

# YOUTH EMPLOYMENT AND ENTREPRENEURSHIP

Research Report #5

## Gender and Youth Economic Opportunity in Tanzania's Cassava, Poultry, Horticulture and Oilseeds Value Chains: A Literature Review

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## Acronyms

CFS	Committee on World Food Security
ESRF	Economic and Social Research Foundation
FAO	Food and Agriculture Organization of the United Nations
HQCF	High Quality Cassava Flour
ICT	Information and Communications Technology
NGO	Non-Governmental Organization
PASS	Private Agricultural Sector Support Trust
RLDC	Rural Livelihood Development Company
SME	Small and Medium-Sized Enterprises
SNV	Netherlands Development Organisation
URT	United Republic of Tanzania
USAID	United States Agency for International Development



## Executive Summary

This literature review provides a gender analysis of the cassava, poultry, horticulture, and oilseed value chains in Tanzania, with an emphasis on activities which offer the greatest potential economic opportunities for youth. The review found that men and women have different levels of knowledge, access and control over resources, and varying opportunities to participate across all value chains. Cultural traditions influence observed gender differences in the allocation of roles and responsibilities, ownership of production and processing assets, resource use and distribution of income accrued from economic activities. The review identified factors contributing to sex segmentation in employment and entrepreneurship, including gender differences in access to land, credit, market information, education and skills levels, and ability to travel. Finally, the review identified key policy, program, and knowledge gaps requiring attention in order to improve the design and implementation of more gender-inclusive youth training programs in the agrifood sector.

### 1. Background, Objectives and Methods

Like other sub-Saharan African countries, Tanzania is grappling with the problem of youth unemployment. Every year, a large mass of youth enters the labor force, but the formal sector (private and public) is unable to accommodate them (United Republic of Tanzania (URT), 2003). The Government of Tanzania, through its Rural Development Strategy and National Five-Year Development Plans, has recognized youth unemployment and underemployment as among the nation's most critical challenges (URT, 2001; URT, 2016).

The agriculture sector offers a potential, and so far underexploited, source of youth economic opportunities in Africa. As noted by the Food and Agriculture Organization of the United Nations (FAO) (2016), 88% or 1.2 billion of the world's youth aged 15–34 years live in developing countries where agriculture is the backbone of their economies. In Tanzania, as well as in most of sub-Saharan Africa, the agricultural sector is the most important employer (Maïga *et al.*, 2015; FAO, 2014). According to Allen *et al.* (2016), 51.4% of young people in Tanzania are employed in farming. The agricultural sector provides 70% of employment overall, and accounts for about 23% of GDP and 30% of exports. The Government of Tanzania's National Five-Year Development Plan 2016-2021 puts increasing emphasis on transforming agriculture, and on accelerating broad-based and inclusive economic growth that is characterized by increased productive capacities and job creation, especially for the youth and disadvantaged groups (URT, 2016). Increasing the economic engagement of youth and women across agricultural value chains is understood to be critical for achieving Tanzania's national development goals, including improving food security and diminishing youth unemployment. Women and youth play significant roles in the agricultural sector in developing countries (Economic and Social Research Foundation (ESRF), 2010; Porter, 2010; URT, 2015). In Tanzania, women contribute 52% of the agricultural labor force, and over 90% of women active in the labor force engage in agricultural activities to some extent (Palacio-Lopez *et al.*, 2017).

Youth constitute about 65% of the total labor force, but their engagement in agricultural activities overall, including emerging agricultural opportunities, lags older cohorts (URT, 2015). There is a



persistent belief that youth have negative attitudes towards agricultural sector work, especially in the subsistence production sector. According to the United States Agency for International Development (USAID) (2016), youth involvement in agricultural value chains is also limited by their lack of access to finance. Recently, youth interest in agricultural production and processing has been stimulated by the new Tanzania Agricultural Development Bank (TADB) fund intended to provide loans to youth interested in starting agricultural businesses (Kimaro *et al.*, 2015). The fund has its origins in a 2013 resolution passed by the Tanzanian Parliament, establishing the new loan program with a designated funding level of about 200 billion shillings annually from the national budget. The TADB program, and other government and donor programs, focus on expanding the participation of adult women and youth—both females and males—in agricultural transformation and growth, especially through the creation and growth of vibrant enterprises throughout agricultural value chains (Njenga *et al.*, 2013).

In order to understand how best to strengthen the participation of young women, women more generally, and young men in Tanzania's agrifood system development, it is necessary to understand their current roles and constraints. In this report, the authors summarize key findings from their desk review of existing Tanzanian policy documents and literature. The objectives of the review are to: (1) understand the gender dimensions of existing national policies that may constrain or facilitate gender-equitable access to employment or business enterprise development in the agrifood sector; (2) map current youth and gendered roles in selected high-potential agrifood value chains (cassava, poultry, horticulture and oilseeds); and (3) review general and gender-specific factors that constrain youth access to employment and entrepreneurship opportunities in the target value chains.

## **2. Factors Affecting Employment and Entrepreneurship for Youth and Women**

*The policy environment.* In Tanzania, youth are defined as those falling between the ages of 15 and 35 (URT, 2007). The National Youth Development Policy recognizes youth unemployment as one of the major challenges facing the nation. Addressing the need to create new economic opportunities will require policymakers to face issues related to lifestyles, cultures, values and orientations as well as social, economic and political reforms (URT, 2007). The policy highlights the importance of preparing young people to engage in agriculture and calls for expanded entrepreneurship skills training, empowerment, education, gender and equity programs (URT, 2007).

The National Agricultural Policy of 2013 notes that national efforts to make agriculture more attractive to youth are constrained by poor infrastructure. Inadequate rural infrastructure, including education, health, and other social services, help to drive young men and women to migrate to urban areas where they often remain un- or underemployed (URT, 2007). The rural-to-urban migration is more likely to leave rural areas under the control of elders whose capacity to work and mobilize resources for agriculture is declining, and women, whose movements outside the home are restricted due to cultural traditions. The National Youth Development Policy also identifies access to land and other resources, such as credit and skills training, as constraining factors affecting youth involvement in agriculture. Youth participation in the marketing of their



agricultural products is also constrained by many factors including limitations on travel for girls and women.

Through the Small and Medium Enterprise (SME) Policy (URT, 2003), the Government of Tanzania has pledged to promote equitable access by youth and women to land and other resources. The policy states that government will ensure that gender mainstreaming is enhanced in all initiatives pertaining to SME development. However, no specific actions are detailed. The Agricultural Marketing Policy (URT, 2008) describes legal and regulatory agricultural frameworks and other institutional structures related to agricultural markets as weak, negatively affecting the economic activities of youth, men and women (URT, 2008). The policy document further acknowledges that youth—both young women and men—have difficulties obtaining land. Customary laws prevent young women from owning and controlling land resources, greatly restricting their potential for advancement in agricultural production or in other agrifood sector activities. At the national level, both the Land Act and the Village Land Act of 1999 guarantee women’s rights to acquire, hold, and use land on an equal level with men. However, at the family level, customary law prevails. Customary law is used for settling family matters of succession and inheritance—and to deny women’s right to own land in their own names (Börjesson, 2005).

*Other factors affecting youth agrifood participation.* Youth participation in Tanzania’s agricultural sector is also affected by constraints related to access to resources and skills, a poor policy environment, and negative perceptions of youth towards agriculture. The majority of youth in Tanzania, as in other developing countries, have little or no access to important resources necessary for agricultural production, such as land, financial credit, inputs or extension services, including information and communications technology (ICT)—provided services (FAO, 2014; Kimaro *et al.*, 2015). Research in Tanzania by Youth Map, a program of the International Youth Foundation, reported that youth abandoned agriculture, despite their continuing interest in the sector, because they lacked important modern farming skills and marketing capacities. These include skills for using internet-based marketing, which is increasingly important for agrifood sector businesses (YouthMap Tanzania, 2014). Youth were also frequently unaware of local opportunities for generating income in the agrifood sector, including opportunities with low barriers to entry.

In rural areas of Tanzania, most youth are informally employed in subsistence agriculture. Subsistence agriculture suffers from problems of low productivity, overdependence on rainfed agriculture, low use of agricultural inputs and limited marketing systems (Rutta, 2012). Kimaro *et al.* (2015) noted that Tanzania’s agricultural sector is characterized by poor pay, high risk from climatic changes, capacity constraints, job insecurity and poor working conditions. The majority of youth in Tanzania perceive agriculture as work for poor people—a job or career for people with no education or skills. They view agriculture as an unpromising sector with low returns, lack of job security, uncertain markets, and lack of crop insurance (Kimaro *et al.*, 2016; Restless Development, 2011).

Employers see the need for youth to improve their skills and access to information that will enable them to discover, prepare themselves for, and succeed in formal sector jobs. Expanding access to entrepreneurship training, as envisioned in the national SME policy, is also important. Needed knowledge and skills should be recast in a youth-friendly manner, featuring new technologies and products that may attract youth to agriculture (FAO, 2007). The Committee on World Food Security (CFS) concludes that many new opportunities are emerging for young people to start up



and run profitable agribusinesses, but they need a range of skills and knowledge related to technical agriculture, financial skills, and entrepreneurship as well as a broader enabling environment of youth-targeted policies and investments before youth can take advantage of them (CFS, 2014).

### 3. Gender and youth in the Cassava Value Chain

Cassava (*Manihot esculenta Crantz*) is an important subsistence food crop in Tanzania. Tanzania is the world's eighth largest producer of cassava, and Africa's fifth largest, after Nigeria, Democratic Republic of the Congo, Ghana, and Angola (Coulson and Diyamett, 2012). Eighty-four percent of Tanzania's production of cassava is utilized as human food, and the rest is devoted to other uses such as starch making and livestock feed. The roots and leaves of cassava are of major nutritional importance in Tanzania, and cassava roots are transported by middlemen for sale in urban centers (Bennett *et al.*, 2012; Nyanda, 2015).

#### 3.1. Gender mapping of the cassava value chain

The cassava value chain is generally characterized by different actors such as input suppliers, farmers, processors, wholesalers, retailers (assemblers), and consumers (Masamba, 2018; Bennett *et al.*, 2012; Sewando, 2014; Anderson *et al.*, 2016; Waziri, 2013). Smallholder farmers are the main producers of cassava tubers and leaves, and then sell their cassava products to different customers along the value chain.

Recent work by Masamba *et al.* (2018) provides a gendered mapping of cassava value chain functions related to the production of fresh and processed cassava for rural and urban consumers. Other authors have organized their analyses around the final products (fresh cassava, dry cassava, local cassava flour, cassava leaf, and high quality cassava flour), identifying the key actors for each product type. The first three products (fresh cassava, dry cassava, local cassava flour) have five key actors: smallholder farmers, small traders, wholesalers, food vendors, and retailers (Mnenwa, 2010; Waziri, 2013; Sewando, 2014). Value chains for the last two product categories, i.e., cassava leaves and high quality cassava flour (HQCF), add in processors for the final products (Bennett *et al.*, 2012; Anderson *et al.*, 2016).

The literature review reveals that cassava in Tanzania is not viewed strictly as a men's or a women's crop. Both men and women are involved in growing cassava, yet some gender disparities are observed due to the specialization of tasks between the sexes. Men are ordinarily responsible for "production node" activities requiring more strength, including land clearing, ploughing and planting, while women specialize in weeding, harvesting, transporting from the field, storage, and processing (Shayo and Martin, 2009; Farm Radio, 2013). In a study conducted by Mutabazi *et al.* (2008), female-headed households were less likely to engage in cassava production because of their more limited access to productive assets as compared to male-headed households. Masamba *et al.* (2018) identified harvesting as an activity conducted by both men and women.

One of the challenges facing all households is the need to consume, process, or sell cassava within a day or two of harvesting, since cassava quality deteriorates rapidly. This may explain the participation of the full household in harvesting at selected times, in order to ensure that sufficient quantities are available for transport to market. Generally, only men transport cassava products to





markets because of cultural restrictions on women's travel, effectively excluding women from participating in these markets (Me-Nsope and Larkins, 2016). Kizito *et al.* (2017) confirms that the cultural expectation for women to focus on household duties limits their ability to travel and participate in transporting commodities to market. In addition, women often lack the resources needed to access different modes of transportation—including carts, animals, bicycles and motorized vehicles. Netherlands Development Organisation (SNV) (2014) notes that although both men and women participate in cassava production, men are more likely to be responsible for transporting harvested cassava to sales points. Waziri (2013) argued that men dominate the cassava “transport node” because it is linked to marketing and income. According to Jeckoniah *et al.* (2013), women are constrained from transporting commodities to market by poor infrastructure, high transportation costs in rural areas, the long distances between farms and urban markets that make travel time consuming, and restrictions on women's movements enforced by their husbands.

The “processing node” of the cassava value chain is comprised of local processors, mainly women, and may include women's groups or associations formed around the processing activity. According to Shayo and Martin (2009), activities associated with cassava processing, such as washing, soaking and drying, are more commonly carried out by women. These tasks are less strenuous than tasks such as land clearing and ridging, which are normally done by men. Cooking is normally done at the household level by women, as food preparation is considered part of women's household responsibilities (Sewando, 2014). Both women and men act as retailers at the village market, although Jeckoniah *et al.* (2013) find that the men are more involved in connecting with brokers and wholesalers for marketing.

Women are reported to dominate the cassava leaf value chain within production, marketing at farm level, and retailing. Men are primarily involved in wholesale trading and as rural brokers (Andersson *et al.*, 2016). Among cassava leaf value chain actors, wholesalers and retailers receive the highest benefits from transport and marketing activities. Farmgate prices are low since farmers have limited information on available markets and are in a weak position to negotiate prices (Bennett *et al.*, 2012). Both dried and pounded fresh cassava leaves are marketed in urban areas. Farmers provide the leaves to brokers, who then arrange for women to process the leaves before sale. There are some cases of women-organized cooperatives formed to dry and process cassava leaves.

Within the cassava value chain, there are potential opportunities to absorb youth facing unemployment challenges. These opportunities stem from the unmet demand for cassava products needed by other actors such as processors of HQCF and dried cassava chips for livestock feed (Bennett *et al.*, 2012; Waziri, 2013). Cassava has the highest return to land compared to other staple food crops such as maize (Mutabazi *et al.*, 2008). It has been argued that the gap between current production and demand presents an opportunity for youth if they can organize into groups for large-scale farming and establish small-scale processing units. Youth would then be better able to fully participate in the cassava value chain, from the production stage to the processing of high quality cassava products like breads and biscuits (Bennet *et al.*, 2012; Anderson *et al.*, 2016). Cassava is also a very drought-tolerant crop and can provide economic opportunities for youth and women even under variable climate conditions (Peter, 2015b).



### 3.2. Constraints to employment expansion along the cassava value chain

Employment opportunities in the cassava value chain are constrained by a number of factors, some of which apply to both men and women, and some that are gender specific. For example, the study conducted by Benard *et al.* (2014) found that a combination of unreliable marketing information, poor infrastructure, high illiteracy levels, low incomes, lack of electricity, and the high cost of ICT makes it difficult for farmers to access and use information related to markets and employment opportunities that is provided in different forms, including increasingly through social media. It is also reported that farmers, in particular youth, are hampered by lack of business experience, skills, and knowledge (Match Maker Associates, 2012).

*Production-level constraints.* A combination of very small plots and low levels of productivity makes it difficult for farmers to meet the growing demand from buyers of cassava products and by-products (Kolimba 2013). Lack of new varieties and quality planting material affect the majority of farmers producing cassava, which results in low yields, according to Coulson and Diyamett (2012). The low yields are due in part to the varieties used, but are also a result of pest and disease damage, poor weed control, low soil fertility and little use of fertilizers or manure. The China-DAC study group (2011) found that the major constraint facing Tanzania's agriculture is falling labor and land productivity due to the use of poor technology and dependence on increasingly unreliable rainfall. Farm Radio (2013) found that there is great potential in Tanzania for farmers to sell their cassava or process it themselves to make higher-value products such as HQCF, if productivity issues can be addressed.

Inadequate access to improved planting materials affects both men and women. However, men may stand a better chance of overcoming the constraint than women since they are more likely to have access to extension training and better able to travel to places that can provide improved planting material.

Farmers are also challenged by unreliable markets, the lack of storage facilities, limited credit availability, and inadequate support from extension officers. They lack information on the different types of products and by-products that can be extracted from cassava along its value chain (Waziri, 2013). There is high demand for cassava products for human consumption in Tanzania. However, a study conducted by Promar Consulting for the Ministry of Agriculture found that most products are still processed using traditional techniques, which are labor-intensive and yield poorer quality products that fetch a lower market price (2011).

*Policy constraints.* Promar Consulting (2011) noted that policies to support cassava value chain development are weak or non-existent in Tanzania, including support for cassava research and incentives for private sector involvement. For example, according to Bennet *et al.* (2012) and Waziri (2013), there is a need for policies to promote large-scale production and sustained markets for cassava for industrial use and human consumption. A possible policy action would be mandatory inclusion of HQCF in industrial wheat flour products, although the efficacy of similar mandates introduced in other countries still needs to be assessed (Minot, 2010).

*Constraints for youth and women.* Customary law dictates that females cannot own land, affecting their ability to secure loans and engage in agricultural activities as a business. Youth, especially women, are also expected to provide labor to the household, limiting the time they have available to plan and operate their own farm enterprises. As noted above, while both young men and women



actively participate in the production of cassava, men usually dominate the marketing decisions and control the income accrued from it (Adebayo *et al.*, 2010; Sewando, 2012; Waziri, 2013), in part due to the travel restrictions on women. Furthermore, women are more constrained by lower literacy rates, and by their greater household responsibilities, including child and elder care. Young women and women in general have difficulty finding the time or means to participate in training programs which could expose them to improved farm-level production or value-added processing technologies (Lwoga *et al.*, 2011).

#### **4. Gender and Youth in the Poultry Value Chain**

Poultry farming in Tanzania plays a pivotal role in both urban and rural settings. Poultry contribute to the nation's food security, provide income, and supply manure for farm operations (South African Poultry Association, 2015). Tanzania's poultry sector has two key components: traditional local chicken production systems and more advanced SMEs (Mnenwa, 2010). According to the National Bureau of Statistics (NBS), in 2012, Tanzania had more than 53 million birds. The majority—33 million—are traditional indigenous breeds, which are predominantly kept in rural areas using traditional production methods.

The poultry value chain can be subdivided based on actors, types of chickens and products: The “sub-value chains” include the egg, exotic chicken, and local chicken value chains. In Tanzania, all poultry meat and eggs are produced for domestic consumption, not for export (Mnenwa, 2010).

##### **4.1. Description and gender roles in the egg value chain**

The main actors in the egg value chain are producers, wholesalers, egg collectors, retailers, and consumers. Depending on the scale of the firm, producers could be men, women, or youth. In small production systems, poultry are essentially free range, organic birds. Women and youth generally take responsibility for keeping the birds in or near the compound, protecting them from predators, and providing food scraps and water. In somewhat larger production systems, men or women may keep layers as owners or employees.

Wholesalers purchase consignments of egg trays from producers, retailers and other wholesale traders, which they sell to retailers and other consumers. Egg collectors move around on a daily basis, buying eggs directly from egg producers and selling the eggs directly to consumers, hotels, restaurants, kiosks, and retail shops. Retailers buy eggs from farmers, egg collectors, and wholesalers, which they sell in relatively smaller quantities to consumers. Men dominate egg collection and marketing for several reasons. They tend to have more financial resources, easier access to transport and greater mobility, and are believed to have a better capacity to handle the risks and uncertainties of business activities compared to women (Kashindye, 2011). Consumers buy eggs from retail shops, public markets, egg collectors, and also directly from producers for home consumption (Kashindye, 2011).

##### **4.2. Description and gender roles in the local chicken value chain**

The local chicken value chain includes input suppliers, chicken keepers, wholesalers, retailers, processors, and consumers. Input suppliers have the role of providing replacement chicks, day-old



chicks, pullets, cockerels, feed, and veterinary drugs to the farmers/keepers. Local chicken keepers assume a number of roles in the value chain. They raise the chickens, process them at household level, and also sell live and killed chickens to traders or to local farmers for consumption. Smaller flocks of local chickens are mostly owned and managed by women, youth, and children who are at home most of the time. The chickens make an important contribution to the family's food security and nutrition (Minga *et al.*, 1996; Ochieng *et al.*, 2011; Queenan *et al.*, 2016). There is a tendency for men to dominate the poultry business as poultry flocks become larger and production becomes more commercial (Queenan *et al.*, 2016; Mnenwa, 2010).

Local chicken assemblers/aggregators, often rural small-scale traders, buy live chickens from keepers in small numbers and sell them to consumers, retailers, and wholesalers in the local markets. Wholesalers purchase chickens from aggregators, and sometimes directly from local chicken farmers, for sale to retailers or consumers. Middlemen or traders from regional and urban markets often buy chickens from the numerous local village markets for transport and sale in urban centers. Local bars, restaurants, and hotels buy chickens from aggregators, keepers and sometimes from wholesalers, which they process and sell to the final consumers. Retailers buy chickens from keepers, rural aggregators, and wholesalers for live sales to the consumer.

The “retail node” for local chicken in markets and towns is normally managed by men and is thought to be more profitable than other “nodes” in this chain. Retailers buy local chicken at an average price of Tshs 8 000 and sell to consumers for roughly Tshs 15 000 per mature chicken (Peter, 2015a). Consumer preferences play an important role in influencing the type and quality of local chickens offered by keepers and traders. Consumers purchase live or processed local chicken from the various channels described above. The majority of all retail chicken and egg sales in rural areas are carried out directly by household members, either at the farmgate or in local markets. While women may be involved in farmgate sales, men dominate most other retail and wholesale trading activities that require travel and transportation. Queenan *et al.* (2016) noted that women have less time available for marketing-related travel due to household and family responsibilities. They may also lack experience with marketing and bargaining and in managing financial risks. In short, men dominate poultry markets, in part because it is uncommon, and sometimes even considered inappropriate, for women to venture out to the market to sell their poultry. Women instead sell at the farmgate to intermediaries or send their husbands to the marketplace. Men tend to be more mobile and to have more outside contacts than women. As a result, they have access to a larger amount of information related to chicken production and sales than women.

Women tend to have more discretionary power over income generated from local chicken production than income generated from other types of livestock. Local chicken production is expanding, and development in the sector can potentially benefit a large number of youth and women who will be able to earn a stable income. However, more intensive development may also result in shifting gender roles and/or increased workloads for women and girls if male household members leave all poultry-related tasks to them. Women may also need to assume marketing and financial responsibilities that were previously carried by their male partners (FAO, 2011; Okali, 2012).



### **4.3. Description and gender roles in the exotic chicken value chain**

Exotic chicken value chain actors carry out different activities from production to consumption points, including chicken husbandry, input supply, service provision, retailers, wholesalers, and processors. Exotic chicken keepers frequently assume multiple roles in the value chain. They raise and process chicken at the household level, and sell chicken to local consumers and traders. There are additional important functions and actors in the exotic chicken value chain, compared to the local chicken value chain. Chicks must be purchased from other farmers who are already raising exotic breeds, or from commercial hatcheries. Compared to local chickens, exotic breeds are managed more intensively, utilizing purchased feed, veterinary, and extension services on a regular basis.

In the exotic chicken value chain, wholesalers buy chicken from keepers or aggregate birds from a number of traders for bulk sale to consumers or retailers. Retailers obtain birds from keepers and wholesalers, and sell them to individual consumers and institutions such as schools and hotels.

Capital outlays and time and skill requirements for profitable management of exotic breeds are relatively high compared to local chickens. In Tanzania, men dominate the production and sales of exotic chickens. Women have less access to capital required for exotic chicken production. In households where women own exotic chicken breeds, they are constrained in marketing functions and in making decisions about how earnings from the chicken venture will be used (Njuki and Mburu, 2013).

### **4.4. Opportunities and constraints to poultry sector development in Tanzania**

The high unmet demand for chicken meat in Tanzania and surrounding countries suggests that there is considerable potential to expand production to improve food security and household incomes of rural people—particularly disadvantaged groups such as women and children. Tanzania has ample space for expanded poultry production and could accommodate an estimated 100 to 200 million additional birds (Private Agricultural Sector Support Trust (PASS), 2017; Research Into Use, 2011; Tanzania Poultry Breeders Association, 2017).

Mnenwa (2010) and Research Into Use (2011) report that a key limiting factor for indigenous poultry development is the low genetic potential of the local breed, including the prolonged length of time required for birds to attain the large size and market weight preferred by consumers (Queenan *et al.*, 2016). Access to hatchery chicks, including faster-growing exotic breeds, is difficult but slowly improving. Between 2011 and 2015, the number of Tanzanian hatcheries expanded from 14 to 26 (FAO, 2015).

Other factors constraining poultry industry development in general, according to Research Into Use (2011), include inadequate chicken supply from keepers to meet demand, especially in peak demand months, along with the reduction in demand from wholesalers in the wet season. Chick mortality from pests and diseases is high due to farmers' lack of technical information and poor access to extension services and inputs. Most small poultry farmers do not know how to manage their chickens to get the highest prices, have no access to regular price information, and do not know how to time their chicken production cycles to coincide with periods of peak demand (People in Need, 2015).





In summary, the main factors constraining the development of Tanzania's poultry industry are the prevalence of disease, poor quality feeds, inadequate technical support services, low genetic potential of local breeds and weak farmer organizations. In general, local chicken production in Tanzania remains a predominantly backyard operation in which free ranging chickens scavenge for scraps and insects, rather than a confined industrial-type operation where medications and feed are carefully controlled to produce faster-growing chickens in bulk (Njombe and Msanga, 2007; Goromela *et al.*, 2006).

Given the relatively short production cycle for poultry, and strong market demand, Hamra (2010) argues that the poultry value chain could provide attractive and profitable employment and enterprise options for youth and smallholders. In addition to poultry husbandry, other opportunities include manufacturing and distribution of feeds and distribution of vaccines, veterinary medicines, and other inputs. Employment opportunities as farm assistants and farm managers exist in larger-scale poultry operations (Njombe and Msanga, 2007). Post-farm, there are expanding economic opportunities for young men and women to add value in poultry processing and marketing, including freezing and packaging operations (Kashidye, 2013).

#### **4.5. Gender-differentiated employment constraints in the poultry value chain**

Backyard local chicken rearing operations are predominantly controlled by women because they are easily compatible with women's traditional household and family responsibilities. However, as the backyard enterprises grow and become more commercialized, men appear to participate more in management and women may lose access to revenue accrued from poultry sales. In local and exotic chicken value chains, women rarely make decisions about sales and use of income without consulting their male partners (Peter, 2015a; Lyanga, 2011; Okitoi, *et al.*, 2007).

Traditional norms also limit women's access to key resources for business development, including information, credit and banking services, and skills training (PASS, 2017; Gebremedhin *et al.*, 2016). As a result, technology adoption (vaccinations, exotic breeds, management systems) among women operators is very low. Lyanga (2011) observes that gender inequalities severely limit women's access and control over resources. While there are important opportunities to improve rural livelihoods through the commercialization of the poultry industry in Tanzania, addressing the critical constraints that impede youth and women's access to knowledge and resources, and therefore their participation in emerging economic opportunities, must be a top priority for policymakers and projects seeking to achieve equitable and sustainable rural development.

### **5. Gender and Youth in the Horticulture Value Chain**

Rising domestic and international market demand for fresh fruits and vegetables has been the driving force behind the rapid expansion of horticulture farming in Tanzania in recent years (Osano, 2010). According to Match Maker Associates (2017), Tanzania is among the top 20 producers of fresh vegetables in the world. Tanzania's climate allows the production of a wide range of fruits such as citrus, mangoes, pineapples, avocado, jackfruit, guavas, apples, pears, peaches, plums, blackberries, and strawberries. Tanzania also has a diversity of vegetables which include Asian vegetables, baby corn, baby marrow, beetroots, beans, cabbage, carrots, cauliflower,



eggplant, kale, leeks, onions and shallots, okra, peas, potatoes, spinach, and tomatoes (Match Maker Associates, 2017).

Horticultural crops make a critical contribution to household food security and nutrition. Short-cycle, drought-tolerant varieties also offer an important source of nutrition during periods of scarcity of traditional staples like maize (Osano, 2010). The horticulture sub-sector has the potential to become one of the main sources of foreign exchange earnings and a significant driver of economic growth in Tanzania (URT, 2015; URT, 2010). In Tanzania, smallholder farmers dominate horticultural production for local markets, while larger firms dominate processing and export of horticultural products for the export market (ESRF, 2010).

The role played by women and men in the horticulture value chain differs according to the crop and value chain stage (Match Maker Associates, 2011). For example, in the mango value chain, men own the mango trees while women sell the fruits. In general, prevailing social norms limit women's access to resources and basic services related to agricultural value chains (United Nations, 2009). A Kenyan study conducted by Muriithi and Matz (2015) notes that in the process of commercialization, women often lose control over both traditional and non-traditional horticultural crops, including those that were previously perceived by the community as women's crops. There are expectations that global value chains could provide women with opportunities for work and greater incomes. However, experience to date suggests that women and men do not have equal opportunities to engage in and benefit from the expansion of agricultural value chain activities. This is because women's roles as laborers and producers are still largely hidden and unremunerated in the agricultural value chain. Understanding current gender roles in horticultural (and all) value chains is important in order to anticipate the potential role of commercialization and the impact of possible policy and program interventions.

### **5.1. Description and gender roles in fresh fruit and vegetable value chains**

There are many actors in the fresh fruit and vegetable value chains, including input suppliers, producers, wholesalers, processors, and retailers. Research services for the improvement of the fresh fruits and vegetables value chain are provided by institutions such as Tanzania Horticulture Association, Horti Tengeru, and the Asian Vegetable Research and Development Center (AVRDC, now known as the World Vegetable Center) (Match Maker Associates, 2008).

Men dominate input supply, especially the supply of specialized seed varieties and pesticides necessary for fruit and vegetable production. However, women predominate in many processing and retailing roles. These require careful handling procedures which women are believed to do best. Sorting, for example, requires prolonged sitting, attention to detail, and careful handling. Retailing of fresh fruits and vegetables is also a female-dominated node of the value chain, partly because women are considered to have better marketing skills in these commodities compared to their male counterparts. However, women's engagement in marketing of horticultural products is limited to retailing near their homes. When it comes to marketing the same products to distant markets, men dominate because, compared to women, they have greater freedom to travel and better access to transportation, including motorcycles, for horticultural transport. In Tanzania, women do not normally use motorcycles.

*Fruit.* There is a gender bias in the ownership of fruit resources. Traditionally men are the owners of perennial trees, such as mangoes, while women may only be involved in the sale of the fruits



(Match Maker Associates, 2011). Women's roles in production and harvesting tree fruits may also be limited. For example, they may have difficulties harvesting fruits that require tree climbing.

In the avocado value chain, a study conducted by Mwakalinga (2014) revealed that women dominate the extraction of avocado oil and processing at the micro-level, but there is no information at industry level and no gender-disaggregated data about other nodes of this value chain, despite the considerable potential for expansion in Tanzania.

*Tomato.* In the tomato value chain, actors include input suppliers, producers, basket creators, transporters, coolies, middlemen, traders, and consumers (Khasa and Msuya, 2016). Middle-aged males and middle-aged females are the key people engaging in input supply, although men outnumber women. In the production node, both middle-aged males and females are involved, but males dominate. Tomato production requires higher levels of investment and generates higher incomes. Sorting, grading, and packaging, which are normally done according to customer quality specifications in different markets, were found to be the responsibility of young men, possibly due to the fact that this activity is linked with direct product marketing to external markets, from which women are traditionally excluded. For similar reasons, only young men were involved in the making of baskets which are used for transporting tomatoes. (Khasa and Msuya, 2016).

According to Khasa and Msuya (2016), the major players involved in the transportation of tomatoes were middle-aged men and women, and some youth. In local markets, the majority of sellers are women, while loading and unloading activities are dominated by young men because those are perceived as masculine activities which require more physical strength. Brokering was done by middle-aged males and females. Marketing in this study was done by middle-aged males and females, as well as small number of male and female youth. However, males dominate this node when any travel is required (Jeckoniah *et al.*, 2013; Khasa and Msuya, 2016).

*Other high value vegetables.* In the high value vegetable value chain (tomato, cabbage, carrot, sweet pepper, broccoli, zucchini, lettuce, cauliflower), smallholder farmers produce for local markets, and commercial farmers produce for the export markets. Smallholder producers sell their high value vegetables to other actors along the chain, including processors, freight forwarders, wholesalers, retailers, and final consumers. Commercial farmers produce fresh fruits and vegetables for supermarkets, a highly competitive market which accounts for only 1% of production (Porter *et al.*, 2010).

Processing involves cutting, peeling, washing, and packaging and is mainly carried out by women at farmgate and household levels (Wash, 2013). Processed vegetables are sold to aggregators, who in turn sell to wholesalers. Wholesalers sell to retailers, supermarket, independent grocers, and food service providers. According to Wash (2013), both women and men participate in wholesale and retail activities. However, men enjoy correspondingly greater control over incomes from vegetable marketing for two major reasons. First, men own much of the fertile valley land on which vegetables are grown. Secondly, men dominate the trade to Dar es Salaam and other urban centers within Tanzania and neighboring countries. Trading activities involving travel by women are limited because of their traditional domestic responsibilities and by attitudes which discourage women from overnight travel away from home.

*Onion.* Onion is another important crop in Tanzania's horticulture sector. Onion value chain actors include input suppliers, producers, brokers, a range of traders, and exporters. Input suppliers are





specialized companies and institutions such as Tengeru Horticulture Institute, and small retail agro-vet shops who supply inputs directly to farmers. Farmers (producers) include women, men, and children who cultivate onion and sell directly to traders and consumers (Jeckoniah *et al.*, 2013). Onion processing activities include cutting leaves off the onions and grading them in different sizes before the onion is sent to the final market. Both women and men are involved in onion grading, but men dominate since grading is linked to marketing and travel from which women are discouraged (UNICEF, 2007).

Traders buy onions from farmers and sell them to the village markets, supermarkets in urban areas, regional markets, national markets and export markets. Both women and men are involved in onion trading but women are more involved at farmgate and local retail levels. Rural consumers buy onions most frequently from women retailers in open markets or retail shops, while men dominate wholesale and external markets which require long distance travel (Jeckoniah *et al.*, 2013). At the household level, men dominate the decision-making on when and how much to sell. While storing onions for later sales when prices are higher can result in substantially greater gains, women lack the resources to build and manage storage facilities. Women producers usually sell at farmgate or depend on husbands and traders to sell produce at other distant markets. Brokers link farmers and traders, providing a source of market and price information. The majority of brokers are men who can move around more freely, and also have wider social networks to draw upon. For the same reason, transportation activities are mainly carried out by men. Women do not have access to reliable transport, nor the resources to obtain it. Rural consumers buy onions most frequently from women retailers in open markets or retail shops (Jeckoniah *et al.*, 2013).

## **5.2. Opportunities for youth along the horticulture value chain**

Tanzania's wide range of horticultural products carries the potential for expanded employment and enterprise creation through small-scale production and marketing opportunities. Small and medium-scale firms can undertake different activities from the farmgate to the final market (Jeckoniah *et al.*, 2013). Most of Tanzania's horticultural products such as onion, avocado, oranges, and mangoes are sold on the spot market, often at low prices, because of the lack of storage facilities. This can be used as an income-earning opportunity if youth are organized into groups for value addition and management of storage facilities. With better access to markets and marketing information, youth can earn potentially high profits (Jeckoniah *et al.*, 2013).

Demand for high-value horticulture products is growing. The Government of Tanzania has been promoting horticulture production to take advantage of opportunities in the world market (ESRF, 2010). Young men and women can tap into such an opportunity. Currently there is strong government, NGO and partner support linking Tanzanian producers to export markets. In Tanzania, processing of mango, tomatoes, and other fresh or dried fruits is less developed. Varieties grown normally end up in local markets and could be a potential entry point for youth entrepreneurs (Match Maker Associates, 2008; Mwakalinga, 2014). OXFAM (2013) notes that the use of collective action—organization into associations and cooperatives—has helped to empower women economically and socially. Women traders organized in groups have the ability to travel to local and distant markets using hired vehicles. This approach might be adopted to create opportunities for young men and young women.



Tanzania has large tracts of underutilized arable land, including irrigable land suitable for horticulture cultivation (URT, 2010, with Horticultural Development Council of Tanzania). Specialized institutions in Tanzania such as the Tanzania Horticulture Association, Horti Tengeru, and the World Vegetable Center can provide training to help youth acquire the skills they need to take advantage of business opportunities (Match Maker Associates, 2008). Provision of technical knowledge on improved production techniques, pest and disease control, soil fertility, harvesting and post-harvest techniques can help to improve productivity. Technical assistance can also improve the quality of horticultural products which will be important to assure the competitiveness of products in export markets (Match Maker Associates, 2008; Porter *et al.*, 2010).

There are NGOs (e.g., Right Way for Development) that support youth wishing to engage in horticulture farming. Right Way for Development provides training in greenhouse technology and subsidizes greenhouse kits for youth. This is an opportunity for youth groups that are well organized to engage in the production of horticultural crops.

### **5.3. Constraints to expanding youth employment in the horticulture value chain**

Porter *et al.* (2010), Baluku *et al.* (2009) and HODECT (2010) identified key constraints facing the vegetable cluster including: 1) poor access by farmers to credit, extension services and inputs; 2) limited export possibilities due to limited airfreight capacity from Tanzania to Europe; 3) lack of market linkages because the majority of Tanzanian exporters do not yet have the experience to secure a supermarket contract in a highly competitive market; 4) a lack of skilled labor; and 5) the weak business environment for local markets.

Women face additional gender-related constraints that limit their access to employment and entrepreneurship opportunities along the horticultural value chain (ESRF, 2013). Jeckoniah *et al.* (2013) observed that cultural attitudes about travel and limited financial resources constrain women's participation in horticultural value chains. For example, youth can often find opportunities to transport horticultural crops from farmgate to collection, bulking, or processing centers, often by motorcycle, but most women do not have access to motorcycles.

Haggblade *et al.* (2012) highlighted the tendency of researchers to ignore or give little attention to young men and women in the value chain projects compared to other gender categories such as adult women and men. Riisgaard *et al.* (2010) argued that women entrepreneurs involved in the spices and aromatic sector are constrained by lack of capital to purchase equipment and raw material. Women may also be averse to the risk of borrowing capital and face other problems related to the transition from informal to formal sector markets. HODECT (2010) noted that women often lack collateral necessary to obtain loans, and are less likely than their husbands to have access to extension and training services.

## **6. Gender and Youth in the Oilseeds Value Chain**

Major oilseeds crops produced in Tanzania include groundnuts, sunflower, soybean, rapeseed, sesame, cotton, and palm oil. There is virtually no oil produced commercially from sesame and groundnut (Rural Livelihood Development Company (RLDC), 2008; Tanzania Edible Oilseeds Actors, 2012; Southern Highlands Food Systems, 2012). In addition to contributing to



household-level food security, the edible oilseeds sector in Tanzania has significant potential to increase household incomes and save foreign exchange at the national level. Tanzania currently imports about half of edible oils consumed in the country (Tanzania Edible Oilseeds Actors, 2012).

### **6.1. Gender mapping of the oilseed value chain**

In general, the development of the oilseed sector in Tanzania is in its infancy and very little documentation exists on gender-differentiated roles, or on the role of youth, within the value chain. Women produce sunflower and other small oilseeds, such as groundnuts and sesame, which they also process at the household level and sell in small amounts in local markets. Men usually own trees, including oil-producing palm and coconut trees.

Oilseeds value chain actors include input suppliers, traders, producers, processors, wholesalers, retailers, and final consumers (Kawamala, 2012; Mwakalinga, 2012). Input suppliers include the Agricultural Seed Agency, agro-shops, extension officers, processors, and individual farmers. Most oilseeds are produced by smallholders in family operations. Men, women, female and male youth, and children are assigned different activities (Mroto and Jeckoniah 2015).

Women and children are responsible for bird scaring, while men and young men, are responsible for land preparation, transportation, and processing. Farmers sell their oilseed production to different actors such as fellow farmers, processors, retailers, and sometimes directly to consumers. In addition to field-level production, farmers are also frequently involved in local processing and retailing of edible oil. Processing at the household level is done by females, while men are involved in industrial processing units owned by individuals or associations.

Detailed information about gender roles is available only for the sunflower value chain. For sunflower, at the household level, women have the role of crushing the pulp of sunflower and extracting oil for household consumption and small retail sales. Men dominate transportation, marketing and processing of sunflower at the industrial level. Men transport sunflower from the farmgate to the industrial processing unit for sale to processors, who also tend to be male.

Retailers tend to be adult men and women who buy sunflower products such as animal cake and oil from processors at the household level which they sell to individual farmers, larger processors, and other consumers. In summary, female and male adults, youth and younger children are involved in various aspects of production. Other nodes such as input supply and transportation, packaging, marketing, and processing are dominated by males, especially as activities grow in scale and become more industrialized (Khahima, 2015).

### **6.2. Constraints and opportunities for oilseed sector development**

The factors affecting the performance of Tanzania's oilseeds sector can be grouped into institutional and functional challenges. Institutional challenges include domestic policies which reduce the competitiveness of local edible oil in comparison to imported palm oil. Key institutional constraints according to Southern Highlands Food Systems (2012) include the duty-free import of crude palm oil, lack of an enabling policy environment for oilseeds, corruption, and poor inter-ministry coordination.



Functional challenges stem from low levels of productivity due to the lack of knowledge, business skills, and access to alternative financing facilities that would enable production and processing businesses to grow to scale (SNV, 2010). Declining soil fertility, pests, diseases and weeds and lack of sustainable markets and market information pose major constraints to the oilseed industry (Ugulumu and Inanga, 2013; Abdallah, 2010). Ahaibwe *et al.* (2013) argue that more attention must be placed on improving oilseed productivity, reducing production costs, expanding the production of value-added oilseed products, and strengthening agricultural marketing.

The oilseed value chain has the potential to create employment opportunities for smallholders, and for women and youth. In Tanzania, 8 million smallholder farmers are involved in sunflower production. Sunflower is an attractive crop because it is relatively cheap to produce and tolerates drought (Abdallah, 2010; Ndongole, 2014). Furthermore, the growing demand for edible oil creates an opportunity to expand the industry to replace current edible imports which have become the second largest import expenditure in the country as a result of higher prices of palm oil (Bank of Tanzania, 2017). Despite such promising opportunities to expand oilseed production, processing, and oilseed-related employment, the sector has attracted little attention and support from government to date (SNV, 2010; Mwakalinga, 2012).

Improving the current low level of productivity in order to meet rising domestic and international demand for sunflower products is a major opportunity which can be tapped by youth in Tanzania (RLDC, 2008; SNV, 2009; SNV, 2010; Kawamala, 2012; Mwakalinga, 2012; Ugulumu and Inanga, 2014). International NGOs such as RLDC, SNV, Aga Khan and VECO are playing an important catalytic role to help value chain actors promote the industry and develop strong businesses in both rural and peri-urban areas (Mwakalinga, 2012).

The growing use of ICT, such as mobile smartphones, radio, and television, can help bridge the information gaps necessary for expanding women's participation, and facilitate the creation of youth-led enterprises and agricultural activities (RLDC, 2011). The majority of farmers have limited oilseed processing capacity (Ugulumu and Inanga, 2013). Organizations such as the Small Industry Development Organization and Vocational Education Training Authority offer technical skills training to youth and adults. Entrepreneurship in processing enterprises is a key opportunity since there are very few modern processing units in rural areas.

## Conclusion

This review has confirmed that there is considerable untapped potential for expanded youth employment and entrepreneurship, including for young women, in Tanzania's cassava, poultry, horticulture, and oilseed value chains. However, there are many gender related constraints that hinder women's and youth engagement in the more lucrative nodes of these value chains. The main constraints affecting active engagement by women and youth in production, value addition, processing, and marketing include lack of access to land and capital, inadequate access to markets and marketing information, and lack of skills and knowledge required for value addition. Cultural traditions also affect young women's ability to travel and land ownership. Overcoming the age- and gender-related constraints will be critical in order to allow Tanzania's greatest resource—its young men and women—to fully participate in and contribute to the country's agricultural and economic development.



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