Gender Equality and the Economic Development of the Soya bean sector in Northern Ghana

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Introduction

Women and youth are among the poorest demographic populations in the world. Pre-existing gender roles and inequalities such as under representation of women in the economic sectors of many developing countries continues to marginalize these groups (Nandal 2011, 119). Women are also subject to the global gender pay gap of 22 percent and are the often the first to lose their jobs (Nandal 2011, 118). Women lack access property rights, economic decision making and often participate in the unorganized sector in many developing countries. Lack of necessary training, technology, finance, cultural norms and skills play a significant role in the limitations for economic inclusion.

The market system approach referred to in this paper is an analysis of the relationship in which the core actors private or public engage in competing for the production, distribution and consumption of goods and services. By focusing on determining core actors, support functions and the enabling environment knowledge is gained on the sub-sector of Soya bean and its system. The main challenges and opportunities are explored to determine women’s involvement and how it can begin to address the sustainable development goals (SDG).

It is evident in many Sub-Saharan African (SSA) countries that many smallholder farmers constitute the majority of crop producers and women compose the bulk of this group. Despite the seeming domination of women in agriculture across SSA, their participation is less visible in high return value addition activities. The unorganized sector of Soya Bean in particular has wide price differentials between farm gates and urban and peri-urban markets; these are often not accrued to women and youth, thus limiting the options for economic inclusion.

Due to the agrarian livelihoods of the people in the northern part of Ghana, specifically Tamale and the Upper West region, Wa. There is significant potential in developing economic opportunities in market activities involving Soya Bean. By addressing the challenges and areas of opportunity within this sub-sector through research, there is opportunity for many of the SDGs to be explored. By focusing on the market inclusion of women it was determined that Goal 1, to end poverty in all its forms, Goal 2, to end hunger and food security and improved nutrition and promote sustainable agriculture, Goal 5, to achieve gender equality and empower all women and girls the path towards sustainability can be more attainable.

Background and Literature

Cognizance of the Smallholder farmers’ role in food production and food security, the government has introduced protective mechanisms to upscale production and expose farmers to new technology. However, these programs (“Push-Pull”, “Ghana Gateway,” “Village
Infrastructure,” and “Nucleus Farmer”) which are all geared towards increasing the incomes of smallholder farmers, (N2Africa 2013, 15) have not been very beneficial to small hold farmers as they are still dependent on the large scale / mechanized farming.

Market research across the commodity value chain, especially at the processing and packaging points and subsequent capacity development support for women and youth to facilitate their integration into cash crop commodity value chains would bring about significant long term economic empowerment for these groups (SADA 2012). An estimated aggregate installed capacity of Soya bean processing plants of around 400,000 tons (against 30,000-60,000 tons annually marketed) estimated consumption is on 200,000 tons and to substitute for imports requires an annual production of 30,000 tons of Soya beans (N2Africa 2013, 38).

There are many identifiable constraints in the agricultural sub-sector. Already visible constraints include the erratic production, the lack of capacity to supply end-markets with quality products, the lack of input supply systems for certified seed, fertilizers, agro-chemicals, tractor and machinery hire services and labor, weak extension services, poor access to output markets and farmers’ capacity to participate in markets difficulties honoring contracts, lack of financing, competition from imports, and policy inconsistencies (N2Africa 2013, 38).

In Northern Ghana, farm financing remains a constraint as smallholders increasingly find it difficult to access microcredit to invest in agriculture. The ability to invest in and to improve agricultural productivity, apart from contributing to food security, provides farmers with the income to invest in other employment opportunities and economic activities outside agriculture. Extending credit to smallholder farmers can act as a catalyst for modernizing small scale agribusinesses and serve as a means of lifting people out of rural poverty.

The literature shows that there is increased pressure regarding the implementation of knowledge and technology transfer needed to impact small scale or household farming. There is a serious lack of agricultural extension services who serve as vital source of information distributors. It is one of the major deficiencies in the agriculture sector in Ghana. To combat this deficiency, the Savannah Accelerated Development Authority (SADA 2012) suggests a strategy of strengthening Farmer Based Organizations (FBOs) to empower smallholder farmers by way of making them competitive. This is because effective FBOs can serve as a conduit of passing on market information “to operators along the value chain to improve productivity and production as well as the quality and safety of produce and products from the sub-sector,” (SADA 2012. 7). It will in turn increase smallholder farmers’ bargaining power to ensure price justice and put them in a better position to advocate for policy change.

In Northern Ghana, small farmers do not play significant roles in the high value addition sub-sector; especially in the processing sub-sector is where most value is added to agricultural products (SADA 2012). To achieve sustainability in the market framework, the capacity of smallholders to add value must be developed along commodity chains.

**Objectives**

The goal of this research paper is to determine what economic opportunities exist using a market systems approach in Ghana, and how women can participate in these activities. Development activity in relation to agriculture is focused in the northern regions where cultural practices enable women to participate in legume farming. The research results obtained from this paper are hoped to provide an introduction to future research and development of the inclusion of women in economic activities that can be further developed in other communities. It hopes to create a brief introduction and comparison from the literature to the field; while
demonstrating how the SDGs can be incorporated in this sector, and how some have started to be explored.

The research explores the challenges and areas for opportunity first described by SADA and N2Africa. The goal is to address economic opportunities and the involvement of women and youth in the value chain of Soya bean. The study aims to understand the role women and youth play in the value chains of Soya bean, their production capacities and constraints, market demand for the goods and services associated with the commodities and the factors that exclude these smallholders from the market chains. The following approaches were implemented throughout the research process.

1. Using a gender lens to approach development for empowering, employing and increasing income opportunities for women and youth.

2. Determining areas of improvement within the value chains of Soya bean in order to enhance the participation of women and youth.

3. Developing a better understanding for the needs of various actors (specifically women and youth) within the value chain and supporting industries, in order to create an enabling environment for youth and women in agribusiness.

4. To propose how the findings of this research can be used to promote the sustainable development goals.

Methodology

Northern Ghana comprises of three main regions (Upper East, Upper West and Northern Region Tamale) and it is a geographical area dominated by subsistence farming. The research was conducted in the field for a total 18 days and specifically in Tamale for 2 months. Field work for Soya bean was conducted mainly in the Upper West region specifically Ga community and Wa. Research was also conducted in Tamale with various stakeholder meetings and NGOs involved in this sub-sector.

These towns are either major production areas, markets, or are target areas of specific interventions for the commodity chain. The research looked to secondary and primary data (where possible to obtain) in regards to public and private industry as well as policies, to be able to determine avenues for women’s inclusion into the market system where possible.

The research area under Soya bean explored: market (external) demand, local demand, growth potential, competitiveness, and potential for women's employment. It is evident that there is currently a consistent demand for Soya bean and there is potential for continued growth. Government is targeting the use of Soya bean as nutrient supplement for children and most households are also finding new ways of using the Soybeans in their daily meals. Such as soya kebab, soya juice, etc. Targeting Soya bean automatically targets women, as this sub-sector is dominated by women.

With regards to the feasibility of integrating smallholders in the Soya bean sub-sector, the key focus areas targeted: vertical and horizontal linkages, stakeholder organization, government and donor support, infrastructure and technology. Information on market potentials remains patchy and women’s challenges and opportunities for domestic expansion have not been studied extensively. The agricultural sub-sector market research analysis in northern Ghana focuses on the Soya bean value chain, highlighting the three key components of the market system:
• Core market actors are those that are involved in producing, exchanging, and consuming the product (farmers, traders, processors, producer associations, wholesalers)

• Support function actors provide services to core market actors (Vocational training providers, Business development services, agricultural extension)

• The enabling environment includes regulation, contract enforcement, land rights, consumer trends etc. Actors include government offices (business registration, regulators) and civil society groups that advocate for market inclusion of their members (women’s land rights groups).

The expected outcome of the research is to generate knowledge, identify gaps, and seek untapped potential within the Soya bean value chain for maximizing income earning prospects for smallholder farmers. It focuses on how women’s involvement in the economic sector can target goals 1, 2, and 5 of the new SDGs.

Due to the limited time allotted for this study, there were challenges faced in fully synthesizing detailed information obtained within the value chain. Additionally, the willingness of respondents to agree to the study at times was limited due to time constraints in their livelihood activities. Lack of access to resources and funding limited the study to a shorter period than expected resulting in less extensive and intensive research. There are significant constraints surrounding published literature on policies and information already collected by SADA and other organizations. A majority of these constraints were overcome by not focusing on the generalities but on the key issue which is the market chain and identifying how the various actors in the value chain relate to sustainable economic development.

Problems and Constraints

Ghana consists of two seasons, the wet and dry seasons. Due to these climate events, agricultural productivity has been impacted at various levels of the value chain mostly at the production level. Irregular rainfall throughout the year limits the capacity of women and youth to participate in consistent income generation activities. In addition, youth unemployment remains high in the Northern regions. The regions suffer from issues related to food security due to these inconsistencies (SEND interview 2015).

Soya bean production has been identified as a sub sector for economic growth due to its increasing potential in the domestic market, specifically from the Southern regions of the country. Soya bean continues to be imported from other countries such as Brazil and Argentina, despite potential production capacity in the North (Ghana Nuts ltd. 2015). These gaps exist due to the lack of organization of market participants and logistical problems to match supply to erratic production resulting in an unmet domestic demand. This encompasses issues related to product volume, efficiency, quality, profitability, competitiveness.

Soya bean Sub-sector and Actors

Currently in Ghana, specifically in the Northern Regions of Tamale, Salaga and Wa, the market for Soya bean is unorganized. It was discovered that, because it is a re-emerging sector the value chain is still developing. Although there is increasing demand for Soya bean within the country, the supply is not able to meet it. Farmers produce the crop then harvest it and take it to the market where it is sold by women directly or collected by aggregators to be sold in the main markets of Techiman and Kumasi. In the case of Wa, currently the main processor is Vista Oil, who collects the surplus Soya bean from a silo, which is an abandoned teachers quarters. Ghana nuts, another main processor also has aggregators that collect from the farmers
associations. The market price is determined by market forces, production costs, transportation and harvesting. Based on an analysis of all the market actors an example of what is believed to the value chain is seen in the value chain flow diagram of Soya bean.

**Value Chain Flow Diagram of Soya bean**

It is important to note here that although based on the linear representation of the flow, it is anything but organized or as clear. Women and men both participate in more than just production. Often women also become marketers and processors. The actors mentioned are only a fraction of all the current NGO programs in place to provide assistance to farmer based organizations. The government is involved at all levels of the value chain because they have decentralized, and are currently working alongside the NGOs, rather than parallel to them.

There are many core actors involved in the Soya bean value chain. As seen above the actors comprise of producers, a majority of which are women and men. Aggregators are those who buy and sell in large quantities and bring them to the market or to the processors. In the case of the NGO Social Enterprise Development (SEND) Ghana, the producers are responsible for bringing the Soya to the designated silo to be sold. Aside from women processing soya for home consumption, and sorting for large industry use, there are two main processors of soya that were identified, Vista Oil and Ghana Nuts.
Both SEND Ghana and the Mennonite Economic Development Associates (MEDA) participate as support function actors and create an enabling environment for women to participate in the soya market. SEND Ghana focuses on how to empower women and use Soya for food security and poverty alleviation. SEND provides silos for aggregators to store their products, and also assist farmers with loans and contracts. Both MEDA and SEND provide extension officers and training to women farmers while contributing to the development of production skills and training on a variety of different topics such as, maternal health, gender equality, production, technology and seeds.

The project Agricultural Technology Trade Promotion (ATTP) under USAID, for Soya provides new technologies and tools to ease production challenges of women. The project also delivers a variety of Soya bean seeds to improve the efficiency of farmers. Another actor participating in supporting the development of the market for Soya is the Agriculture Development and Value Chain Enhancement (ADVANCE, also a USAID initiative). ADVANCE’s main goal is linking the right people to the farmers, in the areas of finance, technology, marketers etc.

In regards to the government of Ghana’s role in Soya, specifically the Ministry of Food and Agriculture (MOFA), provides agriculture extension officers, technology and support services/resources. Due to the dissemination of the sector the district assemblies now have a much stronger role to play in the communities. MOFA works with NGO projects to be able to provide necessary services or draw up policies that will assist in Soya value chain development. MOFA is also responsible for the policies surrounding subsidies involving Soya. For example there is a policy that removes taxes on mechanized equipment allowing farmers to buy tractors at a reduced cost; in addition the government currently subsidies 50% of all seeds (MOFA interview 2015).

Women are participating and located at all levels of the value chain. The current market for Soya Bean is mainly dominated by women who participate in the production, cultivation, harvesting, processing and marketing of their Soya bean stock. A majority of the women are located at the production level and market. Women who are selling the products at the market are selling either raw or processed (ie. soybean, kebobs, milk) which demonstrates the cross linkages of their various activities and easily transmittable roles. The women also are involved in other livelihood and income generating activities, such as groundnut, cowpea, peppers, maize and various other legumes. At the industrial production level Ghana Nuts determined that the women are also involved in sorting and packaging, although there were no concrete numbers reported or percentages.

Youth also participate in this unorganized sector, often assisting their parents with preparing and harvesting on the land. This study did not speak to any youth groups, but rather specifically addressed the women due to time constraints. However at one focus group interview with members of a FBO arranged by SEND, two male youths confirmed that there is youth participation however it is less visible because it is at the household level. Due to climatic conditions there was not steady employment or high income generation potential.

Women inclusion the Soya bean sub-sector

There were many challenges discovered throughout the research within the women’s focus groups. The literature accurately reflects the constraints of the women. Some of the key areas that were highlighted both in FBO groups in Salaga and Wa were challenges associated with climate change. Access to water is becoming increasingly difficult and the rain is more
erratic also later in the season. Women lack proper equipment and tools for farming making various aspects of production of Soya difficult.

Currently SEND and MEDA are focusing a majority of their projects targeting already existing women's groups to participate in the production of Soya. Due to the lack of knowledge regarding the multiple products that are derived or created from Soya, women do not see the benefits. SEND and MEDA are working with women to show how various traditional and non-traditional meals can be made with Soya substitute to improve nutrition.

Within the Soya bean sub-sector one of the main challenges faced by the women is that without proper fertilizer inputs or certified seeds the production of Soya is not enough to feed the family and sell in the same season (evident in both regions, Wa, Salaga). They are also aware that there are knowledge gaps in farming techniques that want to adapt but don't know how. This poses challenges for the market as well. The local supply from processors relies on women farmers to produce maximum yields on many one acre plots. Generally, a majority of women are only able to produce 1-2 50kg bags of Soya in a given season. Ideally the production of 6-8 bags would be sufficient enough for surplus and market from one acre, (MEDA interview 2015).

A reoccurring challenge was in the area of finance, women have difficulty accessing loans because they do not have collateral or credit. The banks prefer the women come as groups but the women would rather be given the loans individually (Sinapi Rural Bank interview 2015). SEND is attempting to overcome this challenge by having the women's groups participate in group loans and contracts whereby what they produce and sell will first be given to SEND to pay back the loan and the remaining will go to the households. The sustainability of these actions need to be explored. MEDAs approach is by encouraging women to not go to the banks for loans but rather use a community savings program, whereby monthly dues are collected and redistributed at the beginning of the seasons to purchase necessary inputs for production.

Land access for the women is not very difficult; it was vocalized by the Lead Farmers in MEDA. However due to yam beetle infestations (as mentioned in Salaga) the men are encroaching on the women's lands, so women cannot expand their Soya plots. The invasion of farmlands by Fulani herdsmen is causing serious problems with production as the animals are destroying the crops. Women face various challenges of doing other livelihood activities and crops. They expressed concern in terms of labor to work on the farm especially when multi cropping.

As stated in the literature tractors and tractor service providers have become a problem. SADA has attempted to address these issues but there is still concern regarding the services and availability of tractors. If their fields are not ploughed they see huge losses. Tractor operators also cheat the women by not ploughing the right measurements fairly. The organizations seem to be aware of all the challenges that the women face and are in the process of adapting to the needs of the women. There are many areas to be looked at including: technology, marketing, extension services, education, financing, gender sensitivity with the use of gender model families.

One of the major challenges comes from the lack of technology needed for making farming less intensive and time consuming for the women. There is a need to expose them to technology that improves productivity and increases the yields for Soya. Sustainability cannot be discussed without sensitivity to the cultural normality's that these regions still adhere to.
Some of the challenges are from women’s participation and proper education on sustainable agriculture practices and knowledge of existing market linkages. Conducting literacy classes and building on their current capacity and simple skills in reading writing and numbers will create a better enabling environment for the women. Demonstrations already being done with SEND and MEDA and increasing women’s attendance through sensitivity issues for male farmers may create more opportunities for women’s inclusion.

**Sustainable Development Goals**

It was through field research that the links between these actors were becoming clear; understanding the re-emerging market sector determined how the development of the Soya bean sub-sector would go a long way to assist in gender equality, poverty alleviation, food security and sustainable agriculture farming. All the linkages between the NGOs, private sector and government create an environment where the needs of all actors are met without compromising agricultural sustainability and food security. They work alongside each other to be able to develop a concrete value chain so that women would be able to participate and generate income from activities that they already are involved in. The most important development goals that each organization repeatedly stated was that the economic opportunities in Soya also allow substance agriculture to be able to produce enough for both the household consumption and surplus for sale to the market. Thus addressing food security issues and developing an economic sector that hopes to be female dominated.

The organizations hope that in the future their projects will be able to overcome the challenges that the women face with climate variability and drought with new technological advancements. The aim is to include more women building the capacity of small farmers to collectively produce enough on small acres to contribute to sector inputs. The education on the nutritional benefits of Soya and how to prepare various dishes has encouraged the participation of many women back into Soya bean production, where this was lacking in the past. Working alongside USAIDs project ATTP has further assisted the development of this sector providing new technologies such as seeds and mechanized tools that are making it easier for women to be able to dedicate time and investment into this area.

From the research it was confirmed that all NGOs, government and private sector are working on insuring that all men and women have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services. While there are many challenges and constraints to the development of the north; it was determined that cultural and ethnic sensitives are being adapted to as much as possible to allow for women to participate. Increasing women’s participation has seen many changes and successes in development and there seemed to be a genuine interest in participating in Soya bean. Once the initial production and cost challenges are improved there is a huge potential for Soya bean to be an economical viable option for women to address issues of poverty, inclusion into the market for income generation, and environmental restoration of agricultural lands.

**Conclusion**

Women’s involvement in income generating activities within Northern Ghana have already contributed to the development of food security and provided economic opportunities for
women’s participation in market sector activities. All actors within the value chain have seen to play a critical role in the development of this sector. The organizations interviewed are only a fraction of the involvement of NGOs and stakeholders that are participating in advancing this sector. They have become increasingly aware of the importance of sustainability aspects and focus on inclusiveness in conversations with financial institutions, government support and private sector involvement. The market research approach and tools used helped to understand the linkages between all actors and their roles within the system.

Each actor has provided a sustainable or is attempting to provide sustainable methods for development within this sector. They have contributed to creating enabling environments whereby women and youth are the targets of their projects. They offer valid resources and knowledge sharing in areas that are lacking by government institutions and limit the private sectors control over production of this industry.

The value chain and market seems to be unorganized there are efforts being made to encourage women to focus on specializing in one specific area for quality purposes. It is evident from the research that by addressing the challenges and areas of opportunity within this sub-sector more sustainable development goals to be adapted and perhaps even achieved. By focusing on the market inclusion of women it was determined that Goal 1, to end poverty in all its forms, Goal 2, End hunger and food security and improved nutrition and promote sustainable agriculture, Goal 5, achieve gender equality and empower all women and girls, can be more attainable.
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