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Intergenerational challenges for agriculture and rural livelihoods in Tanzania

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Agriculture for Food Security 2030
- Translating science into policy and practice

Today more than 800 million people around the world suffer from chronic hunger and about 2 billion from under-nutrition.

This failure by humanity is challenged in UN Sustainable Development Goal (SDG) 2: "End hunger, achieve food security and improve nutrition and promote sustainable agriculture".

The AgriFoSe2030 program directly targets SDG 2 in low-income countries by translating state-of-the-art science into clear, relevant insights that can be used to inform better practices and policies for smallholders.

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Front page: A young family weeding their field

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Summary

This study explores the intergenerational challenges facing agriculture and rural livelihoods in Tanzania. A majority of the Tanzanian population is rural and depends on agriculture for their livelihoods. However, agriculture in Sub Sahara Africa currently face several challenges, and this study specifically investigate challenges related to youth and elderly in Tanzania. Related to youth is the debate on youth as the future farmers, while research from Sub Sahara Africa point on youth's aspiration of a modern urban life and rising youth unemployment rates. Furthermore, youth's engagement in agriculture is restrained by limited access to land and capital. Over the past decades, East Africa has seen a positive development of life expectancy rates. People live longer, however farming without access to modern technology is labour intensive and perhaps not a feasible option for the older ones. Related to elderly is the AIDS epidemic which has hollowed the middle generation and resulted in a large number of orphans usually cared for by the older generation. While intergenerational connections and interdependence have a long tradition in Sub Sahara Africa, concerns of youth employment, agricultural intensification, formal security network and access to land and credits need to be addressed to create a foundation for sustainable rural livelihood intensification which could meet the demands of a growing population. This study is a literature review within the AgriFoSe 2030 and a one month visit to Sokoine University of Agriculture in Morogoro and The Institute of Resource Assessment at the University of Dar es Salaam was carried out in February 2018.

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Introduction

Between 2015 and 2030, the young population (age 15-24) in Sub Sahara Africa (SSA) is projected to increase by 95 million (UN, 2015a), and by 2050 to have reached 437 million, a doubling since 2015 (UN, 2013). Not surprisingly, there is a growing debate on the challenges of absorbing youth into satisfactory and sustainable employment (Sumberg and Okali, 2013; World Bank and IFAD, 2017).

Lately, the political agendas, at both national and international levels, are more intensively addressing issues related to youth employment, and a growing demand for food makes agriculture a feasible option for securing an employment (Kilimani, 2017; URT, 2016). For the African youths, agriculture is perceived as having a significant role in creating employment opportunities (AGRA, 2015; Filmer et al., 2014; Losch, 2016; Sumberg and Okali, 2013) as employment chances in urban and non-farm sectors are limited (Ripoll et al., 2017). Consequently, youth is increasingly linked to interventions on agriculture and food security (Ripoll et al., 2017). Youth unemployment is gendered as women are overrepresented and face higher risks of vulnerable employment and exploitation (Kilimani, 2017).

While youth sometimes is referred to as the future farmers (Leavy and Smith, 2010), research from developing countries indicate that formal sector employment and a modern urban lifestyle dominate the aspirations of rural youth, as well as parents' and caregivers' aspirations for their children (Leavy and Hossain, 2014; Lindsjö, 2016).

Another demographic aspect in East Africa, and in SSA in general is a sharp increase in life expectancy rates over the past decades (World Bank, 2017). The older generation becomes even older. However, due to HIV/AIDS epidemic, and a loss of adults, a middle generation is missing in many households. Consequently, the older generation, instead of being cared for by their children, have been left with the responsibility of new dependents, their grandchildren, further challenging the livelihoods.

Despite an ongoing urbanization in SSA (de Haan, 2017; Jayne et al., 2014), agriculture is currently the single biggest employer (White, 2012). Furthermore, it is the only sector which is able to provide a higher number of employment opportunities as agri-food sector is expected to grow to meet the demands of growing urban and rural populations, changing consumption patterns, and increasing global demands (Ripoll et al., 2017; White, 2012; World Bank and IFAD, 2017). In SSA, food demand is expected to grow by 55% by 2030 (World Bank and IFAD, 2017).

While research on youth have gained increased interest, much less has been done related to the links and challenges between generations. This study aims to analyse the intergenerational challenges in rural livelihoods in developing countries, with specific attention on Tanzania. The study will be guided by the three following questions:

1. What are the demographic challenges in Tanzania, and how do these challenges affect agriculture and rural livelihoods?
2. Which challenges are specifically related to generational belonging? How do these interrelate between generations and how do they affect agricultural development?
3. Based on identified challenges, what policy recommendations can be made?

Methodology

This study is a review of existing research and policy that addresses issues of intergenerational challenges related to rural livelihoods. More specifically, the study relies on relevant available research and data on rural livelihoods, youths, elderly, SGHs, statistics on employment and policies. The material used consists of international journal articles, governmental documents, data from world organizations, and, so called, grey literature, including locally published reports. This study draws on research from East (and Southern) Africa in general but addresses the issues with specific interest to Tanzania.

The work was conducted within the AgriFoSe 2030 between December 2017 and March 2018 and included a one-month guest research period at the Sokoine University of Agriculture in Morogoro and at the Institute of Resource Assessment at the University of Dar es Salaam.

Rural livelihoods

Agriculture dominates rural livelihoods and it is strongly influenced by seasonality due to weather, seasonal flows of the agriculture cycle and seasonal migration. Households' ability to handle seasonality is a source of vulnerability (Andersson Djurfeldt, 2012). However, while agriculture still dominates rural livelihoods, it is often combined with non-farm sources of income. This livelihood diversification is to be viewed as a risk-coping strategy as households that depend on several sources of income are less vulnerable than households that depend on one source only (Alobo Loison, 2015; Ellis, 2000a; 2000b). Livelihood diversification defined by Ellis (1998:4) is "the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living". The perspective of access is highlighted as important in understanding livelihood strategies. Access to livelihood opportunities as well as livelihood activities is determined by social relations, including gender and generation, institutions and organizations (Andersson Djurfeldt et al., 2013; Chambers and Conway, 1992; de Haan and Zoomers, 2005). Health and livelihoods are interrelated as good health enables people to work, while at the same time a profitable livelihood pays for health care (Porter et al., 2013).

A recent study by Inder et al. (2017) of over 3500 rural households in Kenya, Tanzania and Zambia concludes that the households' nutritional needs are not met by their production; 76% of the households reported food shortages, on

average of three months per year. Not surprisingly, households who own more land and had better housing standards were doing best in meeting the households' basic needs, food security and children's education. To secure economic and social development in rural areas, the study further suggests that productivity of land and labour needs to improve. More needs to be produced with the same or less labour input, therefore improvements related quality of soil, water and management, including access to equipment, ought to be prioritized (Inder et al., 2017).

Within the agriculture sector, the youths have the potential to contribute to sustainable food and nutrition security, and to reduce the dependence of food being produced by an aging farming population. If agriculture is to attract the youth several changes are needed according to Ripoll et al. (2017). Farming needs to modernize and be more productive, be less labour intensive, and more profitable (Ripoll et al., 2017). On the other hand, economic opportunities are limited in rural areas and engagement in agriculture is viewed as an obvious opportunity to secure a livelihood among youth (Sumberg and Okali, 2013). Findings from a multiple country study involving 23 research sites in ten low- and middle-income countries, show that farming was perceived as low status, financially unrewarding and tough dirty work. Based on their multiple countries study, Leavy and Hossain (2014:40) conclude that "there is a real risk that this generation of young people will end up being worse off than their parents."

The two major hurdles for attracting youth to farming is, according to White (2012) the governments' neglect of the importance of small-scale agriculture and rural infrastructure. While business and trade are perceived as a possible alternative path to move out of rural poverty, remote villages offer poor conditions in terms of access to markets (de Weerd, 2010) and infrastructure. Results from a study by de Weerd (2010) suggest that due to lack of physical capital, neither agriculture nor business and trade have the possibility to move the poorer people from remote villages out of poverty, while people with similar initial preconditions in well-connected villages had better chances to improve their living conditions. A sudden development growth in landlocked farm-based regions is not to be expected, however, and these areas need to be supported with credit, improved roads and communication and special interventions should target poor people in remote settings (de Weerd, 2010).

Increasing agricultural income should be prioritized as farming, for several decades to come, can be assumed to remain of central importance to the rural economy and to rural livelihoods in SSA. A study from Northwest Tanzania suggests that people with diversified farming, including both food crops for their own consumption and crops for sale, performed better than those who remained in more traditional farming. A combination of farm and non-farm activities was even more profitable (de Weerd, 2010). In a six-country study of trends in smallholder agriculture in SSA between 2002-2015, Jirström et al. (2018) show that total per capita farm household income is approximately twice as high among households combining farm and nonfarm income sources compared to households relying entirely on farming. Livelihood diversification usually requires access to transport, though, which is not available to everyone. Even though public transport may exist in rural areas it might be too costly for the poorer people (Porter et al., 2013). In SSA, rural livelihoods are deeply gendered by social norms and structures. Farm activities, decision making and access to land are all gendered. The informal care work within families in East Africa is also markedly gendered; women are expected to provide the physical care work while men are expected to support financially (Oppong, 2006). Women, for example, care for children, cook, fetch water and do laundry. Some of women's attributed activities are time demanding, for example fetching water from distant sources. Investments in piped water or wells at closer distance would save women time (Kevane, 2012), which potentially could be invested in more income generating activities. Access to land is limited as in most of SSA women are secondary holders of land through their husbands. Governmental investments which shift income and increase opportunities to earn income for women are expected to have beneficial effects as women are more likely than men to spend money on children in terms of education and nutrition (Kevane, 2012).

According to Muthoni Mwaura (2017) it is now widely accepted in most African countries that agriculture can provide a substantial number of jobs for the younger generation. However, the author argues, this view neglects the youths' aspirations and their wish for a formal employment.

The Sustainable Development Goals

The Sustainable Development Goals (SDGs) launched in 2015 guide the global agenda on development, and goals 2 and 8 are particularly relevant for this study. Goal 2 aims to “[e]nd hunger, achieve food security and improved nutrition and promote sustainable agriculture” (UN, 2015b:17). Within this goal equal access to land, increased agricultural productivity and incomes are highlighted. The sub-goal 2.3 further stresses access to productive resources and inputs as well as access to markets. Goal 8 aims to “[p]romote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” (UN, 2015b:21). Within goal 8 youth are specifically addressed through 8.5 which aims to “[b]y 2030, achieve full and productive employment and decent work for all women and men, including for young people” (UN, 2015:22) and 8.6 which states that “[b]y 2020, substantially reduce the proportion of youth not in employment, education or training” (UN, 2015b:22). In addition to these two goals, several goals are indirectly linked such as development of infrastructure, increase access to financial services and focus on relevant skills and entrepreneurship.

The older generation is not explicitly addressed in any of the 17 SDGs, however throughout the agenda the goals are targeting *all people*.

The United Republic of Tanzania

The United Republic of Tanzania is located along the Indian Ocean in East Africa. It borders Kenya, Uganda and Rwanda in the North, Burundi, Democratic Republic of Congo, Zambia, and Malawi in the West and Mozambique in the South. In 1961, the mainland Tanganyika gained its independence from previously being a British colony, and in 1964 Tanganyika and Zanzibar formed the United Republic of Tanzania, usually (and hereafter) referred to as Tanzania.

Despite being a large recipient of aid since independence in 1961 (Tripp, 2012) the country remains poor and is ranked as number 151 out of 188 countries on UNDP’s Human Development Index (HDI) (UNDP, 2016). To address the widespread poverty, in the year 2000 Tanzania launched The Tanzania Development 2025 Vision (TDV) which sets the visions and aim of development that Tanzania should have reached by 2025. The TDV guides the national economic and social development agenda up to 2025 and identifies targets as well as key driving forces in the Tanzanian development process. The three main objectives are “achieving quality and good life for all; good governance and the rule of law; and building a strong and resilient economy that can effectively withstand global competition” (URT, 2000:x). By the year 2025, it is predicted in the TDV that Tanzania has progressed from being a least developed country to a middle-income country. By then, poverty should be eradicated, and the Tanzanian society should be characterized by high quality livelihoods providing food self-sufficiency and food security, and a diversified semi-industrialized economy including a modern and high productive agricultural sector. Furthermore, the TDV stress the need to encourage entrepreneurship and the need to invest in infrastructure especially for the development of rural areas.

In 2012, the Tanzanian national unemployment rate was 2.8%. Urban unemployment was more widespread with 5.0% compared to 1.7% in rural areas. A minor gender difference exists, and the male unemployment rate was 3.2%, slightly higher than 2.3% for female. Between the ages of 15-35 the rate is 4.3%, being highest in the age category of 25-29 years (NBS, 2014b).

As this study focuses on the generational aspects of rural livelihoods the two following sections provide an introduction to the Tanzanian demography and agricultural sector.

Demography

According to the latest census carried out in 2012 Tanzania’s population was close to 45 million. The population is young, and 44% is under the age of 15 and 77% is under the age of 35 (NBS, 2014b). Despite a continuous decline in fertility rate, the Tanzanian fertility rate is still high at 5.1 (in 2016) (World Bank, 2018), and the country is projected to have one of the youngest populations in the world in 2050, with a median age below 24 years (UNDESA, 2011). On

the other hand, the elderly becomes older and the life expectancy rate in Tanzania has increased from 50.4 in 1980 to 64.9 in 2015. Similar development is found in the neighboring countries Kenya, Zambia and Malawi (World Bank, 2017a). In the latest census, those aged 60 years and above constituted 5.7% of the total population (NBS, 2014b). The national annual population growth remains high, 2.7% for the period of 2002-2012 (Agwanda and Amani, 2014) and an annual growth rate of 3.1% in 2016 (World Bank, 2017b) which means that the population will double in less than 23 years.

In Tanzania youth are defined as individuals between the ages of 15-35 and accounts for 68% of the national labour force (URT, 2016). The national job market is limited and there is a strong mismatch between the number of youths who enter it and the number of new jobs available as 900 000 young Tanzanians yearly enter the job market, while only 50 000-60 000 new jobs are created on a yearly basis (URT, 2016). Thus, the low participation of youth is not limited to agriculture sector only but rather an overall low economic participation of youth. In search for paid employment, unemployed rural youth migrate to urban areas to search for jobs within the informal sector. Young women are especially vulnerable at the labour market as they earn less than men, and more often face harassment while seeking employment as well as within workplaces. Tanzania is a hierarchical society in terms of gender and age, and young people perceive they are discouraged to participate in political activities and left out of decision making processes (Restless Development, 2011).

The population in Tanzania is mainly rural as 70.4% of the population is settled in rural areas (NBS, 2014a) and the highest incidence of poverty is found among rural households (Covarrubias et al., 2012) strongly arguing for a focus on smallholder farmers' production and intensification to alleviate poverty. In SSA, the rural population is projected to increase significantly, by about 60% by 2050. The number of youths in rural areas in SSA is projected to increase while the share of rural youth, however, may decline due to migration (World Bank and IFAD, 2017).

In 1983, the first HIV infected person was identified in the Kagera Region in Northwestern part of the country (TACAIDS et al., 2013). Since then, Tanzania has been severely hit by the AIDS epidemic. The national HIV prevalence is 5.1% today, although regional variances on the mainland range from 1.5-14.9% (URT, 2013b). As HIV/AIDS mainly hits the working adults (the middle generation of the population) it has a direct impact on the labour force, leads to increased cost of care and loss of labour due to illness and caring for sick relatives (URT, 2013a). Indirectly, the large numbers of funerals cause labour absenteeism. Due to AIDS, a large number of children have been orphaned and are usually cared for by their grandparents (Oppong, 2006) within so called Skipped Generation Households (SGH).

Agriculture

Agriculture plays a significant role in Tanzania: it contributes about 24% of GDP, 30% of export earnings, employs about 75% of the total labour force and supports livelihoods of more than 80% of its population (URT, 2013a; URT, 2016). Despite these figures, agriculture has failed to alleviate poverty and become an engine of growth in Tanzania (Suleiman, 2018).

The Tanzanian agriculture is characterized by smallholder farmers cultivating 0.2-2 hectares of land (URT, 2013a) and less than 5% of rural households own or utilize more than five hectares of land (Covarrubias et al., 2012). The smallholder farmers play a key role in agricultural production and thus food security in Tanzania (Suleiman, 2018). According to the National Agriculture Policy (URT, 2013a) only 24% (equivalent to 10.8 million hectares) of the land suitable for agricultural production is cultivated, implying large potentials for increased use of land, and farm sizes. Livestock ownership is concentrated among rural population and the top quintile of livestock owners own over 80% of total livestock while the bottom quintile of livestock owners owns less than 1% of total livestock (Covarrubias et al. 2012). Furthermore, there is a division of what kind of livestock depending on wealth of households; a third of rural households owns cattle while almost all rural households own poultry. Covarrubias et al. (2012) note an increasing demand for livestock products from urban population as incomes increase, suggesting potential opportunities for expansion of livestock production to meet the domestic market's demand and changing consumption patterns. The rural households consume 67% of the agricultural production, 30% is marketed and the remaining 3% is allocated as input or other uses (Covarrubias et al., 2012). The combined agricultural activities of crop, livestock and agricultural

wage labour account for 70% of rural households' total income. Rural households in Tanzania spend nearly two thirds of the total household expenditure on food (Ibid.).

The agricultural sector in Tanzania faces several challenges and is hampered by low productivity of land, underdeveloped use of irrigation, limited access to capital, poor rural infrastructure, environmental degradation, low agro-processing, unreliable markets and diseases such as AIDS (URT, 2016). Suleiman (2018) identifies several constraints affecting smallholder farmers and their production. These constraints include, among others, access to credit, access to input and output markets and agricultural extension. Currently, less than 5% of farming households use irrigation (URT, 2013a). “[A]n extremely limited use of modern inputs” (Covarrubias et al., 2012:16) such as the use of fertilizer, pesticides, improved seeds and the use of agricultural tools characterize the Tanzanian agricultural sector.

URT (2013a) emphasizes agro-processing industries in rural areas and their possibilities to provide employment opportunities along the value chain and generate income, and potentially reduce the rural to urban youth migration. Crops are usually marketed in raw form as agro-processing facilities are inadequate and of low capacity, resulting in extensive post-harvest losses. In general, rural infrastructure in Tanzania is inadequate and in addition to the poor rural road networks also includes access to communication facilities, water, storage, processing facilities, transportation, markets and electrification (Covarrubias et al., 2012; URT, 2013a).

At the national level the importance of developing the agriculture sector to reduce poverty has been recognized. The yearly agricultural growth rate (which defines growth in incomes) of 4.4% is higher than the annual population growth rate of 2.6%, however not sufficient to alleviate poverty (URT, 2016). More and better employment opportunities within the agriculture sector are needed to reduce poverty according to the National Agriculture Policy (URT, 2013a). The low participation of youth in agriculture in Tanzania has pushed the government to initiate a five-year strategy, the National Strategy for Youth Involvement in Agriculture (NSYIA) 2016-2021 to address youth specific issues in relation to agriculture, to empower youth and to increase the involvement of the underutilized youth labour force (URT, 2016). Related to the youth, the NSYIA identifies the six following factors as critical and hindering youth participation in agriculture (URT, 2016:25):

1. Land acquisition and accessibility for agricultural investment
2. Acquisition and accessibility of resources for financing youth investments in agriculture
3. Availability and accessibility of agricultural inputs, machineries and other necessary support services
4. A poorly developed agricultural infrastructure such as marketing of agricultural products
5. Climate change and variability
6. Technical and entrepreneurship skills

The issue of land is emphasized throughout the NSYIA. Land laws, absence of detailed land use plans, land use conflicts as well as prolonged land titling severely limit youth's access to land. Access to land is further limited by youth's lack of capital and possibility to borrow capital from financial institutions to buy land. The difficult situation on land has contributed to a rural to urban youth migration whereby the youth has rejected agriculture as a potential livelihood (URT, 2016). Limited access to capital is, however, not only a youth specific concern as URT (2013:4) highlights that “most households can neither save nor access loans from commercial banks and financial institutions”.

The strategies for increased youth participation in agriculture in Tanzania include allocating land to youth for agricultural purposes, support infrastructure such as rural roads and markets and support training for youth. The suggested strategies include extensive investments and NSYIA highlights insufficient budget allocation as a potential weakness for its implementation. Furthermore, the NSYIA may be further limited due to rapid increase of the youth population (URT, 2016).

Socio-economic Challenges Influencing Rural Livelihoods

Youth

There is no worldwide unified definition of the term 'youth', however, it usually refers to individuals within a certain age span. While recognizing contextual variances around the world of the term 'youth', UN uses the ages from 15 to 24 as a statistical definition (UN, 2001), while the African Union Commission defines youth as individuals between the ages of 15-35 (African Union Commission, 2006). The latter age span is also used in Tanzania. In addition to a definition that focus on age, 'youth' also include something more; it includes the meaning of 'becoming' and 'transition' from childhood to adulthood and refers to the period of this transition (Ripoll et al., 2017; White, 2012; Leavy and Smith, 2010). Several different life events may be included within the phase of transition, including getting married, become a parent, graduate from school and start an employment (Gupte et al., 2014). Leavy and Smith (2010) recognize contextual variances, influenced by norms and customs, in the classification of young people. They furthermore stress that young people are more than a group in transition, they are not only future citizens but current members of society with their own agency (Leavy and Smith, 2010). Research on youth in developing countries has failed to acknowledge the variations within the category of youth, and the category is often referred to as a homogenous group. Differences for example in age, gender, education and class need to be recognized as well as the youth's relationships with families and social networks (Leavy and Hossain, 2014; Ripoll et al., 2017; Sumberg and Okali, 2013). Furthermore, the youth differs in their access to resources, their interests and aspirations, their talents and opportunities, and the context surrounding the youth as well as these differences need to be recognized (Sumberg and Okali, 2013). Policy and programs on youth, agriculture and food security would benefit from a more nuanced understanding on differences within the youth category and their surrounding contexts, structures and networks (Ripoll et al., 2017; Sumberg and Okali, 2013).

Sumberg and Okali (2013:262) refer to the term "opportunity space" and distinguish between near and distant opportunity spaces. The nearby opportunity space refers to the youth's particular context where he or she is settled, and the distant opportunity space can be reached through short- or long-term migration. The near opportunity space is shaped by both geographical and social factors. Within the first set of factors the quality of natural resources as well as access to markets are highlighted. The second set of factors include both social and relational influencing factors such as gender, class, level of education, social norms and networks. It is within this opportunity space that the individual youth try to establish his or her livelihood, a process also influenced by interests, attitudes and chances (Sumberg and Okali, 2013).

There are two contrasting viewpoints that dominate the debate on the large youth cohorts in SSA, referred to as the 'youth bulge'. The first one argues that the youth has the potential to, if employed and corresponding to market demands contribute to an overall growth (World Bank and IFAD, 2017), turning the youth into economic agents, contribute to food security and be a source of innovation (Ripoll et al., 2017; Honwana and de Boeck, 2005). The second standpoint, by contrast, argues that large youth cohorts in combination with youth employment challenges including unemployment, underemployment or working under less satisfactory circumstances, have been portrayed as potential future problems with special concerns of civil and political instability as well as terrorism (Urdal, 2006; Alf, 2016; World Bank and IFAD, 2017). Unemployed (or underemployed) rural youth is expected to help their families with farming and subordinate the elderly (White, 2012).

According to White (2012:14), young people ought not to be perceived as passive victims but rather as constrained agents and their reluctance to farm might be the inability to form independent farms on their own as older generation or community elders control the land by customary law in many agrarian societies.

In terms of formal education, young people in low- and middle-income countries today are generally better educated than their parents (Leavy and Hossain, 2014; White, 2012), which is likely to lead to different and higher aspirations. Through better education and communication, Leavy and Hossain (2014) argue that, for the first time, rural youth in many low-income countries now has the possibility to compare farming with other job opportunities. Research from rural contexts in low income countries suggest youth wish to leave the rural traditional life of farming for a more urban lifestyle and employment (White, 2012). In Tanzania, this wish has also been expressed by rural caregivers who support a better and easier lifestyle for their children, and by ensuring their children attend school caregivers hope

they will leave the rural contexts and find new livelihood opportunities (Lindsjö, 2016). The expansion of employment opportunities for the growing numbers of educated youth, has, however, not progressed correspondingly (White, 2012).

Lack of interest in farming might, however, not be the only reason for youth not committing to agro-business. Even if the youths want to do farming, limited access to land and capital may prevent them from considering agriculture as a realistic livelihood option (Leavy and Hossain, 2014). Instead, the young generation is forced to search for other non-farming livelihood opportunities and migrate. Increasingly possibilities for entrepreneurship are discussed as a way for youth to enter the labour market (White, 2012; World Bank and IFAD, 2017).

Efforts targeting youth have been taken to address Tanzanian unemployment and poverty. In cooperation with development partners and financial institutions, the Tanzanian government has invested in entrepreneurship programs, especially aiming to reach youth from poor backgrounds, and youth who joined the programs have been given a start-up capital to establish a small business. Unfortunately, these efforts have not yet succeeded. Two main reasons for poor results are emphasized by the Institute of Development Studies (IDS) (Mgumia, 2017). The first reason relates to youth's aspirations, meaning what kind of work and level of quality in life the youths are aiming for. Consequently, the youth's commitment to entrepreneurship varied. Additionally, the reasons behind starting a business also varied. For some, to have a business may support financing further education, for others it may be one of several livelihoods strategies, and for yet others it might be their only opportunity to engage in a possible income generating activity. The second set of reasons for business failures was the poor backgrounds of youth who were involved in the programs, the neglect of the youth's interaction with other family members, and, the lack of basic needs within the youth's families. Money, which were meant to be used in the start-up of a business, was reported to have been used on food for the household, and other basic households needs for example educational and health related expenses. Similar is reported on profits generated by the new business; rarely profits are being reinvested in the business, instead the profit support family basic needs. Without a family income that meets the household's basic needs, youth are unable to focus and fully engage in entrepreneurship (Mgumia, 2017).



Intercropping within a small village in Iringa Region.

A relatively new service and possibility to livelihood diversification is the introduction of motorcycle services (boda-boda) in rural areas. The service increases the mobility of the rural population and gives an opportunity for a (extra) income throughout the year and is first and foremost carried out by young men. This livelihood option, however, needs a large start-up capital and is limited to the rural elites (Porter, 2016).

Elderly

Both UN and Tanzania set the definition of elderly at 60 years and above (NBS, 2014b; UNDESA, 2011). The share of individuals aged 60-plus of the population in SSA remains low, about 6%. However, in absolute numbers the elderly is expected to increase from 58 million to 215 million by 2050, and 716 million in 2100. The share of aged 60-plus of the population is projected to increase to 10% in 2015, and 33% in 2100 (UNDESA, 2011). Over the past decades, the life expectancy rate in Tanzania, as well as in most SSA countries, has sharply increased. In Tanzania it has progressed from 50.4 in 1980 to 64.9 in 2015 (World Bank, 2017a). The significant increase in life expectancy rate must be viewed as a clear development progress and an indication of increased access to nutrition and medical treatment. However, in the absence of a social pension system, it also raises concerns on the rural elderly's livelihood opportunities. Farming is physically and time demanding work and might not be a possible livelihood option to older individuals. A study of older people in ten villages in Tanzania suggests that older people cultivate only half, or even less, of their total land. Farming is too labour intensive and the older generation depends on their children and grandchildren to assist them with farming. Due to lack of social security at old age, the elderly, however, need to maintain a livelihood to support themselves, and many times also to support new dependents (Porter et al., 2013). A recent study from neighboring country Zambia indicates that households with old people are among the poorest (Chirwa and Kalinda, 2016).

Caring for children, aged, persons with disability and sick individuals are done by family members as few formal care systems exist (Apt, 2012; Ardington et al., 2010; Thrush, 2014). Traditionally, the elderly are cared for by the middle generation as children are perceived as a social security at old age and a source of income (Chirwa and Kalinda, 2016; Kevane, 2012; Oponng, 2006). Due to the AIDS-epidemic that generation is hollowed and has instead left the older generation with new dependents, their grandchildren (Schatz and Seeley, 2015). In Tanzania, more than three million children are orphaned (UNICEF, 2017). The HIV/AIDS epidemic in East and Southern Africa implicates that elderly sometimes simultaneously care for their children and their grandchildren (Schatz and Seeley, 2015). Though it has been widely recognized that orphans usually are cared for by their grandparents (Ardington et al., 2010), the double care burden is under researched. Another reason for less care providers for the older generation is the female migration to urban areas to search for employment or to attend education (Schatz and Seeley, 2015).



Elderly on their way home from the fields.



Intercropping of maize and Irish potatoes

Unemployment (or underemployment) among the generation of productive adults have resulted in their dependence on financial contributions from elderly (Schatz and Ogunmefun, 2007). Social protection programmes offer families a possibility to diversify their livelihoods and programmes targeting elderly have proved to indirectly reach other beneficiaries such as children and grandchildren (Adato and Bassett, 2009; Ardington et al., 2010; Schatz and Ogunmefun, 2007). Elderly living alone or caring for orphans are described as most vulnerable within the category of old people (Porter et al., 2013). The basic needs of the household, that is water, firewood and food from the farm present a major transport hurdle for elderly as it must be carried, sometimes at long distances. In a survey from rural Tanzania, 94% of older people stated that they depend on wood as main source of fuel (Porter et al., 2013).

The need of health services grows with age. However, access to health services in rural areas is constrained by long distances and limited transport availabilities, as well as sometimes long walks to access the only transport route. Furthermore, low incomes among elderly may limit their access to transport, even where regular transport is available. Porter et al. (2013) further conclude that older people's health seeking behavior was affected by transport cost and availability. The more frequent use of bicycles and motorbikes in rural areas are gendered, and men more frequently use these transport modes. In rural Tanzania, a recent survey suggests that only 4% of older women used bicycles regularly compared to 52% of men. The use of motorcycle taxi differed from 18% for women and 31.5% for men (Porter et al., 2013). A recent study from Tanzania shows how elderly's disadvantage in physical mobility has decreased with the introduction of mobile phones and motorcycle taxis (boda-boda), and access to health and other services has improved. The study however, indicated a clear gender imbalance in ownership of mobile phones as well as use of motorcycle services, clearly favouring men. The increased use of mobile phones has also facilitated remittance between family members through mobile money services (Baird and Hartter, 2017; Porter, 2016).

To a large extent, agriculture is about timing in relation to weather, and to find the optimal times when certain activities should be carried out. In Tanzania, the increased use of mobile phones has increased the access to weather forecast online and, in that way, opened up for a more precise timing of activities than the traditional way of communication. However, among elderly the literacy level is low and mobile phones are used for calls only (Baird and Hartter, 2017). The increased access and use of mobile phone are also changing rural transportation patterns. The mobile

phone is becoming a “key communication tool” in rural settlements and may replace some need of transport (Porter et al., 2013:167). Baird and Hartter (2017:467) similarly emphasize mobile phones as “key tools” for livelihood diversifications.

The use of mobile phones clearly favour the young generation as they generally are more educated. Thus, the younger generation now more easily can search independently for information which may contrast the social norms in rural areas, where elderly has been respected for wisdom and knowledge of life (Baird and Hartter, 2017).

Access to land and credits

The primary source of wealth and social status in rural SSA is land ownership, and ownership of more land is positively correlated with larger livestock ownership (Cooper, 2010; Inder et al., 2017). Access to land and credit, is not a youth-specific concern however, even though this category face constraints (Ripoll et al., 2017). The intergenerational transfer of land is the foundation for the young generation to engage in smallholder based agriculture (White, 2012). However, early intergenerational land transactions are rare and as the life expectancy rates increase the younger generation has to wait to access land (FAO, IFAD and MIJARC, 2012).

Through inheritance people have the possibility to be included or excluded from socio-economic opportunities (Cooper, 2010). By tradition, daughters do not inherit land, house nor livestock in Tanzania as they are expected to marry into another family (de Weerd, 2010). Women who are orphaned, unmarried, separated, divorced, widowed or live in a polygamous relationship as well as children of these households are the most vulnerable in terms of inheritance rights (Cooper, 2010).

However, the older generation’s need for land postpones the intergenerational inheritance and limit the younger generation’s access to land and possibilities to engage in farming. As inherited land is divided among siblings (usually boys) and the price of land in SSA is expected to increase over the next decades, rural youth are expected to have less land than the previous generation. As a result, intergenerational land-related conflicts are expected to



Smaller land plots used for maize farming within a village.

increase (Jayne et al., 2014). In other cases, the land is being sold off permanently without allowing the affected next generation to participate and be listened to in the process, and large-scale land deals close smallholder farming options. Not only access to land, but rural life in general needs to improve if to attract the younger generation to remain. Governments need to support the development of infrastructure and services in rural settings (White, 2012). Youth do not only face limitation in access to land but also in access to credits, and rural youth is less likely than their parents to have a bank account (World Bank and IFAD, 2017). Access to credit is not limited to youth, though. In 2013, less than 25% of adults in SSA had access to formal financial services, including a safe place to save money and access to credit (IFC, 2013). Few banks in Tanzania offer loans to smallholder farmers as agriculture is perceived as a high-risk investment by the banks. The low experience on credit management by smallholder farmers, the lack of security to guarantee the loans and the farmers' dependency on weather contribute to the banks' perceptions (Suleiman, 2018).

The intergenerational cash transfers that occurs are not a one-way flow from parents to children, it can flow in both directions as well as skip the middle generation (Moore, 2001; Ardington et al., 2010), and the possibility of transfer cash through mobile phones has eased the cash transfer process in Tanzania.

Concluding discussion

This literature review aims to clarify the intergenerational challenges related to youth and elderly in rural livelihoods in developing countries, with specific attention on Tanzania by answering the three following questions:

1. What are the demographic challenges in Tanzania, and how do these challenges affect agriculture and rural livelihoods?
2. Which challenges are specifically related to generational belonging? How do these interrelate between generations and how do they affect agricultural development?
3. Based on identified challenges, what policy recommendations can be made?

Recent research and statistics included in this literature review clearly indicate that SSA face several ongoing demographic challenges, and that these have impacts on rural livelihoods. Population growth will continue, and the share of youth will remain high. The total number of youth is expected yet to increase in SSA while the share of youth most likely will decrease as people live longer.

Tanzania remains a rural country as 70.4% of the population lives in rural areas, and 62.8% of the population is engaged in agriculture defined in the national census as their own (NBS, 2014b). The agricultural sector is characterized by smallholder farmers who farm on small land plots, limited use of modern technology and inputs and low productivity. Furthermore, poor rural infrastructure (including road networks, water, electricity) constitutes a barrier for the agricultural sector to grow as it constrains the access to markets and improvements depending on access to water, electrification or storage facilities. Thus, to address poverty alleviation smallholder farmers need to be targeted. With a few years left until 2025 and the governmental aim of reaching a middle-income country, Tanzania remains one of the least developed countries in the world according to UNDP's HDI ranking, and with several challenges to address.

In Tanzania, a rapid growing population requires an intensification of the agricultural sector to meet domestic demands and ensure food security. However, intensification within the agricultural sector is limited by poor rural infrastructure, limited access to land and credits, and limited access and use of modern technology and inputs.

Regarding the youth, there is an alarming mismatch between the number of youth who yearly enter the labour market, and the new employments that are created annually. An inclusive labour market need to address this challenge as for the youth to find their role in the society, become independent and financially sustainable. Previous research included in this literature review suggest that large youth cohort in combination with unemployment or underemployment may lead to social unrest and political instability. Furthermore, access to land and credit have been highlighted to limit the younger generation's possibility to engage in farming independently from their families. The older generation live

longer and thus inheritance of land is usually postponed. In addition, as a result of population growth the younger inherit less individually than previous generations. At the same time, the National Agricultural Policy (URT, 2013a) indicates possibilities for extended land use. Access to credit and thus the possibility to purchase a land plot is limited, and an issue of concern not only related to youth.

A sharp increase in life expectancy rate over the past decades suggest improved health facilities (including access to health services) as well as improved nutrition and hygiene among the population. However, when the older becomes even older, a traditional agriculture without modern technology is labour intensive and perhaps not always a possible sustainable livelihood for the elderly. A formal inclusive social security system is lacking in Tanzania meaning that if you have not been formally employed during your life you are not entitled to any state financed pension. In addition, many households have turned into so called Skipped Generation Households (SGH) and the elderly have been left with new duties.

The ongoing HIV/AIDS epidemic in SSA has severely hit the active labour force and consequently resulted in new responsibilities for the elderly. Instead of being cared for by their children, they are instead the main caregivers of their ill children and/or orphaned grandchildren as formal caring institutions and allowance who could assist these groups are missing in Tanzania.

A strong interdependence exists between generations in East Africa (Schatz and Seeley, 2015). This is not a new phenomenon. What is of concern now are the several challenges that all have appeared within a rather limited timeframe: continuing population growth, HIV/AIDS, a population getting older without access to a social security system and a declining informal caregiving and the youth's aspirations and possibility to do farming.

Policy recommendations and institutional interventions

- Policy makers should target smallholder farmers in order to alleviate poverty.
- Improvements in the rural infrastructure (including building road networks, electricity, water and storage possibilities) need to be prioritized to increase access to markets as well as increase possibilities for agro-food business investments in rural areas.
- To support youth in agriculture, possibilities on how to ease access to land through land reform, unused land or community land ought to be considered by policy makers.
- Policy makers should consider incentives for agro-food businesses to increase the value of products, to meet the demands of a growing domestic market and to create employment opportunities.
- Training institutions (schools, vocational training institutions and universities) should provide training in entrepreneurship for youths.
- Policy makers should consider the increase in national life expectancy rate and the need for an inclusive formal social security network to improve the quality of life for elderly.
- Policy makers and institutional training should have a continued high awareness of the impact of HIV/AIDS epidemic as it severely hits the active workforce.
- Elderly need to be considered for training to make use of already existing and accessible technology.

References

- Adato, M. and Bassett, L. 2009. Social protection to support vulnerable children and families: the potential of cash transfers to protect education, health and nutrition, *AIDS Care*, Vol. 21, No. 1, pp. 60-75.
- African Union Commission, 2006. African Youth Charter, available at: http://www.un.org/en/africa/osaa/pdf/au/african_youth_charter_2006.pdf, April 8, 2018.
- AGRA, 2015. Africa Agriculture Status Report: Youth in Agriculture in Sub-Saharan Africa, Alliance for a Green Revolution in Africa, Issue No. 3, Nairobi.
- Agwanda, A. and Amani, H. 2014. Population growth, structure and momentum in Tanzania, THDR Background Paper, No. 7, ESRF Discussion Paper 61.
- Alfy, A. 2016. Rethinking the Youth Bulge and Violence, *IDS Bulletin*, Vol. 47, No. 3, pp. 99-116, Institute of Development Studies, Brighton.
- Alobo Loison, S. 2015. Rural Livelihood Diversification in Sub-Sahara Africa: A Literature Review, *The Journal of Development Studies*, Vol. 51, pp. 1125-1138.
- Andersson Djurfeldt, A., Djurfeldt, G. and Bergman-Lodin, J., 2013. Geography of Gender Gaps: Regional patterns of income and farm nonfarm interaction among male- and female-headed households in eight African countries, *World Development*, Vol. 48, pp. 32-47.
- Apt, N. A. 2012. Aging in Africa: Past Experiences and Strategic Directions, *Ageing International*, Vol. 37, No. 1, pp. 93-103.
- Ardington, C., Case, A., Islam, M., Lam, D., Leibbrandt, M., Menendez, A. and Olgiati, A. 2010. The impact of AIDS on intergenerational support in South Africa: Evidence from the cape area panel study, *Research on Aging*, Vol. 32, No. 1, pp. 97-121.
- Baird, T. D. and Harter, J. 2017. Livelihood diversification, mobile phones and information diversity in Northern Tanzania, *Land Use Policy*, Vol. 67, pp. 460-471.
- Chambers, R. and Conway, G. 1992. Sustainable Rural Livelihoods: Practical Concepts for the 21st Century, *IDS Discussion Paper 296*, Institute of Development Studies, Brighton.
- Chirwa, M. and Kalinda, R. 2016. Challenges of the Elderly in Zambia. A Systematic Review Study, *European Scientific Journal*, Vol. 12, No. 2, pp. 351-364.
- Cooper, E. 2010. Inheritance and the Intergenerational Transmission of Poverty in Sub-Saharan Africa: Policy Consideration, Working Paper, No. 159, Chronic Poverty Research Centre, Oxford.
- Covarrubias, K., Nsiima, L. and Zezza, A. 2012. Livestock and livelihoods in rural Tanzania, A descriptive analysis of the 2009 National Panel Survey, Joint paper of the World Bank, FAO, AU-IBAR, ILRI and the Tanzania Ministry of Livestock and Fisheries.
- de Haan, L. and Zoomers, A. 2005. Exploring the Frontier of Livelihoods Research, *Development and Change*, Vol. 36, pp. 27-47.
- de Haan, L. 2017. Rural and urban livelihoods, social exclusion and social protection in sub-Saharan Africa, *Geografisk Tidsskrift-Danish Journal of Geography*, Vol. 117, No. 2, pp. 130-141.
- de Weerd, J. 2010. Moving out of Poverty in Tanzania: Evidence from Kagera, *The Journal of Development Studies*, Vol. 46, No. 2, pp. 331-349.
- Ellis, F. 1998. Household strategies and rural livelihood diversification, *Journal of Development Studies*, Vol. 35, No. 1, pp. 1-38.

- Ellis, F. 2000a. The Determinants of Rural Livelihood Diversification in Developing Countries, *Journal of Agricultural Economics*, Vol. 52, pp. 298-302.
- Ellis, F. 2000b. *Rural Livelihoods and Diversity in Developing Countries*, Oxford University Press Inc, New York.
- FAO, IFAD and MIJARC, 2012. Summary of the findings of the project implemented by MIJARC in collaboration with IFAD and FAO: 'Facilitating access of rural youth to agricultural activities'. The Farmers' Forum Youth session 18 February 2012.
- Filmer, D., Fox, L., Brooks, K., Goyal, A., Mengistae, T., Premand, P., Ringold, D., Sharma, S. and Zorya, S. 2014. *Youth Employment in Sub-Saharan Africa*, World Bank and Agence Française de Développement, Washington DC.
- Gupte, J., te Lintelo, D. and Barnett, I. 2014. Understanding 'Urban Youth' and the Challenges they face in Sub-Saharan Africa: Unemployment, Food Insecurity and Violent Crime, IDS Evidence Report, No. 81, Institute of Development Studies, Brighton.
- Honwana, A. and de Boeck, F. (Eds.) 2005. *Makers and Breakers: Children and Youth in Postcolonial Africa*, James Currey, Oxford.
- IFC, 2013. *Access to Finance, Sub-Saharan Africa*, IFC International Finance Corporation, World Bank Group.
- Inder, B., Kabore, C., Nolan, S., Cornwell, K., Contreras Suarez, D., Crawford, A. and Kamara, J. K. 2017. Livelihoods and Child Welfare among Poor Rural Farmers in East Africa, *African Development Review*, Vol. 29, No. 2, pp. 169-183.
- Jayne, T. S., Chamberlin, J. and Headey, D. D. 2014. Land pressures, the evolution of farming systems, and development strategies in Africa: A synthesis, *Food Policy*, Vol. 48, pp. 1-17.
- Jirström, M., Archila Bustos, M. F., and Alogo Loison, S. (2018). African smallholder farmers on the move: Farm and non-farm trends for six Sub-Saharan African countries, 2002–15. In A. Andersson Djurfeldt, F. Mawunyo Dzanku, and A. Cuthbert Isinika (Eds.): *Agriculture, Diversification, and Gender in Rural Africa: Longitudinal Perspectives from Six Countries*, (pp. 17-53), Oxford University Press, Oxford.
- Kevane, M. 2012. Gendered production and consumption in rural Africa, *PNAS*, Vol. 109, No. 31, pp. 12350-12355.
- Kilimani, N. 2017. *Accelerating Progress towards Achieving Productive Youth Employment and Decent Work*, IDS Policy Briefing, Issue 136, Institute of Development Studies, Brighton.
- Leavy, J., and Smith, S. 2010. *Future Farmers: Youth Aspirations, Expectations and Life Choices*, Future Agricultures, Discussion Paper 013.
- Leavy, J. and Hossain, N. 2014. *Who Wants to Farm? Youth Aspirations, Opportunities and Rising Food Prices*, IDS Working Paper, Vol. 2014, No. 439, Institute of Development Studies, Brighton.
- Lindsjö, K. 2016. Education – a Key to Life? Caregivers' Narratives of Primary School Education in Iringa Region, Tanzania, *Journal of Poverty Alleviation and International Development*, Vol. 7, No. 1, pp. 137-162.
- Losch, B. 2016. *Structural transformation to boost youth labour demand in sub-Saharan Africa: The role of agriculture, rural areas and territorial development*, Employment Working Paper, No. 204, International Labour Office, Geneva.
- Mgumia, J. H. 2017. *Why Youth Aspiration and Family Circumstances Matter for Entrepreneurship Interventions*, IDS Policy Briefing, Issue 131, Institute of Development Studies, Brighton.
- Moore, K. 2001. *Frameworks for understanding the intergenerational transmission of poverty and well-being in developing countries*, CPRC Working Paper 8, Chronic Poverty Research Centre, Birmingham.

- Muthoni Mwaura, G. 2017. The Side-Hustle: Diversified Livelihoods of Kenyan Educated Young Farmers. In: Ayele, S., Khan, S. and Sumberg, J. (Eds.) 2017. Africa's Youth Employment Challenge: New Perspectives, IDS Bulletin, Vol. 48, No. 3, Institute of Development Studies, Brighton.
- NBS, National Bureau of Statistics, 2014a. Population Distribution by Age and Sex 2013, 2012 Population and Housing Census, Volume II, Dar es Salaam.
- NBS, National Bureau of Statistics, 2014b. Basic Demographic and Socio-Economic Profile, 2012 Population and Housing Census, Volume IIIA, Dar es Salaam.
- Opong, C. 2006. Familial Roles and Social Transformations: Older Men and Women in Sub-Saharan Africa, *Research on Aging*, Vol. 28, No. 6, pp. 654-668.
- Porter, G. 2016. Mobilities in Rural Africa: New Connections, New Challenges, *Annals of the American Association of Geographers*, Vol. 106, No. 2, pp. 434-441.
- Porter, G., Tewodros, A., Bifandimu, F., Gorman, M., Heslop, A., Sibale, E., Awadh, A. and Kiswaga, L. 2013. Transport and mobility constraints in an aging population: health and livelihood implications in rural Tanzania, *Journal of Transport Geography*, Vol. 30, pp. 161-169.
- Restless Development, 2011. State of the Youth in Tanzania, Annual Report 2011, available at: <http://restlessdevelopment.org/file/res-tz-soy-pub-rpt-final-version-feb12-pdf>, January 30, 2018.
- Ripoll, S., Andersson, J., Badstue, L., Büttner, M., Chamberlin, J., Erenstein, O. and Sumberg, J. 2017. Rural transformation, cereals and youth in Africa: What role for international agricultural research? *Outlook on Agriculture*, Vol. 46, No. 3, pp. 168-177.
- Schatz, E. and Ogunmefun, C. 2007. Caring and Contributing: The Role of Older Women in Rural South African Multi-generational Households in the HIV/AIDS Era, *World Development*, Vol. 35, No. 8, pp. 1390-1403.
- Schatz, E. and Seeley, J. 2015. Gender, ageing and carework in East and Southern Africa: A review, *Global Public Health*, Vol. 10, No. 10, pp. 1185-1200.
- Suleiman, R. 2018. Local and regional variations in conditions for agriculture and food security in Tanzania: A review. *AgriFoSe2030 report 10*, 2018.
- Sumberg, J. and Okali, C. 2013. Young People, Agriculture, and Transformation in Rural Africa: An "Opportunity Space" Approach, *Innovations*, Vol. 8, No. 1/2, pp. 259-269.
- TACAIDS, Tanzania Commission for AIDS, Zanzibar AIDS Commission (ZAC), National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS), and ICF International, 2013. Tanzania HIV/AIDS and Malaria Indicator Survey 2011-12, Dar es Salaam, Tanzania: TACAIDS, ZAC, NBS, OCGS, and ICF International.
- Thrush, A. and Hyder, A. 2014. The neglected burden of caregiving in low- and middle-income countries, *Disability and Health Journal*, Vol. 7, pp. 262-272.
- Tripp, A. M. 2012. Donor Assistance and Political Reform in Tanzania, Working Paper No. 2012/37, UNU-WIDER, United Nations University, World Institute for Development Economics Research.
- UN, 2001. Implementation of the World Programme of Action for Youth to the Year 2000 and Beyond, A/56/180, United Nations General Assembly, New York.
- UN, 2013. World Population Prospects: The 2012 Revision, Highlights and Advance Tables. Working Paper No. ESA/P/WP.228, UN Department of Economic and Social Affairs, Population Division, New York.
- UN, 2015a. Youth Population Trends and Sustainable Development. Population Facts 2015/1, UN Department of Economic and Social Affairs, Population Division, New York.

UN, 2015b. Transforming Our World: The 2030 Agenda for Sustainable Development, A/RES/70/1, United Nations General Assembly, New York.

UNDP, 2016. Human Development Report: Human Development for Everyone, United Nations Development Programme, New York.

UNDESA, 2011. Population Division, World population prospects: The 2010 Revision, Volume 1: Comprehensive Tables, No. ST/ESA/SER.A/313, United Nations, Department of Economic and Social Affairs, New York.

UNICEF, 2017. https://www.unicef.org/infobycountry/tanzania_statistics.html, February 14, 2018.

Urdal, H. 2006. A Clash of Generations? Youth Bulges and Political Violence, *International Studies Quarterly*, Vol. 50, pp. 607-629.

URT (The United Republic of Tanzania) 2013a. National Agriculture Policy, Ministry of Agriculture Food Security and Cooperatives, Dar es Salaam.

URT (The United Republic of Tanzania) 2013b. Tanzania Third National Multi-Sectoral Strategic Framework for HIV and AIDS (2013/14-2017/18), TACAIDS, Dar es Salaam.

URT (The United Republic of Tanzania) 2016. National Strategy for Youth Involvement in Agriculture, Ministry of Agriculture Livestock and Fisheries, Dar es Salaam.

White, B. 2012. Agriculture and the Generation Problem: Rural Youth, Employment and the Future of Farming, *IDS Bulletin*, Vol. 43, Institute of Development Studies, Brighton.

World Bank, 2017a. <https://data.worldbank.org/country>, January 26, 2018.

World Bank, 2017b. World Development Indicators, available at:

<https://data.worldbank.org/indicator/SP.POP.GROW?locations=TZ>, May 22, 2018.

World Bank and IFAD, 2017. Rural Youth Employment, World Bank and the International Fund for Agricultural Development.

World Bank, 2018. <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=TZ>, May 27, 2018.