



Gender segmented markets and production systems in Malawi

Anderson Gondwe

*Centre for Social Research (CSR), Chancellor College
P.O Box 278, Zomba, Malawi.*

Email: asgondwe@gmail.com

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of smallholder based agriculture
and food security

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 AgriFoSe 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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Summary

This report aims to give an overview of the agricultural policies in place in Sub-Saharan Africa, based on a review of key regional and national policy documents, with a special focus on the four African countries that have been identified as focus countries for Theme 1 of AgriFose2030: Kenya, Tanzania, Malawi and Zambia. The purpose of the report is twofold, on the one hand to compile information on agricultural policies at the regional and country level and on the other to document if and how such policies address the three target groups of AgriFose2030, namely smallholders, women and youth.

While the pan-African ambitions with respect to the three cross-cutting areas of AgriFose2030 – sustainable intensification, gender and youth and commercialization - have increased since the signing of the Maputo Declaration, figures on public expenditure cast doubt on the national commitment to the CAADP process. Nonetheless, it is heartening to note that an early focus on smallholders in general, has been followed by a recognition of the importance of the role of women and youth in achieving the twin goals of commercialization and intensification.

All of the country level policies documented in this report contain focus areas on smallholders, sustainable intensification and commercialization, while many also focus on both women and youth, but the variations of challenges at the national level need to be recognized.

Abstract

The purpose of this study was to conduct a literature review on gender segmented markets and production systems in Malawi. The underlying argument from the review is that the gender disparities in the agricultural sector make it very difficult for the sector to realise its potential to the fullest. While gender inequalities exist in almost all sectors of the economy, the main form of gender gaps in agriculture relate to access to and control of land, access to credit, access to agricultural implements, including machinery and individual characteristics such as age, experience and education, among others. The review also shows that most of socio-economic challenges and gender imbalances being experienced in Malawi are not necessarily due to lack of relevant policy instruments but rather weak enforcement efforts and inconsistent implementation of policies. Furthermore, the challenges exist in both the production of commodities in the farm and supply of agricultural produce in output markets. With respect to output markets, the key challenges are poor access to infrastructure, limited access to structured commodity markets and inefficiencies introduced by Government interventions in agricultural markets. It is against this finding that we provide three key recommendations as the basis for charting the way forward, namely enforcement of the land reform law, improving access to credit, expansion of extension services and training to ensure adequate access to information and market opportunities.

Keywords: gender gap, smallholder agriculture, Malawi

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1. Introduction

The UN Sustainability Development Goal (SDG) 2 aims to end hunger, achieve food security and improve nutrition and promote sustainable agriculture by the year 2030 (UN General Assembly, 2015). One of the ways of improving smallholder food security is through the sustainable intensification of agriculture, increased market access for smallholder farmers and by strengthening the role of women in agriculture. In order to achieve these objectives, there is need to put together existing scientific evidence to support policy and improve practices within the agricultural sector. This study, therefore, seeks to conduct a literature review on gender segmented markets and production systems in Malawi, exploring the gender disparities that exist in the country's agricultural sector. The purpose of this study is to highlight types and sources of gender inequalities that make the agricultural sector very difficult to realise its potential to the fullest. The study focuses on the smallholder sector where the majority of the population is involved. It is anticipated that the knowledge generated from this inquiry would afford new insights and so inform ways of closing the gaps and mapping the way forward. This research not only engages scholarly work which highlights debates and theoretical perspectives on various policy directions but also uses many documents and especially those produced by government and international institutions to discuss the key issues under examination.

FAO (2011) shows that by reducing gender-based inequalities, poor countries can increase their GDP, reduce poverty and improve nutritional outcomes. Specifically, the study estimates that by closing the gender gap in agricultural production as many as 238,000 people, representing about 3% of the poor population, could be lifted out of poverty in Malawi. This report, therefore, seeks to highlight the gender inequalities existent in Malawi with a view to providing suggestions on how future policies can improve opportunities for women involved in agriculture.

Specifically, the following questions are analyzed in the study:

- a. How are men and women differentially able to participate in existent market systems, based on what factors?
- b. What are the main factors of gender-based exclusion in output markets for smallholders?
- c. What has been the impact of policies, programs and strategies targeting the empowerment of women in agriculture?
- d. How can policies, programmes and strategies promote gender-neutral markets and production systems?

The rest of the paper is organized as follows. Section 2 provides an overview of the context and background that frames the study. Also included in this chapter is a discussion of definitions of some of the key terminology and concepts used throughout the study. Section 3 investigates the nature and types of the existing gender gaps in Malawi with a specific focus on smallholder agriculture. Following this is Section 4 which discusses the factors explaining the identified gender gaps in Malawi, focusing on the production side. Section 5 analyses factors differentiating men and women in output markets, explicitly expounding on issues of access to agricultural markets in Malawi. Section 6 provides an overview of Malawi's development policy perspective and agenda implemented over the years. This includes a discussion of whether gender policies implemented in the country have benefited women in agriculture. Specifically, what is the impact of gender policies, program and strategies on the empowerment of women in agriculture? Finally, Section 7 provides the conclusions and recommendations. Drawing on the literature review and findings, the section also provides suggestions on how to promote gender neutral markets and production systems in Malawi.

2. Background and context

Malawi is a largely agricultural based economy. Agriculture continues to be the most important economic sector in the country and contributed about 30% to the total gross domestic product (GDP) in 2016. The

agricultural sector is officially composed of three subsectors, namely crop and livestock, forestry and logging and fishing and aquaculture. The crop and livestock sub-sector is the dominant of the three subsectors, making up about 70% of total agricultural output on average between 2010 and 2016. This is followed by the forestry and logging subsector with about 25% while the remaining 5% is contributed by fishing and aquaculture over the same period (Government of Malawi, 2017).

Nearly all exports in Malawi come from agriculture. Non-agricultural exports only made up about 20% of the total export value in 2016 although this may vary depending on the source¹. Tobacco remains the largest export crop contributing nearly 66% of total exports in 2016. However, the tobacco sector has been negatively affected by the recent anti-Tobacco smoking campaign. Tea is the second most important export crop making up about 9% of all exports in 2016. Other important export crops are sugar (8%) and vegetables, roots and tubers (6%). Statistics show that Malawi's export revenue has not only stagnated but also remained undiversified over the years (Government of Malawi, 2017, Trade map-International statistics, 2017). For example, Malawi's total exports which amounted to USD999.8 million in 2012, increased to USD1,286.4 million in 2014 before dropping to USD839.3 million in 2016 (USD983.7 million in 2015). Similarly, the contribution of Tobacco to total exports has not changed over the past few years- an indication of lack of diversification away from Tobacco. In 2012, Tobacco contributed about two-thirds (65%) of Malawi's total export revenues although this dropped to about half (50%) in both 2014 and 2015 before increasing back to two-thirds (66%) in 2016.

The agricultural sector in Malawi is categorized into the smallholder and commercial sectors, with the former contributing 60% to total GDP (Chirwa and Matita, 2012). Nearly 84% of agricultural value-added comes from about 1.8 million small holder farmers who on average own 1 hectare of land. Earlier estimates indicated that about 55% of smallholder farmers in Malawi had less than 1 hectare of cultivatable land (Chirwa, 2002). Statistics based on two most recent consecutive nationally representative household integrated surveys (IHS3 and IHS4) seem to suggest that plot areas under cultivation have declined over five years from 0.77 hectares for the 2009/2010 rainy season to 0.61 hectares for the 2015/16 rainy season (NSO, 2012, 2017).

Land holdings in the estate sector are larger, averaging between 10 and 500 hectares (Government of Malawi, 2002, World Bank, 2012). The estate sector concentrates on cash crops such as tea, tobacco and cotton. Farming in the smallholder sector, where the majority of the farmers are involved in, focuses on the production of food staples such as maize and rice for own consumption.

The agricultural sector employs about 85% of the workforce in Malawi. Women contribute to about 52% of the agricultural labour force in Malawi (Dabalén, et al., 2017, Palacios-Lopez et al., 2017). A recent review by Slavchevska, et al. (2016) supports evidence of the feminization of agriculture in Malawi where the female share of economically active population in agriculture has increased from 56.7% in 1980 to 59.2% in 2010 (FAO, 2017). This implies that the majority of women are engaged in the smallholder agriculture sector which is normally characterized by low incomes due to low productivity since most women lack access to important agricultural resources. Therefore, the feminization of agriculture in Malawi presents both opportunities and challenges for women; especially in addressing issues of gender equality in the country's economic growth and development agenda.

Malawi's agriculture is also highly vulnerable to climatic shocks due to high dependence on rainfall- only about 25% of the potential area is estimated to be on irrigation in Malawi (Government of Malawi, 2016). The overlap between rural poverty and smallholder agriculture in Malawi is huge. In 2010, estimates based on consumption aggregates show that about 50.7% of the households in Malawi were

¹ For example, statistics from trade map indicate only 5% of Malawi's exports came from outside agriculture (see http://www.trademap.org/tradestat/Product_SelCountry_TS.aspx?nvpm=1|454|||TOTAL||2|1|1|2|2|1|1|1|1). Regardless of the source, the fact remains that the majority of Malawi's exports are agricultural in nature and the country has not been able to transform its agriculture in many years.

poor with the majority of them based in rural areas which make up of 85% of the total population. Rural poverty was estimated at 56.6% compared to 17.3% in urban areas. Malawi also faces a high level of malnutrition amongst children under 5 years. In 2015, 37% of the children aged below 5 years were stunted and the levels of stunting were higher in rural areas than in urban areas (National Statistical Office, 2014, 2017).

Ending hunger, achieving food security and improving nutrition in Malawi requires promoting sustainable agriculture and supporting smallholder farmers who currently face many challenges. Some of the challenges include low productivity, small land holdings, weak links to markets and high transport costs, among others (Chirwa, 2012). Raising the productivity of smallholder farmers and combating hunger in Malawi requires interventions that enhance women's participation and stimulate inclusive and efficient markets. This view is further reflected in the SDGs which include a specific goal on achieving gender equality and empowering all women and girls. Achieving gender equality is one of the key policy elements carried over from the Millennium Development Goals (MDGs) in order to build on the progress countries have made over the years. Although Malawi did not meet the MDGs targets on the gender theme, some progress has been made over the years in terms of closing the gender gap and improving opportunities for women farmers. Furthermore, the Government of Malawi enacted the Gender Equality Act (2013) to address the inequalities that exist between men and women in Malawi. Specifically, it seeks to achieve three main aims. Firstly, to promote gender equality, equal integration, influence, empowerment, dignity and opportunities, for men and women in all functions of society. Secondly, to prohibit and provide redress for sex discrimination, harmful practices and sexual harassment. Finally, to provide for public awareness on promotion of gender equality in Malawi (see Gender Equality Act, 2013).

It is against the foregoing background that this study seeks to explore the nature and types of gender gaps in Malawi; discuss the main factors of gender-based exclusion of farmers in output markets; study the impact of policies, programs and strategies targeting the empowerment of women in agriculture and finally suggest recommendations as to how policies, programmes and strategies promote gender-neutral markets and production systems in Malawi.

3. The nature and types of gender gaps in Malawi

Although it is not clearly stated in the literature, it is important to state that the concept of gender varies across studies depending on whether the studies in question have data disaggregated by sex which is rarely available for most household surveys. Consequently, some studies use the gender of the household head or farm manager as opposed to the sex of the individual². Generally, the concept of gender refers to socially constructed roles, behaviours, activities and attributes given by society and considered appropriate for men and women. This normally refers to the shared expectations by which men and women are expected to interact and set a distinct difference between women's and men's roles, their access to productive resources, and decision-making authority across different cultures. Within this context, gender equality, therefore, entails equal rights, responsibilities and opportunities that all persons should enjoy, irrespective of whether they were born male or female.

Malawi runs an integrated household survey programme consisting of nationally representative surveys such as censuses, integrated household and demographic health surveys. These provide important sources of general statistics on gender relating to socioeconomic phenomena such as demographics, education, labour market and health³. The female population in Malawi is estimated at 52% and this has not changed for a long time. Gender inequalities exist in almost all sectors, namely education, health, labour market, and politics, just to mention a few. The representation of women is better in the informal

² In this study, an attempt is made to clarify whether the study uses the gender of the farmer or household head/farm manager.

³ The latest integrated household survey was conducted in 2015 and data was released late November 2017. The latest DHS was conducted in 2015/16 and provides the latest statistics on health in Malawi.

sector than in the formal sector but opportunities in the former are generally limited and earnings low (White, 2007; Government of Malawi, 2015).

In 2015/16, the literacy rate amongst individuals aged 15 years and above, defined as the ability to read and write with understanding in any language, was higher for men (81%) compared to women (66%). About 14% of the population aged 15 years and above in Malawi was reported to have never attended school. However, relatively larger percentage of women (19%) than men (9%) was reported to have never attended education. Similarly, there were more women (75%) without any educational qualification compared to 64% for their male counterparts. Only a quarter of women (25%) had some educational qualification compared to more than a third for men (36%) (National Statistical Office, 2017). Although the fertility rates have dropped over the years from 6.7 in 1992 to 4.4 in 2015, the number of births per woman remains significantly higher than the replacement rate of 2.1 children per woman. Despite an expansion in enrolment rates amongst women over the years since the introduction of free primary education in 1994, the secondary school gross enrolment rate for women (39%) is lower than for men (45%).

Statistics also reveal that more men than women are involved in economic activities as measured by the labour force participation rate- the percentage of the labour force in the population of individuals aged 15 years and above. Specifically, the labour force participation rate among men was estimated to be 91% compared to 88% for women (National Statistical Office, 2014). Overall, these labour force participation rates are amongst the highest in the world due to the large size of the informal agricultural sector. The average share of women in agriculture is about 20% for Latin America and 43% for developing countries (FAO, 2011). Although there was no significant association between participation in the labour market and education attained, more women tended to be involved in the informal agricultural sector. Nearly 55% of the women aged 15 and above were involved in household agricultural and fishing activities compared to 53% amongst the male counterparts. The statistics are reversed when we look at the involvement of women in salary, wage, commissions or any payment activities where a relatively smaller proportion of women (4%-10%) enter compared to men (9%-15%). The gender inequalities in terms of labour force participation rates are also carried over to employment rates. The employment rate for men was estimated at 86%, much higher than the 74% for women (National Statistical Office, 2014). The employment gap is even bigger if we look at age-specific employment rates. These rates confirm that gender disparities in the Malawian labour market are huge. Research has also shown that women face discrimination in rural labour markets in Malawi where it has been found that even when rural women are engaged in wage employment, they are more likely to be involved in part-time, seasonal and low-wage jobs, holding all other factors (e.g. education, age and industry) constant. Specifically, 90% of women and 66% of men work part time (FAO, 2011). The study also shows that there exists a wage gap in favour of men in Malawi. Average male wages are higher than those of women in both rural and urban areas of Malawi; male wages are about 18% higher than women's wages in urban areas and 35% higher in rural areas. The wage gap is defined as the difference between the daily male and female wage as a percentage of the average male wage. Statistics based on the 2013 Malawi Labour force survey reveal that on average men nearly earn three times as much as women even after adjusting for the number of hours worked (National Statistical Office, 2014)⁴. The proportion of women receiving low pay rates is also significantly higher for women than men. The low pay rate amongst women was estimated at 66% compared to only 56% amongst men- a difference of 10 percentage points. The low pay rate can be used as a proxy for the working poverty rate and is defined as the proportion of paid employees whose hourly earnings are less than two thirds of the median earnings.

Latest statistics according to the 2015-16 Malawi Demographic and Health Survey indicate that the HIV prevalence amongst women was 10.8% compared to 6.4% amongst men (National Statistical Office,

⁴ The distribution of earnings is based on the sum of gross monthly income from wage employment and gross profit from self-employment activities.

2017). Researchers and policymakers recognise that gender related factors play a role in the observed gap in HIV prevalence among men and women in Malawi, although statistics suggest that the gender HIV prevalence gap in Malawi has only marginally narrowed over five years since the last DHS study conducted in 2010.

So far, we have looked at the general situation of women in Malawi. We now turn to the gender gap specific to agriculture, covering all three subsectors of agriculture in Malawi, namely crop and livestock, forestry and fisheries. World Bank (2015) has shown that women tend to be less than productive than men in the crop sector. The gender productivity gap in Malawi's crop sector is large and ranges from 28% to 31% depending on the definition used. The analysis is aggregated for all crops and based on data from Malawi's third integrated household survey collected in 2010/11. In addition to lower productivity, only a smaller percentage of women is engaged in cash or export crops such as tobacco which men sell for high value. There are several factors accounting for the productivity gap such as access to land, modern inputs, farm labour, education and finance (World Bank, 2015). Generally, women (especially older ones) are systematically disadvantaged compared to men and have fewer endowments and entitlements and more limited access to information and services (FAO, 2017). However, the discussion of these factors is dedicated to Section 4 which follows.

Forests are an important source of employment for both men and women in developing countries, more particularly in rural areas. As in the rest of the sectors, women tend to be involved in unskilled forestry activities which attract lower wages. The working conditions for women in this sector are also generally poor (World Bank, FAO and IFAD, 2009). There is limited information on the specific roles played by women involved in forestry work in Malawi. The main source of information is the integrated household surveys which collect information on non-farm enterprises engaged in sales of forest based products. National Statistical Office (2017) shows that the number of households involved in forest activities in Malawi was small and only accounted for 12% of all household enterprises in 2010/11. The proportion of enterprises selling forest based products in Malawi was reported to be marginally higher in male-headed households (12%) compared to female-headed households (11%).

The fisheries sector in Malawi is an important source of employment, rural development and food security. Within the agricultural sector, the fisheries sector is the second largest employer after crop farming (FAO, 2005). The importance of fish and fishing business in Malawi cannot be overemphasised. Fish is an important unique source of protein, providing 60% of the animal protein dietary intake of Malawians (Phiri, et al., 2013). Fish are also known to contain Omega-3 fatty acids, which contribute to a healthy heart. Much of the fish in Malawi is caught from lakes and rivers. Fish farming or aquaculture in Malawi is still at an early stage of development but has a lot of potential given that the local demand for fish is still very high (FAO, 2005). There exist various stages in the fish value chain in Malawi, namely harvesting, collection, processing and trading. While harvesting is dominated by men, fish processing and trading is largely done by women. Once harvested, the fish is collected by women who process and sell the processed fish (sun-dried, frozen, fried, parboiled or smoked) to distant markets (Food and Agriculture Organization of the United Nations, 2005; Manyungwa and Hara, 2017). Fish harvesting is dominated by men who are either crew members or gear owners and have an influence on where to fish and have direct control of the harvest. In some cases, crew members operating gears owned by women are said to go fishing for a number of days without reporting back to women gear owners, and when they return the money is not given to the owners- something they would not do to the male gear owners (Manyungwa & Hara, 2017). These power relations negatively affect women engaged in fishing which in turn exacerbate gender imbalances in the agricultural sector.

4. Factors explaining the gender gaps

Understanding the nature and type of constraints faced by women is an important step in eliminating barriers that limit the participation of women in markets and for developing policies, programmes and

strategies that promote gender-neutral markets and production systems in Malawi. A critical analysis of the gender gaps is important for arriving at policy implications relevant for the Malawian context.

There are several factors documented in the literature explaining why women tend to have less access to agricultural resources and inputs compared to men. More generally, and this holds across many countries, male farmers are found to control more land and livestock, have better access to farm implements, use more of improved seed varieties and purchased inputs such as fertilizers, are more likely to use credit or insurance, have higher education levels and are more likely to have access to extension services (FAO, 2011). The disparity is mainly attributed to different cultural expectations.

Land is the most important resource for agricultural households. Access to land can take many forms such as ownership and renting (FAO, 2011). According to recent statistics, not only do fewer women own land in Malawi but women also own smaller plots compared to men. Estimates by Doss et al. (2015) based on the 2010-2011 LSMS - Malawi Integrated Household Survey data indicate that 40% of agricultural land area is owned by women and 18% is jointly owned by men and women⁵. Furthermore, the research shows that men tend to own land of greater value in terms of quality and location compared to women.

The gendered land holdings explained in the foregoing paragraph can be linked to lineage patterns and marriage systems, among the matrilineal and patrilineal cultures in Malawi. The matrilineal cultures are mostly found in the central and southern regions of Malawi amongst the Chewa, Lomwe, Yao and Ngoni (but not in Mzimba). The first three matrilineal tribes in the list comprised nearly 64% of the Malawian population according to the 2008 Population and Housing Census. On the other hand, the patrilineal culture is largely dominant in the northern region and some south-western parts of the country mostly amongst the tribal groups of the Tumbuka, Ngonde, Sena and Tonga. Both the matrilineal and patrilineal systems are associated with some form of discrimination when it comes to land inheritance. In the former system, only daughters are heirs of their matrilineal land while in the latter male children inherit their patrilineal land (Berge et al., 2013). Land tenure practices vary within the matrilineal groups depending on where the couple settles after marriage. On the one hand, when a couple resides in the husband's village (virilocal residence- which rarely happens), men tend to gain primary rights to land (Peters, 2010; Berge et al., 2013). On the other hand, when residence takes place in the wife's village (uxorilocal residence), the men only use and borrow their wives' land. Research has shown that while farming land may be owned and inherited through the maternal side, the agricultural land is managed and controlled by the men. For example, based on a sample from four rural areas of Malawi, namely Ntchisi, Thiwi Lifidzi, Shire Highlands, and Bwanje Valley, Mvula and Mulwafu (2018) report that 69% of the farm managers were men. It is shown in the literature that men residing in the wives' villages are able to increase their power through commercial agriculture (Berge et al, 2013). Moreover, research has shown that men are more likely to control cash cropping activities within the households (Chirwa et al., 2011).

Since land tenure relations including access to land and control over it are governed according to local rules, matrilineal and patrilineal systems also represent a problem for land reforms among the small-holder farmers who make up to nearly 80% of the farmers in Malawi (Berge et al., 2013). One example of failed land reform programmes was the Lilongwe Land Development Programme supported by the World Bank in 1967. The programme aimed at modernising land tenure in about 1000 villages in the district of Lilongwe. It was based on a wrong 'colonial' assumption that matrilineal lineage system did not encourage agricultural investment and productive use of land. Specifically, it sought to introduce private titles to customary land which would consequently lead to investment and improved agricultural productivity. The process involved identifying village boundaries and then allocating the land within the village boundaries to individual lineages and families. The land was allocated and registered under the head of the lineage/family, locally known as *mwini-mbumba*, chosen to be a guardian of the matrilineal

⁵ This is a large-scale nationally representative household survey that includes questions to identify the area of each agricultural plot and the owner (or owners). Another comprehensive source of women's access to land is the national census of agriculture and livestock collected almost every ten years.

group of sisters and their children (Berge et al., 2013; Peters, 2010; Kaarhus, 2010). However, the review and audit of the project shows that the project suffered from patrilineal biased view among the project staff and researchers. The project failed and was never scaled up to other districts. Specifically, instead of increasing the security of rights to ownership of land, many women lost their customary land rights under a matrilineal-matrilocal regime and were not able to obtain loans from banks even with titling of land. Neither did the project achieve its intended aim of improving agricultural productivity (Berge et al., 2013; Peters, 2010; Kaarhus, 2010).

In addition to women being less likely to hold land titles, FAO (2011) finds that they are also disadvantaged when it comes to access to agricultural implements and machinery. The analysis is based on an agricultural implements index for Malawi calculated using information on the ownership of farm implements, namely hand hoe, slasher, axe, sprayer, panga knife, sickle, treadle pump, watering can, ox cart, ox plow, tractor, ridger, cultivator, generator, motorized pump, grain mill or other implements, chicken house, livestock kraal, poultry kraal, storage house, granary, barn, and/or pigsty. Differences in access to farm implements and machinery between men and women explain about 18% of the gender gap in Malawi (World Bank, 2015).

Another important factor explaining and sustaining the gender gap is crop choice. Research done in less developed countries shows that women and men farm different crops and this has implications on access to output markets. World Bank (2015) indicates that male farmers are more likely to grow cash or export crops that fetch higher incomes on the markets. In Malawi, there exists a gender gap of 28% in favour of men in terms of the fraction of land devoted to export crops. Specifically, about 10% of men's plots is devoted to tobacco, the country's main cash crop, compared to 3% of women's plots. FAO (2011) estimates the sources of gender gaps and states that by closing the gender gap in the cultivation of cash crops is closed, Malawi's GDP can potentially increase by more than \$28 million, representing about 2% of 2018/2019 national budget. There are several factors as to why women tend to grow less export crops than men. These factors range from social norms which may dictate which type of crops women can cultivate due to lack of access to intensive labour and non-labour inputs (e.g. fertilizer) required for cultivating marketable crops. Women are also said to prioritize food crops needed for food security in their families (World Bank, 2008, 2015). Although not specific to Malawi, other factors that generally prevent women to move from subsistence to higher value crops include less access to market information and lower mobility (World Bank, FAO and IFAD, 2009).

Households keep livestock and poultry for various reasons such as source of farm labour, store of wealth, collateral for credit and an essential safety net during times of crisis (FAO, 2009). Generally, livestock holdings of female farmers are much smaller than those of men and women are much less likely to own large animals (e.g. cattle, donkeys and oxen) that are useful as draught animals. This implies that women are more likely to face labour constraints in agricultural production than their male counterparts. Since livestock can also be used as collateral finance, especially in informal credit markets which are the main source of credit for most people in Malawi, the fact that women own less livestock means that they are at a disadvantage when it comes to obtaining the much-needed finance for purchasing useful agricultural implements and inputs⁶. The most recent statistics on the ownership of livestock and poultry are available in the Malawi national census of agriculture and livestock for the 2006/07 agricultural season. The data is collected on a household basis and can only be disaggregated by the gender of the household head rather than by the gender of the individuals. In keeping with figures in most developing countries, the proportion of livestock (and poultry) owned by female headed households (48%) is less compared to male headed households (61%). This applies for all major types of livestock, namely cattle, goats, pigs and chicken (National Statistical Office, 2010).

⁶ According to NSO (2017), the main six sources of loans in 2016/17 were village banks (38%), neighbours (15%), relatives (15%), money lenders/katapila (7%), Non-Governmental Organisations (6%) and Savings and Credit Cooperatives (4%). Commercial banks only made up of 3% of all loan sources.

Another important gender binding constraint is access to credit. Statistics show that both poor women and men have low access to credit in Malawi. For example, results from the fourth integrated household survey (IHS4) indicate that in only 13% of the surveyed households did at least one household member successfully obtain loan in the last 12 months prior to the survey (NSO, 2017). Disaggregated data by gender for 2016/17 indicate that more male-headed households had access to credit (14%) compared to households headed by females (10%)⁷. Amongst those that borrowed, the top three reasons for obtaining loans were to finance start-up businesses (53%), purchase agricultural inputs for food crops and cash crops (34%) and purchase non-farm inputs (6%). This implies that more women than men, missed the opportunity to start-up businesses or purchase inputs for agricultural production. The main reasons for low access to credit include high borrowing rates, lack of collateral, and prohibitive repayment schedules (Pitamber and Rugimbana, 2005). It is for these reasons that most of the people in Malawi fail to qualify for loans in the formal financial sector which make up of a small share of all loan sources as earlier noted.

Differences in individual characteristics such as age, experience and education levels also explain the gender gap. Of great importance is education and access to extension services. As discussed in Section 2, women in Malawi generally have lower levels of education compared to males. Agricultural extension services provide farmers with direct knowledge on farming techniques and technical advice on agriculture and may be in some cases more relevant to farmers than general education. However, research has also shown that women not only have less education and experience but are also less likely to have access to agricultural extension services (FAO, 2011; World Bank, 2015). Consistent with findings from other African countries, research has shown that extension agents in Malawi, the majority of whom were male, tended to favour relatively well-off male farmers who had more experience and large land holdings mostly dedicated to cash crops (Gilbert et al., 2002).

Women and female headed households also face labour constraints which prevent them from engaging in the cultivation of high value crops that are labour intensive. Two sources of farm labour are available to farmers, namely family labour and hired labour from the labour market. Unlike men who specialize in work outside the home, women are themselves highly involved in household chores such as domestic care which imply that they have less time for agricultural activities⁸. Households headed by females tend to have more dependents but fewer members due to the fact that most of the female heads are widowed, separated, or divorced (FAO, 2011; World Bank, 2015). Although men can assist women, they only do so after they have finished working on their plots. In order to cope with lack of labour, female-headed households tend to spend more time on the farms than male headed households (Takane, 2008). The gender productivity gap due to unequal access of farm labour is estimated at 45%- this is not just huge but the highest contributor to the gender gap in Malawi (World Bank, 2015).

Unlike most studies, Andersson Djurfeldt (2018) presents some trends over time in asset control and ownership in three rural areas of Malawi, focusing on physical assets deemed important to the livelihoods of rural households. Access to and control of assets are said to increase the bargaining power of individuals and also enhance their opportunities both within and outside the household. Furthermore, empirical research shows that increased women access and control of assets is positively associated with improvements in other development indicators (Quisumbing and Maluccio, 2003). In keeping with the notion of capitals found in the Sustainable Livelihoods Framework literature (see Chambers and Conway, 1992; Scoones, 1998; Scoones, 2009), assets are defined as productive resources that enable involvement in agricultural and non-agricultural activities. However, due to data

⁷ NSO (2017) reports the results by the gender of the household head. However, as noted by World Bank, FAO and IFAD (2009) during field research on access to credit in Malawi, this may potentially understate the number of women borrowers given that only single women had loans in their own right. The rest of the loans granted to households were recorded in the name of the household head.

⁸ Statistics based on the fourth integrated household survey conducted in 2016/17 show that more economically active women (51%) than men (39%) were reported to have spent some time doing domestic activities such as collecting water and firewood in the past 24 hours (NSO,2017).

constraints, the study focused on agricultural as opposed to non-agricultural assets. Examples of agricultural assets include land, agricultural labour, water and livestock while non-agricultural resources include forest resources and housing consumer durables, among others. These assets can be used for consumption, collateral for loans, safeguarding against shocks and income generation including rent, interest and profits (Deere and Doss, 2006; Deere, 2010).

Two specific gendered patterns are discussed in this literature with respect to land rights and land size holdings in Malawi. First, that land size holdings in Malawi are declining over time in all the regions studied, namely Ntchisi, Thiwi, Bwanje, and Shire Highlands. Although the land size holdings declined for both men and women, the declining trends tended to affect female farm managers more disproportionately. This is worrying and may lead to more precarious women rights to land over time as also suggested by Peters and Kambewa (2007). The second issue relates to land ownership more generally. Although most women have access to land in Malawi, this is not entirely the case for widows who are not resident in their indigenous community as is usually the case amongst patrilineal marriage cultures (Peters, 2010; Lastarria-Cornhiel et al. 2014).

The findings from Andersson Djurfeldt (2018) on agricultural labour also corroborate with what is found in other studies on Malawi. Other research has shown that women have less access to the two main sources of agricultural labour, family and livestock labour (see FAO, 2009; FAO, 2011; World Bank, 2015). The problem of gender gap in access to labour resources is notably persistent (over time) in Malawi, particularly the Shire Highlands. Another related problem is the quality of the family labour that households headed by females access. Using the percentage of male adult members of the total household members of working age (16–60) in a given household as a measure of the quality of the labour, Andersson Djurfeldt (2018) finds that male headed households had a share of about 50% of male adult labour compared to only about 30% or less for the female counterparts in all the four regions under study, namely Ntchisi, Thiwi Lifidzi, Bwanje Valley, and the Shire Highlands. Therefore, female headed households not only have less access to agricultural labour but also poor quality of the labour they received for their farming activities. It is often thought that female headed households may replace the male labour shortage from the market or from male relatives. Consequently, having fewer male members in a household does not necessarily imply labour shortages for female headed households although this is not a universal phenomenon as it may vary across regions.

There also exist gender differentials in water access and use of irrigation in Malawi (see Andersson Djurfeldt, 2018). Highlighting these inequalities is particularly relevant given that Malawi's agriculture is highly dependent on rainfall and this is linked to low productivity and high yield variability for most crops. Research has shown that irrigation does not only enhance fertilizer response but also increases crop yield and reduces yield variability. Consequently, access to water resources is critical for smallholder farmers' incomes and welfare, particularly for women who make up the majority of the labour force in agriculture. Nkhata et al. (2014) found that farmers who irrigated their crops in the Bwanje Valley (in central Malawi) had higher welfare and more food secure than the non-participants (those who do not irrigate their crops). Furthermore, irrigation enabled the production of a broader diversity of crops such as vegetables for own consumption by farm households thereby promoting their health status. More interestingly, the study found that female-headed households earned more agricultural income as a result of their participation in the irrigation scheme.

Hyder and Behrman (2014) presents empirical evidence on female economic activity in three rural locations in Malawi: Rumphu in the northern region, Mchinji in the central region and Balaka in the southern region. Using household panel data from the Malawi Longitudinal Study of Families and Health (MLSFH), the study examines the age-specific female labour market participation rates for five different labour market outcomes namely, agriculture related work, market and sales activities, cottage industry,

other economic activities and out of the labor market⁹. Furthermore, the study also analyses the determinants of female labour force participation in Malawi in order to shed light on the factors associated with female labour force participation.

Apart from being longitudinal thereby allowing one to observe some dynamic aspects of the female labour force participation, one interesting feature of the Hyder & Behrman (2014) study is that it incorporates some explanatory variables important in the context of Malawian culture such as ethnicity, religious affiliation and marital status (including both polygamous and monogamous marriages). As noted earlier, these factors explain the gendered patterns observed in terms of agricultural assets such as land within the context of matrilineal and patrilineal practices across Malawi's ethnic groups. Generally, the study finds that female labour force participation rates in Malawi are very high when compared with other less developed countries with a lot of concentration taking place in the agricultural and cottage sectors, in keeping with statistics on other sub-Saharan African countries, particularly Burundi, Madagascar, Mozambique and Tanzania (Hyder & Behrman, 2014)¹⁰. This corroborates with statistics earlier presented in Section 2 which generally show that women employment tends to occur in the low paying jobs outside formal employment. Cohort analysis shows the female labour force participation rates increase at a diminishing rate with respect to age. Women who live with children are more likely to participate in the labour market than those who do not probably as a result of some supply of family labour in agricultural production.

5. Women and challenges in output markets

5.1 The role of ADMARC in agricultural markets

Unlike the preceding section which specifically focused on production, this section explicitly discusses agricultural output markets in Malawi. In 1971, the Government established the Agricultural Development and Marketing Corporation (ADMARC) as a monopsonistic parastatal responsible for buying crops from smallholder farmers at guaranteed fixed price. ADMARC's Profits and export earnings from cash crops such as Tobacco, cotton and rice were used to cross-subsidise operations and prices for food crops, particularly maize (Fafchamps et al., 2006). However, from 1980s, Malawi adopted Structural Adjustments Programmes (SAPs) with technical and financial support from the World Bank and the International Monetary Fund (IMF). This occurred as world prices for tobacco deteriorated making it difficult for Government to continue providing subsidies. Consequently, Malawi embarked on structural reforms in the agricultural sector notably involving the removal of subsidies and state intervention in output markets. Under SAPs, the forces of demand and supply were allowed to determine the prices of agricultural produce in markets. While implementing SAPs, it was expected that through the removal of subsidies and state intervention, price distortions would be dealt away with resulting in increased market competition in terms of quality and quantity of agricultural output (Chirwa, 2005). However, this did not happen as anticipated. Instead, both the quantity and quality of agricultural produce deteriorated largely negatively affecting women and relegating them to subsistence farming.

Through the reforms, private trading of agricultural produce was allowed although producer prices remained controlled by ADMARC through the use of price controls, notably fixed price band was established with the Corporation acting as buyer of last resort (Badiane et al., 1997). Through its extensive network consisting of depots, unit markets and warehouses, ADMARC continues to be a dominant player in output markets in Malawi and receives bulk delivery of produce from private traders for distribution throughout the country (PwC, 2016). Therefore, ADMARC's operations continue to have

⁹ Market refers to salaried employment, marketing work including sales while cottage refers to production taking place in the home such as handicraft work (e.g. basket/mat weaving), alcohol production and carpentry. Out of the labour force consists of students who have never worked or currently not seeking employment.

¹⁰ In 2010, the agricultural share of economically active women was estimated at 94% compared to an average of 65% for the sub saharan Africa (see Food and Agriculture Organization of the United Nations,2017).

significant effects on agricultural markets. However, Edelman (2016) shows that the buying and selling prices set by ADMARC are either too cheap or too high for most of the agricultural marketing period. Furthermore, since ADMARC's budget is subject to Parliamentary approval of the National Budget which happens a few months after the onset of the harvest season, its activities are usually not aligned with the forces of demand and supply.

5.2 Structure of agricultural markets

In addition to the inefficiencies introduced by ADMARC interventions in agricultural markets, the structure of agricultural markets in Malawi requires that small holder farmers physically travel to markets thereby incurring high transport costs, covering the transportation of the travel of the traders to and from the markets, transportation of goods in addition to bagging, loading and offloading costs. These costs reduce the margins earned by farmers who also pay market fees. Since market fees are fixed and do not proportionally increase with the volumes traded, they act as a form of regressive tax particularly for the small to medium-size traders, most of whom are women (Fafchamps et al., 2006). Furthermore, informal agricultural markets suffer from lack of proper weighting equipment to objectively ascertain volumes of agricultural produce.

The need for many traders to personally travel to markets to buy or sell instead of placing orders over the phone or other electronic means can be dealt with through structured markets which are organized and formal places where farmers, traders, processors, millers, banks and others enter into organized, regulated trading and financial arrangements (East Africa Grain Council, 2013). Under structured trading, buyers and sellers do not physically meet but trade is facilitated through an exchange operated by an independent firm. Currently, the Government of Malawi is promoting structured markets as a solution to inefficiencies in the crop export market and this desire is reflected in MGDS III, Malawi's overarching development strategy for 2017-2022 (see Government of Malawi, 2017). While structured markets for export crops such as Tobacco and Tea are functioning and have been in place for a long time, only a small volume of crops traditionally grown by small holder farmers, namely maize, beans, cowpeas, groundnuts, sunflower and rice are traded on the structured trading platform. Structured commodity trading has great potential in Malawi and offers a lot of benefits in addition to the facilitation of trades. Some of the additional benefits of structured trading to farmers include availability of up-to-date information on prices; better price premiums through aggregation of produce by many farmers; access to collateral finance through warehouse receipt systems which is usually not possible under normal circumstances; enhancement of the quality of produce through grading standards; reduction of post-harvest losses; and smoothing of surpluses that occur during the harvest season when everyone harvests (Gondwe and Baulch, 2017; East Africa Grain Council, 2013).

5.3 Infrastructure challenges

Women increasingly supply a significant amount of high-value traditional produce to local and international markets, but when compared to men they are disadvantaged in terms of market infrastructure, mobility, access to training, access to market information, and productive resources (World Bank, FAO and IFAD, 2009). Malawi has poor road networks and face high costs of vehicle operation costs which poses a challenge in transporting the produce from farms to the markets. In the absence of other means of quick means of transport farmers are forced to carry their produce to local markets which has the effect of reducing both quantity and quality in the case of perishable goods. Evidence suggests that women tend to lose income and control as products move from the farms to the markets (Gurung, 2006). According to World Bank, FAO and IFAD (2009), remoteness limits marketing opportunities, increases uncertainty and reduces farmgate prices and increases costs of farm input costs. Therefore, in addition to the development of better road infrastructure, there is need to improve post-harvest facilities, particularly storage facilities (to manage surplus and limit post-harvest losses) and processing facilities to enhance value thereby improving trader's margins and incomes for

smallholder farmers. Although ADMARC and Government own and operate warehouses, there is need for the storage facilities in the country to be extended and rehabilitated which could further facilitate trade of agricultural produce and promote Malawi's warehouse receipts system currently being offered by Malawi's two commodity exchanges, namely the Agricultural Commodity Exchange for Africa (ACE) and Auction Holdings Limited Commodities Exchange (AHCX) in conjunction with commercial banks and credit bureaus (Edelman et al., 2014).

6. Malawi's development policy and impacts on women

6.1 Gender and development policy in Malawi

Malawi's development policy agenda is currently being implemented in the form of five-year strategies summarized in the Malawi Growth and Development Strategy (MGDS). The first two programmes, namely MGDS I (2006-2011) and MGDS II (2011-2016), were focused on poverty reduction with agriculture and food security as the most important key priority area¹¹. Within this priority area, Government's focus was increasing on agricultural productivity, agro-processing and diversification. The third programme (MGDS III) has recently been formulated, covering the period from 2017 to 2022. Although MGDS III focuses on building resilience, some of the elements and lessons learnt from MGDS I and II are being rolled over by the government. Another main departure from its predecessors is that MGDS III has identified flagship projects which will be implemented together with five key priority areas, namely Agriculture; Water Development and Climate Change Management; Education and Skills Development; Transport and ICT infrastructure; Energy, Industry and Tourism Development and Health and Population. Malawi's national development strategies are usually aligned with the international development agenda such as structural adjustment policies (1981-1998), millennium development goals (2000-2015) and sustainable development goals (2016-2030). This is in part due to the fact that Malawi develops its development agenda in consultation with key international stakeholders such as the International Monetary Fund (IMF) and the World Bank who also provide both technical and financial support to the government.

The successive Malawian governments have, at least in theory, focused on addressing gender imbalances in the national development policy agenda. However, the prominence of gender issues has differed across the policies. For example, unlike MGDS I, MGDS II specifically included gender and capacity development as an additional theme (Government of Malawi, 2007, 2012). Under MGDS I, gender only appeared as a sub-theme under social development. Explicitly, MGDS II focused on employment creation with a view to poverty reduction, incorporating gender specific issues in all labour initiatives and interventions, reducing practices of discrimination in the labour market and provision of improved statistics on the labour market (Government of Malawi, 2012).

The Malawi government also implemented the Economic Recovery Plan (ERP) in 2010 as a result of a sharp decline in the economy's growth rate which required a set of new policies to prevent a further deterioration of living conditions. Specifically, ERP was needed to prevent a crisis and reduce poverty and malnutrition rates. ERP consisted of a set of immediate (within 3 months), short term (within 1 year) and medium term (2-5 years) policy reforms aimed at poverty eradication and cushioning the vulnerable from the impacts of the said reforms (Government of Malawi, 2015; (Randall, 2013). Immediate plans consisted of the devaluation of the Malawi Kwacha, fiscal and monetary policy reforms and adjustment of fuel prices. The short term plans included scaling up a number of social support programmes such as the public works programme (PWP), the farm-input subsidy programme (FISP), the school meals programme and continuation of the social cash transfer (SCT) programme, among others. The medium term programmes (2-5 years) identified five key areas to lead growth and achieve quick results. The sectors include energy, tourism, mining, agriculture and transport infrastructure and Information

¹¹ The MGDSs are a means of implementing the country's long term agenda known as the Malawi Vision 2020 launched in 1998. Prior to MGDS I was the Malawi Poverty Reduction Strategy which ran from 2002 to 2005.

Communication Technology (ICT). The ERP is also supplemented by the National Export Strategy (NES) developed in 2012, covering the period from 2013 to 2018. NES is a roadmap for the development of Malawi's productive base to achieve export competitiveness and economic empowerment of the vulnerable groups such as the poor, farmers, youth and women (Randall, 2013).

The MDG goal 2 to which Malawi was a signatory, aimed to promote gender equality and empowerment of women. Several indicators and targets were set in the areas of primary education, literacy rates, and share of women employed in the nonagricultural sector and women representation in the national parliament¹². However, Malawi only met one of the 5 indicators under the gender theme, namely gender parity in primary education. The share of women in wage employment in non-agriculture in 2015 was estimated at about 30% against a target of 50%. Nevertheless, progress was made when compared to the baseline level of 13% observed in the year 2000. Government efforts in promoting gender equality and women empowerment were affected by a number of challenges such as early marriages amongst women, sociocultural barriers against women and limited resources in the education sector (Government of Malawi, 2015). The country continues to pursue the goal of achieving gender equality and empowering all women and girls under Sustainable Development Goals (SDG) goal 5. Some of the strategies are also reflected in MGDS III whose formulation process was completed in August 2017.

The preceding discussion provides the context within which the gender issues are placed in the national development plan. In addition to the above, the government has specific policies focused on dealing with agriculture and gender issues. Malawi's main investment plan for agriculture is summarized in the Agricultural Sector Wide Approach (ASWAp), a medium-term policy framework covering the period 2011-2015¹³. It is focused on increasing productivity, food security, nutrition and agricultural incomes of the rural poor. ASWAp is aligned with MGDS as well as the Comprehensive Africa- Agricultural Development Programme (CAADP) of the African Union (AU) which Malawi signed in 2010. Under CAADP, countries agreed to invest at least 10% of their respective national budget into agriculture in order to realise an annual GDP growth of about 60% per annum. Malawi also has its own policy on agriculture called the National Agricultural Policy (NAP).

ASWAp is linked with two major agriculture-sector development programmes, namely the Farm Input Subsidy Programme (FISP) and the Green Belt Initiative (GBI). These jointly account to about 70% of the total ASWAp budget. Introduced in the 2005/06 agricultural season, FISP (combined with good rains) significantly led to an improvement in the production of maize in the country especially over the period between 2005 and 2009. The green belt initiative aims to increase productivity and food security by maximizing the available water resources for irrigation. However, the initiative is silent on women empowerment and the expected role that they are supposed to play.

The implementation and management structure of ASWAp is coordinated under several ministries. The ministry of agriculture, irrigation and water development (MoAIWD) is the lead ministry and it is where the national agriculture policy (2016) and the Agricultural Extension Policy (2000) sit. However, the ministry of gender is not directly involved in the ASWAp management structure. Other important sectoral and strategic policies within the ASWAp policy framework include the National Nutrition Policy and Strategic Plan (2007) and the National Youth Policy (2013). The ministry also recently developed the National Irrigation Policy (2016) where the GBI is articulated with a focus on irrigation infrastructure development and rehabilitation. The ministry of industry and trade is responsible for ensuring that there

¹² It is important to state that MDG 3 only sought to improve the share of women in the non-agricultural sector. This is a different agenda from improving the opportunities of women within agriculture where the majority of them currently participate.

¹³ According to the National Agricultural Policy document, ASWAp (just like was the case with MGDS II) would be reviewed to ensure coherence with the policy framework stipulated in NAP. Following the review, ASWAp was extended and is now called the National Agriculture Investment Plan (NAIP), expected to cover the period from 2018 to 2022. As the name suggests, NAIP is aimed at providing a guide to investors to direct resources towards the key priority areas proposed in the plan.

is a market for the country's production. The ministry developed the National Export Strategy in 2012 with the aim of realising the country's export potential. The Ministry of Lands and Physical Planning ensures that land issues are properly managed as the Ministry of Agriculture intensifies agricultural activities. This ministry owns the Malawi national land policy (2002) and the National Land Use Planning and Management Policy (2005). Finally, the Ministry of Natural Resources, Energy, and Environment ensures sustainable use of the country's agricultural resources. The ministry's activities in this regard are guided by the National Climate Change Policy (2012).

All gender related programmes in the country are coordinated by the Ministry of Gender, Children, Disability and Social Welfare. The ministry developed the national gender policy (2000, 2015) and is also responsible for the execution of the social cash transfer programme, one of Malawi's two large safety net programmes¹⁴. At a national level, the Malawi Constitution recognises and promotes gender equality as one of the ways of promoting the welfare and development of the people of Malawi. It seeks to guarantee rights to every citizen and is also specific on women's rights. The Constitution acknowledges that discrimination against women is a problem that needs to be eradicated from society in order to achieve economic growth. This, therefore, implies women having equal access to resources, time and opportunities that can enable them to compete on equal playing field with men. The emphasis of the Malawi Constitution on gender equality is on improving the lives of girls and women.

From the foregoing review of Malawi's development policy, it seems that most of the socio-economic challenges still being experienced in the country (including gender imbalances) are not necessarily due to lack of relevant policy instruments but rather weak enforcement efforts and inconsistent implementation of policies. In some cases, the policies have been ineffective as a result of shocks such as over-reliance on rainfall for agricultural production and price volatilities of agricultural inputs and outputs. Consequently, Malawi remains largely static in terms of economic growth, urbanisation and structural transformation. Despite improvements in non-monetary dimensions of welfare, monetary poverty rates remain high and stagnant, especially in rural areas. The question of whether development policy in Malawi has benefited women in agriculture is addressed next.

6.2 Have the gender policies benefited women in Malawi?

This section seeks to document the impact of policies, programs and strategies targeting the empowerment of women in agriculture. Recently, Malawi has signed and ratified a number of international and regional treaties and conventions as a commitment to promoting human rights and gender equity (FAO, 2011). We begin with a brief review of selected key policies and programmes with a focus on agriculture and specific to the gender gaps identified in Section 4, namely land, employment and earnings.

The constitution of the Republic of Malawi was adopted in 1994 and has three sections dealing with gender issues, namely promoting gender equality for women (Chapter 3, section 13), prohibiting any kind of discrimination based on gender (Chapter 4, section 20) and promoting women's rights (Chapter 4, section 24). The constitution provides the main legal framework for addressing gender inequalities and adopting gender related reforms in Malawi.

Furthermore, Malawi adopted the National Land Policy in 2002 which recommends tenure reforms to guarantee security and equitable access to land for all Malawians without gender based discrimination. The policy sought to review inheritance laws to allow the remaining spouse, children and especially orphans to inherit the deceased's estate even in the absence of a will. Moreover, one of the factors explaining the huge disparities in terms of access to land between men and women is largely explained by the discrimination women face with respect to customary inheritance rights. Therefore, the proposed

¹⁴ The other programme is the Malawi Social Action Fund-Public Works Programme (MASAF-PWP).

reviews and reforms are particularly relevant considering that nearly 80% of land used by smallholder agricultural farmers in Malawi was categorized as customary according to the National Census of Agriculture and Livestock (NACAL) 2006/07. The proportion of land that is customary is particularly higher in the Northern region where it was estimated to be 86% compared to 76% for the central and southern regions. The majority of land was inherited, and operated by men (National Statistical Office, 2010). Access to land by gender is clearly disproportionate considering that 52% of the population in Malawi is female. In 2016, the Malawi parliament passed the Land bill albeit amid controversy, taking into account the proposed reforms which had been debated for nearly 14 years¹⁵. Although the national land policy seeks to promote gender equality, there is need to adopt best practices on land governance given that there is always a disjuncture between how a law is conceptualised and how it is actually implemented. The current matrilineal practice does not include male children as heirs to the customary land. In patrilineal-patrilocal areas, land is transferred through males which has the effect of lessening women rights (Peters, 2010). Once properly implemented and governed, the recent land reform laws will enhance equality given that it states that both male and female children are heirs of the land.

The government of Malawi identifies land as one of the critical resources for agricultural development and such that in 2004 it embarked on the land reform policy with the aim of improving production and incomes for the rural population which makes up 85% of the population (World Bank, 2012). An evaluation by the World Bank (2012) rated the land reform policy as satisfactory and exceeding expectation given that 15,142 households were successfully relocated against a target of 15,000¹⁶. This implies that land acquisition improved over the years and there are currently joint efforts by both Government and the World Bank to scale-up the pilot phase of the project so that it can cover the whole country. Although beneficiaries were provided with startup grants, the project largely benefited men considering that only 24% of the beneficiary households were headed by females. The land had to be acquired on a commercial basis (albeit with grant funding) between buyers voluntarily seeking to resettle and willing sellers in the settlement areas. In addition to less participation by women possibly due to low incomes, female headed households faced a lot of problems such as opening up new gardens and constructing shelters in the new locations. World Bank (2012) acknowledges this problem and states that future projects should consider providing additional resources to disadvantaged beneficiaries such as households headed by female, orphans and the elderly.

Malawi is also a member of the International Labour Organization (ILO) and has signed several ILO conventions which aim to promote the fundamental principles and labour rights also enshrined in the country's constitution (1994) and employment act (2000), among others. The constitution of Malawi upholds gender equality and prohibits gender-based discrimination with respect to employment, pay and engagement in economic activities. The country's employment act covers fundamental principles such as prohibition of forced labour, promoting equal remuneration for work of equal value, prohibiting gender based discrimination and provision of remedies for infringement of fundamental rights.

On the basis of the foregoing, what evidence is available to demonstrate whether the policies and legislation have reduced gender inequality in agriculture? Attributing the improvement in gender equality to gender policies is both a difficult and complex task. Over the past few years, gender indicators improved alongside an increase in the legislation of gender related policies and programmes. The

¹⁵ Strictly speaking, the Land Bill refers to eleven bills, namely the Land Bill; the Registered Land (Amendment) Bill; the Physical Planning Bill; the Forest (Amendment) Bill; the Companies (Amendment) (No.2) Bill; the Mines and Minerals (Amendment) Bill; the Land Survey Bill; the Lands Acquisition (Amendment) Bill; the Local Government (Amendment) Bill; the Malawi Housing Corporation (Amendment) Bill; and the Customary Land Bill. Parliament initially passed four of the bills mid July 2016: Land Bill, Physical Planning Bill, Land Survey Bill and Customary Land Bill before an additional three amendment bills into acts at the end of November 2016, namely the Lands Acquisition (Amendment) act, the Malawi Housing Corporation (Amendment) act and the Public Roads (Amendment) act.

¹⁶ While acknowledging the positive benefits of the reform, Chinsinga (2008) notes that some of the households migrated back to their original villages due to lack of functioning services such as health, water, transport and markets in the new areas.

Gender Inequality Index (GII) for Malawi shows that there has been some reduction in gender inequality in Malawi. The index score decreased from 0.654 in 2005 to 0.599 in 2010 before declining further to 0.591 in 2013. GII reflects gender-based inequalities in three dimensions – reproductive health (measured by maternal mortality and adolescent birth rates), empowerment (measured by the share of parliamentary seats held by women and attainment in secondary and higher education by each gender), and economic activity, measured by the labour market participation rate for women and men (Human Development Report, 2016).

Gender indicators have continued to increase recently. Estimates based on the Demographic Health Surveys (DHSs) indicate a steady decline in pregnancy-related mortality ratio amongst women aged 15-49 in Malawi between 2000 and 2015, from 987 deaths per 100,000 live births in 2000 DHS to 675 deaths per 100,000 live births in the 2010 MDHS survey, before reaching 497 deaths per 100,000 live births in the 2015 DHS survey. The percentage of women aged between 15 and 49 years who had completed secondary education was estimated at 6.5% in 2015, an increase from 5.6% reported in 2010. The participation of women in the labour market have continued to increase over the years. In 2010, about 56% of women were reported to be in employment (defined as having done work in the past seven days) and this proportion had increased to 63% in 2015 (National Statistical Office, 2011, 2017). That said, the trends may in part be explained by improvements in other factors other than education and health which have increased economic opportunities for women in general and also essential for the empowerment of women. Nevertheless, Malawi now has an overarching employment and labour policy thereby providing a framework for the promotion of productive and decent employment, as well as enterprise development. Furthermore, labour issues are also now clearly articulated in the country's development policy frameworks such as the Malawi Growth and Development Strategy and the national agricultural policy (FAO, 2011).

As earlier discussed in the paper, Malawi's development agenda has in the recent years been focused on poverty reduction. The Farm Input Subsidy Programme (FISP) is one of the most significant policy interventions used by government in the recent years in Malawi. The programme, which has the primary aim of increasing agricultural production and reducing poverty, provides heavily subsidised fertiliser and other farm inputs covering between 1.5 and 2 million poor smallholders in 2014/15 agricultural year at a cost of around 3% or more of annual budget. FISP has consistently accounted for more than half of total agricultural public expenditures in Malawi (Pauw et al., 2014; Dabalen et al., 2017) and is being scaled back to improve the country's fiscal position and avoid a situation where FISP crowds out other public investments in strengthening markets and improvements in irrigation. Research has shown that while FISP has led to improvements in agricultural production and achieved some poverty reduction in the presence of good weather, the programme has suffered from poor targeting. According to Dabalen et al. (2017), in 2013 nearly half of households in the top three consumption quintiles received FISP subsidies compared to only about one-third from the bottom two quintiles. Compared to men, women have less access to subsidised farm inputs in the FISP programme. This is despite the fact that in the recent years the targeting guidelines have encouraged communities to provide special consideration to vulnerable groups such as households headed by children, females and orphans as well as households affected by HIV and AIDS (Government of Malawi, 2008). The identification and selection of beneficiaries is done by village heads and members of village development committees.

Chirwa et al. (2011) find that male-headed households are more likely to receive FISP coupons than female-headed households and where female headed households receive subsidies, they also tend to receive less than the male counterparts. For example, in the 2008/09 agricultural year, male headed households on average received about 1.55 maize fertiliser coupons compared to 1.45 coupons for households headed by females (Chirwa et al., 2011). More generally, female farmers are disadvantaged in many other respects in terms of access to resources. For example, female farmers on average have smaller plot sizes, with less access to commercial fertilisers and belong to households which are less likely to grow cash crops such as tobacco.

Over the past years since the 1980s, Malawi's agriculture has been described as being under a low maize productivity trap coupled with continued cases of food shortages, vulnerability and high incidences of poverty (see Chirwa and Dorward, 2013). Furthermore, population has increased rapidly leading to declining farm sizes over time forcing small holder farmers to cater for their livelihoods on much small areas. One of the strategies being implemented to improve livelihoods and productivity is rapid intensification of farming systems. Agricultural intensification is said to lead to an increase in crop yields and this usually takes place faster with the introduction of technology and irrigation. Intensification is also associated with diversification (Binswanger and Savastano, 2016). Mvula and Mulwafu (2018) discuss some gendered patterns of crop intensification and diversification in rural Malawi. Disaggregating results by the gender of the farm manager, the study finds that while land holdings had declined for some of the households over time, there existed no significant differences between male and female headed households with respect to crop intensification and diversification. Nevertheless, farmers who intensified their crop production (by cultivating more than once a year) experienced an increase in the levels of incomes in addition to a general improvement in their livelihoods.

7. Conclusions and recommendations

The study sought to document the gender gap in Malawi's agriculture from the existing body of literature with a specific focus on smallholder agriculture. The literature review has provided a detailed description of the key challenges faced by women in Malawi's existing agricultural systems, thereby providing a context within which to understand the framework of policies, programmes and strategies required to address the gender imbalances. Before drawing lessons for policy, a number of observations can be made from the review. Firstly, that the gender inequalities are not good for Malawi's agriculture and economic welfare considering the valuable contribution women make in agriculture. Given that women are found to be as efficient and productive as men according to research, eliminating these gender gaps in Malawi can not only lead to improved productivity but also improve welfare and reduce poverty in Malawi. Secondly, although some gains have been made over time, the gender gaps in Malawi remain persistent over time and exist in all the three main sectors of Malawi's agriculture, namely the crop, fisheries and forestry sectors. Gender gaps in other sectors such as education also tend to reinforce the plight of women in Malawi. Thirdly, although statistics suggest that Malawi's female economic activity is high as compared to other developing countries, most of the women in Malawi are more likely to be engaged in the less paying activities of the informal sector. Finally, women face challenges both during the production and marketing of their agricultural commodities. Policy interventions should, therefore, focus on addressing challenges related to both production and access to markets.

The literature review has also revealed a feature quite unique to Malawi with respect to land rights and land ownership as few other developing countries show a relatively large proportion of women (32%) having access to and control of land, the most important resource for agricultural households. Perhaps these findings relate to the matrilineal practices of the Malawian population, a finding not so common in most developing countries of Africa. Only four other countries are recorded to have a high percentage of landholders who are women are Cape Verde (51%), Botswana (35%) and Comoros (33%). On the other spectrum lie Ethiopia (19%), Gambia (8%), Madagascar (15%), Mali (3%), Tanzania (27%), Mozambique (23%), Uganda (16%), Zambia (15%) and Senegal (9%) with significantly relatively less percentage of women who are landholders (see FAO, 2016; Lastarria-Cornhiel et al., 2014).

Most of the gender gaps observed are common to women regardless of economic sector and geography (across regions or rural-urban areas). Specifically, women tend to be affected in the same way with respect to agricultural assets, with the exception of land which tends to vary by region depending on land practices of the various ethnic groups.

One final key message from the literature review is that female farmers are equally efficient when compared to male farmers. The only reason women are less productive is because they have

disadvantaged access and control to important agricultural resources (see Food and Agriculture Organization of the United Nations, 2017). Consequently, coordinated policy interventions and action from the government, civil society, private sector and the farmers themselves can be used to reduce the gender inequalities and improve their productive potential in agriculture. This leads us to a short discussion on policy recommendations arising from the study. Although the factors explaining the gender gaps are many, not all of them are equally important within the context of Malawi. For example, decomposition analysis of the gender gaps in Malawi show that land is not necessarily the most important single determinant of the gender gap in agricultural productivity in Malawi is access to male labour (45%) and it is by far an outlier compared to other factors such as cultivation of high-value crops (28%), agricultural implements (18%), use of inorganic fertiliser (5%), wealth index (3%) and pesticide use (1%). Tackling the gender inequalities through policies, programmes and strategies, whether in isolation or in conjunction, can help promote gender-neutral markets in Malawi.

The first policy recommendation relates to the enforcement of land reform law so as to remove discrimination against women and guarantee equality between men and women. As stated earlier, most of the observed gender inequalities in Malawi are as a result of weak implementation or enforcement efforts as opposed to lack of relevant policy instruments. Moreover, as earlier stated, only seven (7) out of eleven (11) land related bills were passed at parliament. Furthermore, although parliament recently passed the Land Bill, there are still a lot of controversial issues that need review, two of which are highlighted next. Firstly, the government has introduced transaction fees relating to the creation and subsequent registration of customary estates which some have argued would disadvantage the poor, more particularly the women whom the government specifically wants to empower. Furthermore, owners of customary estates will now be liable to pay tax on capital gains from the land in hold¹⁷. The second controversy relates to the fact that, going forward, Government will no longer grant freehold land. While this in itself is not a problem, the main dispute is that the law does not apply retrospectively implying that current freehold holders, mostly estates owners with vast pieces of land, will not lose their titles. Some have argued the abolishment of new freehold titles while at the same time allowing others to hold land on freehold basis is discriminatory and believe government should consult further.

The second recommendation arises from the problem of women's limited access to credit which, as shown in the literature, negatively affects their ability to purchase productive resources and farm inputs. Specifically, lack of collateral and punitive interest rates coupled with low access to formal lending institutions prevent women from engaging in income generating activities in both agriculture and outside agriculture. Therefore, deliberate government efforts aimed at increasing access to banks in rural and unbanked areas has the potential to foster access to credit and promote economic development for both men and women especially following the passing of the land and customary bills which now allow holders of customary land to register their land and use it as security for obtaining bank loans.

The third recommendation arising from the paper relates to expansion of extension services and training. Studies across developing countries including Malawi have shown that extension agents (mostly dominated by men) tend to reach fewer female farmers than their male counterparts. Therefore, by promoting agricultural extension services that are gender neutral and also include more female agents may help reach more women, who have been found to be as productive and efficient as male farmers when agricultural inputs such as land, fertiliser and credit are taken into account. This argument can be extended to women and girl education in general. As earlier noted, significantly more women (about 28%) than men (about 14%) in Malawi were reported to have never attended education which has implications on the high levels of illiteracy and innumeracy observed amongst women. Research on the labour market has shown that improving the education (human capital) of women does not only improve their range of choices with respect to economic activities but also makes them better farmers and significantly improves their incomes. Furthermore, apart from increasing their chances of getting

¹⁷ These problems caused the opposition members of parliament (MPs) to walk out of parliamentary deliberations in protest resulting in the bills being approved in their absence by the government MPs who formed the majority.

better paying employment opportunities, education and training are expected to reduce the amount of time women spend in mostly unpaid household activities such as collecting firewood.

Finally, there is need to deal with the problem of insufficient access to information (including business opportunities) and underrepresentation in networks such as women's business associations and agricultural cooperatives, both regionally and locally. The rising prevalence of mobile phone usage in Malawi can be a useful instrument for disseminating price information to segments of farmers would otherwise be excluded from the agricultural market place. For example, the Agricultural Commodity Exchange for Africa (ACE) is already taking effectively advantage of this expanding technology to disseminate price information to farmers located in rural areas who deposit their produce and trade through the ACE grain structured market. Through this technology, ACE is able to link sellers and buyers without the two having to physically meet at the commodity exchange. This is particularly relevant given that Government seeks to create new commodity markets for non-traditional agricultural commodities such as oilseeds, livestock, sugarcane, animal feed and fisheries markets as outlined in MGDS III, Malawi's five-year national development agenda for the period from 2017 to 2022.

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