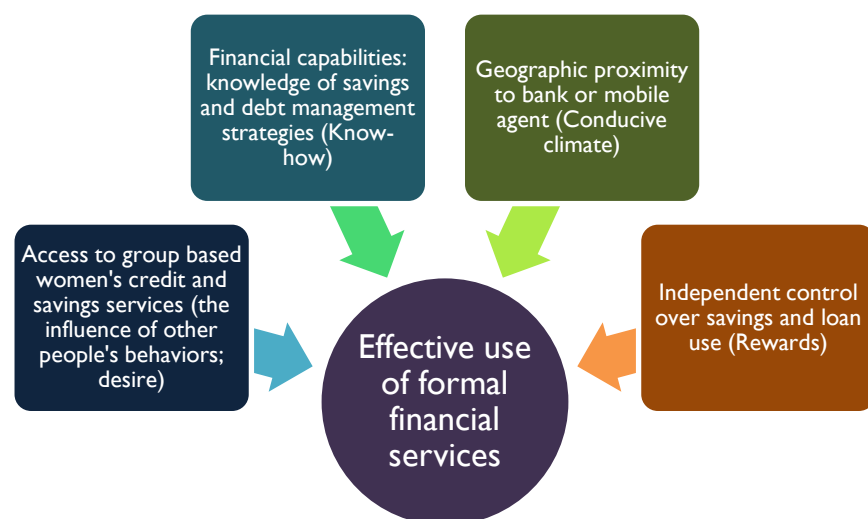
In Ghana, citrus farmers' access to formal financial services is relatively limited. Only half the women we interviewed had bank accounts and none had borrowed for farming, and while more men had formal bank accounts they also had limited access to loans for farming. The ADVANCE project's 2009 baseline survey of citrus farmers found only 22% of citrus farmers borrowed in 2009 (from any source) for either farm or non-farm purposes; only a handful of these women or men borrowed for pesticides, herbicides, or hired labor. As savers, men deposit lumpier sums of money less regularly in banks, while women deposit smaller sums on a more regular basis. Women are especially active savers in *susu* accounts (daily doorstep collection of savings by bank agents) because collection is daily and more convenient in terms of proximity. In one rural bank, for example, women comprised an estimated 90% of *susu* account holders.

In Kenya, both women and men sweet potato farmers had bank accounts, which they used more for saving than borrowing. Most were members of a local village bank and many had accessed loans from it. However, the loan sizes were relatively small (and tied to the amounts that individual members had in their savings accounts). By contrast to Ghana, almost everyone in Kenya was using the mobile money transfer service M-Pesa to send and receive money through cell phones. However, to date, this money transfer system does not have strong links to bank services, so it remains a limited "on-ramp" to financial inclusion.

2. Behaviors that Support or Impede Women's Effective Use of Financial Services

Strategies for encouraging women's financial inclusion—access to and use of financial services—can build behavioral factors into their design. Figure 2 illustrates nudges to promote behaviors that enhance women's access to and use of financial services. These suggest leverage points that might exist to facilitate the change process for men and women.

Figure 2: Factors Encouraging Women's Effective Use of Formal Financial Services



Influence of other people's behaviors through groups: Well-designed financial services can help women to save, accumulate lump sums, and control income, yet many women remain unbanked. Group-based delivery channels for credit and savings, where peer pressure substitutes for conventional forms of collateral, works well for rural women in Africa. These systems build largely on social networks that reinforce regular saving and disciplined loan repayment. In both Ghana and Kenya, women are active in group-based credit and savings while, for the most part, men are not. Peer pressure provides a low-cost alternative to conventional collateral. (Desire)

Financial capabilities: Despite the growth of financial services for the poor in Africa, many women lack basic knowledge about what financial services are available, how to choose which ones to use, and how to improve the management of their money through the use of financial services. Improved knowledge of financial service options and how to use them to their best advantage can help women accumulate and control lump sums. (Know-how)

Proximity: Women, especially rural women, often lack the time and mobility to go to banks if they are located at a distance. In Ghana, women save regularly through *susu* savings accounts where agents visit women at their doorstep or market stalls on a daily basis to collect small deposits. This allows women to put aside very small amounts on a regular basis without having to take the time to travel to a bank. This is a popular financial service for women in Ghana, and builds on a favored feature of informal savings systems. In Kenya, proximity to rural banking agents and M-Pesa facilitates women's money management. This saves time and reduces the transactions costs for women to save. Proximity is an important factor that drives women's use of financial services. (Conducive climate)

Independent control over savings and credit: Access to individual savings and credit products that are designed to meet the needs and preferences of women is a way to improve control over investment decisions and rewards related to upgrading. (Rewards)

3. Participation in Payment Systems

The methods through which payments are made also influence people's ability to accumulate and control lump sums for upgrading. Direct participation in the cash or non-cash payment system is an important incentive to upgrade. Women's motivation to work on a crop or to upgrade is reduced when cash or non-cash payments for those crops go to men. Women risk being left out of payment systems when new business models that link farmer organizations with input and credit are designed in ways that

privilege one individual in the household, usually a male household head. Understanding, trusting and participating in the method through which payments are made is especially important in dealing with a new buyer or entering a new value chain relationship.

Women citrus farmers in Ghana often prefer *cash payments in full at pick up*, because it reduces their risk of non-payment and increases their control of income. Women farmers who depend on hired labor often prefer this lump sum method of payment so they can pay their laborers. When women have longstanding relationships with traders, they may receive advance payments (cash pre-financing) to cover the cost of inputs and/or labor. It requires trust on the part of the buyer that the farmer will not side-sell and trust on the part of the farmer that the trader will come to harvest the fruit and make a final payment.

Perhaps the most common method is for *partial cash payment at harvest and full cash payment later*. It is a risky proposition for farmers and failure of traders to make the final payment was a common complaint by both men and women. Women have a lower preference for this payment method because they have more immediate needs for cash to feed their families or pay hired laborers, cannot risk the loss, and may not be at the farm get to receive the cash when the trader returns.

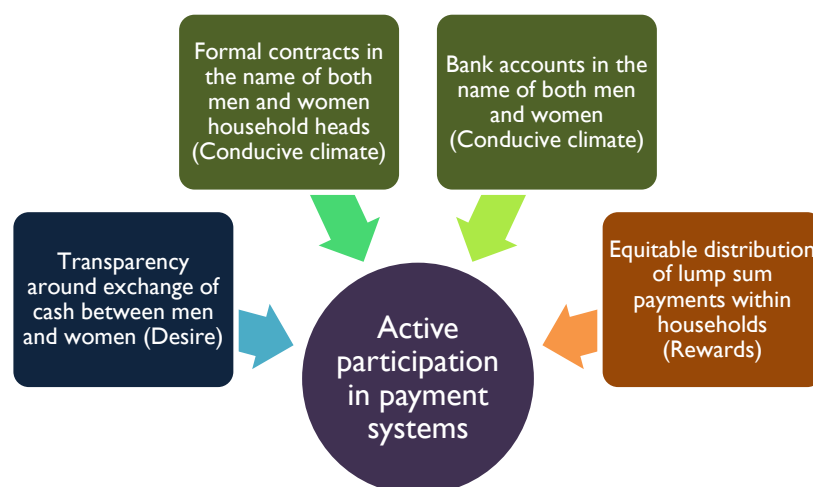
Upgrading through new business models linking producers with new buyers and input suppliers often involves *non-cash payments through banks*. It is a safe and secure way of being paid, but is currently a payment system mostly for men. In Ghana, when men and women jointly own the farms, the account typically is in the name of the man who controls it. If the processor buys citrus through farmer organizations the account typically is in the name of the man (who also is the official member of the group). Women are largely left out of payment arrangements through banks. Women in Ghana prefer cash payments because it gives them more control over the income.

In Kenya, payments to sweet potato farmers are made through M-Pesa, a cell phone money transfer service. Interviews suggest that using M-Pesa creates an opportunity for women to increase their independent control over income. Women spoke highly of M-Pesa, which they considered “personal money.” Although it does not necessarily address the social norms that shape access to income in the household, M-Pesa does provide a way to make timely intra-household transfers between husbands, wives, and other household members and also for women to secure payments they receive for crops under their control.

4. Behaviors that Support or Impede Women’s Participation in Payment Systems

In both Kenya and Ghana, women and men said that whoever receives the income and has it in their hands controls it. Proximity to the farm at harvest time is closely related to the control of the income. On women-owned farms, women receive and control the income. On jointly-owned farms, both men and women deal with the traders and other buyers. If payments are made on the farm, men often receive and control the income if they are there on a more regular basis. If payments are made through bank accounts (from processors), men typically receive and control this income because they own the bank accounts. When women do not receive the payments, they have less incentive to invest time and money in upgrading.

Figure 3: Factors Encouraging Women's Active Participation in Payment Systems



Social norms: Social norms around the exchange of cash between men and women hinder women's participation in some cash payment systems. When bargaining is involved in setting prices for cash payments, men often prefer to deal with other men rather than women, especially if large lump sums are involved. This is because in some settings it is not culturally appropriate for men and women to haggle over the exchange of cash. When women traders are involved, men farmers may leave the bargaining to women because they can “bargain harder” with women traders. **(Desire)**

Contracts and bank accounts in the name of women: Women are often left out of non-cash payment systems when they involve selling under contracts that are in the name of the household head (which is typically the man). When payments are made through direct deposit to bank accounts, these accounts are in the name of the male contract holder. While these types of formal agreements can enhance trust between farmers and buyers, women often are excluded. Active participation in payment systems, especially non-cash payment systems linked to contracts, can be an incentive for women to upgrade. **(Conductive climate)**

Distribution of income in households: Putting cash payments in the hands of women farmers can improve the distribution of benefits within households and be an incentive for women to upgrade by giving them more say in the allocation of lump sum investments. **(Rewards)**

B. Implications for Programming

In designing upgrading strategies that are inclusive of women, it is important to start with a contextualized understanding of money management behaviors of men and women, and the challenges they face in accumulating lump sums. In two places in Africa, the field research showed that rural women must manage small amounts from a variety of income streams to make ends meet, which makes it difficult to accumulate significantly large lump sums. Further, social norms often favor men's control over lump sums and therefore reduce women's incentives to invest in upgrading. Strategies that encourage women and men to change any money management behavior should be grounded in a basic understanding of gendered patterns of earning, allocating, spending, and controlling income in a particular context.⁵

⁵ A qualitative research/assessment tool for mapping the sources and control of income between men and women in households is provided in a companion report (Sebstad and Manfre 2011).

Financial services

- Doorstep savings accounts allow women to save small amounts on a regular basis through agents that visit women in the marketplace or homes and collect deposits on a daily basis. It improves women's access to savings services that are key to accumulating and controlling lump sums. The proximity and regularity of this service is a nudge to get women to save regularly.
- Expansion of rural branches and rural banking agents at the village level also can bring savings, credit, and other financial services closer to women. Proximity is a key factor for rural women who face considerable time and mobility constraints.
- Mobile money services, like M-Pesa, put a money transfer service directly into the hands of women who have cell phones. Linking mobile money to savings accounts and other bank services can further encourage women to save discretely, accumulate savings, and control lump sums.
- Larger, individual loans with payment terms appropriate for smallholders can be an incentive for both men and women to upgrade. In general, greater focus on the financial service needs of smallholders—savings, loans, money transfers, and insurance—could improve women's access to and control of lump sums for upgrading.

Payment systems

- Agricultural payment systems through banks are an important “on-ramp” to financial inclusion for both men and women in rural areas. In Ghana, accounts set up for payments from processors were the first (and only) bank accounts for many men and women farmers.
- Working with processors to change the business practice from establishing accounts in just one person's name to joint accounts can facilitate women's access to income from sales. This would be an example of choice architecture whereby the program makes the initial decision about how money will be accessed within households, while allowing farmers to “opt out” of this arrangement. In many cases accounts are automatically set up in the name of male household heads because they are official members of farmer organizations. Including the names of both husbands and wives on bank accounts set up to receive agricultural payments can enhance women's participation in and benefits from upgrading.
- An alternative to this would be to encourage processors or other value chain actors to set up contracts with individual women suppliers, even if they are in male-headed households. Allowing women to establish these accounts as individuals (not just wives) can help to ensure their financial inclusion and provide an incentive to upgrade.
- Payment accounts linked to savings accounts or used to gain access to loans are an on-ramp to financial services that can benefit both men and women.

Financial education

- Financial education can improve women's knowledge and skills about financial services and payment systems—what they are, why they are important, and how to use them to improve personal and farm money management and to accumulate lump sums. Financial education can help both men and women farmers to understand what types of payment systems are right for them (cash, advance payment, payments through banks, etc.) as they enter new value chain relationships. It also can address specific issues related to upgrading, for example, equipment rental/leasing services or upgrading opportunities that can be adopted through incremental investments. Financial education can be delivered through women's groups (e.g., in markets, in churches), extension agents, farmer field schools, processing companies, or bank branches.

5. Business Practices

Social norms regarding gender shape many of the business practices of men and women in agricultural value chains in Africa. Business practices may be defined as the customary way of doing things in an economic activity.⁶ In agricultural value chains, business practices can refer to behaviors and practices related to production, harvesting, processing, and marketing as well as business management (e.g. record keeping, managing and coordinating logistics).

Several factors *drive* gendered business practices. These include women's time constraints, mobility constraints, and limited bargaining power due to a lack of alternatives. Socio-cultural norms may limit women's ability to interact with male commercial actors in the value chain, deal with formal institutions, or cross boundaries of class or ethnicity in transacting business. Differences in women's age, marital status, education level, and the type of economic activities in which they engage will further influence business practices and interactions in commercial networks. The gendered roles that women play in households reinforced by these social norms affect their ability to interact with other commercial actors in value chains. Gender limits the types of economic activities in which women engage and how they operate them. Many of the current business practices of women may not translate well into the types of demands required to participate in new commercial relationships.

Traditional rules or norms in business practices may be *enforced* informally through social sanctions. Women may be particularly impacted by these sanctions, given their need to maintain social relationships in the community that they depend on for social and economic support in times of need. This makes it hard to change business practices.

A. Adopting New Products, Processes or Technologies

Business practices related to the *adoption of new products, processes or technologies* are some of the most challenging to understand. In part this is because research on adoption tends to focus on the products and technologies over the motivations to adopt, which may differ between men and women. Our research did not expect to solve the adoption question but instead focused on gender in two areas that facilitate the adoption of new technologies, that is, access to information and access to inputs and services.

I. Access to Information

Access to information about new products, practices, and technologies is an important incentive for upgrading. Knowledge of the positive (and negative) experience of others as well as the outcomes and benefits of innovations plays an important role in farmers' decisions to adopt them.

Farmers access information from a range of sources, including input suppliers, extension officers, buyers, other farmers, and information services. They receive information through channels such as training, television and radio, and mobile phones. Word-of-mouth is one of the most common ways that both women and men get information about new products and farming practices. The channels through which women access information are narrower than men's due to women's time and mobility constraints, and their more active participation in social rather than commercial networks. In some cases, women are less motivated to seek out information on new products, processes or technologies,

⁶ Business practices may be defined more formally as the methods, procedures, and rules (norms, guidelines, laws and policies) that guide men and women in business activities.

and information providers are less interested in reaching out to women because men are seen to be the decision makers in households.

Input suppliers are a primary and trusted source of information on new products associated with upgrading. In Ghana and Kenya they provide information to women and men in their shops or through field visits to introduce new products. Input suppliers interviewed noted several differences in how they provide information to men and women. One Kenya input supplier said that women customers tend to ask more questions, want more detail on the products, and are much more cautious, while men just buy the product without as many questions. By contrast, an input supplier in Ghana said that women are always in a rush and do not have time to ask questions. Another commented that it was problematic to spend too much time explaining things to women customers as they run the risk of being accused of sexual harassment by their husbands. Several mentioned women's lack of decision-making power to act on the information they provide about new products. Another input supplier commented that women are less trusting of new brands unless they have first-hand information on outcomes from others who have used the new products.

Processors are another key source of information about new products and practices to improve quality. In Kenya, one processing company wanted to introduce orange flesh sweet potatoes into their line of products for export. Given there is not yet a local market for this product, the processors actively disseminated information on this new variety to smallholder farmers through input suppliers, farmer groups, lead farmers and field visits by company extension agents. They stressed the potential market demand, as well as the importance of using pesticides, fertilizers, and farming practices that met international standards. Initially, the focus of these efforts was mostly on male household heads (considered to be "serious farmers"), but soon expanded to include women and hired laborers upon recognizing their critical role in production.

2. Access to Inputs and Services

For smallholder farmers, upgrading often requires access to new types of inputs (e.g., herbicides, pesticides, and fertilizers) or services (e.g. spraying, pruning, or hiring labor for tasks). Ready access to appropriate inputs and services is an incentive to upgrade.

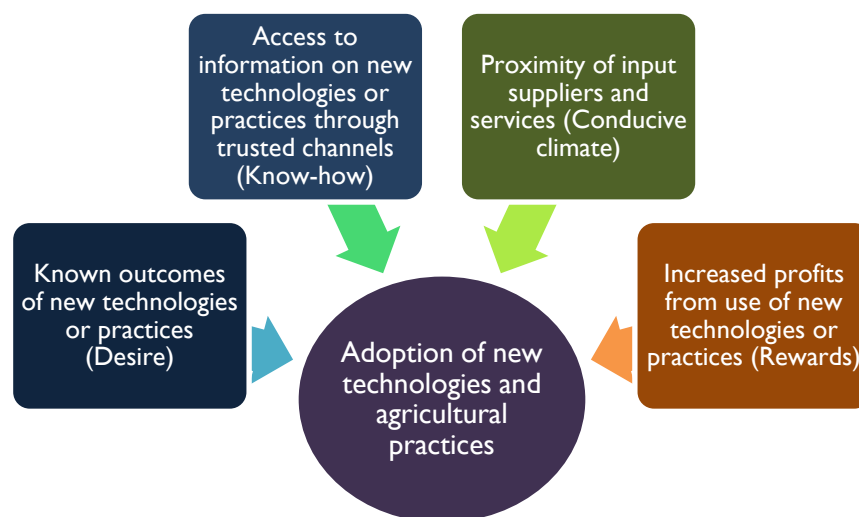
Research on gender differences in agricultural productivity highlights disparities between men and women in their access to inputs and services. In Ghana, Doss and Morris (2001) found that differences in adoption rates for improved crop varieties for men and women, at 59 and 39 percent respectively, are accounted for in part because of differences in access to labor and extension services. It is estimated that only 20 percent of services on new and improved technologies reach women in Ghana (Ministry of Food and Agriculture 2007:17). In Kenya, differences in fertilizer use by men and women resulted in higher gross value of output per hectare by men (Saito, Mekonnen and Spurling, 1994). The research is clear that differences in access to and use of inputs and services results in differences in productivity gains for men and women.

In the citrus value chain in Ghana, baseline research conducted by the ADVANCE project found that most citrus farmers were not using agrochemicals or fertilizers. While both men and women live near shops and have ready access to inputs and services for upgrading citrus, the costs of using them are higher for women because they depend more on hired labor to apply them. Higher costs mean lower profits for women. The ADVANCE baseline survey shows that even though output per hectare is *higher* for women farmers when they adopt herbicides and pesticides, their gross margins are *lower* because they spend more on hired labor (\$237 for women compared to \$135 for men for hired labor; \$14.24 for women compared to \$3.47 for men for plowing in 2009). Moreover, twice as many women had negative gross margins (53%) compared to men (24%). Women's greater dependence on hired labor to use new technologies clearly is a disincentive to upgrade.

In the field studies, input suppliers offered insights on some differences between men and women in using new inputs and services and what motivates or constrains them to adopt a new technology. Some input suppliers believe men are harder to convince to use new products because they will always challenge the input suppliers and need to see the outcome first. Others said that if input suppliers explain new technologies to women, they will adopt them more easily than men. One input supplier said that men are more motivated than women to use new products and practices because they have a greater interest in improving their businesses. Another comment was that women farmers need more time to adopt because they do not use the new products themselves, rather they use hired labor. Since women have to test new products through hired labor (whereas men farmers do it themselves), the testing process takes more time.

3. Behaviors that Support or Impede Women's Adoption of New Technologies and Agricultural Practices

Figure 4: Factors Encouraging Women's Adoption of New Agricultural Technologies and Practices



Known outcomes and influence of other people's behaviors: A known outcome of changing a business practice may be particularly important for women, whose limited access to income relative to men may make them hesitant to try something new if it risks their ability to meet basic household needs. In Kenya, where the orange flesh sweet potato is largely unknown to farmers, men said they were willing to move into orange flesh sweet potatoes because the local processor assured them of a market. In Ghana, input suppliers often test new products on their own farms and compare them with old products to provide firsthand accounts to their customers. Many citrus farmers—men and women alike—stated that they were motivated to enter citrus farming because of the success they saw other farmers were having. One input supplier commented that if farmers see a positive difference, then they will adopt the new technology. (Desire)

Information on product use: As mentioned above, women often demand more detailed information about how to use a product, which takes time and effort on the part of input suppliers or agents. However, once they have the details, women are more likely than men to follow the proper protocols for use. To build trust in the information they receive, women often triangulate information from more than one source. (Know-how)

Proximity of inputs and services: Time and mobility constraints make it difficult for farmers to access services at a distance. Input suppliers recognize the importance of proximity and locate local branches

close to farms or local markets. Processing companies reach out to farmers at the farm gate and community level. Mobile phones increasingly play a role in bringing farmers, input suppliers, and financial service providers closer together. In Ghana, the distance between their homes and farms continues to pose a challenge for women to supervise hired labor. This is less of a challenge for men because they often work alongside hired labor on their farms. (Conducive climate)

Profit margins: Several input suppliers commented that women are more price sensitive than men and often choose agro-products based on price, while men will choose products they know well and trust. Price and profit margins play an important role in women's decisions. A key disincentive to upgrading for women, as evident in Ghana, is their greater dependence on hired labor since it adds cost and reduces their gross margins relative to men. (Rewards)

B. Implications for Programming

Understanding gendered behaviors can improve the design of program strategies to promote the adoption of new technologies and practices. Mapping out the business practices of men and women ahead of time is important as people sometimes make assumptions about the sexual division of labor that do not hold true. In Ghana, for example, there were many misconceptions about gender in the citrus value chain. We consistently heard that citrus is a man's crop, citrus farming is for men, and women's role is mainly buying and selling citrus. We also heard that women are less active than men on citrus farms because they are too busy with household and social responsibilities and are not strong enough to carry out heavy farming tasks such as weeding, spraying, and picking fruit. However, the research found that both men and women own citrus farms (20% belong to women in the ADVANCE baseline study), manage citrus farms, and work as farmers, managers, and hired labor on citrus farms. Both men and women market citrus. Nevertheless, these common misperceptions about gender segmentation are reflected in the views of bankers (payment accounts are in the name of men; citrus loans are for men); of input suppliers (citrus inputs and training are for men); and of farmer organizations' leaders (women do not have time for farmer organizations; meetings do not need to be scheduled at times convenient for women; leadership is for men). These perceived 'norms' reinforce gendered roles in citrus production and marketing and affect women's ease of access to key resources related to upgrading. In designing program strategies, moving beyond these beliefs (based on the way things have always been done) can help to shape new norms and create opportunities that are more inclusive of women.

Many of the program strategies suggested below are not new, but remain important for promoting value chain development that is inclusive of and benefits women.

Access to information

- Women value face-to-face interaction with those providing information on agriculture. Women-specific farmer groups and farmer field schools provide the opportunity for face-to-face interaction in venues and formats that are comfortable for women. Women value formats that are interactive, encourage questions, and discuss details on how to use new products and services. Where men tend to dominate mixed gender meetings, women-only training is preferred. Increasing the number of women trainers and extension agents can also improve information flow to women.
- The timing and location of farmer group meetings and other face-to-face information channels should be convenient and appropriate for women.
- Women's information channels should be used to disseminate information, for example, churches and market associations.

- Information should be targeted not only to women who are *de jure* household heads, but also to women in male-headed households and *de facto* women-headed households who are isolated from many agriculture information channels.

Access to inputs and services

- Input suppliers are a key source of information about new products and how to use them. Men in the shops do not always feel comfortable dealing with women customers. This could be addressed by increasing the number of women in shops (as agents, owners, or workers), training input suppliers on customer service and information delivery that is friendly to women, and promotion of agent networks that bring services to women within their communities..
- Hired laborers are critical, but too often invisible, actors in agricultural value chains (on farms, in markets, in transport, etc.). Given the importance of hired labor as an input for women farmers, value chain assessments and projects that facilitate value chain development should acknowledge the important role of both men and women hired laborers. Given their role in production and processing, men and women hired laborers should be involved in training on improved farming practices and use of new technologies. More attention is needed to issues of health and safety risks facing young women laborers and child labor. In general, there is a need for better understanding of gender issues facing hired laborers.
- Given women's diversified economic roles, the development of technologies and services that can be used to save labor and improve productivity across crops, livestock, or other economic activities should be considered.

6. Value Chain Relationships

Value chain relationships refer to the interactions between firms and individuals distributed horizontally and vertically within a value chain. Building cooperation and trust in value chain relationships is important for forming commercial networks that support upgrading. These networks help value chains function more efficiently and respond more effectively to market demand when those participating in them trust each other, cooperate and share information.

A. Women's Participation in Broader Commercial Networks

The fieldwork in Ghana and Kenya drew on the concepts of social capital and trust in examining value chain relationships and identifying factors that influence women's relationships and participation in broader commercial networks.

1. Social Capital

Social capital can be defined as, “the ability of actors to secure benefits by virtue of membership in a social network” (Portes, A., 1998). Like other forms of capital, it is a resource that can be built up and drawn upon later. Social capital grows out of social networks based on trust, reciprocity, and shared norms of action.

Two types of social capital are of interest: bonding and bridging social capital. Bonding social capital refers to the links between people and groups of people with similar demographic characteristics, shared identities and viewpoints. Bonding social capital promotes horizontal cooperation in value chains, where individuals with common backgrounds or socio-economic characteristics link together for specific purposes. Horizontal cooperation in marketing products can expand market opportunities for small producers by reducing the costs that buyers incur in dealing with large number of small producers. It can also give producers leverage in negotiating volumes, prices, and other terms of sale. Bonding capital can have positive effects where it helps groups of individuals overcome similar constraints.

Bridging social capital, on the other hand, refers to building cooperative connections between heterogeneous groups. It may be more fragile, but likely to foster social inclusion (Schuller, Baron and Field, 2000). Bridging social capital brings smaller groups or networks together, thus broadening the base of resources they can draw upon for information, inputs, services, and markets. Both types of social capital are important in value chains because they foster cooperation and trust, and facilitate individual and firm access to information, resources, and market opportunities.

Bonding capital builds strong ties that women depend upon as a form of informal insurance for meeting basic needs in times of stress, dealing with emergencies and managing other crises. Because maintaining these social relationships is so important for household economic security, women may be less willing to “bargain hard” or “walk away from a deal” in commercial transactions within their social networks. When mobility constraints and social norms restrict women's interactions outside of accepted social networks, women may be limited in developing wider commercial networks and relationships. This may not always be the case, however. In the handicrafts sector in Guatemala, for example, women used their social capital and as a group were better able to articulate their needs and negotiate with other actors (Bloom et al 2008).

By comparison, men's networks often are larger and more extensive. Greater mobility allows them to interact with a broader range of individuals beyond their social networks including buyers, input dealers, and public officials. Social norms place fewer restrictions on who they may interact with in public,

facilitating their ability to seek out new relationships. This creates greater opportunities for men to develop bridging capital.

2. Trust

Trust can be defined as: “confident reliance by one party about the behavior of other parties” (Clarke 2002). It is a critical element of both bonding and bridging social capital. In the context of value chains, trust in relationships is an important incentive for upgrading. It also is a significant factor affecting intra-household dynamics and decision-making around production and marketing.

There are many sources of trust. In social settings, trust is associated with cultural affinities and interdependence—characteristics akin to bonding capital. In commercial relationships trust may emerge from multiple prior transactions or through knowledge of someone else’s experience. This information often is obtained through word of mouth, reputation, social networks, or other information channels. When social capital is absent, trust in commercial settings also may be established through formal agreements and contractual arrangements that define the terms of the relationship and reduce the uncertainty around the outcome of the relationship. Trust has other features: it generally relates to a particular purpose (e.g., the delivery of a spraying service on time), it changes over time, and it can be easily broken.

When trust in commercial settings grows out of repeated transactions, women may be at a disadvantage because of more limited mobility compared to men. Not only do women have fewer opportunities to build trust in commercial relationships, in some cases, they may require higher levels of trust than men in these relationships. This is especially the case when they are very poor and have primary responsibility for feeding their families. Given little margin for error, women may require a greater level of certainty in the outcomes at the same time that they have less access to information, less previous experience, and fewer opportunities to enter into contractual arrangements.⁷ This limits the nature and scope of their relationships in value chains.

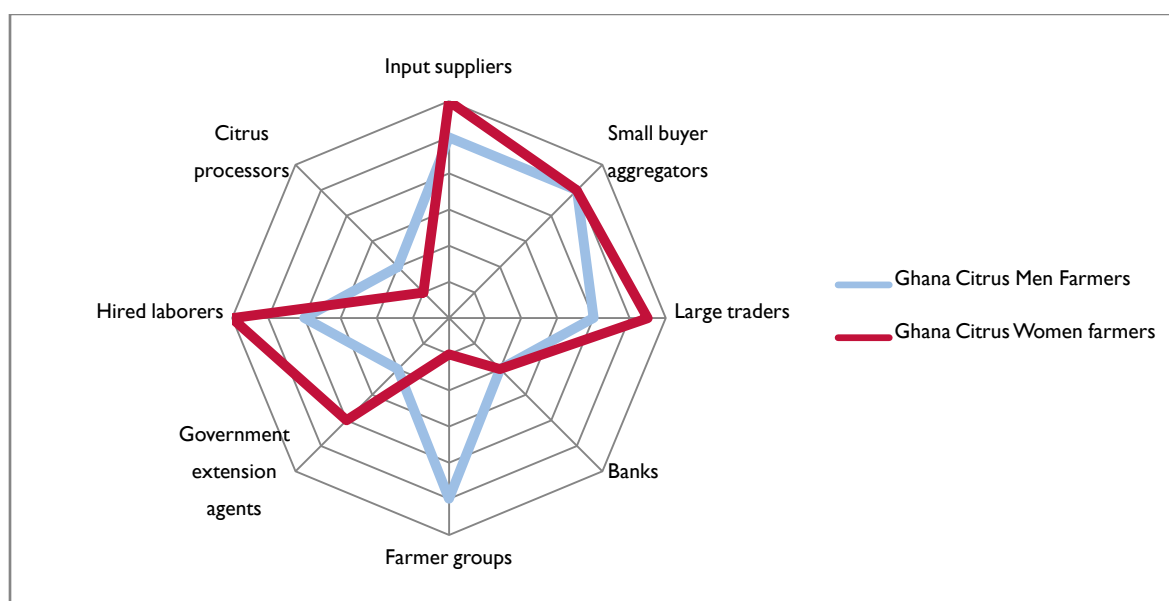
Overall, the challenges women face in building trust in commercial relationships affects upgrading by limiting their participation in broader commercial networks.

3. Behavioral Factors Influencing Women’s Participation in Broader Commercial Networks

In the field research in Ghana and Kenya, women and men in the two value chains were asked to discuss and rank the quality of their relationships with other value chain actors. The ranking was based on factors including trust, cooperation, frequency of interaction, location, and social norms regarding interactions between men and women. As seen in Figure 5, women citrus farmers cited better quality relationships with input suppliers and hired labor compared to men. They ranked the quality of their relationship with processors and extension agents lower compared to men. Men reported better quality relationships with farmer groups (all men) which are a source of bridging capital. Both men and women said their relationship with banks was not good at all.

⁷ Women in many rural African settings are also less likely than men to engage in formal contractual or agent relationships due to lack of legal identity (official ID cards), lack of property ownership, and/or the norm for household heads to be signatories.

Figure 5: Gender Differences in the Quality of Value Chain Relationships for Citrus Farmers



Source: Ghana, November 2010

The focus group discussions found many similarities in factors that men and women consider important for building trusting value chain relationships. These included convenience of location, good customer service, credit, discounts or additional free services, good information, reliability, and payment in full and/or on time for sales. One gender difference was that women farmers highly value direct, face-to-face contact with other actors. Face-to-face interaction was actually more important than the frequency of interaction in building cooperation and trust with other value chain actors. However, their lack of time and mobility limited their participation in farmer organizations and value chain stakeholder meetings,⁸ and this limits face-to-face contact and the ability to build relationships, especially with new value chain actors such as processors. Women deal primarily with value chain actors who come to the farm, do not require a lot of time, or are accessible in the local markets.

Both women and men farmers recognize the value of being part of commercial networks beyond their own community. They did not believe that working with community members, where the presence of bonding capital is more likely, contributed to greater trust or better business. Most farmers and traders also explained that “business is business,” and that it was sometimes preferable to work with people outside the community because they do not know you as well. There was recognition that mixing social and commercial networks does not always work to your advantage.

⁸ The ADVANCE project organized several stakeholder meetings in Central Ghana to facilitate better communication and more cooperation and trust in the citrus value chain.

Figure 6: Factors Influencing Women's Participation in Broader Commercial Networks



Figure 6 illustrates several behavioral factors that influence the development of a cooperative relationship between farmers and new buyers.

Influence of other people's behavior: People are motivated to “follow the herd” when they see other people doing something. In Ghana, farmers followed other community members to a new buyer. They were influenced by first-hand information from neighbors and friends on prices, terms of sale, and reliability. Farmer groups also played a role in getting many of their members to sell to a processing company. Women did not participate actively in these farmer groups, so many continued to sell primarily to brokers (who in turn sold to processors). (Desire)

Training and technical assistance from processors: Cooperation with a new buyer also develops when the buyer provides training on how to upgrade crops. Farmers value this training, especially when they learn things they can apply across other crops. It also is a way for processors to ensure quality and volume. In markets (primarily export markets) that enforce standards regarding safe chemical use, sanitary farm management, or other health and safety standards, farmer training helps processors and other export firms meet these standards. In Kenya, cooperation between men and women farmers and one processing company was strengthened through visits by field managers every ten days, written feedback to farmers when the company rejected any of the farmers' crops detailing why they do not meet their standards, and follow-up with phone calls or SMS to discuss actions to improve the products. (Know-how)

Accessible communication technologies: Cell phones in both Kenya and Ghana have significantly improved information flow in value chains. In both places, the low cost of cell phones and wide availability of cell phone networks have improved the efficiency of marketing and reduced the costs for both farmers and brokers. The mobile money system in Kenya provides a safe and reliable way of sending payments. This system was not in use in Ghana, and there was a stark contrast in the ease of sending and receiving payments. Reducing the amount of time between the delivery of goods and receipt of payments fostered trust and cooperation between farmers and buyers. Women and men both use cell phones in communicating with other value chain actors, although their use of SMS services for getting price information was still limited. (Conducive climate)

Purchase agreements: In Ghana, advance purchase agreements between processors and farmers have improved cooperation, but this has mainly benefited men farmers so far. Processors prefer to buy fruit that has been ripened on the tree because it has a higher sugar content for juices and other products. However, because there are many buyers competing for citrus, processors need to provide an incentive

to farmers to keep the fruit on their trees longer. For farmers, it is a risk to keep the fruit on the tree until it is almost ripe, because if the processors do not buy it, it rots on the trees. To provide incentives for farmers to cooperate, processors sign written purchase agreements with farmers. In some cases, they make advance payments to farmers for labor and inputs, or provide advance loans against the harvest income for emergencies. This helps to build trust in the relationships between farmers and processors. (Rewards)

B. Implications for Programming

Value chain programs should start by assessing the current roles of men and women and the nature and quality of their value chain relationships. This information can be used to identify opportunities for promoting women's participation in broader commercial networks. Assessing the extent to which value chain relationships overlap with social networks could also suggest leverage points for moving beyond these relationships into broader commercial networks. Assessment tools that address these issues are included in a separate report (Sebstad and Manfre, 2011).

In the context of strategies to facilitate value chain development there is a need for the following:

- Involve more women in stakeholder meetings, which are a good way for people to connect with wider commercial networks, gain information on the requirements for new products, learn about new markets, and meet new value chain actors.
- Facilitate active outreach to women by input suppliers, processing companies, and other buyers (who often are men, and prefer dealing with men).
- Include women as well as men in formal agreements between value chain actors.
- Involve women in training related to value chain upgrading. Despite longstanding experience and research recognizing the importance of involving women farmers in training, they are still left out, especially in training related to cash crops. Know-how is a key incentive for behavior change.
- Recognize all women farmers—*de jure* and *de facto* household heads, women in male-headed households, younger and older women, and women who work as hired laborers—in efforts to facilitate value chain relationships that support upgrading.
- Promote women farmer groups and women's active participation in mixed gender farmer groups.

7. Summary

This framework presented in this paper identifies three categories of behaviors we considered significant in terms of gender and upgrading:

- Money management because capital is required to invest in upgrading strategies.
- Business practices because new business models often aim to change the way men and women access inputs, services and technologies necessary for upgrading.
- Value chain relationships because relationships may change with upgrading and require new ways of building trust and cooperation.

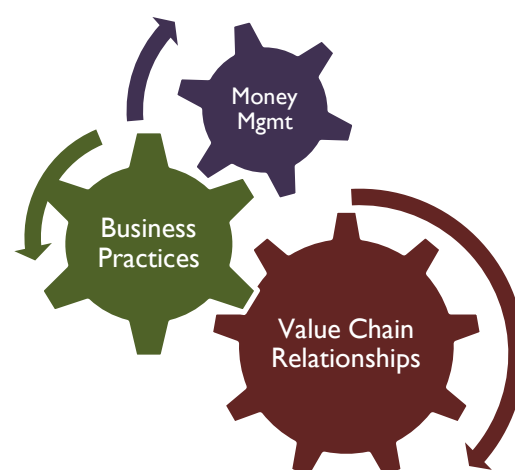
Figure 7: Behaviors are interlinked

A literature review and exploratory field research confirmed the relevance of these behaviors to upgrading and identified some differences in men and women's behaviors. The research attempted to explore factors that drive behaviors, where they are different for men and women, and implications for programs that promote value chain upgrading that is inclusive of and benefits women.

One aim of the research and the development of this framework was to identify leverage points for facilitating value chain development that is inclusive of women. We conclude with several thoughts. First, the three categories of behavior in the framework—money management, business practices and value chain relationships—are *interlinked*. To encourage upgrading, practitioners need to consider how changing practices in one category of behavior can support or impede a move toward desired behaviors in another area. For example, when buyers provide different payment options (e.g. pre-financing), this can help women overcome constraints to adopting new practices and increase cooperation between the buyer and women.

Second, no single behavioral factor (desire, know-how, conducive climate, rewards) is responsible for promoting or impeding change related to upgrading. That said, some behavioral factors appear to have greater spillover effects than others. For example, reducing the geographic distance between service providers and women can change women's access to services and inputs, and enhance trust by increasing the frequency of face-to-face interaction between them. Access to communication technologies and services, such as M-Pesa, can facilitate men and women's participation in safe, secure and predictable payment systems. This provides easy and quick access to the rewards for participating in value chains and increases trust and cooperation between farmers and buyers. For women, however, it may not replace the need for face-to-face interactions with buyers.

Finally, we still do not have enough data on which factors provide the best leverage points for changing women's participation in the value chain. Factors related to a conducive climate such as the availability of time, geographic distance, and access to communication technologies are well-known gender-based constraints. Addressing these factors is likely to make it easier for women to participate but taken alone may not promote change. Social norms regarding gender roles routinely frustrate women's desire to change. Increasing women's incentives to go against the norm and participate in value chains is likely to come from addressing multiple factors such as influence of others whom women trust, better



knowledge of possible outcomes, or breaking down complex decisions into steps that are easier to understand. Providing practical mechanisms such as contracts in the name of women, direct participation in non-cash payment systems, or financial education specifically on strategies for accumulating and controlling lump sums can improve women's access to the rewards from upgrading.

A. Future Use of the Framework

In applying this framework in the future, the broad categories defined here may be generally applicable for understanding behaviors (money management, business practices, value chain relationships) and behavior change (desire, know-how, conducive climate, and rewards) relevant to upgrading. They provide a useful structure for considering gender differences in value chain behaviors. However, the overall framework encompasses a potentially broad set of variables and relationships, and should be adapted to fit specific programmatic or research objectives. We initially selected variables based on a wide review of literature on gender, agriculture and value chain development. A similar approach, but with a narrower focus, could be used to adapt the framework to suit a particular crop, country, value chain, or type of upgrading. The framework should be seen as a menu of options rather than something always to be used as a whole.

The findings allow that there are no universal gendered "behaviors." Gender drives behaviors, norms of behavior, and norms of economic participation. It shapes how individuals use and invest their income, conduct business, and maintain and develop relationships with other economic actors. These practices play out differently in different places and there are exceptions to the norms everywhere. A better understanding of current practices in the context of specific value chains or geographies is perhaps most useful for addressing gender-based constraints to upgrading.

B. Suggestions for Future Research

The findings suggest room for future research and experimentation in several areas:

- Research to understand the overlap between social and commercial networks and how this influences women's behaviors around upgrading. What are the risks that women face in moving beyond social networks?
- Research on women and men's control over income and implications for participation in upgrading. Does women's independent control over income make a difference in their participation in and benefits from upgrading?
- Qualitative research on factors that drive behaviors and behavior change in value chains, and how they differ for men and women. Are social norms and other people's behaviors stronger drivers of behavior for women compared to men in value chains? Is proximity of inputs, service, and markets a more important driver of behavior and behavior change for women compared to men?
- Experimental research that tests "choice architecture" in value chain upgrading programs. Programs could present options for financial services, payment systems, input supplies, new services, or marketing arrangements that encourage women's participation in upgrading (e.g., setting up non-cash payment systems with the names of both husband and wife on the accounts with the choice of opting out of this arrangement). Researchers could study the outcomes on women's participation in and benefits from upgrading.

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