

Review

Gendered participation in cassava value chain in Nigeria

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Abstract

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The cassava value chain in Nigeria has a lot of significant value chain processes and much of these processes remain untapped. The paper therefore examines the participation of men and women in cassava value chain in Nigeria. It looks at studies on cassava value chain conducted in the Niger Delta and South West Nigeria and examines strategies and opportunities for increasing participation of cassava farmers, (especially women) in value chain processes. The paper specifically looks at how agricultural value chain analysis can be used as an instrument to understand gender inequalities and to identify ways to overcome them in order to achieve gender equitable outcomes for men and women in agricultural value chains. First, it looks at how value chain analysis can be used as an instrument to understand gender inequalities and to identify ways to overcome them. Second, integrating gender into a value chain framework helps to understand how gender inequality hinders (equal) upgrading strategies and to identify ways of how these barriers can be removed.

Keywords: Africa, Agriculture, Cassava, Gender, Gender Inequality, Nigeria, Value Chain, Women

INTRODUCTION

Gender Inequality in Sub Saharan Africa

It is common knowledge that gender inequality is one of the most pervasive forms of inequality, particularly because it cuts across other forms of inequality. Different rules, norms and values govern the gender division of labour and the gender distribution of resources, responsibilities, agency and power. These are critical elements for understanding the nature of gender inequality in different societies. Gender segmentation in household arrangements in sub-Saharan Africa (SSA) is prevalent in the face of highly complex lineage-based homesteads. Much of SSA is matrilineal, with women's access to land being through usufruct rights through their husband's lineage group. Since women's obligation to the

family includes provision of food and caring for their children, they are granted this access to enable them carry out these responsibilities. In parts of West Africa, including Nigeria, women generally have usufruct rights to separate holdings through their husband's lineage. Women's low participation in national and regional policy-making, their invisibility in national statistics and their low participation in extension services have meant that those issues of most concern to women have been neglected in the design and implementation of many development policies and programmes. In some countries such as the Benin Republic, the programmes developed were far from addressing the main concerns of women as they were neither involved in policy making decisions nor were they directly consulted to articulate their needs. In some

countries, despite legislative and tenure changes in favor of smallholders, women continued to be placed in a disadvantaged position in terms of access to land. Women's access to land was rarely discussed and thus their benefits from land reforms were few.

Gender Differences in Entrepreneurship and Farming

Following the World Development Report 2013, "jobs" are broadly defined to include various forms of wage and non-wage work, formal and informal. Informal work is the largest source of employment throughout Africa, Asia, and the Middle East, and working women are more likely than working men to be self-employed or farming. Entrepreneurship is critical to gender at work. Micro, small, and medium enterprises (MSMEs) comprise 90 percent of all jobs in developing countries, and over the past decade their growth rate in low-income countries has been triple that of MSMEs in high-income countries. Agricultural employment remains the primary source of livelihood for about 38 percent of the population in developing countries. Women comprise about 43 percent of the agricultural labor force in developing countries overall, and about half in East Asia and Sub-Saharan Africa. The "feminization of agriculture" has been documented in developing countries as men migrate farther away and for longer for off farm employment while women, more constrained in terms of time and mobility, are more likely to continue agricultural work. Women are generally concentrated into low levels of agricultural value chains, performing mostly basic smallholder farming activities. Some key areas of female disadvantage are well established, although data tend to be weak.

❖ Because of differences in human capital and productive inputs, female farmers achieve lower productivity than male farmers—20 to 30 percent less, due largely to differences in human capital and access to productive inputs. As a result of gender-specific constraints, female farmers tend to have lower output per unit of land and are much less likely to be active in commercial farming than men.

❖ Women typically farm less profitable crops and smaller plots than men. Women farm both cash and subsistence crops, though social norms often result in men's farming concentrating more on the former and women's more on the latter. For example, in Ghana, cocoa is grown more by male farmers, while cocoyam, a staple crop often consumed at home, is disproportionately grown by women. In all 14 countries for which there are data, the farm sizes of male-headed households are larger than those of female-headed households, and in some countries the gaps are particularly wide—in Ecuador and Pakistan, for instance, farms of male-headed households are more than twice

as large.

❖ There are well documented disparities in access to and control of financial and physical capital—particularly credit and land. For many women, this gender bias extends to non-land assets, such as livestock—especially more valuable livestock, such as cattle. Sex-disaggregated data on livestock ownership are rare but available data consistently shows gaps. A study of men's and women's livestock ownership in North-eastern Uganda found that 62 percent of men, compared to only 14 percent of women, owned cattle.

Measuring the gender gap in agriculture is a profile based on research by Oseni et al., who assess Nigeria's gender gap in agricultural productivity as well as the key contributing factors to this gap.

In Northern Nigeria, plots managed by women seem to be on average just as productive as plots managed by men when simple averages are compared, due in part to differences in land size. Women in the north manage plots that are nearly half the size of men's. As the size of the farm increases, its productivity decreases. This difference therefore masks the stark gender gaps in agricultural yields in the north of the country. In other words, the female/male gap would be much larger if women in the north had similar-sized plots to men. Indeed, after controlling for manager, land holdings, input use and household characteristics, on average plots managed by women produce 27% less per hectare than plots managed by men, underscoring the importance not just of quantities but also of returns to productive factors for the gender gap in the north.

Quantity and efficiency of farm labour

Men in the north tend to live in households that have more adult labour available and tend to hire more outside labour to meet their agricultural needs. Differences in the number of adult males in the household and the intensity of hired male labour use (measured by days per hectare) account for a large portion of the total gap. Meanwhile, having an extra female adult in the household generates lower returns for female-managed plots relative to male-managed plots. This finding suggests that women may work less efficiently on plots managed by other women.

Intensity of fertilizer use

Female farmers tend to apply less fertilizer per hectare than men, and this difference represents a substantial proportion of the overall gap. Closing this disparity in input use could reduce the north's gender productivity gap.

Engagement in commercial agriculture

Women's cultivation of cash crops and use of purchased seed narrow the gender gap in terms of returns, meaning that female farmers enjoy higher productivity increases from these activities relative to men. Encouraging female farmers to cultivate higher-value crops could help them leverage this advantage to bridge the gender productivity gap.

Age

Older women face lower returns, suggesting that women, including widows, face disadvantages in agricultural production as they age. In the south of the country, women achieve similar returns from productive factors to those of men on average, implying that differences in female/male productivity would disappear if women could draw on equal quantities of key inputs.

Factors influencing the gender gap in Southern Nigeria include:

- ❖ Availability of farm labour: Male farmers in the south, like their northern counterparts, deploy more labour on their plots. Differences in the amount of male household labour used per hectare explain much of the gap in the south.
- ❖ Herbicide use: Women use less herbicide per hectare compared with men, and this imbalance further widens the gender productivity gap in the south.
- ❖ Household structure: Men receive a larger relative boost to productivity from having additional children in their household. This observed difference in returns suggests that men are better able to mobilize younger household members for agricultural work.

Gender inequalities are prevalent in both traditional and modern agricultural value chains

Cultural stereotypes about men and women's work govern the role women can play in cultivating commercial crops and marketing produce. Women tend to be confined to petty trading, buying and selling small volumes directly for retail in local markets, while men tend to predominate in wholesaling into regional and international markets. As traders, women face challenges posed by inadequate transport infrastructure as well as social restrictions over their mobility. In modern value chains, men are concentrated in more remunerative and permanent positions since they generally control household land and labour, while women predominate as temporary wage earners or casual labourers in agro-industries. To market their produce, women need timely, reliable and accessible market information. They need advice, formal and informal training and short courses on how to access markets combined with better

infrastructure. Loan finance and credit are also essential so that women smallholder farmers can pay for inputs, improve farming, and develop small business enterprises to empower themselves economically and support their families. However, accessing financial services (including micro-credit) can be extremely difficult for women smallholders. Women smallholder farmers need accessible information on types and terms of credit facilities in languages that all can understand. In West Africa, East Asia and Central America, rotating savings and credit associations have helped overcome the challenges for women in accessing financial services. These structures have shown great success in terms of low-cost replicability, building confidence, and creating new opportunities. The poorest may benefit from community-managed savings and credit groups which can help them improve the way they manage money, and when appropriate, can provide small loans on flexible and competitive terms and without requiring collateral, to meet emergency needs or for investment in small enterprises.

Cassava Value Chain in Nigeria

Africa is the world's largest cassava producing region accounting for nearly 55 percent of the world's cassava output. However, Africa's yields are the lowest in the world standing at only 10 tonnes per hectare compared to 26 tonnes per hectare in India. The low productivity is a result of limited market opportunities due to low utilization of mechanization and production or processing tools. It takes a farmer in Africa 10 days to uproot or harvest their fields where a farmer in India needs only six hours. Yet cassava has enormous potential to improve food security and livelihoods of people in Africa - it is an industrial crop in emerging countries like Brazil, Indonesia and Thailand.

Cassava has played and continues to play a remarkable role on the agricultural stage of Nigeria. Since its debut in the late 1600s on Portuguese trade ships from Brazil into Nigeria, it has gone from minor crop to a major crop that accounts for between 40-50% of all calories consumed in Southern and Central Nigeria (Maziya-Dixon 2001). Nigeria is the world's largest producer of cassava. Its current production was estimated in 2009 to be 36.8 million metric tons (FAOSTAT 2010). Total area harvested in 2009 was 3.13 million ha, with an average yield of 11.7 t ha⁻¹ (FAOSTAT 2010). It is produced predominantly (99%) by small farmers with 1-5 ha of land intercropped with yams, maize, or legumes in the rainforest and savannah agro-ecologies of Southern, Central, and lately Northern Nigeria. About one-third of the total national output comes from the Niger Delta region where many livelihoods depend on cassava as a main source of food and income. It has been estimated that the number of small commercially oriented cassava producers within the

region would be in the range of 70,000- 120,000 (out of the more than 1 million producers) and over 400-500 cooperatives and cottage industries, 800,000-950,000 traders, 46 small medium processing industries and 1 large processing industry in the region. The end markets for cassava in the Niger Delta region can be broadly categorized into: traditional food oriented segment (which is the dominant segment as it accounts for about 90% of cassava produced) and the industrial product segment (including starch and high quality cassava flour – HQCF) which accounts for less than 10%. About 70% of cassava farmers in the Niger Delta region are women; also, women are almost entirely responsible for the processing and marketing of cassava and its by products in the region. Moreover, women are almost entirely responsible for processing and marketing of cassava products in most part of the country. In most cases, women buy agricultural produce from their husbands and other farmers, process and market. Small-scale cassava processing is the domain of women, although most of the mechanized equipment (graters and grinders) are owned and operated by men (Toccoet *al*, 2012, Fries and Akin, 2011, Riisgaard, *et al*, 2008

Value chains has been seen as a vehicle by which new forms of production, technologies, logistics, labour processes and organizational relations and networks are introduced. It can be a very useful conceptual tool when trying to understand the factors that impact the long-term profitability of business and when developing a successful strategic plan for business. Cassava Value Chain Analysis in the Niger Delta, a study commissioned by the Partnership Initiative in the Niger Delta (PIND) - a non-profit organization (supported by Chevron) reveals that the value chain comprises input suppliers, farmers/farmers cooperatives, processors, traders, and collectors, intermediate and final consumers within and outside the region. The Cassava Value Chain presents the major markets for cassava products, the major actors involved in the production, processing, and marketing of cassava, and their relationships as they move product from the fields through to the end markets. The chain is categorized into three channels of small, medium and large scale production, each serving a different market.

Various key players' functions are identified as production, collection, bulking, processing, storing, wholesaling, refining, packaging, retailing and marketing. The raw cassava is either purchased by the consumer directly or sent to the processor for value addition via private collectors or cooperatives and even by the farmer and or households. Traders in turn collect processed products from rural markets and transport to rural, semi-urban and urban markets for sales. Medium and large scale processors collect raw produce and products to further process and refine for industrial and export markets.

An analysis of Cassava Value Chain in Nigeria, From a Pro-poor and Gender Perspective of Farming

Households in Southwest, Nigeria, by Apata, Temidayo Gabriel, shows that:

- ❖ 36.7% of male respondents were involved in cassava value chain processes, 79.3% of female were involved in cassava value chain processes
- ❖ Women are more likely to manage their own work and income where capital barriers to entry are lower and where physical product transformation involves simple, relatively low cost equipment.
- ❖ Where and how men and women participate in value chains determines the extent to which they benefit.
- ❖ Women farmers have positive risk attitude towards participation in the alternative cassava value chain strands for commercialization.
- ❖ Female cassava growers understand that there are markets of value added products like cassava flour and cassava chips e.g. for animal feed
- ❖ Study observed that most male cassava farmers sold cassava in fresh form without adding value, while female farmers processed cassava
- ❖ 71.6 % of the male who have low education were involved in the selling of cassava fresh tuber, 82.6% for female
- ❖ Higher number of women who have relatively moderate education were involved in cassava value chain processes
- ❖ Factors such as access to assets, education and the nature and value of economic activities affect the way in which men and women participate and gain in value chains processes.

It is obvious that participation in cassava value chain processes leads to improvement in household income for both male and female headed households and improving the chain has the potential to result in pro-poor benefits for cassava farmers and entrepreneurs. There is therefore need to introduce strategies to reduce gender barriers, constraints and inequalities and increase returns to the poorest, especially women by increasing their access and control over productive assets and resources such as farm land, improved seedlings, herbicides, human capital, decision making etc. and also encourage appropriate cassava processing technologies such as grating, chipping and crashing by educating farmers with targeted attention at women farmers on these technologies and promote ownership of processing equipment. Small holder farmers need secure and stable access to productive resources including land, water, forests and fisheries, as well as access to inputs, appropriate financial services (including social transfers) in order to invest in and improve their production systems. They also need appropriate extension services, training, technologies and access to appropriate marketing facilities. This need is particularly acute for very marginalized and excluded communities, especially women farmers. Evidenced has shown that cassava production has a lot of significant value chain processes and much of this processes remain untapped hence there

is need to examine strategies and opportunities for increasing participation of cassava men and women farmers in value chain processes

The emerging framework, being discussed in the paper “Addressing Gender Equality in Agricultural Value Chains: Sharing Work in Progress” by Anna and Noortje V, 2011, builds upon earlier work developed within Agri-ProFocus (APF) learning trajectory and within KIT. It looks at mainstreaming gender in the existing chain empowerment framework, developed by KIT (KIT et al 2006). The aim of the gender and value chain framework is twofold. First, it looks at how value chain analysis can be used as an instrument to understand gender inequalities and to identify ways to overcome them. Second, integrating gender into a value chain framework helps to understand how gender inequality hinders (equal) upgrading strategies and to identify ways of how these barriers can be removed

Emerging framework on gender and agricultural value chains: The chain empowerment framework

It is developed from the notion that empowerment of small farmers is vital for sustainability. Chain empowerment is about increasing the capacities of farmers to add value to the activities they are involved in to become involved in chain management issues. This is summarized in two basic questions:

1. Who does what in the chain?
2. Who determines how things are done? (KIT et al, 2006).

There are four empowerment strategies

1. Upgrading as a chain actor: The farmers become crop specialists with a clear market orientation.
2. Upgrading as activity integrator: Adding value through vertical integration - the farmers move into joint processing and marketing in order to add value.
3. Upgrading as a chain partner: Developing chain partnerships - the farmers build long-term alliances with buyers, centred on shared interests and mutual growth.
4. Upgrading as a co-owner: Developing ownership over the chain - the farmers try to build direct linkages with consumers.

Although the chain empowerment matrix is a powerful tool to understand the different positions farmers take within a chain and how these can be improved, the matrix does not allow us to understand why farmers are positioned in a particular quadrant and what the constraints are to move out of this position. Because the matrix does not provide an explanation of constraints, it is unable to differentiate between the constraints faced by women as compared to men, because of their social position. Neither does it provide information on outcomes

of the strategies and whether these outcomes are different for women and men and different types of farmers. Because of that, it doesn't provide us enough insights how interventions can be designed to generate gender equal outcomes and are pro poor. Because of these shortcomings, a new framework has emerged based on the existing one. This framework serves two additional goals:

1. Help to design, implement, monitor and evaluate value chain interventions in such a way that they contribute to gender equality in a given context.
2. Understand how gender equality contributes to pro-poor and economically efficient value chain development.

Structure and agency

In order to design upgrading strategies which can lead to gender equal outcomes (men and women benefit equally from the upgrade), additional dimensions are needed in this framework to fully understand the processes that shape their positioning, the constraints they face, and to design interventions that address these and lead to upgrading (change). The proposed additional dimensions for the framework come from the social sciences and are also used in the political economy and gender literature. These additional dimensions look at the role of institutions and how these shape human interaction (for example in the value chain) and at the same time how individual behavior shape and are shaped by these institutions (decisions people make and why). It's about the impact of values and ideas (informal institutions) on behavior which are specific to a certain context, time and sometimes specific value chain. By looking at the interaction between structures and agency, the dimensions help to understand the impact of structures (formal and informal institutions) on individual behavior which are specific to a certain context, time and sometimes specific value chain, and the other way around. So basically in this form of analysis human agency shapes and is in turn shaped by formal and informal rules and institutions which accounts for a certain positioning in the value chain and the outcomes of value chain interventions.

Upgrading strategies from a gender lens

An analysis focusing on institutions and agency helps to understand the positioning of a rural entrepreneur in a value chain and the constraints to upgrade (or to change that position). As a result, it helps to design interventions that address these potential constraints to upgrade. A gender lens is essential in that kind of analysis. One way to engender the chain empowerment framework is therefore to look both at structural and individual constraints and opportunities for men and women to

upgrade in a value chain. Based on that, interventions can be designed that aim to achieve gender equal outcomes in upgrade strategies. To make an intervention successful, no shortcuts can be taken. To enable women to gain a higher and secure income, it is not enough to only improve their technical skills, but to also invest in improving individual skills, such as planning and literacy.

Success stories of gender sensitive upgrade strategies

For example in the case of the Allan Blackia chain in Tanzania, represented by Harold Lema from the NGO Faida MaLi, existing gender policies and targets ensured that women were represented in training, producer organizations and price negotiations. This made them chain partners in a newly developed value chain. Traditionally AB nuts are a women's crop. The nuts grow on trees in collective lands and women pick process and sell them in the local market. The demand from Unilever increased the price of the nuts and as a result the interest of men to be involved in growing them. Women did not have that opportunity because they don't own land. In this example Faida MaLi established the relationships between Unilever and the farmers, who initially were mainly women. They ensured that women were also part of the contractual negotiations and arrangements when the nut became a commercial crop. They did this through quota for female representation in their training programs and in producer groups. As a result, women did not lose their source of income from the AB nut, but instead were able to participate in a newly developed commercial value chain as one of the chain partners.

The case "café feminino", presented by Gay Smith from OPTCO, is an interesting example where the intervention resulted in Peruvian female coffee producers becoming co-owner of the coffee chain. Interventions resulted in higher quality production and female representation at all levels of the value chain. This enabled women to establish sustainable relationships in the chain, which made them co-owners and decision makers. It has resulted in a successful female coffee brand in the world market. The intervention initially focused on coffee farming and for coffee producers to become so called "crop specialists". Later on training was also focusing on finance, leadership and organizational skills. The situational analysis showed that in Peru, coffee producers face a number of constraints (e.g. lack of organization, land ownership). Women involved in coffee production face additional constraints, such as illiteracy, double responsibilities and some face domestic abuse. The NGO that supported the producers, proposed to other actors in the chain to develop a separate women's coffee label and to market this separately. As a result, the cooperative set up a small export company, to manage the processing of the coffee. A US based coffee importer

was interested to buy the coffee which was produced, processed and sold only by women. This made it easier for female coffee producers to build sustainable relationships in the chain. As a result women are now able to co-decide on how their coffee is being produced, processed and sold.

CONCLUSION

Agricultural employment remains the primary source of livelihood for about 38% of population in developing countries but is underperforming for a number of reasons. Among these is the fact that gender gaps and inequalities in access to a wide range of agricultural resources, including land, livestock, farm labour, education, extension services, credit, fertilizers and mechanical equipment, market access etc. exist and are skewed against women farmers as they have limited resources and opportunities they need to make the most productive use of their time compared to men. Women are farmers, workers and entrepreneurs, but almost everywhere they face more severe constraints than men in accessing productive resources, markets and services. This "gender gap" hinders their productivity and reduces their contributions to the agriculture sector and to the achievement of broader economic and social development goals. Cassava is one of the staple crops in Sub Saharan Africa and over the years its potential has remained unexploited and often viewed as a poor man's crop in some countries. With increasing effects of climate change which has badly affected productivity of other major staples such as maize, cassava still remains one of the possible crops which can help mitigate food insecurity and improve livelihoods in SSA. One of the key constraints facing cassava production is that the gendered participation of men and women produces different benefit, and gains for men and women which include household income. The benefits of women's participation in agricultural value chains are determined by their control of productive resources and household level decisions. Concerted effort must, therefore, be made to ensure that women have better, cheaper and reliable access to land, credit, agricultural inputs, extension information, markets and other resources to increase their productivity and income. Looking at the chain empowerment framework through a gender lens, provides a good basis to design interventions that contribute to gender equal upgrading outcomes for men and women in agricultural value chains.

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