

Review of the Uganda smallholder pig value chain assessment results and suggested potential interventions to improve women's access and control of resources in the pig value chain

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Smallholder Pig Value Chain Development in Uganda Project financed by IFAD and the EU

www.livestockfish.cgiar.org




January 2014

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Contents

Background	2
Significance of gender in Uganda’s pig value chain	2
The pig value chain assessment process.....	3
Terms of reference and report outline	3
Gender responsive review of the value chain assessment results	4
Assessment of the pig value chain methodology	7
Recommendations	8
Revision of the value chain assessment methods	8
Suggested adaptations to the gender transformative value chain assessment tools	8
Making the best bet interventions gender responsive.....	14
Value chains	14
Pig health and management.....	15
Feeds and breeds	16
Tracking progress	16
Gender impacts at individual level for women.....	17
Gender impacts at Household/Family level:.....	17
Gender impacts at Community/Market/value chain levels:.....	17
Gender impacts at National/macro-levels:.....	17
References	19

Background

Significance of gender in Uganda's pig value chain

The concept of value chains describes the full range of activities that are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use (Kaplinsky and Morris, 2000). The activities that comprise the value chain can be contained within a single firm or divided among different firms, as well as within a single geographical location or spread over wider areas.

The term Value Chain refers to the fact that value is added to preliminary products as they progress in the chain through a combination of resources (ILO, 2006) and the actors actively seek to support each other so that they can increase their efficiency and competitiveness. They invest time, effort and money, and build relationships (hence the term chain) with other actors to so as to reach the common goal of satisfying consumer needs and thereby increase their profits (KIT, FAI, 2006).

Value Chain Analysis (VCA) is increasingly being used as a methodology for identifying effective strategies for Value Chain Development (VCD) for pro-poor growth. It aims to identify appropriate points of intervention for upgrading industries to compete on local, regional and international markets and improving the situation of those currently disadvantaged in the value chain.

VCA is used to understand why particular countries and particular types of enterprises find it difficult to enter certain sectors, why many of the potential benefits of an enterprise fail to reach the very poor, and identify the implications for value chain development. Gender inequalities are often critical to understanding and addressing the 'weakest links' within value chains, and the most critical areas for upgrading quality and growth as well as poverty reduction because gender differences and inequalities affect the ways in which value chains operate at every level (Mayoux and Mackie, 2007).

Uganda's National development Plan 2010/11-2-14/15 recognizes that in order to realize its vision of "a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years", there is need to among other things broaden participation in the socio-economic transformation process through the promotion of gender equality.

It is noted that there are certain elements in Uganda's traditions, culture and religious norms that discriminate against women constraining their empowerment and economic progress. At the governance level, these rules and practices limit political and economic participation of women. At the community and household level, women are restricted from participating in important decisions such as resource use and access to services. Women have been marginalized in access to and ownership over land, education, businesses, skills development financial resources, employment and inheritance rights (NDP, 2010: 31). At the same time, a substantial amount of women's time is taken up in providing care activities due to the unequal gender division of roles coupled with productive roles. According to the Uganda 2002 Population Census, the agricultural sector employed a higher proportion of women (83 percent) than men (71 percent) (MAAIF, 2010). This situation clearly depicts women's disadvantaged position despite their critical role in Uganda's agriculture and society in general. There is therefore ample justification for the ILRI- led pig value chain projects in Uganda to target women with direct benefits to empowerment and sustainable development.

The pig value chain assessment process

The CGIAR Research Program on Livestock and Fish identified the smallholder pig value chain in Uganda as a high-potential target. The goal of the program is to translate research into major interventions that stimulate pro-poor transformation of selected livestock and fish value chains and generate benefits at scale. The program has begun engaging with research and development partners in Uganda, analyzing the pig value chain and its policy environment, and characterizing how smallholders currently raise and market pigs.

In 2013, the ILRI-led pig value chain projects in Uganda conducted a value chain assessment with producers in Kamuli, Masaka and Mukono districts. The objectives of the value chain assessment were to:

- Characterize the pig production and marketing systems
- Identify the constraints and opportunities faced by producers
- Identify and select interventions for pilot testing
- Identify key elements and variables to consider for the producers' benchmarking surveys

The producer pig value chain assessments were conducted in the form of producer workshops through farmer focus group discussions in the 35 sampled villages. A total of about 1400 pig farmers were covered during the focus group discussions. In addition, about 7-9 village leaders from each village were also separately interviewed.

In addition, the Safe Food Fair Food project conducted a value chain assessment from November 2012 to February 2013 to assess various components of pig production, namely, feeds, breeds, markets, animal health and food safety. Under this assessment, qualitative and semi-qualitative data on pork consumption, preparation, knowledge, attitudes and practices was collected in 34 villages in the same districts. The results were shared in a workshop held on 9-10 April 2013.

Terms of reference and report outline

This assignment involved review of the value chain assessment results from a gender perspective specifically focusing on issues women smallholder farmers face related to access and control of resources along the pig value chain. In addition, the identified preliminary list of best bet interventions were reviewed to ensure that gender related constraints have been taken into consideration. The following data sets and documents were reviewed:

- Smallholder pig value chain assessment in Uganda: Results from producer focus group discussions. A Draft report.
- Results from the qualitative assessment of food safety and nutrition in the smallholder pig value chain in Uganda—Consumers. Draft report dated 9 April 2013 by Safe Food Fair Food project.
- Results from the qualitative assessment of food safety and nutrition in the smallholder pig value chain in Uganda—Producers. Draft report dated 27 March 2013 by Safe Food Fair Food project.
- Value chain assessment and best bet interventions identification. 9-10 April 2013. Workshop report
- Rapid pig value chain Assessment toolkit for pig farmers—Uganda, 9 November 2012.
- Access data sets of focus groups and key informants from Kamuli, Masaka, and Mukono districts

Based on the review, the report assesses the pig value chain assessment methodology used and results from a gender perspective and makes recommendations on potential interventions to improve women farmers' access to and control over resources in the pig value chain.

Gender responsive review of the value chain assessment results

This section summarizes the key findings from the gendered assessment regarding opportunities and constraints of smallholder producers in Uganda's pig value chain.

It was revealed that men and women in the target communities depended on a range of farm and off farm enterprises for their livelihood. In terms of the contribution of the livelihood sources to household income, pig and crop production were ranked highest by both the women and men groups in most of the value chain domains.

Pig production and marketing was perceived to be a relatively new activity and was appreciated by both male and female farmers due to possibilities of getting quick returns due to their fast growth. The women are developing a new mindset that treats pig production as a business and a willingness to invest in it. Women find piggery attractive because of a range of attributes. They referred to pigs as a 'live bank' because it is an asset they can liquidate at any stage if growth (piglets, sow, boars, gilts or finishers). Income accrued from pig enterprises can be used to cater for large cash needs such as school fees.

There are new fast growing breeds, and pigs are reared by women in the domestic spaces therefore making it possible to perform other activities in the household that are associated to their gender role. Pig production and marketing require less capital investment and small space/land compared to other stock such as dairy cattle. Pig production co-exists symbiotically with women's roles in crop production and reproductive roles of food processing because pigs benefit from crop and kitchen waste as feed while crops utilize pig manure to enrich soils. Farmers in all districts reported a problem of declining soil fertility and the women in Kamuli reported increased use of fertilizers in crop farming by farmers.

Gender influences division of roles in pig production. Men are involved in feed mixing, tethering and cleaning the piggery during morning hours when they are at home and marketing. Men tend to enjoy more leisure time and higher participation in off farm income generating activities. Women have busier schedules attending to crops, the pig enterprise and household chores. Their involvement in the pig enterprise included cleaning of kraals, fetching water, collecting feeds and watering and feeding the animals twice a day. The women got assistance from the children in the evening after school.

Decision making on various activities in pig production and marketing is also gendered. Men and women make decisions depending on the household structure although there was no consensus on how this is done. While men's groups indicated that most decisions were a shared responsibility between men and women with a few decisions exclusively made by men, women's groups indicated that pigs are owned by women and consequently they carry out all activities and make most decisions. The situation regarding control of income from pigs was also equally mixed. This rather sensitive area requires more investigation using qualitative methods best suited to understand the nuances in gender relations and intra-household dynamics.

A range of institutions operating within the villages were perceived by farmers to be of importance in contributing to the communities' welfare in general and some address pig value chain issues directly. In the urban-urban and rural-rural value chains of Masaka district, NAADS was highly ranked in terms of importance. The farmers indicated its important contribution in offering advisory services on modern agricultural practices and livestock management, especially supporting farmer groups

and helping them in acquisition of inputs and piglets, and advice on proper housing structures. In some cases, NAADS supplied some of the house construction materials while the farmers supplied labour.

BRAC, which is a microfinance institution offering group loans to women and individual loans to men at a low interest rate, was also highly ranked in some of the sites. In some cases, institutions that support vulnerable groups such as orphans through school fees payment, purchase of scholastic materials while also providing families with livestock such as goats and pigs for free were also highly ranked especially in the rural-urban and rural-rural value chains.

In Kamuli district, VEDCO, a local NGO was ranked highly in Bugulumbya where it offers training to farmer groups on improved livestock and agricultural practices. It provides piglets and feed inputs while also offering trainings on construction of pig housing. It is also involved in hygiene and sanitation interventions. NAADS was also ranked as important in the same sub-county and it supplies improved seeds and planting materials especially for maize, beans, banana and cassava.

Membership in groups is an accurate predictor of access to production services by poor smallholder farmers because in Uganda most government organizations and NGOs often use groups as channels to provide services to farmers. Overall, a majority of farmers belonged to a group.

A small proportion of farmers receive market information, extension, credit, and animal health services. Gender gaps exist for all services with women having less access to all services except credit where they enjoy a slight edge over men in a few areas served by BRAC, an NGO that targets women. Land is predominantly owned by men and sizes are small, about 1 acre on average.

The value chain assessment identified general constraints associated with various components of the smallholder value chain though these were not gender disaggregated. Constraints were identified in the areas of inputs and services, product sales, feeds and feeding, pig health and management, breeds and breeding management. Regarding inputs and services, the most important constraints included unavailability, high cost and price fluctuation, and poor quality. High input prices tended to lower the pig farmers' profit margins thereby discouraging them from investing in inputs.

Other constraints to use of better quality inputs included lack of knowledge on better quality inputs especially in the rural-rural and rural-urban value chains. Some of the specific issues included lack of knowledge on feed mixing to achieve good quality feeds and poor knowledge on quality standards for most inputs. A high proportion of farmers in the rural-rural value chains also indicated unavailability of outlets selling high quality inputs as a major barrier to use of better quality inputs. This was also a common constraint in the urban-urban value chains in Mukono district but not Masaka.

Farmers are not able to expand sales volumes because they lack capacity in terms of feed resources, finances and breeds. In addition, several constraints hinder them from obtaining better prices for their pigs, namely, lack of capacity to estimate the weight, lack of market information and limited marketing outlets. Since most pig farmers rear pigs to enable them offset emergency financial needs, they are not able to obtain better prices since under such circumstances, they are willing to accept any price for the animals to meet their financial obligations. Farmers' low bargaining power due to lack of proper organization was a constraint mentioned in a number of sub-counties in all the value chains. Other commonly cited constraints affecting prices and farmers bargaining power included sale of poor quality pigs due to poor performing breeds, poor feeding, lack of proper management and instances of traders colluding in setting prices that disadvantage farmers.

The constraints related to feeds and feeding depended on the feed sources used. The high cost of commercial feeds, the seasonal variation in cost of ingredients, low quality of commercial feeds and ingredients were some of the main constraints mentioned by farmers. The low quality of commercial feeds is associated with poor knowledge on feed formulation by feed stockists, whereas the case of low quality ingredients is associated with adulteration. In the case of crop residues, their availability is dependent on the cropping calendar, particularly in the case of those that are consumed green, because silage conservation is not used at all. In all the districts farmers identified the need for training on conservation techniques for crop residues and forages. In the case of kitchen leftovers frequently used in peri-urban settings, those sourced from restaurants, school cafeterias and hotels present a risk of harmful objects (glasses, plastic bags) and they need to be checked carefully before feeding to pigs. Another risk is the introduction of pathogens from the kitchen leftovers to animals.

The constraints on breeds and breeding management included lack of transport to take sows to boars, lack of boars, and lack of capital for servicing sows. Regarding animal health, a major concern raised by farmers is the poor quality of the health services due to unqualified practitioners and absence of regulation and quality assurance by responsible government organs. All constraints were considered to be related to a lack of information / knowledge.

Regarding pork consumption, results revealed that overall, the level of consumption among producers is low on average 1kg per household. The study seems not to have targeted other market segments so as to get a broader perspective of pig consumption. Pork consumption is largely seasonal with peaks during festive seasons of Easter, Christmas and to a less extent Martyrs' day. Other factors influencing consumption include income and religion with poorer farmers eating less pork while muslims, Seventh Day Adventists and some traditional religious beliefs totally prohibit pork consumption. Men tend to have more access to pork since they can eat it both at home and at pork roasting joints which women cannot freely access. The assessment identified knowledge, attitudes and practices regarding pork although these were not gender disaggregated.

Assessment of the pig value chain methodology

The tools were semi-qualitative in nature and covered different subject domains. The domains covered include breeds and breeding management, feeding, animal health, epidemiology, value chain mapping and marketing, and food safety. Other aspects covered included gender roles and decision-making in the livestock and fish value chains as well as livelihood assessment.

Most of the tools were engendered. However, in most cases, the gender disaggregation stops at a head count of men and women undertaking respective activities or accessing services. It does not go a step further to understand how and why men and women engage the way they do; the benefits they derive from their engagements; how men and women feel about the status quo and what is needed to change it for the better.

More importantly, the tools don't foster an understanding of power relations within the households and the value chain as a whole as well as the status of women's empowerment therein. Where the Value chain mapping tool probes for reasons why some producers don't receive services, the responses are not gender disaggregated making it impossible to identify gender based constraints and their underlying root causes. Comparing responses of separate men and women's focus groups is not helpful without this in-depth analysis.

The analysis of institutions that support upgrading of the pig value chain (such as extension and advisory services, credit, transport, markets) stops at listing the institutions, their level of contact with producers, importance, whether they target women or not and number of women and men having access. The analysis does not look within the institutions to uncover nuances regarding how and why their operations hinder efficient and equitable access by women. It also fails to consider the wider social, policy and regulatory contexts in which the chain operates yet these often have a critical influence on the chain's operation and performance in general and gender equity dynamics in particular.

Mayoux and Mackie (2007) make a convincing argument for including a wider contextual analysis in gendered value chain analysis. They propose that "gender analysis should not look only at enterprises per se, but also at the other enabling environment, including gender relations, which affect how enterprises operate, how they relate to each other and particularly the causes of inequality within the chain. In many cases services apparently external to the enterprise like gender sensitization of male entrepreneurs and household members, child care support and general improvements in health and education provision are also essential for real increases in women's incomes. In many contexts macro-level factors like enterprise regulation, levels of inflation, infrastructure development or changes in property legislation may be more significant in influencing the income levels and women's vulnerability than targeted enterprise projects or programs. Gender equitable land reform, anti-discrimination legislation and support for women's advocacy organizations may be a more valuable contribution to stimulating women's enterprises than small micro-enterprise development projects for women".

The tools used in this assessment considered individual producers (men and women) but did not look at gender relations within households and how they influence women's participation and benefit from the chain. The analysis also stopped at the production node but did not look at barriers and opportunities for women to engage in higher nodes of the chain so as to reap higher returns.

It is also important to note that while the value chain analysis identified general pig value chain constraints, it does not go further to understand how these affect men and women differently as a result of their social position and the root causes of identified gender differences. It does not therefore provide ample information to inform the development and implementation of gender sensitive interventions that ensure gender equitable outcomes.

Recommendations

The VCA has revealed important gender gaps regarding access to resources in the value chain. However, without a thorough assessment of the strategic gender needs of women in the value chain, we lack a basis for designing gender transformative approaches that would sustainably improve women's access and control over resources. This section proposes some potential recommendations in this regard.

Revision of the value chain assessment methods

It is recommended that the pig value chain project in Uganda operationalizes the gender transformative approach to value chain analysis as recommended by the ILRI Livestock and Fish gender strategy. Rather than focusing on identifying and addressing gender gaps between men and women, such approaches seek to understand the positioning of women in the chain and attendant strategic interests and needs; why differences in resource ownership, control, and decision making exist, in order to identify ways to address the underlying causes of constraints to upgrade and create lasting change for the value chain and its actors.

Gender transformative value chain assessment tools therefore ask questions at the micro (individual and household), meso (community norms and organizations), and macro (chain structure, societal rules, norms, values, government policies) levels. The draft manual by Kantor et al (available at: livestock-fish.wikispaces.com/VC_Toolkit) is a useful starting point. The tools in this manual can be adapted to the pig value chain and Ugandan context and fine-tuned using experiences of other organizations that have used such tools in the field.

The tools can be piloted on a small area, for instance in any of the sub-counties identified for testing of the potential best bet interventions under the project. The gender transformative interventions identified together with the communities using the Envisioning change tool (explained below) would be implemented concurrently with the best bets to address the identified gender constraints using action research approach--an iterative process of intervention, monitoring, evaluation with inbuilt controls to facilitate attribution of observed outcomes (Coles and Mitchell, 2011).

Suggested adaptations to the gender transformative value chain assessment tools

It is recommended that the smallholder pig value chain assessment uses four out of the seven tools in the GTA manual (available at: livestock-fish.wikispaces.com/VC_Toolkit) which have direct relevance to the suggested potential best bets. The tools include: gendered market system mapping; relationship wheel; decision making and access and control over resources; and envisioning change. A brief overview of the tools is provided below.

Gendered market system mapping which consists of three tools, provides a gender-aware understanding of the structure and functioning of the value chain, the positions of different social groups in the chain and an initial assessment of the enabling environment, with explicit attention to social and cultural factors. Throughout the mapping, 'who' and 'why' questions are asked to obtain socially disaggregated information and explore why the chain is organized as it is, and with what consequences for different actors.

Tool 1 Mapping of value chain actors and market channels involves conducting discussions with male and female actors at each of the nodes across the value chain (producers, processors, traders, retailers, etc). This segmentation makes it easier to document the experiences, constraints and opportunities for women and men by node. The output of this exercise is a detailed map, showing the value chain actors, the different market channels

and different products, the value chain nodes and market channels where men and women dominate, and prices paid in each market channel, and a detailed documentation of the discussion around producing the map.

Tool 2 Mapping market services and other stakeholders examines the major sources of inputs and other market services and their accessibility to different types of value chain actors; the relative access to and control over the different services by men and women respectively; and major constraints in buying inputs and accessing market services. The existing tool focuses on marketing, transport, and credit services. In adapting this tool to the Uganda pig value chain, I propose that we add questions aimed at carrying out a gender audit of other institutions that support chain upgrading (i.e extension, veterinary services, local governments at district and sub county level, NGOs) so as to identify any gaps in capacity and other areas that could explain the gender gaps identified in the baseline.

Tool 3 Mapping the enabling environment and external drivers documents economic, political, legal, environmental, technological and socio-cultural drivers and external forces that influence the chain. This is because value chains do not exist independent of the larger socio-economic, cultural and political systems in a region or country. These systems can facilitate, limit or be neutral to the development of the value chain and to the ability of different social groups to participate in the chain and control the benefits of these efforts. The key questions are: What are the main sources of change in the value chain that may affect future performance of the value chain and the opportunities and benefits available to different value chain actors? What is their possible impact on the value chain and its different actors? This analysis under tool 3 can yield points to inform advocacy for a conducive environment as suggested in the potential best bets.

Relationship wheel

The objective of this tool is to understand how relationships with different people and organizations within and outside of the value chain matter to women's and men's value chain participation and outcomes. It is particularly focused on examining the quality and value of these relationships, including how power operates in the relationships, and how this varies by gender.

The results will show how interconnected value chain actors are, and where these connections help and hinder women and men in their efforts to develop and achieve performance and upgrading goals. This information can demonstrate: when targeting value chain interventions may be inappropriate given the way families or groups work together, where exploitative relationships need to be addressed to enable different actors to achieve better chain outcomes, and where positive relationships can be strengthened or expanded.

This tool will inform bet interventions on organizational models to enhance value chain coordination, by providing understanding on functioning of women only and mixed sex pig producer organizations and how these can be effective vehicles for women's empowerment.

Decision making and ownership and access to resources

The objective of this tool is to understand gendered patterns of decision making and of ownership of and access to resources important for the respondents' value chain work. In particular the tool aims to draw out how these ownership and decision making patterns affect motivations to work in the chain and to expand operations. The decision making questions also go beyond asking who made decisions, since asking this question directly often results in normative responses (e.g. men make decisions) instead of the story behind the decision. The focus is therefore on how decisions on issues relevant to the value chain are typically made, including decisions related to the control women and

men have over the income earned from their work, and why these patterns exist. In both cases, obtaining information on the consequences of ownership and decision making patterns for women's and men's incentives to work and expand/upgrade is of central importance, as this makes the link between gendered patterns of behaviour and value chain outcomes.

Generally, information generated from all the above tools will be useful in making the potential best bets gender responsive, particularly those under Value chains (Group 3), and training, communication and capacity development (Group 1) (See Value chain assessment and best bet intervention identification workshop report, 2013).

Envisioning change

The visioning exercise is the final activity of the value chain analysis during which the results of the analysis are shared with value chain actors in a workshop setting to enable them reflect on the results and the linkages between gender and social equality and value chain performance. It is an opportunity to use evidence from the analysis to begin the process of awareness raising around the negative implications of social inequalities for the chain and its actors.

The aim is to support socially and economically marginalized value chain actors to develop visions for how they would like to see the value chain and the context in which it operates change in order to improve their ability to participate in it and benefit from their efforts. The output of this exercise developed in an inclusive participatory manner consists of gender specific visions for the chain's structure and operation that enable poor and marginalized actors to achieve their goals, and an analysis of the opportunities and constraints to achieving that vision. The visions and analysis are the basis for action planning to define gender transformative value chain development interventions.

Making the best bet interventions gender responsive

Potential best bet interventions identified in the workshop were clustered into three areas namely, Animal Health, Feeds and breeds, and Value chains (SPVCD Workshop report, 2013). This section contains suggestions drawn from literature that can be adopted to make the proposed best bet interventions gender responsive.

Value chains

Proposed best bet interventions under this category include facilitation of the emergence of organizational models to enhance value chain coordination, capacity building for farmers and organizational model actors in husbandry practices and business skills, record keeping, quality assurance, and value addition among others; as well as facilitation of emergence of policy advocacy fora to influence policies favorable smallholder pig value chains at district and national levels. Implied in these interventions is a desire to empower farmers to take more control over the value chain.

In order to make these interventions gender responsive, the project should aim at empowerment of women farmers such that they are moved from a situation where they are mostly concerned only with pig production to a level where they are also involved in activities higher up in a chain, including trading in pigs and pig products and inputs, and participating in partnerships with other actors in the chain on equitable terms. Empowerment would also mean that they control the income and other benefits from their engagements in the chain. Described below are some examples of gender responsive chain upgrading strategies that can potentially empower women:

Horizontal coordination: This involves development of relationships among actors within nodes e.g formation or strengthening of producer groups. Horizontal organizations can be beneficial by increasing women's market and social power, improving access to services and assets and helping to tackle some of the underlying gender inequities, such as low social status, that disempower women in value chains. A useful complementary intervention involves development of the capacity of women to a level where they can take on leadership roles and actively influence decision making as members of mixed sex groups. They may also need individual skills to boost their confidence and self-esteem to enable them to negotiate equitable benefits from their engagements in the groups. However, intervening in poorly understood existing horizontal networks can have damaging outcomes hence the importance of making a thorough assessment of these institutions during the initial value chain assessment that informs the strategy development (as suggested above).

Experience elsewhere has shown that women only groups may not be the best solution for all development problems. For example, an evaluation of a project in Tanzania, showed that the exclusion of men from some producers groups created resentment and anger that manifested itself in acts of sabotage and, in comparison with mixed groups, introduced additional transaction and input costs for the group because women were reliant upon a small number of male fishers for seed stock and feedstuffs (Cole and Mitchell, 2011).

Vertical coordination: This refers to developing relationships among actors between nodes e.g establishing production contracts between producers and buyers that can lead to increased income and access to credit on better terms or less tangible outcomes such as increased social status and prestige. While this is potentially beneficial to both men and women, for the latter participation does not always result in equitable gains, which are contingent upon underlying issues such as the intra-household dynamics that govern income control (Cole and Mitchell, 2011). In situations where increased incomes through better terms of trade tend to result in the appropriation of activities by men, there would be need for complementary strategies such as gender sensitization of men and

women to appreciate negative effects of marginalizing women on household welfare, and equipping women with skills to negotiate more equitable household gender relations.

Upgrading as chain actors: This involves targeting women farmers with knowledge and skills to enable them become specialists with a clear market orientation so that they increase volumes and/or quality that they produce. To enable women to gain a higher and secure income, it may not be enough to only improve their technical skills, but to also invest in improving individual skills, such as planning and literacy where it is identified that they have deficiencies in these areas.

Upgrading as activity integrator: Here the women farmers are supported to overcome barriers to entry into more profitable levels of the chain that require higher capacities and resources. This can involve equipping them with skills (for example on finance, leadership, organizational skills, literacy, numeracy) and other resources to enable them add value through taking control over more activities in the chain for example becoming pig traders, transporters, butchers. In order to strengthen women's negotiating power within markets and enterprise chains, other areas of support can include strengthening their market information networks, Improved facilities for women in markets and measures to counter discrimination, training for networking and collaboration, formation of networks and information centres on women's rights, subcontracting conditions and labour legislation, formation of collaborative networks for women to directly access higher levels in the value chain (Mayoux and Mackie, 2007). Women can also be assisted to resolve issues of heavy household workload, and domestic abuse that may arise when they strike out in these new unconventional businesses. However, two possible pitfalls to this strategy are that women may not control the additional income that they earn and on top of that it may increase a woman's workload considerably with implications for her wellbeing. There is therefore need for complementary strategies that empower women to negotiate for better terms in the household.

Establishment of favourable macro level policies: This involves lobbying for changes in policies to end gender discrimination, and establishment of institutions to represent women informal sector workers in economic policy-making.

Pig health and management

In order to address the issue of limited knowledge on biosecurity and good husbandry, proposed best bet interventions in this area include an education package on biosecurity knowledge and pig disease information, as well as training on good husbandry practices. Training packages will consist of manuals, leaflets and posters.

It is recommended that the Knowledge Attitudes and Practices (KAP) survey which will precede the KAP interventions should collect gender disaggregated data so as to identify men and women's knowledge, attitudes, practices, any inequalities and biases that exist and their root causes. It should also analyze the local knowledge systems in pig management—who knows what, who shares with whom and on what, all of which should inform design and implementation of the KAP interventions.

For the KAP survey, men and women should be treated as individuals and data reported at individual rather than household level so as to understand the issues affecting men and women as individuals. The training manuals should include a module on gender analysis, and suggest some known tips or guidelines for gender sensitive training, communication and extension methods. One example of a women friendly training practice is the use of a wide range of channels for communication (e.g drama, pictorials, radio messages) and for all channels use of the local languages in message

delivery. This would aim at overcoming barriers stemming from women's lower education levels, limited mobility, time constraints, and gender roles among others. The messages should be displayed in locations accessible to women and at convenient times.

Proposed best bet interventions to address issues of poor drug management include provision of evidence of negative consequences of misuse of veterinary products, training on drug use, sensitization of actors on consequences of low quality drugs and testing of an improved model of improved pig health delivery and management. The issues of poor confinement types and disease surveillance will be addressed through testing housing and tethering models as well as a field lab for rapid diagnostic tests, and central slaughter at village level model respectively.

It is recommended that all these proposed best bet technologies should be subjected to an ex-ante socio-economic feasibility assessment aimed at determining potential impact on time use and burden to women; and their suitability to women's resource endowment and other capacities (i.e in terms of cost, availability of credit to purchase inputs, and required literacy and numeracy levels). This assessment can be carried out in a community level workshop organized as a follow up to the workshop that identified the best bets which was attended by only technical personnel. The community level workshop would provide an opportunity to men and women pig producers to be involved in not only assessing the feasibility of proposed interventions but also in setting priorities for technology development.

In the short run, given their limited resource endowment and restrictions to mobility, women are likely to benefit more from technologies that utilize non purchased inputs which are available in the domestic space or in close proximity to the homestead. In this regard, the potential best bets of testing indigenous traditional knowledge as natural de-wormers or homestead wallow against ectoparasites, the central village slaughter place and Community Animal health Networks for quick distribution of health messages look promising for targeting women.

Gender sensitive participatory research methods should be used during the testing of the proposed technologies. For example, the process should draw on male and female farmers' indigenous technical knowledge, and sources of innovation; participating farmers should include both sexes; and mechanisms that allow women to participate and speak freely such as having separate groups for men and women should be employed during consultations and other events.

Feeds and breeds

Proposed best bet interventions in this area included developing training guidelines, conducting actual training, testing various technologies and collective action for influencing policy. The recommendations given above for these respective areas can be applicable in this context as well.

Tracking progress

It is expected that adoption of the recommendations of this report would lead to gender equity impacts at different levels, and the project would need appropriate indicators to measure the impacts at each level. Below are some suggested indicators at the various levels adopted from Mayoux and Mackie (2007). It is important to note that these are not meant to be prescriptive but should at best be taken as guidelines or a menu to pick from. Ultimately, the actual indicators should be generated from a participatory process involving all relevant actors and they need to be linked to the gender transformative interventions selected for implementation. Indicators would depend on the particular purpose and scope of the value chain development process. The Envisioning change process described above could include a session on participatory identification of indicators.

Gender impacts at individual level for women

- Economic: Increased income, productive and assets (particularly large assets) and women's increased control over these; Increased access to and control over/ role in decision-making about household income and assets; women's increased participation in key activities and decisions in household businesses/male-owned businesses, Reduced burden of unpaid work in household; increased visibility, recognition of and value given to women's role in household production and reflected in increased control over decision-making.
- Psychological: Improved negotiating power; Increased perception of life choices and confidence; Increased confidence in coping with life challenges
- Social: Increased ability to develop social capital and challenge social constraints
- Political: Increased participation in decisions affecting their lives

Gender impacts at Household/Family level:

- Economic: changes in economic decision-making processes and household division of labour
- Psychological: improvements in perceptions of women's abilities and status
- Social: Reduced violence in the household; reduced pressure for conformity to social norms/ restrictions on women's mobility
- Political: changes in decision-making processes in general and acceptance of women's autonomy.

Gender impacts at Community/Market/value chain levels:

- Economic: increased economic options/more and better jobs for women; increased access to markets/reduction in market barriers and discrimination; improved access to services to reduce burden of unpaid household work
- Psychological/ideological: Widened perceptions of women's capacities and abilities; Increased access to education and training
- Social: Reduced social pressure for women to conform to stereotypes
- Political: increased women's participation in community and market-level planning and decision-making.

Gender impacts at National/macro-levels:

- Economic: removal of gender discrimination in legislation and policymaking; increased provision of services needed by women; reform and implementation of property legislation which gives women equal access to resources
- Psychological: removal of discrimination/affirmative action in education and training; removal of gender stereotypes/gender-discriminatory language from all official documents and positive promotion of new female role models
- Social: legislation to remove social barriers to gender equality; measures to combat gender violence at household, community and institutional levels introduced and implemented.
- Political: equal representation of different women stakeholders in economic decision-making processes.

These gender impact indicators could be combined with more general indicators of household poverty, enterprise growth and institutional sustainability for example:

- Enterprise level (both women's and joint businesses): increase in fixed assets (machinery, premises, etc.); more customers; expansion into new markets; increased business networks; increased potential for expansion.
- Household level: improved food security and nutrition, particularly for women and girls; improved housing conditions (including better kitchen, sanitation and factors which reduce

household work e.g. improved flooring); money for education of children, particularly girls and equal male responsibility for these expenses;

- Association/Institution level: new members; increased revenue; meetings with policy-makers; improved management; sustainable services to members.

The monitoring and evaluation process should also include gender audits at institutional level.

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