

**The Invisibilisation of Female Farmers from
Agricultural Policies and Interventions: The case
of the Malawi Farm Inputs Subsidy Programme
(FISP)**

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Acronyms

ADD – Agricultural Development Division

ADMARC – Agricultural Development and Marketing Corporation

AIDS – Acquired Immunodeficiency Syndrome

ASWAp – Agriculture Sector Wide Approach

AU – African Union

CISANET – Civil Society in Agriculture Network

DFID – Department for International Development

EPA – Extension Planning Area

FANRPAN – Food, Agriculture and Natural Resources Policy Analysis Network

FAO – Food and Agriculture Organisation

FHH – FHHs

FISP – Farm Inputs Subsidy Programme

GAD – Gender and Development

GOM – Government of Malawi

HIV – Human Immunodeficiency Virus

ICRISAT – International Crop research Institute for the Semi-Arid Tropics

IFPRI – International Food Policy Research Institute

IGA – Income Generating Activity

MEGS – Malawi Economic Growth Strategy

MGDS – Malawi Growth and Development strategy

MHH – MHHs

MPRSP – Malawi Poverty Reduction Strategy Paper

NASFAM – National Smallholder Farmers' Association of Malawi

NGO – Non Governmental Organisation

OPV – Open Pollinated Variety

SOFA – The State of Food and Agriculture

SWAP – Sector Wide Approach

USAID – United States Agency for International Aid

WFP – World Food Programme

WID – Women in Development

Abstract:

Female farmers in Malawi and many other African countries remain subordinate to and more food insecure than their male counterparts. It is paradoxical that this status quo has persisted in spite of two significant factors: their high and increasing involvement in food and agricultural production, and policy commitments at both national and international levels to address gender inequalities in the agricultural sector. Using the case study of the Malawi Farm Input Subsidy Programme (FISP), this research critically engages with these issues to explain why agricultural policies have not been successful in addressing gender inequalities in the sector. It argues that in spite of feminisation of agriculture, development policies in Malawi still largely consider men as 'the farmers' and therefore neglect female farmers and the complexity of gender relations. Consequently, the government's response to food insecurity is compromised by a cyclical process embedded in the policy making cycle that facilitates, re-enforces and perpetuates the subordination of female farmers – the Female Subordination Cycle.

This research is situated at the intersection of food security, agricultural policy and gender and development literature – fields that are inter-connected but inadequately speak to each other. It therefore brings to the fore connections across these fields that are critical for understanding and consequently addressing the dual and inter-connected challenges of female subordination and food insecurity. Through a detailed examination of how the food security status of FHHs (both de jure and de facto) has been affected by the FISP, it contributes to a de-invisibilisation of female farmers from agricultural policies and interventions.

The research takes a pragmatic approach and employs mixed research methods. It is grounded in extensive fieldwork involving a large number of participants (over 540). A gender-aware approach to selection of participants is undertaken in that although female farmers are the main and primary research participants, male farmers are also consulted through focus group discussions.

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Chapter 1: Introduction

1.1 Background and Rationale

Food insecurity remains one of the major challenges facing most sub-Saharan African countries. *The State of Food Insecurity in the World 2013*, published by the Food and Agriculture Organisation (FAO) notes that although the developing regions as a whole have made significant progress towards achieving hunger targets of the Millennium Development Goals (MGDs), Sub-Saharan Africa remains the region with the highest prevalence of undernourishment and food insecurity. Furthermore, and as is widely understood, women remain more food insecure than men (Lauterbach and Matenje, 2013; Dodson *et al.*, 2012; Mehra and Rojas, 2008; Ajani, 2008). This is in spite of the fact that they contribute significantly to agricultural and food production in the region (Gawaya, 2008; Kes and Swaminathini, 2006; Mehra and Rojas, 2008; FAO, 2011; Actionaid, 2010; SOFA team and Doss, 2011). Moreover, this status remains although it is now being acknowledged that global agriculture and food production are underperforming because women, who are the main food producers, face many gender-specific challenges that affect their productivity (see FAO, 2011). Although this connection between gender and food security is acknowledged, academic and policy debates in these fields inadequately speak to each other. Specifically, food security and agricultural policy research and debates do not sufficiently include gender issues, being more focussed on such issues as improving agricultural productivity, efficiency of production and food prices (see Asenso-Okyere and Jemaneh, 2012). In the pursuit of these objectives, gender issues do not feature sufficiently as can be evidenced for example, in the limited availability of gender-sensitive technologies or innovations for improving agricultural production and productivity (Kingiri, 2010).

This research is therefore situated at the intersection of food security, agricultural policy and gender and development literature; and aims at bringing to the fore connections across these fields that are critical for understanding and consequently addressing the dual and inter-connected challenges of female subordination and food insecurity. Specifically, it explores why agricultural policies have not been successful in addressing gender inequalities in the sector. It questions why these inequalities have persisted despite governments' and international agencies' stated commitment to addressing them.

In order to engage with these issues, the research uses the case study of the Malawi Farm Input Subsidy Programme (FISP). This is because the programme is hailed as an example of a successful food security intervention for sub-Saharan Africa. The research critically explores how and why the food security status of female farmers, particularly those from de jure and de facto FHHs (FHHs), has been affected by this intervention.

The analysis highlights the nature and extent of the inter-dependence between addressing gender inequality and improving food security. It argues that addressing food insecurity will require more than just understanding the challenges facing female farmers. It will require a deep understanding and critical engagement with the nexus between gender, agricultural policies, and food security. Failure to engage at this level only leads to the formulation of food security interventions that are either ill-designed or inadequate for the purpose. On this basis, it asserts that the Malawi government's response to food insecurity has been compromised by a cyclical process embedded in the policy making cycle that facilitates, re-enforces and perpetuates the subordination of female farmers instead of addressing it.

Food insecurity in Malawi remains chronic, arising from such factors as low agricultural productivity, limited usage of required farm inputs and technology, and limited availability of fertile arable land (World Food Programme, 2010). In addition, many Malawians also suffer transitory food insecurity where they experience food shortage during some periods in the year (Harrigan, 2008). The World Food Programme reports that over half a million Malawians are chronically food insecure and that 65 percent of rural households run out of food each year (WFP, 2012: i). The food security situation in Malawi has been worsened in recent years due to recurrent weather shocks. In response to widespread food insecurity experienced in 2004 following a major drought, the Malawi government introduced a large scale farm input subsidy programme in 2005/6, aimed at increasing food production in the country. Noteworthy, this comes at a time when, internationally, the role of subsidies in stimulating growth and addressing food security and poverty alleviation objectives is re-emerging in agricultural policy and academic debates (Minde *et al.*, 2008). A recent book by Chirwa and Dorward (2013), '*Agricultural Input Subsidies: The Recent Malawi Experience*' demonstrates this renewed interest in the subject and its topicality. However, as will be discussed in more detail below, this publication is limited in its analysis of gender issues in spite of its extensive discussions of farm input subsidies in general and the Malawi FISP in particular.

Debates on the role of farm input subsidies in addressing food insecurity have intensified particularly following the global food crisis of 2008. Renowned economist, Jeffrey Sachs, one of the biggest proponents of farm input subsidies, has repeatedly argued that input subsidies can contribute to a green revolution to end hunger in Africa (Sachs, 2008; Denning and Sachs, 2007). This opinion is also shared by the Alliance for a Green Revolution in Africa (AGRA), who have called on governments to boost fertiliser use in Africa, with subsidies if necessary (Minot and Benson, 2009). They argue that input subsidies have the potential to deliver income benefits to the rural poor through either increased production of cash crops, or indirectly through increased production of food crops that generate marketable surpluses. Similarly, former US President, Bill Clinton, has since the global food crisis questioned the neo-liberal stance against farm input subsidies and advocated for their resumption in developing countries. He puts the blame for the global food crisis on ‘...decades of policy making by the World Bank, the International Monetary Fund and others, encouraged by the U.S., that pressured Africans in particular into dropping government subsidies for fertilizer, improved seed and other farm inputs as a requirement to get aid’ (Associated Press, 23 October 2008).

The influence of this school of thought on agricultural policies, particularly in Africa, is evident. In 2008, African Union heads of state declared that they would ‘...intensify agricultural production and productivity through the use of targeted input subsidies, particularly fertiliser and improved seeds’ as one way of mitigating the impact of the global food crisis (Assembly/AU/ Decl. 2 (XI) Page 2). This declaration followed a resolution made by African Union (AU) Ministers of Agriculture at the Africa Fertiliser Summit in Abuja in 2006 that AU member states would grant targeted subsidies for fertiliser to farmers, with special attention to poor smallholder farmers.

Whilst the arguments that farm input subsidies have the potential to deliver food security benefits to the poor may hold, it should be noted that this impact is neither certain nor automatic. As Wiggins and Brooks (2010) argue, there is evidence that subsidies intended to benefit specified groups of farmers or specified crops, may be less effective due to leakages i.e. diversion to other groups instead of the target group. Moreover, they may benefit larger or less poor farmers, who can afford unsubsidised inputs more easily than the poorest farmers (Chirwa and Dorward, 2013). It is important to question the effectiveness and efficiency of farm input subsidies in addressing the food insecurity of the poor because in many cases, the provision of farm input subsidies happens at very high direct and opportunity costs. In Malawi, Dorward and

Chirwa (2011: 8) note that, at their peak in 2008/09, '(farm input) subsidy costs accounted for 80 percent of the public budget to agriculture and 16 percent of the total national budget'. Similarly, Wiggins and Brooks (2010) cite India and Sri Lanka as examples of countries where input subsidies have taken up over 15 percent of the total national budget. Such expenditure may diminish resources available for other priorities within the sector or for other sectors such as health and education, which may also perpetuate food insecurity.

Whilst it is valuable to question the effectiveness of farm input subsidies in addressing the needs of the poor, the tendency in food security debates to focus on the poor in general, and not critically engage with who the poor really are, is of particular concern. As highlighted above, evidence from Malawi and many other developing countries suggests that within the group of the poor, women and FHHs are more food insecure and vulnerable. Therefore, where concerns are raised about the effectiveness of farm subsidies in addressing the needs of the poor, it becomes even more pertinent to question their effectiveness in addressing the food insecurity of these women and FHHs.

Regardless of the on-going debate on the impacts of farm input subsidies, there have been many reports in recent years of 'new or expanding subsidy programmes in different countries around the world, including the African countries of Ghana, Nigeria, Tanzania, Kenya, Rwanda, Mali, Senegal and Malawi' (Dorward, 2009: 32). This research is therefore timely to generate some valuable contributions to the understanding of input subsidy programmes, particularly their gendered dimensions and consequently implications for female farmers. In this respect, Malawi offers a vital case study because apart from being one of the first countries in the Sub Saharan Africa region to introduce a large scale input subsidy programme in recent years, the Malawi FISP continues to make international headlines as a government intervention that has been successful in addressing food security challenges in the country (Department for International Development (DFID), 8 May 2007; Reuters Africa, 24 July 2009; New Agriculturalist, 2008, Perkins, 10 July 2009). Malawi has become a regular feature in global policy discussions about food security and has been cited as an example worth emulating that could provide valuable lessons for combating hunger in Africa (Chinsinga, 2010; FANRPAN, 2008; Holden and Lunduka, 2010; Sachs, 2008; Denning and Sachs, 2007). It is for this reason that the programme has been a subject of increasing academic enquiry over the last few years.

Despite this increasing interest, research on the Malawi FISP is limited on account of four main factors. Firstly, it is limited because it is dominated by economic and agronomic discourse. There is a paucity of gender scholars in this subject specifically, as well as in the general areas of agricultural policy and food security in the country. These fields are largely dominated by agronomists, crop scientists and economists which explains why the research agenda has tended to be dominated by agronomic or economic enquiry. Moreover, because of the nature of enquiry, the studies have mainly used quantitative methods (econometric analyses) and generated quantitative data and so-called hard facts (Garbarino and Holland, 2009). Consequently, the research to-date has not generated adequate in-depth information or unveiled detailed underlying meanings as is normally acquired from qualitative assessments (Teddlie and Tashakkori, 2003). More specifically, it has not generated adequate gender-related data because as Charmes and Wierenga (2003: 434) argue, 'there are many critical issues related to women empowerment that escape quantification in the conventional sense'. The quantitative measures may therefore simply present figures to demonstrate the existence of gender inequalities but they not highlight or reveal the dynamics that lead to those inequalities (Semu and Binauli, 1997).

Although research by Malawian political scientist, Blessings Chinsinga has provided complementary qualitative information regarding the programme, the information has largely been on political processes surrounding the FISP (see Chinsinga, 2011; Chinsinga, 2007; Chinsinga, 2008; Chinsinga, 2012, Chinsinga, 2012b). Because of this focus, his research participants have mainly included input traders, civil society organisations, academics, donor agencies and the government. His limited involvement of rural farmers as research participants has therefore meant that his conclusions on the impacts of the programme on food security have mainly relied on secondary data generated by other researchers (particularly by economists Andrew Dorward and Ephraim Chirwa). Therefore, even the qualitative work by Chinsinga has not provided detailed information on the gendered food security impacts arising from the FISP.

Secondly, research on the FISP has largely focussed on national and aggregate level factors, and neglected implications of the programme at the household level. Many of the studies conducted since the inception of the programme have focussed on analysing its influence on national maize output, productivity and prices (see Dorward *et al.*, 2008; Dorward, 2009, Denning *et al.*, 2009; Chinsinga, 2011; Mucavele, 2010; Tchale, 2009). While these studies have provided useful knowledge on the impacts of the FISP on food security in Malawi at the national level, they have provided limited

insights on practices, experience and therefore impacts at the household level. As Dorward (2009) observes, analyses that focus on macro-level impacts are likely to obscure impacts at household or other micro-levels.

Although SOAS *et al.* (2008) and Dorward and Chirwa (2011) document improved household food sufficiency as a result of the FISP, they do not provide details on intra or inter household level factors. This disaggregation is however necessary because household food security does not automatically entail food security of all household members (Agarwal, 2011). Intra-household distribution of food may be skewed such that some individuals, usually women or (girl) children, within a household may be under-nourished (Uttaro, 2002; Pinstrop-Anderson, 2009). As noted in the Malawi Food Security Policy, inappropriate intra-household distribution of food is a key contributory factor to poor nutrition at household level (GOM, 2006). Consequently, because of the male and adult bias in food distribution that is evident in Malawi and many other developing countries, the question is not only on whether households get enough food, but how it is distributed within the household and whether that food fulfils the nutrition needs of all members of the household (Haddad *et al.*, 1997, FAO, 2006). Therefore, the above cited studies that have looked at the impacts of the Malawi FISP on national food security have only provided a broad picture and have overlooked the detailed insights on gender dynamics at play at the household level.

Thirdly, the focus of research on aggregate factors has also obscured impacts at the local level which may relate to certain sections of the population only, such as subordinate or vulnerable groups including female-headed farm families, landless farmers, and child-headed farm families. Specifically, the lack of focus on female farmers and FHHs is notable because as will be discussed in Chapter 3, female farmers are increasingly becoming the key players in agricultural production in Malawi and in many other developing countries. Whilst it is known that the FISP has led to improvements in food security for smallholder farmers in general, there is a research gap on how female farmers in particular have been affected. This gap is even acknowledged in the recent publication on agricultural input subsidies by Chirwa and Dorward (2013) cited above where they observe that for future research, it is necessary that ‘...the analysis of gender issues in the subsidy programme goes beyond examination of differential access of subsidized fertilizers among male-headed and female headed households, and also includes examination of intra-household use of subsidized fertilizers’ (*Ibid.*: 240).

To date, the gendered analyses of the programme that are available in the literature have only gone as far as highlighting the disproportionate receipt of subsidised inputs by MHHs (see SOAS *et al.*, 2008; Dorward and Chirwa, 2011; Chirwa *et al.*, 2011; SOAS *et al.*, 2008; Chibwana *et al.*, 2010; Ricker-Gilbert and Jayne, 2009 and Holden and Lunduka, 2010). These studies have revealed that FHHs have been less likely to receive the subsidised inputs and when they have, they have received less inputs than MHHs. Because of the economic focus of these studies however, they do not go into any analyses or discussions to explain these gender inequalities – neither their causes nor implications. Apart from Dorward and Chirwa (2011: 12-13) who broadly conclude that the disproportionate receipt of the subsidies inputs ‘by MHHs with more land and other assets means that many households who are not food self-sufficient may not have benefitted directly from incremental (maize) production from subsidised input use’, there are no (detailed) analyses on the actual implications of this for the FHHs. Further, there is only one study by Chirwa *et al.* (2011) whose analysis has gone beyond the receipt of the subsidised inputs, and looked at intra-household decisions on the use of subsidised inputs on farms. Even then, their analysis only went as far as the use of subsidised inputs and did not explore gendered differences in the utilisation of crop harvest/output. The research gaps therefore not only exist in terms of impacts of receiving subsidised inputs on food production for FHHs, but also on gendered differences in the utilisation of crop output following the use of subsidised farm inputs. This research therefore argues that more rigorous analyses, informed by different approaches and literature, are required in order to gain a deeper understanding of the implications of the FISP for female farmers.

Lastly, previous research on the Malawi FISP has to a large extent focused on the impacts of the programme on maize, and particularly on it as a food crop (see for example Denning *et al.*, 2008; Chirwa *et al.*, 2008; Minde *et al.*, 2008; Dorward, 2009; Dorward and Chirwa 2011, Dorward and Chirwa, 2009). In Malawi, many scholars assert that food security in the country is highly synonymous with maize production (see van Donge *et al.*, 2001; Smale, 1995; Katengeza *et al.*, 2012; Mzamu, 2012; Mazunda and Droppelmann, 2012; Dorward and Chirwa, 2012). While it cannot be disputed that maize is the most important food crop in the country, being grown by 97 percent of the farming households (Denning *et al.*, 2009: 3), and the main crop targeted by government interventions, it is likely that the FISP would still directly or indirectly affect the production of other crops. This is not only because the programme has since 2008 also targeted other crops (such as groundnuts, soya beans, cotton and tobacco), but also because the impacts of the programme on maize are likely to have knock-on

effects on the production of other crops. It is therefore important to also consider what the impact of the Malawi FISP on these other crops has been. In this regard, studies by Holden and Lunduka (2010b), Chibwana *et al.* (2010) and Chibwana and Fischer (2011) on whether the FISP has led to a crowding out of other crops in favour of maize provided valuable insights. However, the focus of their analyses was smallholder farmers in general and did not provide any gendered perspectives.

1.2 Research aim and objectives

This research aims to critically explore and explain why, in spite of governments' commitments to addressing gender inequality in the agricultural sector, female farmers remain subordinate to and more food insecure than male farmers. To do this, the research will use the case study of the Malawi FISP, analysing how and why the food security status of female farmers has been affected by the programme. It is therefore intended to fill the above-highlighted research gaps by providing a thorough critique of the impacts of the Malawi FISP on female farmers, based on a methodological approach that is poised to generate extensive and in-depth information from and regarding female farmers. This research will therefore go beyond analysing the impact of the programme on smallholder farmers in general to analysing its impacts on women from different household types in particular.

In looking at female-headed households, the research will distinguish between de facto and de jure FHHs. De jure FHHs exist where the legal head of the family is a woman such as a divorcee, a widow or an unmarried woman. De facto FHHs are those 'in which an adult male partner is away from the household but remains involved through remittances and other economic and social ties' (FAO, 2011: 24). Although there is some evidence that de facto and de jure FHHs are similar in that they both have limited access to productive assets, they are different in two main aspects. Firstly, unlike de jure FHHs, de facto female heads are usually not income poor because of remittances (Horrell and Krishnan, 2007). In addition, in de facto FHHs, although it is the women who manage the farms and households for long periods of time, the absent men still retain decision making powers over important matters (FAO, 1995; Kennedy and Peters, 1992). This includes decisions such as what crops to grow, how to utilise subsidised fertilisers, and where to sell their crop produce. In de jure FHHs on the other hand, the female heads are solely involved in such decision making. Evidently, because of these differences between de jure and de facto FHHs, it will be necessary for this research to study impact on these two sub groups, and not simply all FHHs as one homogenous group. Simply engaging in a dualistic comparison between male-headed and FHHs may mask the complex processes that distinguish the two sub-groups of FHHs (Takane, 2007; Kennedy and Peters, 1992).

The specific targeting of female farmers to be included as research participants is significant because as Spring (1995) observes, social and cultural norms and practices in Malawi usually limit researchers and enumerators access to female farmers. This is

because the women's economic roles tend to be undermined and it is mostly men who are considered to be the farmers. To date, there is no known research on the Malawi FISP that has specifically targeted female farmers. This research therefore makes an important contribution in challenging the prevalent neglect of female farmers and gender issues from food security and agricultural research and policy debates, as explored in more detail in Chapter 3.

In explaining the food security impacts arising from the Malawi FISP, this research takes a more holistic approach that transcends the equating of food security to maize production. The research appreciates that although food security is a term that is extensively and commonly used in development practice and literature in recent years, conceptualising its meaning has proved a very complex and intricate process. The notion has evolved considerably since it was first introduced in the 1970s, and debates on an appropriate definition have persisted and dominated related discourses since (FAO, 2003; Clay, 2002; Heidhues *et al.*, 2004; Pinstруп-Anderson, 2009). The pluralism of themes and sub-themes associated with this notion is evident in the fact that over thirty definitions were noted to have been used between 1975 and 1991 (Maxwell and Smith, 1992). Therefore and as the FAO (2003: 25) observes, '...whenever the concept (of food security) is introduced in the title of a study or its objectives, it is necessary to look closely to establish the explicit or implied definition'.

The research takes cognisance of the multi-dimensional aspects of food security. Specifically, it adopts the World Food Summit (1996) definition that:

'Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life' (FAO, 1996).

This definition has gained wide acceptance globally because it is considered to adequately satisfy the multi-dimensional aspects of food security which include food availability, food access, utilisation, as well stability of both availability and access (Burchi and de Muro, 2012; Clover, 2003; FAO, 2006; Tiongco, 2011; Gross *et al.* 2000; Pinstруп-Andersen, 2009). In addition, it also embodies concerns with availability and access at household and individual levels as well (see Burchi and de Muro, 2012). Renowned economist, Amartya Sen has been credited with influencing this paradigm shift from pure concerns with food security at the national and global level to the household and individual levels, based on his food entitlements theory developed

during the early 1980s (Clover, 2003; Alcock, 2009). Focusing on the ability of people to command food through the legal means available in society including production, trade, labour and transfers, Sen held that individuals faced starvation if their full entitlement set did not provide them with adequate food for subsistence. He held that starvation was 'a matter of some people not having enough food to eat and not a matter of there being not enough to eat' (Sen, 1981: 434). The theory thus led to a persuasion to expand the analytical focus of food security from a macro focus on national and global food supplies or availability, to the ability of people to access or acquire food at the household and individual levels (Burchi and de Muro, 2012; Clover, 2003).

Food availability is defined as the amount of food physically available to a household (micro level) or in any area of concern (macro level) through all forms of domestic production, commercial imports, reserves and food aid. Food access is the physical and economic ability of a household to acquire adequate amounts of food. Food utilisation focuses on the use of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. Stability on the other hand entails availability and access to adequate food at all times (FAO, 2006). Therefore, in analysing the impacts of the FISP on food security, the research will consider these aspects, except for utilisation, whose analysis would require a different methodological approach (i.e. physiological approaches). This means that in addition to analysing the impacts of the programme on food availability (i.e. maize production), the research will also analyse its impacts on food access (achieved through crop sales).

Groundnut is the main crop of choice for this analysis of crop sales because it is the only other crop (apart from maize) that has been targeted by the FISP for at least a few years. Tobacco, cotton and coffee were only included in the programme in 2008 and are no longer targeted crops. Groundnuts are also grown in all the regions in the country, as is the case for maize (Ministry of Agriculture, 2009). This is significant as it means that the results from this analysis could be of relevance to most of the districts in the country. More importantly and relevant to the analysis in this research, groundnut is a crop that is grown by both male and female farmers in most parts of the country, unlike other cash crops such as tobacco.

This analysis on groundnuts also has value to other African countries as the crop is also an important crop in East and Southern Africa, planted on approximately 4.5

million hectares of land. Anecdotal evidence from Malawi and other African countries suggests that groundnuts are a 'woman's crop', implying that it is mainly grown by female farmers (Rohrbach, 2000). Malawi is one of the top five producers in Africa where it is the most important legume in terms of total production and area under cultivation (Freeman *et al.*, 2002). The crop has recently become targeted by the government in its efforts to increase productivity that would lead to increased exportation of the crop (GOM, 2009). Even though in smaller quantities than maize seed, groundnut seed has since 2008, been included as part of the Malawi FISP package. The crop was traditionally one of the main cash crops for smallholder farmers and a major export crop in the 1970s. However the Malawi groundnut export market collapsed in the 1990s due, in large part, to a failure to maintain export quality requirements, especially on aflatoxin levels (Bapu *et al.*, 1994). As these challenges are being addressed, it is now re-emerging as an export crop. This means that the crop has potential to generate high incomes for the farmers' livelihood. It is therefore necessary to explore how female farmers are involved in the production of the crop, and more specifically, how receipt of subsidised groundnuts seeds influences its production for female farmers in relation to male farmers.

1.3 Research questions

The main question that this research addresses is as follows: How and why have female farmers belonging to different household types been affected by the Malawi FISP?

In order to answer this question, the thesis answers the following sub questions:

1. What are the roles, involvement and position of female farmers in the agricultural sector in Malawi?

This question is answered in Chapter 3, through a literature review of feminisation of agriculture. This review is used provide the contextual basis for empirical analysis in this research. Although the focus is on Malawi, the chapter also makes reference to experiences from other developing countries particularly from the Africa region.

2. How (and why) are gender issues addressed in Malawi's agricultural and development policies?

This question will be answered in Chapter 4 through a critical review of the development process and implementation of national and development policies in Malawi post 2000.

3. How has the Malawi FISP affected food production for female farmers belonging to different household types?

This question will be answered in Chapter 5 through the analysis of primary data generated during the fieldwork. The analysis explores the impacts of the FISP on the production output of maize for the different categories of smallholder farmers. It also includes farmers' perceptions about changes in their food security status as a result of the FISP.

4. How has the FISP affected crop sales for female farmers belonging to different household types?

This question will be answered in Chapter 6 by analysing primary qualitative and quantitative data on how the FISP has affect sales of maize and groundnuts for female farmers belonging to the different household groups.

1.4 Theoretical Framework

In exploring these issues, the thesis builds on concepts used by Moser *et al.* (2004) in their framework for assessing gender mainstreaming of 'policy evaporation', 'resistance' and 'invisibilisation'. The concepts were introduced by these scholars in their gender audit of the implementation of UK's Department for International Development (DFID) - Malawi gender mainstreaming strategy that was commissioned by DFID in 2004. In addition, the thesis also uses the concept of 'sectorisation' of gender issues, as used by Beall and Davila (1994). These concepts have also been used by various scholars mainly in reviews and assessments of gender mainstreaming efforts of international/development agencies as well as of developing country governments (see Ngwira, 2004; Semu *et al.*, 2004; Eerdewijk, 2013; Whitehead, 2003; Moser and Moser, 2005; Zuckerman, 2002; MacDonald, 2003).

Policy evaporation occurs when 'good policy intentions fail to be followed through in practice' (Moser *et al.*, 2004: v). As observed by Eerdewijk (2013: 1), this is the process where 'gender-rich policies tend to turn into gender-poor practice'. This means that gender issues that are mainstreamed at policy design are not incorporated into gender specific programmes, objectives or activities. The term was first introduced by Sara Longwe in 1995, and further explored in 1997, where she argued that gender-oriented policies tend to evaporate within the bureaucracy of the typical international development agency, which she called a 'patriarchal cooking pot' (Longwe, 1997: 148). She further asserted that gender policies were likely to evaporate in these institutions because they threatened the prevalent internal patriarchal traditions. Longwe therefore used evaporation to explain the real cause behind the lack of progress on national and global gender targets set at the 1985 Nairobi World Conference on Women. Although a few decades have passed since this concept was first introduced, it is still relevant today as will be revealed in this analysis.

Resistance to gender issues happens 'when effective mechanisms block gender mainstreaming, with opposition essentially political and based on gender power relations, rather than on technocratic procedural constraints' (Moser *et al.*, 2004: v). This term has also been used in reference to Malawi's development policies where Malawian scholars Naomi Ngwira, Garton Kamchedzera and Linda Semu have argued that the basis for opposition to gender equality in most Malawian institutions and policy processes is patriarchal gender power relations. They assert that there is a lack of political will at various institutional levels to address gender inequality or ensure gender

mainstreaming (see Ngwira *et al.*, 2003; Semu *et al.*, 2004). The lack of gender integration or focus on addressing gender issues is not due to a lack of knowledge on its necessity, but values that refuse to accept gender integration as a basis for gender equality or equity.

Invisibilisation describes the process where 'monitoring and evaluation procedures fail to document what is occurring on the ground', resulting in inaccurate or inadequate information on gender-related impacts and outcomes (Moser *et al.*, 2004: 2). In this case therefore, the lack of information on gender issues is not only due to gender policy evaporation but also due to a failure to mention observed gender disparities or gendered outcomes (Moser, 2005). Whilst invisibilisation has often been used to specifically refer to the monitoring and evaluation processes of government or international agency programmes, this research also considers the disappearance or neglect of gender issues from the academic research agenda as well as policy debates. This concept is particularly significant in this research because the analysis is directly targeted at addressing the invisibilisation of female farmers and their needs from agricultural policies and programmes. By highlighting how and why female farmers are affected by the FISP, it will raise important issues that are affecting these female farmers but have not been systematically monitored or documented. This research therefore contributes to a 'de-invisibilisation' of gender that is necessary to spur action aimed at addressing gender inequalities.

Lastly, the analysis also adopts the concept of sectorisation, which refers to the treatment of women's issues as separate from mainstream issues or sectors. Although sectorisation is mentioned in the gender audit by Moser *et al.* discussed above, the concept is not included in their framework for assessing gender mainstreaming. It was however used by Beall and Davilla (1994) in their critique of the 'Women in Development' (WID) and 'Gender and Development' (GAD) approaches (see Chapter 3 for more on these approaches). They argued that the WID approach had led to the 'confinement of women's issues to separate women's projects, or the marginalisation of the issues into under-financed and poorly resourced women's ministries, bureaux, offices and desks' (Beall and Davilla, 1994: 2). Furthermore, they argued that sectorisation of gender issues remains a challenge although efforts within the GAD approach have involved developing gender competence among mainstream policy makers and practitioners so that a gender-aware approach can become an automatic part of policy-making processes.

Even outside the WID and GAD gender approaches, sectorisation seems to be another critical concept in analysing and explaining how gender issues are currently being incorporated in national policies. It links closely to the concept of 'cross-cutting issues' that has now become a regular feature of many government policies and programmes in developing countries. The concept will therefore be adopted alongside the other three used by Moser *et al.* (2004) and described above as the theoretical framework for this research.

Building on these four concepts, the thesis develops what it calls a 'Female Subordination Cycle', described in more detail in Chapter 4. The rationale is that although these four concepts describe different processes that affect gender mainstreaming, they are inter-related and inter-connected through this Female Subordination Cycle. Through this cycle, they work to facilitate and reinforce gender inequalities in the agricultural sector, and consequently keep female farmers more food insecure than men. The cycle explains how resistance to gender issues leads to sectorisation and policy evaporation, which in turn facilitates invisibilisation and therefore reinforces resistance. It is observed through the Female Subordination Cycle that although the individual concepts may provide a useful assessment of the incorporation of gender issues in policies, the assessment can only be comprehensive and complete when it includes an appreciation of their connections. On this basis therefore, the analysis will use both the four concepts individually as well as collectively (as the Female Subordination Cycle) in exploring the reasons that have perpetuated the dual challenges of women's subordination and food insecurity.

1.5 Originality

The originality claims of this research are based on four main points. Firstly, and as discussed in the previous section, the analytical framework used in analysing gender integration in this research is novel. The framework builds on and combines concepts used by Moser *et al.* (2004) and Beall and Davilla (1994) in their frameworks for assessing gender mainstreaming to develop a 'Female Subordination Cycle'. Although the concepts of gender policy evaporation, resistance, sectorisation and invisibilisation have been used by many other scholars, none have considered them in this cyclic order. This research has therefore enriched this literature by elaborating how these concepts are inter-linked and inter-connected through the Female Subordination Cycle, and the implications thereof.

Secondly and in particular reference to the Malawi FISP, the research is the first to comprehensively analyse what the impacts of the programme have been on female farmers belonging to different household groups. As highlighted above, despite the growing research interest in the programme, knowledge on gender aspects of the programme is limited. Previous studies that have analysed the impacts of the programme have considered smallholder farmers in general and have not disaggregated them by gender or household type. The analysis will therefore shed light and generate new knowledge regarding the FISP and female farmers. Furthermore, it will also generate original knowledge by looking beyond the impact of the FISP on crop production, and analysing the differences by household type in the utilisation of the crop output derived from the FISP.

Thirdly, the research will also generate new knowledge regarding the impact of the FISP on other crops, and more specifically on groundnuts. As indicated above, research on the impacts of the Malawi FISP on other crops apart from maize is limited. This research will therefore contribute knowledge to this aspect of the FISP by explaining how groundnut production and sales for female farmers belonging to different household types have been influenced by receipt of subsidised groundnut seed.

Lastly, the methodology adopted in this research is also original. Specifically, the utilisation of mixed methods in this analysis is of particular value because previous studies on the impacts of the FISP have mainly used quantitative (econometric) methods. The triangulation of quantitative methods with qualitative ones in this

research will allow the generation of extensive as well as in-depth and detailed findings that will complement and more fully explain the findings. Moreover, this will also be facilitated by the large number of participants (over 540) involved in this research. There is currently no known research on the FISP that has involved such a large number of female farmers. This is therefore unique research that will shed light on and bring to the fore a detailed exposé of the perceptions of female farmers regarding the programme.

1.6 Methodology

A detailed discussion of the research methodology is presented in the next chapter. This section simply provides a summary to make this introduction chapter more complete.

The research adopts a pragmatic approach where the choice of methods and research design is 'determined by what we want to find out rather than by any predetermined epistemological position' (Muijs, 2004: 1). The research therefore uses mixed methods where quantitative methods are triangulated with qualitative ones. Mixed methods research, where 'the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry' (Johnson and Onwuegbuzie, 2004: 17) is suitable for this research for two main reasons: Firstly, mixed methods research is often cited as a way of ensuring or increasing the validity and reliability of the results (Golafshani, 2003; Morse *et al.*, 2002). This is because introducing a second method may help clarify unexplained or inconsistent findings from one method. Secondly, using this approach is advantageous because as suggested by Bryman (1988), it is 'the best of both worlds' which capitalises on the advantages of both quantitative as well as qualitative methods. It draws on the strengths and minimises the weaknesses and limitations of both methods in a single research. With mixed methods, both 'hard generalizable...data' associated with quantitative methods as well as 'deep, rich observational data' that are more associated with qualitative methods are obtained (Sieber, 1973: 1335). As Teddlie and Tashakkori (2003) suggest, mixed methods research takes into account both the inductive and deductive processes associated with qualitative and quantitative research respectively. Consequently, combining methods will provide some corroboration and offer fuller understanding than can be achieved through a single method.

Key informant interviews were held involving 28 participants from government departments, private traders, donor organisations and support institutions working in the agricultural sector. In addition, a survey using open and closed questions, and involving 540 female farmers (who were randomly sampled), was conducted in Mzimba, Mchinji and Mangochi districts in the northern, central and southern regions respectively. Focus group discussions were also conducted in the same areas involving both male and female farmers. Care was taken to ensure that representative samples were generated from the districts, and that the selection of the study districts

took into consideration variations in cultural practices, socio-economic conditions, land holding sizes and agricultural production patterns. By virtue of both the sampling methods and sample size therefore, the findings from this research can be generalised to apply to the rest of the areas/sections in the districts under study as well as to other districts within the country with similar agro-economic and cultural practices (Kemper *et al.*, 2003).

Prior to undertaking the field research in Malawi, ethical approval was received from the University of Leeds Research Ethics Committee on 27 May 2010. In keeping with the ethical requirements, the research had an information sheet that contained all the basic information about the research. This information sheet was provided to all research participants and explained to those who could not read (using local authorities) so that they could make an informed choice on whether to participate in the research or not. All the research participants were provided with a consent form which they signed to confirm that they had understood the objectives and methodology of the research and to indicate their willingness to participate. It was also explained to the participants that all the information provided by them would be treated with confidentiality and be published in the thesis anonymously. In general, most of the targeted individuals for both the survey and key informant interviews had no reservations and were keen to participate in the research. This was probably due to the popularity of the FISP, both politically and economically, in the country.

All interviews with farmers were conducted in vernacular languages, while key informant interviews were conducted in English. The advantages of this are presented in the detailed discussion of the research methodology in Chapter 2.

1.7 Relevance and Value of this research

The contributions of this research are twofold. At the theoretical level, it contributes to a deeper understanding of the nexus between gender, agricultural policies and food security, and to debates on an appropriate definition of food security. At the empirical level, it enriches literature on feminisation of agriculture, and fills specific research gaps on the Malawi FISP.

Firstly, and as highlighted above, this research is situated at the intersection of food security, agricultural policy and gender and development literature. Its contributions therefore cut across these three fields and highlight that because of feminisation of agriculture, gender issues need to become an integral part of both academic enquiry and policy debates regarding food security and agricultural policies. The research therefore makes an important contribution in challenging the prevalent invisibilisation of female farmers and gender issues from food security and agricultural policy debates. More importantly, it sheds light on the processes that perpetuate the dual challenges of food insecurity and gender inequality. This has important policy implications for Malawi and other African countries that are burdened by these challenges.

The research also contributes to an appropriate definition of food security, debates that have persisted since the notion of food security was first introduced in the 1970s. There are many themes and sub-themes associated with this notion (Clay, 2002). Although in recent years, these debates have waned as the 1996 World Food Summit definition has increasingly gained wide acceptance globally (because it is argued to fulfil all four necessary aspects of food security, namely food availability, access, utilisation and stability), the notion remains complex, multi-faceted and dynamic. In this regard, the research highlights the value of understanding the perspectives of female farmers, and ensuring that these perceptions are appropriately incorporated in academic and policy discourses on food security. Specifically, it demonstrates the inadequacy of the focus on 'food availability' as the main aspect of food security in Malawi. While this focus may reflect the goals and objectives of policy makers and male farmers, it neglects those of female farmers and their attention to food preference as a key aspect of food security. Although food preference is mentioned in the 1996 WFS definition, it does not receive similar attention in the literature as the four elements of 'food availability', 'access', 'utilisation' and 'stability' that have been singled out from the above definition as adequately satisfying the multi-dimensional aspects of the notion (Burchi and de Muro, 2012; Clover, 2003).

Thirdly, the research contributes to enriching the literature on feminisation of agriculture by providing an exposé of its manifestation in Malawi. As argued in Chapter 3, although feminisation of agriculture is a global phenomenon, its manifestation has varied across geographic regions as well across time periods. Female farmers in different countries and in different geographical regions within the countries are involved in agricultural production in varied ways. In addition, agricultural patterns in many countries are also changing in varied ways, resulting in regional variations in the way that female farmers are involved in the sector. Moreover, gender relations are often different in different cultures, socio-political contexts or countries (Kabeer, 1996). Broad generalisations (at the international or even regional level) on feminisation of agriculture are therefore problematic. Instead agricultural policies at country level must recognise these variations, and be appropriately designed for the nature of feminisation of agriculture evident in that country.

The focus of this analysis on Malawi is significant because Malawi's economy is highly dependent on agriculture, with women playing a particularly significant role as they contribute over 70 percent of the labour force (GOM, 2002: 22). In spite of this, a review of the literature on feminisation of agriculture demonstrates the limited attention that Malawi has received. Since Spring's (1995) work on 'Agricultural Development and Gender Issues in Malawi', there have been limited detailed studies on the changing role of women in the country's agriculture. A rich literature exists on feminisation of agriculture for other regions such as Latin America (Deere, 2005; Meier, 1999; Lastaria-Cornhiel, 2006); China (Zhang *et al.*, 2006; Song and Jiggins, 2000 and 2002; de Brauw *et al.*, 2012; Song *et al.*, 2009; Rawski and Mead, 1998; UNDP, 2003; Zhang *et al.*, 2004); India (Ganguly, 2003; Vepa, 2005) and sub-Saharan Africa (Doss, 1999). Within sub-Saharan Africa, attention has been on the West African countries of Ghana (Vigneri and Holmes, 2009; Doss, 2002) and Nigeria (Erie *et al.*, 2011; Nosiru and Rahji, 2012) and East Africa's Uganda and Kenya (Njuki *et al.*, 2006; McPeak and Doss, 2006). This research will therefore enrich the feminisation of agriculture literature and in particular, generate new knowledge regarding the manifestation of this phenomenon in Malawi.

Although Pauline Peters has since the 1990s written about gender, agriculture and land in Malawi, her analyses have been based on a longitudinal study conducted from 1986 in one district (Zomba) in the southern region of the country. Therefore although she raises some important issues regarding female farmers (such as their involvement in commercial agriculture), her analyses have been limited by the focus on one

geographic region and a lack of comparative perspective with other districts in the country. More recently, one study by Takane (2009) has looked at differences in agricultural production between male-headed and FHHs. Her analysis focussed on how FHHs have been affected by liberalisation policies, and mainly considered the involvement of FHHs in tobacco farming. There is therefore still need for more detailed analysis looking the participation of female farmers in other key crops in the country as well as in the agricultural sector in more broad terms. More importantly, there is need to understand how female farmers are affected by the recent moves by the government towards more interventionist policies within the agricultural sector.

Finally, this research is valuable in that it fills specific research gaps regarding the Malawi FISP. Specifically, it provides insights on the gendered impacts of the Malawi FISP as well as a more holistic understanding of the programme's food security impacts. As highlighted above, despite the growing research interest in the programme, knowledge on gender aspects of the programme is limited. Previous studies that have analysed the impacts of the programme (mainly using quantitative/econometric analyses) have considered smallholder farmers in general and have not disaggregated them by gender. An understanding of the gendered implications of the Malawi FISP, as well as an understanding of its impacts on other crops in addition to maize, is however necessary in order to assess its effectiveness as a food security intervention.

Although this research is grounded in the Malawian context which could be different from other countries, the findings may still be relevant for other African countries, particularly those with similar programmes and scenarios. Other countries within the region, such as Ghana, Nigeria, Tanzania, Kenya, Rwanda, Mali and Senegal are already learning from the Malawi FISP and developing similar input subsidy programmes (see Denning *et al.*, 2009). Moreover, as will be discussed in Chapter 3 of this thesis, the roles, involvement and challenges facing females within the region are similar in many ways. As these countries face the dual challenges of improving agricultural production and also reducing gender inequalities in the sector, it is necessary to consider the issues that will be highlighted in this research. What are the key factors for consideration in designing and implementing subsidy programmes in order to benefit male and female farmers alike?

1.8 Outline of the chapters

This thesis first presents a detailed discussion of how the research was conducted. It then introduces the concept of feminisation of agriculture, and discusses its implications for agricultural policies. It then explores how, in light of this phenomenon, gender issues are addressed in Malawi's agricultural policies. This is followed by a more detailed analysis of the Malawi FISP, and based on findings from the field research, a critical examination of how female farmers in the country are affected by this intervention.

Chapter 2: Research methods

Because of the scale of the field research, where over 700 participants were involved, a thorough and detailed discussion of the research methods is presented in this chapter. It discusses the selection of research areas/districts; how the research participants were selected, approached and interviewed; how the data was collected and analysed; as well as the entire field research process.

Chapter 3: The Feminisation of agriculture and its implications for female farmers

This chapter highlights women's high and increasing role in the agricultural sector. It presents a global picture but makes specific reflections based on the case of Malawi. The objective of the chapter is to provide contextual background for this research as well as provide a thorough exposition of feminisation of agriculture and its implications for agricultural policies. The chapter therefore draws on food security, agricultural policy literature as well as gender and development literature.

The chapter argues that in spite of feminisation of agriculture, female farmers face many gender-related challenges that affect their agricultural production and productivity. Consequently, the poor performance of the global agricultural sector in recent years is due to the fact that women, who are the main farmers, lack the required factors of production for agricultural production. Despite the progress made by feminist scholars in bringing to the fore these gender inequality issues in agriculture and the subsequent articulation of their necessity and ways to address them, gender blindness still blurs agricultural policy processes. Not only are women's issues highlighted in agricultural policies only when they matter economically or productively, policy designs also tend to only focus on the productive roles of women and overlook the complex interactions between these productive roles and their reproductive and community

roles. Such gender blindness is likely to have implications for the success of policy interventions.

The chapter also makes a case for the disaggregation of female farmers according to household type, and more specifically between de jure and de facto FHHs. It asserts that simply engaging in dualistic comparisons between male-headed and FHHs may mask the complex processes that distinguish various types of FHHs. It is therefore necessary for this research to study impact on these sub groups, and not simply all FHHs as one homogenous group.

Chapter 4: Gender and agricultural policies in Malawi

This chapter presents a review of Malawi's key agricultural and development policies and discusses how gender issues have been incorporated in the policies and the reasons thereof. The objective of the chapter is to analyse why, despite the government's stated commitment to addressing challenges facing female farmers in the country, female farmers have remained disadvantaged in terms of access to agricultural resources, assets and services. The chapter answers the following research questions: How are gender issues addressed in Malawi's agricultural and development policies?

The chapter includes a literature review as well as document analysis of the development process; content as well as implementation of Malawi's main agricultural and food security policies and programmes namely the Malawi Poverty Reduction Strategy (MPRSP), Malawi Economic Growth Strategy (MEGS), Malawi Growth and Development Strategy (MGDS), the Agricultural Sector Wide Approach (ASWAP) and Malawi FISP. The analysis highlights and draws attention to the lack of focus on gender issues in both the research and policy agenda. In making the analysis, the chapter builds on concepts used by Moser *et al.* (2004) in their framework for assessing gender mainstreaming of gender 'policy evaporation', 'invisibilisation' and 'resistance'; as well as 'sectorisation' as used by Beall and Davilla (1994) and develops a Female Subordination Cycle. It argues that although gender issues are mentioned as a key cross-cutting issue in all key development and agricultural policies in the country, they are seldom or appropriately addressed in practice due to processes embedded in the Female Subordination Cycle which facilitate and reinforce gender inequality in the agricultural sector.

Chapter 5: Impact of the FISP on food production

This is the first of the two chapters in the thesis that will present findings from the field research. This chapter answers the research question on how food availability for female farmers belonging to different household types has been affected by the FISP. In line with the holistic approach to food security explained in Section 1.1 above, this chapter considers impacts of the FISP on food (maize) availability and preference.

The chapter explores the reasons why FHHs are deriving lower benefits from the FISP than MHHs. It argues that although poor socio-economic conditions play a part in influencing low production amongst female farmers, gender-related challenges also play a significant part. The chapter connects to the Female Subordination Cycle and discusses its influences on the food security benefits derived from the FISP by female farmers. Specifically, it faults the government's failure to 1) to prioritise and target FHHs as FISP beneficiaries, and 2) implement the FISP in a way that it addresses both the practical and strategic gender needs of FHHs, as major contributing factors.

Chapter 6: Impact of the FISP on crop sales

This second chapter discusses findings from the field research by presenting an analysis of the impacts of the FISP on crop sales as a measure of the food security aspect of access. The focus of this chapter is therefore on the maize and groundnuts that are sold by households and not consumed within households. The analysis finds that FHHs (both de jure and de facto) do not benefit as much as MHHs from crop sales because their benefits are eroded by poor timing and mode of their crop sales. It further explores how the requirements that women face to fulfil their triple roles (see Moser, 1989) affect their cash crop production as well as crop sales. The analysis reveals the extent of gender invisibilisation from the FISP and how that causes the government to implement initiatives that are unlikely to benefit female farmers.

Chapter 7: Conclusions and recommendations

The conclusion will focus on the main findings from this research and discuss the originality claims and contributions to knowledge of this work. It also highlights the policy implications of this work, and areas for future research. Although this research is grounded in the Malawian context which could be different from other countries, the findings may still be relevant for other African countries also experiencing feminisation of agriculture and with similar programmes to the FISP. Specifically for the Malawi government, these findings point to areas that need to be addressed if farmers from FHHs are to derive similar benefits from the FISP as those from MHHs. For other

countries facing the dual challenges of improving agricultural production and also reducing gender inequalities in the sector, it is necessary to consider the issues highlighted in this research. A key recommendation from this research is the need to de-invisibilise female farmers and their issues from such government interventions.

Being the first to focus on the impacts of the Malawi FISP on female farmers, the research is likely to identify new areas for further enquiry. While this work contributes significantly to knowledge on inter-household variations in food security impacts arising from the FISP, further analyses focusing on intra-household dynamics are required, particularly on how the food security status of individual members in households (defined in terms of food utilisation) is affected by the programme.

Chapter 2: Research Methods

2.1 Introduction

This research is grounded in extensive empirical work, strengthened by the use of a combination of research methods and inter-disciplinary literature. It cuts across and engages with gender and development, food security and agricultural policy literature to critically explore how and why female farmers have been affected by the Malawi FISP. Embracing a mixed methods way of thinking, it employs multiple data collection methods (i.e. document analysis, a survey, key informant interviews and focus group discussions) to facilitate the collection of broad and in-depth information. Furthermore, the research is also underpinned by extensive fieldwork involving a large number of research participants. A total 540 female farmers were interviewed in the survey, 28 participants were involved in the key informant interviews and a further 198 male and female farmers were involved through the focus group discussions. This chapter therefore presents a detailed discussion of the methodology used in this research. Specifically, it will critically reflect on the research methods used; the data collection and analysis methods; and the choice of research areas/districts and participants. Ethical considerations are discussed throughout the chapter.

Section 2.2 begins with an exploration of pragmatism – the research philosophy adopted in this research and the influence behind the selection of mixed methods research. The section also provides an appraisal of mixed methods research, focussing on its relevance and value for this project. Before engaging in detailed discussions of the data collection methods, Section 2.3 presents a self-reflection, discussing my place within this research. This is necessary not only to identify potential areas for biases, but to also reflect on the personal factors that aided the fieldwork (Bryman, 2008). Specifically, it reflects on how my vast experience working in the agricultural sector in Malawi and my familiarity with the local context and language facilitated easier access to interviewees and assisted the interview processes. Section 2.4 discusses the specific data collection methods used as mentioned above, focussing on how they were used for complementarity and triangulation purposes. This section also provides a description of the study areas/districts and discusses their differences in terms of culture, land ownership, socio-economic conditions and agricultural production practices. A discussion of these differences is important because aside from the receipt and utilisation of subsidised inputs, these factors are also likely to have an influence on

crop production and productivity. They therefore need to be taken into consideration during the analysis. Section 2.5 provides a conclusion to the chapter.

2.2 Research philosophy and approach

The philosophical basis of this research is pragmatism. Pragmatism, developed by philosophers like Charles Pierce, John Dewey, William James and Chauncey Wright in the United States of America in the 1870s is centred on linking theory and practice (Greene, 2007). It contends that the meaning and truth of any idea is a function of its practical outcome. Recognising that each research method has its own limitations and that different approaches can be complementary, it advocates for the selection of the most appropriate method for the research problem (Maxcy, 2003; Muijs, 2004). Although pragmatism is considered to be less purist in terms of theory and methods, preferring 'action to philosophizing' (Johnson and Onwuegbuzie, 2004), it has been argued to be the 'leading contender for the philosophical champion of mixed methods research' (Greene, 2008: 8). Because it endorses eclecticism and pluralism, and asserts that different or even conflicting theories and methods can all be useful ways to gain knowledge, it readily embraces a mix of methods if the research questions and practicalities allow it (Brannen, 2005: 10; Johnson and Onwuegbuzie, 2004). In this case, the choice of methods and research design is 'determined by what we want to find out rather than by any predetermined epistemological position' (Muijs, 2004: 1). Pragmatism therefore espouses the 'dictatorship of the research question' as termed by Teddlie and Tashakkori (2003) where methods are determined by the research questions to be addressed in any particular study rather than theoretical considerations or any perceived links to particular ways of understanding the social world. It is question-driven as opposed to paradigm-driven (Greene, 2007).

Based on these considerations therefore, this research uses mixed methods, combining quantitative and qualitative methods. Mixed methods research, where 'the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry' (Johnson and Onwuegbuzie, 2004: 17) is valuable for this research for two main reasons: Firstly, it is a way of ensuring or increasing the validity and reliability of the results through triangulation (Golafshani, 2003; Morse *et al*, 2002). This is because introducing a second method may help elaborate or clarify unexplained or

inconsistent findings from the first method (Brannen, 2005). Moreover, the confidence in inquiry inferences is increased when results from multiple data collection methods provide consistent or convergent information (Greene, 2007: 100). Secondly, using mixed methods is advantageous because as suggested by Bryman (1988), it is the best of both worlds which capitalises on the advantages of both quantitative as well as qualitative methods for complementarity purposes. It draws on the strengths and minimises the weaknesses and limitations of both methods in a single research. With mixed methods, both 'hard generalizable...data' associated with quantitative methods as well as 'deep, rich observational data' that are more associated with qualitative methods are obtained (Sieber, 1973: 1335). As Teddlie and Tashakkori (2003) suggest, mixed methods research takes into account both the inductive and deductive processes associated with qualitative and quantitative research respectively. Particularly for social phenomena, which are usually complex and multifaceted, complimentary mixed methods serve to 'elaborate, enhance, deepen and broaden the overall interpretation and inference from the study' (Greene, 2007: 101). Consequently, combining methods will not only provide some corroboration, but will also offer fuller understanding than can be achieved through a single method.

Specifically, quantitative methods, involving systematic empirical investigation of quantitative properties and phenomena and their relationships (Burnham *et al*, 2004; Creswell, 2009; Brannen, 1992), are suitable for this research for two main reasons. Firstly, because of the large number of research participants involved and the large amount of data collected, quantitative methods simplify the process of data entry and analysis (Hughes, 2012). Secondly, in order to make meaningful comparison between different household types, the research requires quantitative data on such aspects as total volume of crops produced, volume of crops produced per unit area, volume of crop sold and land holding sizes.

On the other hand, qualitative methods are necessary in order to generate an interpretation of the quantitative observations for the purpose of discovering underlying meanings and patterns in the relationships (Neuman, 2003; Bryman, 1988; Brannen 1992). Qualitative methods also help to get an in-depth understanding of the issues and of the participants' perceptions (Devine, 2002). More importantly, qualitative methods are more likely to reveal gender relations, which are central to the contributions of this research. Although quantitative data may reveal gender inequalities, they do not reveal the dynamics that lead to such inequality (Semu and Binauli, 1997). As Charmes and Wierenga (2003: 434) also argue, 'there are many

critical issues related to women's empowerment that escape quantification in the conventional sense'. The concern in this research is therefore not only on gendered data, but on the dynamics that lead to gender inequalities as well.

Irrespective of the above advantages, this research appreciates that mixed methods is a relatively new approach and some of the details of the approach are yet to be worked out fully by research methodologists. This includes such aspects as how to qualitatively analyse quantitative data or how to interpret conflicting results (Johnson and Onwuegbuzie, 2004). In consideration of this therefore, mixed methods are employed to expand understanding and not only to seek corroboration (Onwuegbuzie and Leech, 2005).

Specifically, the following data collection methods were used:

1. Document analysis
2. Key informant interviews
3. Survey using semi-structured questionnaires
4. Focus group discussions

In terms of sequencing, document analysis was undertaken as the first step and then as the research progressed and relevant material was identified. The purpose of the first phase of document analysis was to acquire an understanding of Malawi's agricultural programmes and policies, including the FISP, as well as an understanding on the issues affecting female farmers in the country. Key informant interviews were conducted next with the intention of verifying information obtained in the document analysis, and also to get an understanding of the implementation of the FISP. Again, this helped to formulate relevant questions for both the focus group discussions and the survey. The survey and focus group discussions were carried out last and conducted simultaneously. Conducting the survey last was beneficial because it allowed some issues that were not anticipated but arose during the key informant interviews to be included. At the same time, conducting the focus group discussions during the same period as the survey allowed immediate verification and further discussion of the issues arising from the interviews. Each of these data collection methods is discussed in detail and in turn in Section 2.4.

These data collection tools were employed in a case study analysis. Using a case study helps to acquire a detailed as well as contextualised understanding (Yin, 2009). The Malawi FISP was chosen as the case study for this research because it provides

an apt context for answering the research questions, and also because it epitomises a broader category of such agricultural interventions in Africa (Bryman, 2008). Moreover, because there are many countries in Africa developing their own farm inputs subsidy programmes (Denning *et al.*, 2009), and with similar circumstances facing their female farmers, the findings from this research could be applicable beyond the Malawi case, and also generate insights for further research on this topic in other countries.

2.3 Self-reflection

Before discussing the methodology in detail, a discussion of the researcher's place within this research is necessary in order to reflect on how it may have influenced the manner in which the project was conducted. As Bryman (2008) observes, social researchers need to be reflective about the implications of their methods, values, biases and socio-cultural context for their work.

Firstly, before starting this project, the researcher had been working as Development Director for NASFAM, the biggest farmer organisation in Malawi. The job involved developing and managing projects aimed at assisting rural smallholder farmers to improve their food production as well as increase the profitability of their farm enterprises. In the 12 years at NASFAM, she had worked in different programmes and managed different programmes including the monitoring and evaluation, food security, gender and communications programmes. Because of this vast experience in NASFAM, and thus the agricultural sector in the country, there was a good understanding of the context and knowledge of the relevant institutions and individuals to be included in the survey. In addition, personal contacts provided easier access to most of the key informants. However, to minimise potential biases involved with selecting only people who were personally known to the researcher, further investigations were undertaken in order to identify all relevant institutions and informants to be targeted. In addition, snowballing (Miller and Brewer, 2003) was used where some key informants recommended other relevant institutions or informants to be interviewed thereby expanding outside the range of personal contacts.

It was also necessary to clarify with all the research participants (particularly those who were aware of this researcher's previous role in NASFAM) that this was an academic research project and that it had not been commissioned by NASFAM. The use of the University of Leeds identification and research information sheet were necessary in this respect. Moreover, the researcher's absence from NASFAM for at least two years also helped to break the perception of a close association between the researcher and NASFAM. That notwithstanding, as Berg (2007) suggests, issues of confidentiality and anonymity were appropriately explained and confirmed with the participants in order to encourage their free participation. This was essential as it allowed participants from organisations in the same business as NASFAM to freely provide information which they would not normally provide to NASFAM or its employees. This included such information as crop purchases information and crop marketing strategies.

Secondly, the researcher's vast experience in working with smallholder farmers and familiarity with Malawi's rural areas helped to eliminate the possibility of major misunderstandings of the context as well as practices. Furthermore, it also proved useful in making decisions on the best approach to take in order to collect accurate and detailed information as was required. For example, with full appreciation of the literacy levels of many of the female interviewees, the researcher was able to determine where to probe for more information. Therefore where the farmer participants indicated that they did not know an answer to a question, other ways of asking the same question were firstly explored before recording 'no answer' in the questionnaire. Irrespective of this, the researcher was also mindful of the common risks of insider research, particularly where the interviewees' responses are misconstrued or taken for granted (Darlington and Scott, 2002). Careful attention was therefore taken to ensure objectivity by ensuring that all questions in the questionnaire were asked and their responses recorded accordingly, and that any assumptions were cross-checked with the interviewee before being recorded.

Lastly, the research was also facilitated by the researcher's good command of the two main languages used in the research (English and the national language, *Chichewa*), and a basic understanding of *chitumbuka*, a language commonly used in one of the study areas (Mzimba district). This enabled easier, accurate and timely data collection (Berg, 2007: 102). Although there were a few farmers in Mzimba who were not fluent in either English or Chichewa, they still had some basic understanding of at least one of them. Moreover, in order to deal with the large number of individual interviews targeted for the survey, six research assistants were recruited to assist with data collection. Two of these research assistants were fluent in *chitumbuka*. Having them was therefore helpful in ensuring that any interviewee who preferred to be interviewed in *chitumbuka* was appropriately supported. Although the research team was mixed, composed of three men and three women, most of the research participants did not express a preference to be interviewed by either a man or a woman. As discussed in Section 2.4.3 below, because of the popularity of the FISP, most of the participants actually wanted to be interviewed and therefore were less concerned about the gender of the researcher. Further details regarding the research assistants are provided in Section 2.4.3 below.

2.4 Data Collection Methods

2.4.1 Document analysis

Document analysis involves the rigorous and systematic analysis of the written contents of documents (Wach and Ward, 2013) and it was undertaken for two main purposes. Firstly, it was undertaken to acquire an understanding of Malawi's agricultural policies and programmes, including the FISP, as well as an understanding of the issues affecting female farmers in the country. The analysis, based on the Female Subordination Cycle and its elements of gender resistance, evaporation, sectorisation and invisibilisation, explored the place of gender issues within Malawi's agricultural policy making processes. It therefore helped to generate an understanding of the policy initiatives and priorities of the government in addressing issues affecting smallholder farmers in general, and women farmers in particular. Because agriculture is the mainstay of Malawi's economy, providing livelihoods for the majority of Malawians, development policies in the country have largely been agricultural-centred (GOM, 2010). The document analysis therefore covered both agricultural-specific as well as the main national development policies as well. These included the following:

- Malawi Poverty Reduction Strategy – 2002
- Malawi Economic Growth Strategy
- Malawi Growth and Development Strategy – 2006
- Agricultural Sector -Wide Approach

In addition to analysing the contents of these documents, a literature review of their development processes was also undertaken in order to understand the context under which they were developed. As Bryman (2008) observes, the context under which documents are developed has implications for their content. Understanding the context is therefore a critical part for understanding the content.

Secondly, document analysis was conducted to get an understanding of the background and context under which the FISP was being implemented. More specifically, it helped to comprehend the roles that different players (and particularly international and donor organisations) have played in development of the country's policies and key programmes such as the FISP.

The document analysis was conducted prior to the field research, and this was particularly significant in that it helped to develop understanding of the different issues that had to be covered by each of the above data collection methods (Bowen, 2009). The documents were however revisited throughout the research period as findings with respect to gender emerged.

2.4.2 Key informant interviews

In-depth interviews were conducted with key organisations/persons knowledgeable about the FISP. They included farmer organisations, NGOs, private traders and input suppliers, agricultural service providers, donors and government departments (details given below). In identifying participants for these interviews, nomination as well as sampling for diversity was used (Pierce, 2008). Nomination involves intentional selection of participants that are directly involved with the subject in question, and sampling for diversity ensures views from a variety of stakeholders in the subject matter are included. In addition, as discussed above, snowballing (Bryman, 2008) was also used to ensure that the research captured as many of the relevant institutions and informants as possible. Most of the key informant interviews were conducted in the month of June 2011 and all the institutions that had been identified for inclusion in the study were interviewed. In order to minimise cases where the research participants do not show up for interviews, all the key informant interviews were held at the participants' offices, mainly in Lilongwe. Only one was held in Blantyre at the head office for one of the private traders. Other interviews with informal and some formal traders were held in the survey districts of Mangochi, Mchinji and Mzimba. On average, they took about 30 to 50 minutes.

The interviews assisted in collecting more broad contextual information as well as information relevant to answer the following questions;

1. What factors have influenced the implementation of the FISP?
 - a. What influence have international and donor agencies exerted on the government and how has that affected the implementation of the FISP?
 - b. What have been the influences of other domestic stakeholders such as farmer organisations and NGOs, on the FISP?

2. Impact of input subsidy on crop marketing.

How has the FISP affected prices and volumes of sales for maize and groundnuts?

3. Impact of the FISP on farm input sales.

How has the FISP affected prices and volumes of farm inputs sold by private traders?

4. General perception of the FISP on the economy and national food security

The following categories of institutions were interviewed: (details provided in Appendix 2).

1. Government

These were elite interviews that involved people 'who exercise disproportionately high influence on the outcome of events of policies in (one's) research area' (Pierce, 2008: 119). For the government offices, authorisation to interview the responsible officers had to be sought from the Principal Secretary first, a process which took some time. Nonetheless, the interviews were held in a conducive environment and manner and managed to collect all the required information.

2. Formal marketing agencies/private traders.

Interviews were conducted with key players in Malawi's agricultural markets who are involved in the sale of farm inputs and/or procurement of farmers' produce. In addition to these formal traders, interviews were also conducted with informal traders. These interviews were less formal and less structured as the interviewees were not pre-identified but were approached when met in the field. They were informed about the study and its objectives and also asked for their consent to participate. By asking a few questions and observing their operations, the research was able to acquire some insights into actual trading practices.

3. Farmer organisations

Farmer organisations in Malawi play a significant role in policy processes and advocating on behalf of their members for improved agricultural services in the country. NASFAM and FUM are the largest farmer organisations in the country, both boasting of national coverage in terms of their membership. Interviewing these national farmer organisations therefore helped to collect information relating to the other districts in the country that were not covered by the survey. To minimise biases associated with insider research (Darlington and Scott, 2002), the interview with NASFAM involved two

participants to ensure that adequate relevant data was collected from the interview and not to rely on my prior knowledge of the organisation.

4. NGO

The Civil Society in Agriculture Network (CISANET), a network of NGOs working in the agricultural sector in Malawi was interviewed. This organisation is involved in policy analysis on agricultural and economic issues that affect the general public. Interviewing this organisation therefore assisted in getting information on how the FISP has been implemented, how it is perceived by NGOs and what its impact has been on national economy and food security.

5. Support services institutions

Interviews with organisations that provide support services in the agricultural sector in Malawi provided information necessary to substantiate information arising from government interviews on what the impacts of FISP have been on national output, crop productivity, food security and crop prices.

6. Donor community

Most of the donor agencies operating in Malawi have been providing financial and technical support to the Malawi Government for the implementation of the FISP. Interviews with these organisations therefore assisted in generating information about influences behind the FISP and other agricultural policies in the country. This was necessary to analyse to what extent the implementation of the FISP has been affected by the institutions sponsoring the programme.

Information collected from the key informant interviews was also supplemented by information collected from a FISP research dissemination evaluation workshop held on 20 June 2012. The workshop, organised by the UK DFID, brought together stakeholders in the agricultural sector to discuss reports produced by different organisations and researchers on the FISP. Not only did the workshop provide up to date information on the FISP, its implementation, challenges and successes, it also provided an opportunity for discussions with other informants who were not captured during the key informant interviews. Furthermore, because the workshop was held after data analysis for this research had started, it was an opportune time to seek clarification on some of the findings.

The key informant interviews, just like the focus group discussions, were audio-recorded, which enabled revisiting the interviews during the data analysis phase as necessary. In keeping with research ethical requirements, the reasons for recording the interviews were explained to the participants and their consent sought prior to commencing the interviews (Bryman, 2008). However, due to the large number of farmers involved in the survey, it was not feasible to record them. Firstly, it would have been too costly to provide recording equipment to each of the research assistants. In addition, in terms of time, it would not have been feasible to transcribe several hundred interviews within the PhD research period. Regardless of this, the need to audio-record the farmer interviews was also minimised because the questionnaire was developed in such a way that facilitated quick and easy filling in, for example due to closed-ended questions.

2.4.3 Survey Using a Semi-Structured Questionnaire

2.4.3.1 Selection of survey areas

Malawi is divided into three geographical regions for administrative purposes: Northern, Central and Southern regions. The survey was conducted in three districts, one in each of the three regions. The aim was to generate results that would be representative of most of the districts in the country, taking account of the differences in cultural practices, socio-economic conditions, agricultural production patterns and land holding sizes.

These areas are also different in terms of their climatic conditions and in order to minimise the impacts of this on crop production output (which is beyond the scope of this research), districts with similar agricultural production patterns in terms of maize and groundnut production were purposively selected. This led to the selection of Mzimba district in the North, Mchinji in the Central region and Mangochi district in the Southern region. Mzimba and Mangochi had the highest production of both maize and groundnuts in the Northern and Southern regions respectively in the 2009/10 crop growing season. For the Central region, it was Lilongwe which had the highest production of both maize and groundnuts. However, because Lilongwe is the Capital City of Malawi, it is not representative of the rest of the districts in the central region. As has been raised by Benson *et al.* (2005), farmers near urban centres have better welfare than those from rural areas due to higher incomes from food crop sales arising from higher food demand from urban areas. Lilongwe was therefore replaced with Mchinji, the district with the highest production of groundnuts and the third highest production of maize in the region. Average production figures for these crops for 2009/10 are shown in the table below:

Table 2.1: Average maize and groundnut production in metric tonnes (For growing season 2009/10)

Region	District	Maize production	Groundnut production
North	Mzimba	255,687	23,625
Centre	Mchinji	264,723	39,912
South	Mangochi	160,247	11,318
National average		115,949	10,640

Source: Ministry of Agriculture and Food Security Crop Production Estimates (2011)

The research used multi-stage sampling (Kemper *et al.*, 2003) to select the specific research areas in these districts to be targeted for the survey. Firstly, the Extension Planning Area (EPA) with the highest production of the two crops was identified in each of the three districts, and then one Section within that EPA was randomly sampled. The research participants were drawn from these Sections. The EPA and Sections are divisions according to the Ministry of Agriculture and Food Security for administration and planning purposes. Each district is sub-divided into EPAs according to terrain, ecology and population. There are currently a total of 187 EPAs in the country and these are further sub-divided into 2,268 Sections (covering a total of 38,404 villages). The sections are the lowest level of the ministry's structure and the main point at which services such as training and extension are delivered to smallholder farmers (Chinsinga and Cabral, 2008). The number of Sections in an EPA depends on the size of the EPA. On average, this ranges from about 7 to 15.

The following areas were selected: Makhosikazi Section within M'bawa EPA in Mzimba district; Msitu Section within Msitu EPA in Mchinji district; and Chilipa Section within Chilipa EPA in Mangochi district. This is summarised in Table 2.2. below:

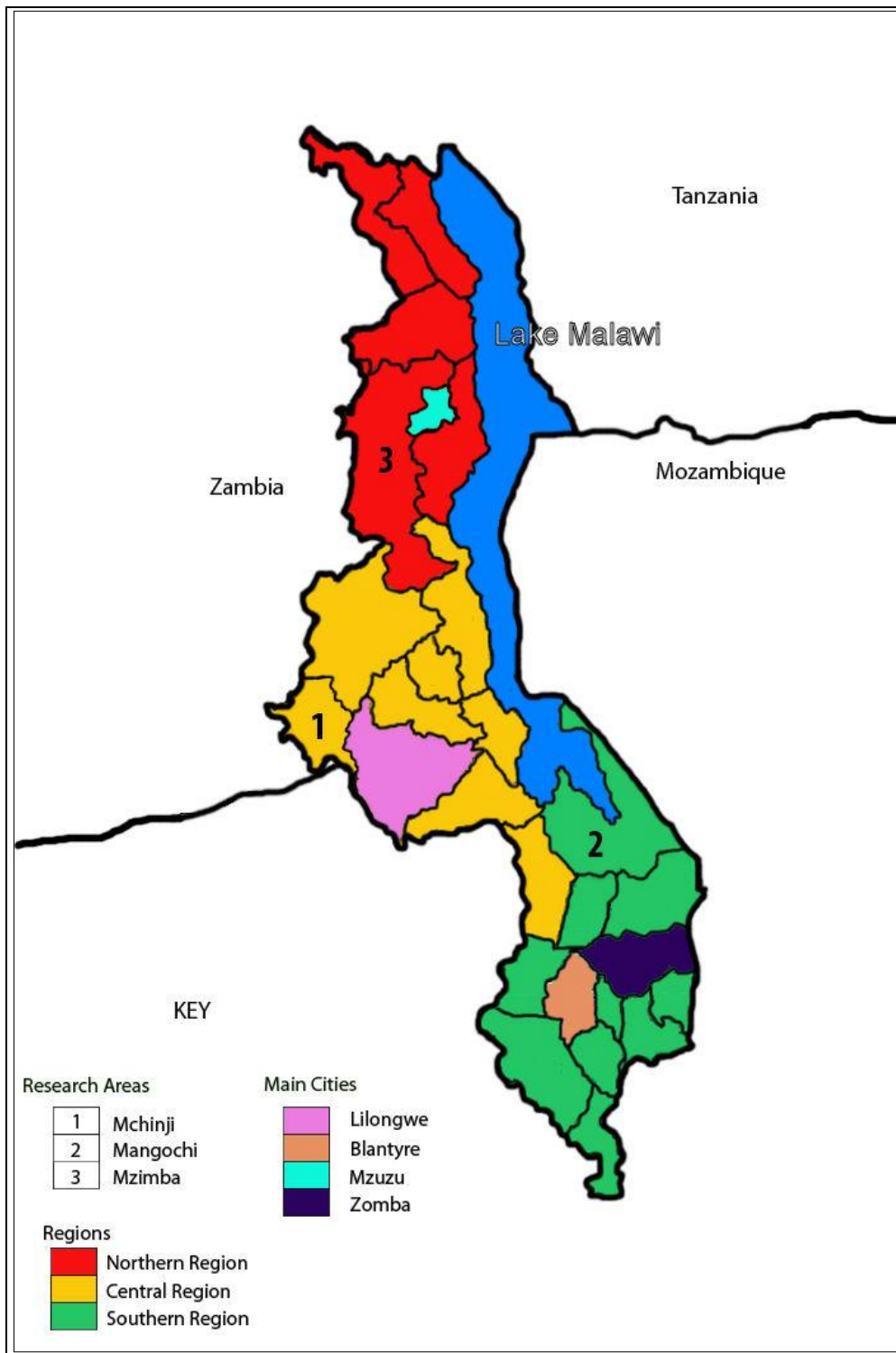
Table 2. 1: Summary of research areas

District	EPA and section	Number of EPAs in district	Number of Sections in district	Number of villages in district	Number of villages covered in the research
Mzimba	M'bawa, makhozikazi	19	222	3561	47
Mchinji	Msitu, Msitu	6	36	2212	36
Mangochi	Chilipa, Chilipa	11	126	1538	14

Source: MOAFS: Department of Agriculture Extension Services (2007)

The map below shows the research areas.

Map 2. 1: Map of Malawi showing district divisions and study districts



Source: Adapted from google maps

The three geographical regions in Malawi are different in many ways such as; poverty levels (World Bank/Government of Malawi, 2007; Bohne, 2009); culture (Trinitapoli and Regnerus, 2006; Takane, 2007), literacy and education levels (Kalipeni, 1997); and in terms of land holding sizes (Tchale, 2009; Dorward and Chirwa, 2011). As explained below, it is expected that crop production and productivity for the survey participants could be influenced not only by receipt of subsidised inputs but by the above factors as well. These regional differences will therefore be reflected on and integrated into the analysis of the findings from the field work presented in chapters 5 and 6.

In terms of cultural differences, the northern region is dominated by the patrilineal societies of *Tumbuka* and *Ngoni* tribes. On the other hand, the southern region, is dominated by matrilineal *Yao* and *Lomwe* tribes (Trinitapoli and Regnerus, 2006; Takane, 2007). The central region is also predominantly matrilineal although some pockets of mixed patrilineal and matrilineal or less rigid matrilineal systems exist (Mtika and Doctor, 2002). This research was conducted among the *Tumbuka* in Mzimba district and the *Chewa* and *Yao* in Mchinji and Mangochi respectively. These three are the main ethnic tribes in the country which means that in terms of ethnicity, the research has national representation. This is significant because, as observed by Place and Otsuka (2001) and Takane (2007), cultural systems have an influence on access and utilisation of land. In Malawi, over 69% of the land falls under customary tenure (GOM, 2001), and this means that the influence that cultural systems have on how land is acquired, utilised or even disposed of can be quite significant. For example, in patrilineal societies in the northern region, land rights belong to men and are mostly transferred from fathers to their sons (Takane, 2007). Consequently, FHHs in such societies are not at liberty to make their own decisions on how to utilise their land. The opposite is true in matrilineal societies where land is transferred following matrilineal lines from the matrikin to daughters (Takane, 2007; Peters 1997, Peters, 2002; Mkandawire 1984). Although other evidence from Malawi suggests that women's primary rights to land in matrilineal systems only exist in theory and not in practice (discussed in more detail in Chapter 3), it is still worth considering in this research how access to and utilisation of land by female farmers, and more specifically FHHs, may affect their access to and utilisation of subsidised inputs from the FISP.

The three regions are also different in terms of socio-economic conditions such as poverty levels, land-holding sizes, and literacy and education levels (Tchale, 2009; Kalipeni, 1997; World Bank/GOM, 2007). Farmers in the Northern region generally have higher land-holding sizes, are more literate and less income poor; while those

from the Southern region have the worst socio-economic conditions of all three regions. This is discussed in more detail in Chapter 5 under Section 5.2.

The regions in Malawi are also different in terms of political affiliation. Voting in Malawi follows a regional bias whereby the region where one lives affects which party one will support or vote for (Ferree and Horowitz, 2007). This trend has been observed during all general elections since the first multi-party elections in the country in 1994 (Chinsinga, 2012). Between 1995 and 2004, the southern region was more associated with the United Democratic Front (UDF), whereas the central and northern regions had a bigger leaning towards the Malawi Congress Party (MCP) and Alliance for Democracy (AFORD) respectively. Since the resignation of President Bingu wa Mutharika from the UDF, the party on whose ticket he won the elections in 2004, and the subsequent formation of his Democratic People's Party (DPP) in the same year, districts from the lower southern regions such as Mulanje, Thyolo, Chiradzulo and Phalombe have now become DPP strongholds.

Because the FISP is a highly politicised programme, there have been claims that the FISP has been more biased towards the DPP dominated districts. It has been observed that strong opposition districts such as Mangochi and Machinga have been receiving lower volumes of subsidised inputs than others (Chinsinga, 2012). Although this research will also consider how the volume of subsidised inputs received per participant is likely to affect crop production, it will not directly assess the impact of political affiliation on FISP receipt and consequently on crop production. This would have required the collection of some politics-specific data at the national level, which is beyond the scope of this research. That notwithstanding, the extent to which the research will assess the impact of volume of subsidised inputs received on crop production means that inferences can be made regarding the link between political affiliation, volume of subsidised inputs received and crop production.

2.4.3.2 Sampling and selection of survey participants

Sampling and selection of survey participants was based on quantitative research approaches since all of the data collected in the survey was entered and analysed numerically. Therefore, in order to be able to make valid statistical inferences from the quantitative analyses, sampling of research participants had to be done in such a way that a representative sample was selected (Bryman, 2008). Statistically, this can be achieved through a variety of probability sampling methods depending on the characteristics of interest in the population (Ritchie *et al.*, 2008; Pierce, 2008). Because probability sampling involves methods in which every unit in the population has a chance (greater than zero) of being selected in the sample, and this probability can be accurately determined, (Kidder and Judd, 1986; Neuman, 2003; Schofield, 1998; Black, 2005) biases related to estimates of population parameters are minimised (Trochim, 2006; StatTrek, 2011).

Based on this consideration, the research used stratified random sampling which involves dividing the population into homogeneous and mutually-exclusive sub-groups and then taking a simple random sample in each sub-group (Kidder and Judd, 1986; Schofield, 1998; Black, 2005). Because this research uses comparative analysis i.e. a comparison of two or more groups with a view to discovering something about one or all of the groups being compared (McNeill and Chapman, 2005; Brannen, 1992; Pierce, 2008), stratification helped to ensure that farmers belonging to each one of the research categories were sampled. In order to make the necessary comparisons therefore, the farmers were firstly divided into two groups of FISP recipients and non-recipients. Each of these two groups was then further split into three sub-groups of de jure FHHs, de facto FHH and MHHs. This then created the following six categories/sub groups;

1. De facto FHHs who received subsidised inputs
2. De facto FHHs who did not receive subsidised inputs
3. De jure FHHs who received subsidised inputs
4. De jure FHHs who did not receive subsidised inputs
5. Women in male headed-households who received subsidised inputs
6. Women in MHHs who did not receive subsidised inputs

2.4.3.2a sampling size

Determination of sample size for the survey was based on the Central Limit Theorem, a foundation for many statistical procedures used in research. The theorem states that the distribution of an average or sum tends to be Normal, even when the distribution from which the average or sum is computed is decidedly non-Normal (Crawley, 2005). The distribution of the phenomenon under study does not therefore have to be normally distributed because its average or sum will be normally distributed or approximately normally distributed if the sample size is large. For all practical purposes, a sample size equal to or greater than 30 (≥ 30) is considered sufficient (Lohninger, 1999; Pierce, 2008). Since this research involves comparisons amongst women in six categories as indicated above, and taking 30 as the minimum number of participants to have a normal distribution, the total sample size per district was 180 female farmers. In total, therefore, across all the three districts, 540 women farmers were interviewed in the individual interviews. A further 25 male farmers and 40 women farmers (approximately) were interviewed in the focus group discussions in each district. Interviewing such a large number of participants necessitated the use of research assistants, and this is discussed in more detail in Section 4.4.2 below.

The process of selecting the specific farmers to be included in the 180 individual interviews per research district was as follows: A sampling frame i.e. a list of all farmers within the section/research area (Bryman, 2008), was obtained from the EPA office in each of the three research districts. This list is based on information that is collected every year by village traditional authorities, providing details of households in their villages. Another list of farmers who had received subsidised inputs during the 2009/10 and 2010/2011 growing season was also obtained from the same office. These lists indicated the gender of the farmer but not their marital status. It was therefore not possible to create the six research sub-groups directly from these two lists. Consequently, four clusters were created in each district from the two lists as follows:

- Female FISP recipients
- Female FISP non recipients
- Male FISP recipients
- Male FISP non recipients

It was from these four clusters that the six research groups were to be created. To do this, a random sample of at least 150 participants was taken from each of the female

clusters and 30 from each of the male clusters. The sampled farmers were then invited to meetings on specific days through their village headmen. At the meetings, the six research categories were explained and the women were asked to go to the group which best described them. This was done openly to ensure that the participants went to the correct group. There were some cases where other women would intervene where their colleague had gone to a different group and not the one to which they belonged. This process was very useful because it ensured accuracy in the categorisation of the research participants. It could have been difficult to ensure this level of accuracy in categorising and selecting the research participants if the process had not been done in an open forum. Following this process, 30 women were randomly selected from each of the six research sub-groups to be interviewed in each of the three districts. Only women farmers were targeted in the individual interviews since the objective of the research is to compare the impact of the FISP on female farmers in different household types. Male farmers only participated in the focus group discussions and the purpose of this was simply to collect additional contextual data on the FISP and its implementation.

Women farmers who were sampled to come to the meetings but were not selected for the individual interviews were asked to participate in the focus group discussions. Apart from being an efficient and cost effective way of conducting the focus group discussions, this selection process was also ethical because it ensured that all the eligible farmers who were invited to the meetings participated in the research. It also needs pointing out that the farmer interviews were held within an average of less than ten minutes walking time from the farmers' homes in order to avoid adding more pressure on the participant's time.

2.4.3.2b Definition of the research groups

In defining the household types, de jure FHHs were those in which the woman was the legal or culturally recognised head of the household. This included women who had never married, those who were divorced, separated or widowed. De facto FHHs, on the other hand, were those where a man was the legal or culturally recognised head of the household but was away from the household for at least 50 percent of the time in a year (FAO, 2011; Horrell and Krishnan, 2006; Due and Gladwin, 1991).

Information collected during the survey suggested that in Mangochi, most of the de facto FHHs were as a result of men leaving home to seek employment in the tea estates of Thyolo and Mulanje, or other employment in Blantyre city or in South Africa. In Mchinji, men left their homes to work in estates in neighbouring Mozambique, whereas in Mzimba, Mzuzu city, Zambia and South Africa were the main destinations for men leaving home to look for employment.

Secondly, a FISP recipient in this research was defined as someone meeting the two conditions below:

1. They should have received subsidised inputs for the last two consecutive years i.e. 2009/10 and 2010/11 growing seasons. This is because, as discussed before, the research will use data from the 2009/10 crop growing season for its analysis. It was therefore necessary that the farmers were FISP recipients for that year too. Secondly, it was necessary that they were still FISP recipients in the current year (2010/11) as well in order for them to be able to respond to questions targeted at FISP recipients.
2. They should have received at least one 50 kg bag of either basal or top dressing fertiliser and one 5 kg packet of maize seed. It was necessary to include this minimum requirement because there were many cases where the farmers did not receive the full subsidy package. In other cases, this was because they were requested by their traditional leaders to share with other farmers. This was particularly common in the southern region and some parts of the central region. The implications were that in some areas, the package was shared amongst so many farmers that they ended up receiving as little as 5 kg of fertiliser per farmer from the purported 100kgs.

The contents of the subsidy package have been changing since the inception of the programme in 2006 (refer to appendix 1). In 2009/10 and 2010/11, the full subsidy package consisted of one 50 kg bag of basal fertiliser, one 50 kg bag of top dressing fertiliser, one 5 kg packet of maize seed (or one 10 kg packet of OPV maize) and one 2 kg packet of legume seed. It was however difficult to find sufficient farmers in one research area for all the research categories who had received this full package. This challenge has also been documented by other researchers working on the subject. In a survey of the 2008/9 FISP, Holden and Lunduka (2010) found that only an average of 11 percent of FHHs and 29% of MHHs received the full subsidy package due to the limited supply of the inputs. Dorward and Chirwa (2011) found that on average, recipient households received 1.5 fertiliser coupons. This challenge is also recognised by the government which estimates that out of the 3,200,000 deserving farming households, only around 1,600,000 were registered to receive subsidised inputs in the 2009/10 growing season (GOM, 2008). Sharing subsidised inputs has therefore become common practice. Focus group discussions held during the pilot testing revealed that farmers considered themselves FISP recipients if they received at least one 50 kg bag of fertiliser and one 5 kg packet of seed. It was for this reason therefore that the research defined FISP recipients as those who had received a minimum of this package (i.e. one 50 kg bag of fertiliser and one 5kg packet of maize seed).

2.4.3.3 Survey data collection tools

The questionnaire used in the survey was semi-structured although it had more closed than open questions. Open-ended questions were useful in that they allowed the research participants to talk at length on a topic and qualify and clarify their responses as they desired (Pierce, 2008; Neuman, 2003). They also allowed the respondents to freely express their opinion without feeling forced to choose from statements that may have seemed more or less satisfactory (Kidder and Judd, 2005). Additionally, as noted by Rose and Sullivan (1996), open questions also help to bring out some issues that the research may not have anticipated at the time of designing the questionnaire.

For a project involving such a large number of participants, closed-ended questions were however also important to simplify the process of data entry and analysis (Neuman, 2003; Swift, 1998). Coding open-ended questions can be a complicated and time consuming process especially where responses are incomprehensible, irrelevant or self-contradictory, which makes meaningful categorisation difficult (Kidder and Judd, 2005). Secondly, closed-ended questions are advantageous in that they may help to clarify the intention of a question or help the respondent's memory (Kidder and Judd, 2005). Despite these advantages, closed-ended questions have the disadvantage that they may force respondents to give simplistic responses to complex issues or may suggest ideas that the respondent would not otherwise have given (Neuman, 2003).

The aim of using a combination of closed and open questions was therefore to collect both factual and attitudinal data and deal with the strengths and weaknesses of both open and closed-ended questions (McNeill and Chapman, 2005; Neuman, 2003). In addition, some closed-ended questions included an 'other' option which allowed respondents to provide their own responses in addition to what was already provided in the questionnaire (Gillham, 2000). A rating scale was also used to quantify some of the qualitative responses, allowing the research to get a comparison based on respondents' feelings or beliefs (McNeill and Chapman, 2005). The questionnaire used in the interviews is attached as appendix 4.

During the interviews, the following information was collected from the members;

- Basic personal information
- Land holding and utilisation of land
- Crops grown and volumes harvested
- Types and volumes of inputs applied and their source
- Crops sold the previous year - volumes, prices and buyers
- Number of months per year that maize produced by the farmer herself lasted
- Food security perception and coping mechanisms when own-produced maize ran out

Because of the farmers' lack of access to techniques and equipment for accurately measuring land, it was difficult to collect accurate data on land holding and land farmed during the farmer interviews. With this in mind, in most cases, the farmers presented an estimation of their land holding because their land had never been accurately or scientifically measured. This is a major challenge facing many researchers collecting data on land sizes in rural Africa (Muwanga-Zake and Magezi-Apuuli, 2005). In most cases where an interviewee was not sure about the size of her garden, or where unusually high or unusually low figures were mentioned, the interviewee was asked to demonstrate the size of her garden by pointing out the extent of her land from where they were. Though not completely accurate in itself, this helped the researcher and the interviewee to estimate together the size of the land. It was also for this reason that the research combined quantitative and qualitative research methods and also used probing so that information could be verified accordingly.

This information collected from the survey was useful in answering the following research questions;

1. Impact of input subsidy on crop (maize and groundnut) production and productivity for the different research categories.

This was found by comparing the total production as well as production per unit area for those households that received the subsidised inputs and those that did not in each of the household types.

2. Impact of the FISP on food security for the different research categories: This was measured in two ways. Firstly, this was measured by comparing the number of months that the maize that they produced on their own farms or maize that they bought lasted in a year. This is because, as will be discussed in

Chapter 5, food in Malawi is highly synonymous with maize (Minot, 2010). Secondly, it was measured by the farmers' perceptions of their food security status. The participants were asked if they felt that their food security status had become better off, worse off or remained the same since the introduction of the subsidy programme.

3. Impact of the FISP on crop marketing.

This was found by comparing the volume of sales for maize and groundnuts between FISP recipients and non-recipients in all the research categories.

Based on the researcher's previous experience in conducting surveys involving farmers in rural areas, the survey was planned to be conducted during the crop marketing season which starts around April/May and continues up to around September. During the marketing season, when food is in plentiful supply, farmer participation in surveys is generally better than during the lean months (between December and March). During the lean months, their participation can be adversely affected by failure to show up for interviews as they spend a lot of time carrying out casual work, '*ganyu*' or other short term employment in order to acquire food or some cash. In addition, their responses may also be deliberately changed in order to create a stronger impression of their food insecurity. Furthermore, one is also able to access and interview informal crop traders during this crop marketing period, as this is the time when they go around the villages setting up informal markets. They are usually not traceable once crop marketing finishes. The survey was therefore conducted between July and September as follows:

- Mchinji (Central region): 3 – 30 July 2011
- Mangochi (Southern region): 1 August – 26 August 2011
- Mzimba (Northern region): 28 August – 24 September 2011

Irrespective of this advantage, this timing however also raised another factor for consideration. Because of the difference in rainfall patterns among the regions in Malawi, the northern region normally harvests their crops a few months later than the south and central regions. Taking this into consideration, the survey in Mzimba district was conducted last, in August. However, it still transpired that some farmers had not yet completed crop harvesting by this time. It was therefore not going to be possible to make comparisons among the three regions on crop marketing based on the 2010/11 season. The research will therefore use crop marketing data from the previous season, 2009/10, in analysing the impact of the FISP on crop sales. Fortunately, the farmers

were able to easily recall details from this season, mainly because of the significance in their lives.

Data entry was conducted from 29 August to 30 September, 2011. Five data entry officers, including the researcher, were involved in the process of data entry, but data cleaning was done by the researcher alone. Data cleaning involves inspection of the data for outliers and missing data and its subsequent correction (Rahn and Do, 2000). All the data from the survey was entered and analysed in Statistical Package for Social Scientists (SPSS) version 16.0. Data from the focus group discussions and key informant interviews were stored in Microsoft Word and Excel.

During the survey, it became clear that it was very important to emphasise that the research was being conducted for academic purposes and not on behalf of the government to determine FISP recipients. It transpired that in some areas, some farmers suspected that the research team were consultants sent by the government to assess and identify FISP recipients. As such, many people, even those who had not been shortlisted and invited to the survey, came to the meeting venues and wanted to be interviewed as well. It was therefore necessary to take time at each of the meeting venues to explain the research objectives in detail to ensure that people participated objectively. It was only when it was evident that the explanations were clear and convincing to the participants that the interviews started.

As explained above, six research assistants were recruited to assist in data collection. Apart from conducting some of the individual interviews, the research assistants were helpful in taking notes during the focus group discussions so that the researcher could concentrate on facilitating the discussions. The research assistants were all University graduates or students who had significant experience in conducting field research and had good references from previous research projects in which they had been involved. They were therefore conversant with various research methodologies. However, in order to ensure uniform and comprehensive understanding of the objectives and methodology of this research, training was conducted for all the research assistants prior to field research. The researcher also went through the questionnaire in detail and explained what each question meant and the information that it sought to generate. In addition, every evening, the researcher cross-checked all the questionnaires done during the day to ensure that there were no missing data or other technical errors.

2.4.4 Focus group discussions (FGDs)

Individual farmer questionnaires were triangulated with focus group discussions involving small groups of approximately 10-15 people. Triangulation involves 'using different data and methods to uncover the same results as a way of ensuring validity' (Harrison, 2001: 83). Even though triangulation can be costly in terms of time as well as financial resources, it is useful as a way of ensuring that information is corroborated, using multiple methods (Burnham *et al.*, 2004: 277). The focus group discussions were also used to consult male farmers in order to ensure that the research was gender-aware in its selection of research participants.

The main advantage of focus group discussions (FGDs) is that they allow participants to interact in a discussion on a particular topic which may raise new issues and concerns that the researcher may not have anticipated (Devine, 2002). In addition, this interaction helps the researcher to get a more realistic account of what they think as the participants are forced to think about and possibly revise their views (Bryman, 2008). For this research, such interaction was also important because some of the questions asked the farmers to recall what happened a few years ago. In the focus groups, farmers were able to discuss amongst themselves and remind each other as necessary.

The FGDs also enabled more farmers to be included than would have been possible if only individual questionnaires were used. They also facilitated the inclusion of male farmers who were not included in the survey. In general, the FGDs were particularly useful in substantiating some of the information provided by the individual questionnaire respondents on general issues such as crop production patterns, crop marketing activities and implementation of the FISP in the areas. More importantly, the FGDs also captured the farmers' perceptions of the challenges with and benefits arising from the programme. Because the FGDs were held separately for male and female farmers, they also revealed the gender dynamics of their perceptions. The FGDs therefore answered the same research questions as the individual interviews, but with more emphasis on qualitative perceptions.

Six focus group discussions were conducted in each district, engaging separately with female-headed recipient households, female-headed non-recipient households, women in male headed households (both recipients and non-recipients) and male farmers in MHHs for both recipients and non-recipients. Splitting the focus groups by gender

allowed free interaction and participation of the research participants in each of the categories. On average, the focus group discussions took around 45 minutes. Both the survey questionnaire and focus group discussion check list were pilot-tested in Chigonthi Section in Chigonthi EPA in rural Lilongwe. Pilot testing was necessary to check that the research tools were appropriately developed to be able to get the required data (Neuman, 2003; Wilson, 1998; Brannen, 1992). In this case, some questions were reformulated or changed following the pilot testing in order to make them clearer. The pilot testing also helped to order the questions in such a way that would make it easier for the respondent to recall information and provide accurate information. For example, questions on land holding, land farmed and area allocated to different crops had to be asked consecutively in order to cross check that the information provided was complementary. In addition, some questions that were not very relevant to the research were removed after noting that the questionnaire was taking over an hour to complete. Following this adjustment, on average, the questionnaire was completed within fifty minutes. This was an important ethical consideration as it didn't take the women away from their domestic duties for too long.

2.5 Conclusion

This chapter has discussed in detail the methods used in this research. It has explored pragmatism and reflected on the significance of using mixed methods research for this analysis. The chapter has presented a discussion on sampling and how the research participants for the survey, focus group discussions and key informant interviews were identified and reached. These multiple data collection methods employed in this research facilitated triangulation and also assisted in generating both extensive and in-depth information. The research should therefore generate rich empirical findings that will be of value to other scholars working in the fields of food security, agricultural policy, and gender and development in Malawi.

The chapter has also presented a justification of why the field research was conducted in one district in each of the three regions in the country. Mzimba, Mchinji and Mangochi are similar in that they all produce high volumes of maize and groundnuts. However they differ in terms of their culture, land holding and population density and in their political affiliations. These factors will therefore need to be borne in mind when analysing the data from the field research as they could have an influence on the results.

The key terms used in this research have also been defined and explained in this chapter. In this research, a FISP-recipient is defined as a farmer who received at least one 50 kg bag of fertiliser and one 5 kg packet of maize seed. This definition is in line with the general practise on the ground where most of the farmers do not receive the full subsidy package and those who received at least a bag of fertiliser considered themselves as recipients.

The chapter is presented in a manner that reflects on the implications of the choices made, their strengths and weaknesses and therefore the implications that they may have for the conclusions from this research.

Chapter 3: The Feminisation of Agriculture and its Implications for Female Farmers

3.1 Introduction

Since the 1970s, there has been growing recognition both in the literature as well as in development practice of the fact that agriculture is increasingly becoming feminised. Although as noted in the World Development Report (2008) of the World Bank, many development policies continue to assume that farmers are predominantly men, there is now increased evidence to the contrary. Despite enumeration challenges, empirical data from many parts of the world reveals significant contribution of women to the agricultural sector. Globally, women contribute over 50 percent of food production (Mehra and Rojas, 2008). This contribution is higher in developing countries where women comprise 43 percent of the agricultural labour force and produce 60-80 percent of the food (FAO, 2011: 8). Similar statistics are reported for sub-Saharan Africa, where the average contribution of women to the agricultural labour force and food production stands at around 50 and 80 percent respectively (IAASTD, 2009: 2; SOFA team and Doss, 2011).

Despite this high involvement, female farmers face many gender-related challenges that affect their agricultural production and productivity. It is widely acknowledged that they lack good access to most factors of production such as land, labour, farm inputs, and research and extension services (Vepa, 2005; Doss, 2001; Kevane, 2004; Diagne and Zeller, 2001). Consequently and as the FAO (2011) observes, the poor performance of the global agricultural sector in recent years is due to the fact that women, who are mainly the farmers, lack the required factors for agricultural production. The FAO (2011) further observes that agricultural policy interventions therefore need to be targeted at addressing those gender-related challenges if food and agricultural production at both national and global levels is to improve. Such observations by international agencies are essential for confirming the critical role of female farmers in the agricultural sector as well as the need to address gender inequalities in the sector. However, as this chapter will argue, improving agricultural productivity for female farmers will require more than such broad declarations by international agencies. On the contrary, it requires a deeper understanding of feminisation of agriculture - its causes, the context in which it is happening, its manifestation and consequences, as well as its implications for food security.

Specifically, food security challenges at household as well as national (and consequently global) levels will not be resolved unless the subordination of female farmers in the agricultural sector is also appropriately and adequately addressed. Drawing on food security and agricultural policy literature as well as gender and development literature, this chapter will expound on this argument by critically engaging with the gender, food security and agricultural policy nexus.

Firstly, section 3.2 discusses the theoretical basis of feminisation of agriculture and demonstrates how this has influenced the economic-centred thinking in agricultural policy on the role of women in agriculture. The chapter argues that despite the progress made by feminist scholars in bringing to the fore gender inequality issues in agriculture and an articulation of their necessity and ways to address them, gender blindness still blurs agricultural policy processes. Not only are women's issues highlighted in agricultural policies mainly when they matter economically or productively, policy designs also tend to only focus on the productive roles of women and overlook the complex interactions between these roles and their reproductive and community roles.

Section 3.3 explores the various ways in which women are involved in agriculture, revealing the variations across and within countries. It argues that feminisation of agriculture needs to be considered and understood in its proper context in order to understand its implications for women and for food security. Although feminisation of agriculture is a global phenomenon, its manifestation has varied across regions (Deere, 2005; Lastarria-Cornhiel, 2006; Cernea, 1978; Agarwal, 2011; Katz, 2003; Codjoe, 2010; Zhang *et al.*, 2006; de Brauw *et al.*, 2012). Female farmers in different countries and geographical regions within countries are involved in agricultural production in varied ways. In addition, agricultural patterns in many countries are also changing in varied ways, resulting in variations in the way that female farmers are involved in the sector in different countries. Agricultural policies at country level must therefore recognise these variations, and be appropriately designed for the nature of feminisation of agriculture evident in that country. It is important that declarations by international agencies do not neglect or obscure such country/regional-level variations.

Crucially, this section also makes a case for disaggregating female farmers by household type. It questions the tendency for policy as well as research to largely or exclusively focus on women belonging to FHHs (Chant, 2004). FHHs are not synonymous with female farmers, nor are FHHs a homogeneous group (Horrell and

Krishnan, 2006, Chant, 2003, Takane, 2007). The section therefore argues that in order to address gender inequalities in agriculture and improve food and agricultural production, agricultural policies must reflect on the role and position of female farmers belonging to different household types, and not only and broadly on FHHs.

The implications of feminisation of agriculture are discussed in Section 3.4, which explores why female farmers are not benefiting from agriculture despite their increasing involvement in the sector. It discusses how and why female farmers remain subordinate to their male counterparts. Although various reasons are provided in the literature for this, as explored in Section 3.5, the chapter concludes that the main factor that has perpetuated rather than resolved female subordination in the sector is the gender blindness of agricultural policies.

In order to contextualise the review in this chapter, reflections on the general themes will be made based on evidence from Malawi. Evidence from other countries, both from Africa and other regions will however also be used to demonstrate and capture the global extent of feminisation of agriculture. This contextualising of the literature using the Malawi case will assist to enrich the literature on women and agriculture in the country. Malawi's economy is highly dependent on agriculture as the sector accounts for 36 percent of gross domestic product (GDP), employs 87 percent of total population and accounts for 63.7 percent of total income of the rural poor (GOM, 2002: 22). Within the sector, women play a particularly significant role, contributing over 70 percent to the agricultural labour force (*Ibid*: 89). In spite of this, a review of the literature on feminisation of agriculture demonstrates the limited attention that Malawi has received. Although substantial literature exists for other agricultural-dependant economies in Africa and other regions, there have been limited detailed studies on the changing role of women in agriculture in the country since Spring's (1995) work on 'Agricultural Development and Gender Issues in Malawi'. This focus on Malawi is therefore both necessary and opportune as it will enrich the literature on feminisation of agriculture and reduce the extent of broad regional generalisations.

3.2 The Theoretical Basis of Feminisation of Agriculture

In order to appropriately engage with the concept of feminisation of agriculture, it is necessary to understand its theoretical basis and how it has developed. This section will therefore discuss the genesis of feminisation and explore how the economic-centred origins have influenced the current orientation of the concept.

Feminisation of agriculture has been described as the intensification of women's involvement in the agricultural sector (Spring, 1995; Deree, 2005; Lastaria-Cornhiel, 2006; Gartaula *et al.*, 2010; Vepa, 2005; FAO, 1998 and 2003). The concept has its roots in Ester Boserup's pioneering work on 'Women's role in economic development', published in 1970 (Beneria and Sen, 1981; Jiggins, 1998; Spring, 1995; Song *et al.*, 2009; Lastaria-Cornhiel, 2006). An extensive critique of Boserup's work by various scholars has highlighted two main impacts: its challenge to previous generalisations on the role of women in economic development, as well as presaging more research and enquiry on women's issues (see Jaquette, 1990; Beneria and Sen, 1981; Jiggins, 1998; Kanji *et al.*, 2007; Spring, 1995; Song *et al.*, 2009).

Firstly, Boserup highlighted women's (previously neglected) contribution to agricultural and industrial development by providing strong empirical evidence from various regions of the world, including Africa. Her work made significant contributions to the understanding of gender division of labour. By highlighting the heterogeneity in gender division of labour in agriculture across cultures, she demonstrated that these divisions were not innately determined. To the contrary, her analysis suggested that differences in types of agricultural systems and cultural factors (specifically patterns of social hierarchy) were important in establishing the prevailing gender division of labour. Based on population census data from four major regions of the world, Boserup distinguished between male and female farming systems, and highlighted that in female farming systems, which were characterised by extensive shifting cultivation, food production was taken care of by women. Male farming systems on the other hand, were characterised by intensive irrigated agriculture and it was men who were responsible for agricultural production. In addition to highlighting the existing role and involvement of women in female farming systems, Boserup also demonstrated that in some countries in sub-Saharan Africa, such as the Gambia and Central African Republic, farming systems were becoming even more 'female' than they had previously been (Boserup, 1970: 10).

This understanding of gender divisions of labour has become important, not only in the case of feminisation of agriculture, but also for the understanding of gender as a social construct (see Unger and Crawford, 1992). Boserup argued that in the recent past, women were not only equal to men in status, but they were also equally productive. She therefore challenged prevailing wisdom that women were less productive than men and therefore that it would be wrong for policy to direct scarce resources to the less productive (see Jaquette, 1990). This argument raises important questions for consideration particularly in respect to the position and contributions that female farmers have to play in addressing food security challenges. The tendency evident in most agricultural policies to target smallholder farmers in general, and not specifically focus on women (World Bank, 2008), despite the acknowledgement of women's significant contributions in the sector, demonstrates that preference for male farmers still reigns.

Another contribution of Boserup's work was her claim that women's work was under-enumerated. She observed that although subsistence activities in general, whether carried out by men or women, were usually omitted from official statistics, some of those activities, such as domestic work and participation in agriculture as unpaid family labour, tended to be specific to women. She therefore raised an issue that is essential for a proper understanding of women's contribution to and participation in economic life (Beneria and Sen, 1981: 281). A large scholarship has since articulated how and why women's work is under-enumerated (Agarwal, 1985; Spring 1995; Samarasinghe, 1997; Katz, 2003; Deere, 2005; Jiggins, 1998; Mason, 1995, Jiggins, 1998). Although the challenge remains (Mahmud and Tasneem, 2011; Deere, 2005), efforts at both national and international levels to include subsistence work in official statistics, demonstrates the impact of such scholarship (Beneria, 1997), and therefore the value of Boserup's contribution.

In general, it has been widely accepted by scholars that Boserup's analyses were seminal and contributed towards a new thinking about the role of women in development (Beneria and Sen, 1981; Jiggins, 1998; Kanji *et al.* 2007; Spring, 1995; Jaquette, 1990; Song *et al.*, 2009). Her analyses on the gender divisions of labour drew scholars' attention to the differential impact by gender of development and modernisation processes (Rathgeber, 1990; Spring, 1995) and to enquiries on factors that influence sexual division of labour in agriculture (Deere, 1982). The identification of feminisation of agriculture challenged previous generalisations that attributed the provision of food exclusively to men. As Kanji *et al.* (2007) observe, it is widely

acknowledged that her work inspired the UN Decade for Women (1976 – 1986) and presaged an era of research and enquiry on women's issues.

Irrespective of this significant influence, some of Boserup's hypotheses have been challenged and argued to be flawed (Rathgeber, 1990; Spring, 1995). Firstly, some of her hypotheses were inaccurate on the basis that prevailing empirical data did not support their claims. Based on national data from Latin American countries, Huntington (1975) argued that the characteristics ascribed to female farming did not exclusively apply to female or subsistence farming only but were also evident in male farming systems as well as in some commercial export plantations. He cited several examples from Brazil's agriculture where 'male subsistence farmers used similar implements, technology and land use patterns as female farmers' (Huntington, 1975: 1003). In addition, he gave examples of cultivation systems where 'the tool was female, the techniques mixed, and the land tenure male' (*ibid.*). He therefore argued that the factors Boserup used to classify subsistence agriculture into male and female farming systems (such as the farming implements and technology used, land tenure systems, and level of productivity of agriculture) were inadequate to define a typology. Huntington therefore questioned the accuracy of the male-female farming systems dichotomy.

Secondly and closely linked to the above was the over-generalisation of Boserup's claims. Huntington (1975: 1004) highlighted the case of Brazil agriculture where European colonialists adopted and continued the use of the tools and techniques of local Indian women. He therefore challenged Boserup's broad assertion that 'Europeans showed little sympathy for the female farming systems which they found in many of their colonies and in those independent countries where they settled' (Boserup, 1970: 42). Although such over-generalisations may be problematic, they were still significant in that they encouraged more detailed analyses by other scholars (Beneria and Sen, 1981: 281).

Lastly, Boserup's work lacked sound theoretical ground. Beneria and Sen (1981) assert that Boserup's work was too empirical and descriptive, and lacked a clearly defined theoretical framework on which to base the empirical analyses:

'These data are rich in insights about the patterns and variations in women's work across Africa and Asia, but most of her analysis is purely descriptive. Ad hoc introductions of values and ideology often take the place of explanations' (Beneria and Sen, 1981: 282).

Beneria and Sen further argued that while Boserup lacked theory, her work was heavily influenced by neo-classical economics, with its limitations. A key flaw is its lack of focus on women's domestic and reproductive roles (see also Huntington, 1975; Afonja, 1981). Beneria and Sen (1981: 291) observe that although her intention was to describe the different forms of women's subordination, Boserup failed to elucidate the crucial role of the household as the focal point of reproduction or to even discuss the role of social relations in the household in contributing to the 'woman problem'. Instead, Boserup's approach focused on non-domestic production as a determinant of women's position in society, and her solutions to women's subordination were only seen in the sphere of economic and social relations outside the household.

Making a similar observation, Huntington (1975: 1005) observed that just like the economists that Boserup criticised for neglecting women's unpaid domestic labour, she also made similar mistakes. By neglecting the transferability of domestic work experience to the paid work setting, for example, she insinuated that domestic work had no social value. More recent feminist scholarship however highlights the role of reproduction and domestic work in determining women's participation in production and economic work (see Moser, 1989). Boserup's analysis therefore lacked a connection to the feminist perspective on the core issues of women's subordination because it only focussed on their production roles (Beneria and Sen, 1981).

Her production and economic-centred analyses led to thinking that women issues were important because they mattered economically (Moser, 1989). This influence was evident in the design of the Women in Development (WID) approach that was promoted during the 1970s (Taylor, 1999; Moser, 1989; Razavi and Miller, 1995; Tinker, 1990). The WID approach focussed on the need to integrate women into development processes as active agents, and not as passive recipients of welfare programmes or needy beneficiaries (Razavi and Miller, 1995; Tinker, 1990). It maintained that the reason women were subordinate was their exclusion from the market sphere and economic processes, mainly due to their limited access to and control over factors of production. The approach therefore put more emphasis on women's productive roles at the expense of their reproductive functions (Reeves and Baden, 2000).

In practice, this thinking was then evident in development projects that were initiated by international organisations under the influence of this WID approach. As asserted by Moser (1989), development interventions influenced by this approach were mostly

limited to cases where the economic argument was strong. She argued that the focus of these development projects was therefore only on meeting women's practical needs, by for example, creating employment and income generating activities, improving access to credit and education. Practical gender needs 'are those needs which are formulated from the concrete conditions women experience in their engendered position within the sexual division of labour. Unlike strategic gender needs, they are formulated directly by women in these positions, rather than through external interventions' (Moser, 1989: 1803). Moser further argued that meeting these practical needs is, however, inadequate to address gender inequalities. It is only when women's strategic needs i.e. 'needs which are formulated from the analysis of women's subordination to men' (Moser, 1989: 1803), are met as well, that women can achieve greater equality and therefore challenge their subordinate position.

Although the Gender and Development (GAD) approach, developed in the 1980s was intended to address the short falls in the WID approach, (and more specifically the focus on sex and not gender as a determinant of women's subordination – see Rathgeber, 1990), the thinking that women's issues only matter when they matter economically still persisted, even through the GAD period. For example, a study by Razavi and Miller (1995) found that the adoption of gender issues by the World Bank was based on research that highlighted the direct and positive synergies between investing in women and achieving the Bank's main objectives. For the International Labour Organisation, Razavi and Miller found that it was only when arguments on women's issues were backed up by solid economic analyses and research findings that they had any influence on the organisation's policies and work.

Even more recently, this perception is still evident as revealed in the case of feminisation of agriculture. After over three decades of mobilising empirical evidence by feminist scholars on the neglected role of women in agriculture (Bryson, 1981; Jiggins, 1998; Saito *et al.*, 1994; Creevy, 1986), it is only after the global food crisis of 2008 that global attention has been caught. There is now a greater appreciation in development practice at the global level that addressing gender inequality in agriculture is a central part of addressing the current agricultural challenges (see FAO, 2011). Whilst this realisation of the link between gender and agricultural development may be a positive development towards addressing gender inequalities in agriculture, it reinforces the perception that gender issues deserve policy attention because of their influence on production and economic life outside the home (Afonja, 1981). The concern seems to be more on national and global level food security and agricultural production, and not

on the household level. As highlighted in Chapter 1, this may mask impacts that relate specifically to FHHs. Furthermore, it may also mask intra-household impacts where, as is prevalent in many developing countries, distribution of food within households is skewed such that some individuals, usually women or (girl) children, may be under-nourished (Uttaro, 2002; Makell, 1996; Levin *et al.*, 1999; Pinstrup-Anderson, 2009).

Therefore, the fact that attention is being drawn to women's issues in agriculture due to their impact on national and global food security and agricultural production, with limited attention given to household-level food security, demonstrates that gender blindness still blurs agricultural policy processes. Specifically, it implies that policy concerns are mainly on addressing food security challenges. Although the relevance of gender issues is acknowledged, there is still limited understanding of and conviction for the inter-play between gender, food security and agricultural policy. The gender inequalities in agriculture need to be addressed, not only for the sake of national and global food production, but also for the sake of women themselves. The next section therefore discusses in greater detail how female farmers are involved in the agriculture sector, highlighting the value of their contributions as well as the conditions under which they work.

3.3 Feminisation of Agriculture in Practice

Since Boserup's pioneering work, various scholars have highlighted the different forms in which feminisation of agriculture is taking place. This has included feminisation of agricultural labour, feminisation of farm management, feminisation of smallholder production, and feminisation of cash crop production. It is necessary to provide a thorough review of these various forms in order to comprehensively understand the phenomenon (its variations across geographical areas and socio-economic environments) and consequently its link to food security. Moreover, because women are not a homogenous group (see Takane, 2007; Horrell and Krishnan, 2007), it is also necessary to understand the specific place and role of women from different household types within the phenomenon. Broad assertions that the involvement of women in the agricultural sector is increasing fail to capture the gender dynamics that are at the centre of the feminisation of agriculture phenomenon.

3.3.1 Feminisation of agricultural labour

Feminisation of agricultural labour is said to occur when the proportion of farm work done by women increases, or when women's engagement in paid agricultural work increases (Zhang *et al.* 2006; de Brauw *et al.*, 2012). Based on rigorous empirical research for over two decades, it has now become broadly accepted that 'farming in general has become a female occupation' (Jiggins, 1998: 252). In many developing countries, women are depending more on agricultural work due to their limited access to other non-farm jobs (Agarwal, 2011). Based on reviews of data from Latin America and sub-Saharan Africa on changes occurring in agriculture since the mid-1980s, Lastarria-Cornhiel (2006) highlights the increasing participation of women in the agricultural sector, either as independent producers, as unremunerated family workers, or as agricultural wage workers. Similarly, Deree (2005) also talks about the increasing role of women as wage workers in non-traditional agro-export production in Latin America. Based on an analysis of agricultural data from Latin America, Deere observes that women's wage employment in the region has been concentrated in the non-traditional agro-export sector of fresh vegetables, fruits and flowers. She observes that although estimating the magnitude of women's employment in these industries is difficult due to the precarious and temporary nature of the employment, reviews of case study literature show that a higher proportion of women than men are employed in the sector. For example, women constitute 70-80 percent of those employed in flower

production in Mexico, two thirds of field labour in grape production in Brazil, and 60- 80 percent of workers in the flower industry in Columbia.

Such high employment of women in non-traditional export crops has also been observed in some sub-Saharan African countries such as Kenya, Uganda, Zambia, Zimbabwe, Ethiopia and South Africa where women comprise between 60-80 percent of labour (Dolan and Sorby, 2003; Fontana, 2009; Dolan *et al.*, 2003; Langan, 2011; Tallontire *et al.*, 2005). In explaining the increasing employment of women in these industries, several scholars have highlighted how women's socialisation, characteristics and domestic requirements make them suitable for or lead them to such kinds of employment (see Fontana, 2009; Deere, 2005; Dolan 2005; Barrientos *et al.*, 2003). Deere (2005: 30) asserts that non-traditional export crops are highly labour-intensive, particularly at certain peak periods, such as harvesting. As such, the labour demands for the industry are for a flexible labour force that can be employed for only a few months in the year and not permanently. Because of women's needs to fulfil production as well as reproduction roles (this is discussed in more detail in Section 3.4.2), they are more willing than men to accept short-term and casual employment. The non-traditional agro-export industries therefore see women as a cheap source of labour that can be drawn upon seasonally.

The high employment of women in these industries arises not only from the industry's need for a flexible labour force, but also from a need for nimble fingers (Lastarria-Cornhiel, 2006; Dolan, 2005; Tallontire *et al.*, 2005). 'Women are regarded as submissive and docile, having greater dexterity for tasks that require care and patience' (Lastarria-Cornhiel, 2006: 5). Similarly, Tallontire *et al.* (2005: 565) report that companies perceive women to be suitable for this kind of work due to their 'capacity to perform tedious and delicate work without complaint'.

However, as mentioned above, this form of feminisation of agricultural wage labour is mainly evident in countries that have active non-traditional export industries. For Malawi, a country with no non-traditional agro-export industries, feminisation of agricultural labour is more evident in the form of increased involvement of women in paid casual work on other smallholder farms. Several authors have highlighted that in Malawi, the most common form of paid agricultural work is '*ganyu*' (Takane, 2008; Kerr, 2005; Bryceson, 2006; Mtika, 2001; Whiteside, 2000; Leach, 1995). *Ganyu* is defined as a 'range of short-term casual labour contracts that are widely practiced in the country' (Takane, 2008: 184). Although *ganyu* is practiced in other industries as well, it

is most common in the agricultural sector (Whiteside, 2000). A study by Leach (1995) involving 420 smallholder farmers in four of the eight Agricultural Development Divisions (ADDs) in Malawi, found that 64% of the *ganyu* done by smallholder farmers was agricultural-related and done on farms of other smallholder farmers.

Although men, women and children are all involved in *ganyu*, several studies have indicated that women from FHHs are more involved in it than those from MHHs (Whiteside, 2000; Takane, 2008; Peters, 1988; Vaughan, 1987; Kerr, 2005). The high dependence of FHHs on *ganyu* is due to their limited access to other wage labour or other sources of income (Vaughan, 1987). In addition, as Whiteside (2000) asserts, FHHs who typically have lower labour availability and earn lower wages than MHHs, tend to spend more time on *ganyu* in order to raise enough cash or food to meet their needs.

A study conducted in one district in Northern Malawi by Kerr (2005) reported that since the repeal of the Special Crops Act in 1994, and the subsequent allowing of smallholder farmers to grow and market tobacco, there has been an increase in *ganyu* work demanded by tobacco farmers. In most cases, tobacco farmers are men and wealthier than female farmers. Similar observations were made for the Southern region by Peters (1997) based on a longitudinal study of seven villages in the region from 1988 to 1999. She argued that reliance of FHHs on *ganyu* as a source of food and income had increased over this ten-year period, a period which coincided with increased tobacco production by male smallholder farmers. Evidence provided by other studies on Malawi's tobacco production suggests that tobacco is more rewarding than other cash crops and smallholder farmers who engage in it have been able to increase their incomes significantly (Prowse, 2009; Orr 2000; Zeller *et al.*, 1998). It can therefore be concluded that agricultural patterns in Malawi are changing in a way that is increasing the demand for female labour but is less rewarding for women. As men are increasing their production of tobacco, women are increasing their engagement as *ganyu* labourers on the tobacco farms, and earning lower wages than men for it.

3.3.2. Feminisation of smallholder production

In addition to the feminisation of agricultural wage employment, feminisation of agriculture has also been documented in the form of increased engagement of women in domestic agricultural work, termed 'feminisation of smallholder production' by Deere (2005: 1). It is widely held that in many developing countries, involvement of women in domestic farm activities is increasing (Mtshali, 2002; Butt *et al.*, 2010; FAO, 2011; UNDP and FAO, 2007; Lastarria-Cornhiel, 2006). This is despite queries on how women's contributions to domestic farm work are measured. Doss (2011) maintains that generally men and women produce food together and this makes the process of assigning the output separately to men or women very complex, if not impossible. She further argues that even if this were possible, there is inadequate global data that would allow measurement of the share of food produced separately by women. To do this would, for example, require 'very detailed agricultural production data that included labour inputs for different tasks for men and women and agricultural outputs across a wide range of production systems' (Doss, 2011: 4). This level of detail is, however, not captured in most censuses and is therefore not available on an international level.

In addition to this challenge, many scholars have also documented the under-enumeration of women's role in agriculture and other economic activities (see Mahmud and Tasneem, 2011; Katz, 2003; Deere, 2005, Beneria, 1992; Spring 1995; Samarasinghe, 1997; Jiggins, 1998). An analysis by Deere in 2005 where data from household surveys was compared to that from agricultural censuses for 19 Latin American countries found under-reporting of women's work in the censuses ranging from 60 to 500 percent. Shortfalls in how census data is collected, who collects it and how it is interpreted have all been cited as potential causes for such under-enumeration of women's work. Deere (2005) argues that most censuses tend to emphasise income generating activities and thereby underestimate subsistence production. Because agriculture is often defined as field work, subsistence activities involving women such as rearing small livestock and kitchen gardening are therefore undercounted or excluded. She also highlights the fact that during censuses, women (in Latin America, for example) who are heavily involved in agriculture are likely to mention 'home care' as their primary responsibility, overlooking their involvement in agriculture. Similarly, Hussmanns *et al.* (1990) also explain that in most developing countries, women have a tendency to define themselves as 'mere housewives', even when they are economically active in the household. Agarwal (1985) suggests that in most developing countries, male bias in data collection, particularly in censuses, affects

data collection on women's activities. During censuses when male household heads are asked about women's work, they usually report the women's economic productive work simply as part of housework. In addition, Spring (1995) explains that under-enumeration of women's work is a result of social and cultural norms and practices that undermine recognition of women's economic and decision making roles as well as limit enumerators' access to the women.

However, improvements in gender data collection methods at both national and international levels are being observed (Deere, 2005; Spring, 1995). Scholars are also using various methods including surveys and country case studies to capture women's involvement in domestic agriculture. For example, based on evidence generated from country studies carried out in four African countries (Burkina Faso, Nigeria, Zambia and Kenya), Saito *et al.*, (1994) observe an increasing engagement of women in more farm activities and phases of the production cycle. They argue that due to male migration from the rural areas and therefore from farm activities, women are taking over some farm activities such as land preparation, which were traditionally only performed by men. They add that in some cases, the women are actually carrying out most of the farm activities themselves and only getting help from family or hired labour and not their husbands. Mtshali (2002: 87) also observes that in KwaZulu Natal, South Africa, social changes such as male migration and children's education are causing women to take over more farm activities. He cites examples where in order to allow children to go to school, women have to take over farm work traditionally carried out by children, such as caring for livestock. Lastaria-Cornhiel (2006: 4) also observes that case studies from Africa show that within the smallholder sector, 'women are assuming more responsibility in agricultural production either as principal farmers or as unremunerated family workers'.

This high involvement of women in domestic agricultural production is evident in food production data from many parts of the world. A large literature on smallholder production reports that women constitute the majority of food farmers, producing over 80% of the food world-wide (Gawaya, 2008; Kes and Swaminathini, 2006; Mehra and Rojas, 2008; FAO, 2011; Ajani, 2009; Action Aid, 2010). In addition to the FAO's State of Food Agriculture published in 2010, several scholars have in recent years, and in reference to the global food crisis, highlighted women's high but neglected role in food production (see Holmes *et al.*, 2009; Agarwal, 2011; Mehra and Rojas, 2008). Agarwal (2011: 22) argues that gender inequalities are a significant part of the global food crisis and therefore a critical part of the solution too. Based on findings from over 20 years

research work by the International Centre for Research on Women, Mehra and Rojas (2008: 1) also make a similar assertion:

‘A key failing of past efforts to reduce hunger and increase rural incomes has been the lack of attention paid to women as farmers, producers and farm workers – both wage and non-wage... To move forward, however, the world community must make a significant shift in its thinking about women, food security, agriculture and the global marketplace to see women as key economic agents of change in rural communities who in their own right contribute to local, national and global food security and economic growth’.

Mehra and Rojas further argue that despite the common myth that women are exclusively subsistence farmers, the reality is that they work as both subsistence and commercial farmers, producing both food and cash crops. Saito *et al.* (1994) made a similar observation when they suggested that another aspect of feminisation of agriculture is the increasing involvement of women in the production of cash crops, an activity previously dominated by male farmers (also Doss, 2002).

Evidence on the increased participation of women in cash crop production is, however, inconclusive. A substantial amount of literature and empirical evidence however suggests that in Africa, production of market-oriented crops is still mainly the domain of male farmers and that the participation of women in cash crop production is typically lower than that of men. Women are more associated with the production of food crops (Brown, 2008; Gladwin *et al.*, 2002; Enete and Amusa, 2010; World Bank *et al.*, 2009; Gladwin, 2002). In Ghana, where cocoa is the largest cash crop, Vigneri and Holmes (2009) observe that women only represented 20% of the cocoa farmers in the country. They also reported a similar trend in Uganda’s coffee production and marketing. Doss (2001) also suggests that even for crops such as maize, which can be both a cash and a food crop, gender divisions still exist where varieties that are produced more for the markets, usually hybrids, are classified as men’s (Doss, 2001).

This domination of a particular gender in the production of some crops has led to the classification of crops as either men’s or women’s crops (Koopman, 1993; Doss, 2001). Cash crops are therefore classified as men’s crops and food crops as women’s. This classification does not however imply exclusive production of a particular crop by one gender since for most crops both men and women are usually involved at different stages of crop production. As Doss (2002) notes, the classification is mainly based on

who makes the decisions about which crops to grow and who controls the output. When changes arise regarding these, consequential changes in the gender classification of the crops also arise (Hill and Vigneri, 2009). There are a number of examples where crops that were originally classified as female crops became controlled by men as they became commercialised or financially lucrative (World Bank *et al.*, 2009; Kasante *et al.*, 2001; Doss, 2001; and Lilja and Sanders, 1998). This includes the case of groundnuts in Zambia (Wold, 1997); rice in the Gambia (von Braun *et al.*, 1994) and leafy vegetables in Uganda (Shiundu and Oniang'o, 2007).

Similar trends have also been documented for Malawi. Several scholars and policy documents have, since the 1980s, documented the high involvement of women in food crop production (Chipande, 1987; Spring, 1995; Gladwin, 1992; Lele, 1989; Smale and Heisley, 1994; Dorward and Chirwa, 2011; UNDP and FAO, 2007; GOM, 2012). Empirical evidence from the country suggests that although women are investing some work in cash crops, cash cropping remains the domain of male farmers and more men than women are involved in cash crop production (GOM and World Bank, 2007). A review of national data from the Second Integrated Household Survey (2004/05) by Mathiassen *et al.* in 2007 indicates that there is a noticeable difference in the survey data between the crops grown by female –headed households and those grown by MHHs. They indicate that FHHs tended to grow food crops for household consumption while MHHs tended to grow cash crops. Even in terms of maize production, more FHHs grew local maize which is mainly for home consumption, as opposed to hybrid maize, which is used for both sale and household consumption.

These gender divisions in crops grown once again demonstrate the need for gender considerations in agricultural policies. Agricultural Policies that neglect such factors are likely to be inappropriately designed for the achievement of their food security or other objectives. Moreover, such policies are likely to unintentionally exclude either male or female farmers, depending on the crop focus. It is therefore necessary that gender analyses are conducted on and regarding agricultural policies so that both the intended and unintended gendered effects are understood. Furthermore, it is also necessary that the bases of such gender variations are explored. In this regard, it is noteworthy that several scholars have examined why women are more involved in food crop production than in cash crops. Doss (2001) asserts that women grow food crops out of their choice – because they consider it their responsibility to feed their households, while the provision of cash income is considered men's responsibility. Others have however asserted that various circumstances force women not to engage in cash crop

production. Two seminal studies by Fafchamps (1992) and Key, *et al.* (2000), demonstrated that scale of production is often important for engaging in cash crop production. It is only when households are able to achieve food security that they engage in cash crop production. Consequently, women, who typically have limited access to factors of production and achieve lower crop productivity, are constrained from moving into cash crop production. In addition, based on case study reviews from Uganda and Ghana, Hill and Vigneri, (2009) also argue that because cash cropping entails accessing output markets, women are disadvantaged due to the challenges they face producing at scale, in achieving quality, and in securing low costs of transacting in markets. Moreover, as Morrison *et al.* (2007) argue, female farmers may even be physically constrained from accessing markets. For example, they may face physical harassment by market officials when the high cost of market permits leads women to market their wares outside market boundaries.

For the case of Malawi, Mathiassen *et al.* (2007) suggests that female farmers are constrained from moving into cash crop production due to their lack of complementary inputs. They argue that FHHs grow more local than hybrid maize varieties because they lack seed and fertilisers that are normally required for hybrid maize production. In addition, as Uttaro (2002) elucidates, yields from unfertilised hybrid maize are not substantially better than local maize to justify the price of seeds. Therefore, because of women's limited access to fertiliser and/or credit for purchasing fertilisers, they tend to grow local maize as opposed to hybrid maize. Mathiassen *et al.* therefore conclude that the reason FHHs grow food crops more than cash crops is not only to get food but it also because they lack the commercial inputs needed for cash crop production. Such a conclusion raises questions on whether the FHHs would increase their production of cash crops if they had better access to the required inputs. More specifically, does making seeds and fertilisers, the main commercial inputs required for hybrid maize production, through the Malawi FISP for example, encourage FHHs to commence or increase their production of hybrid maize? This information is largely unavailable because, as will be discussed in Chapter 4, detailed research on utilisation and impact of the Farm Input Subsidy Programme (FISP) on female farmers is largely unavailable.

3.3.3 Feminisation of farm management

Another form of feminisation of agriculture that is worth exploring, particularly in light of the position of women in different household types is feminisation of farm management. Some scholars have also asserted that because of the absence of men from the farm due to rural out-migration, women are not only increasing their labour input into farming, but they are also increasing their decision-making on farm matters (see de Brauw *et al.* 2006; Deere, 2005; Zhang *et al.*, 2006). De Brauw *et al.* (2006: 2) has defined feminisation of farm management as occurring 'when women begin to make decisions about farm production, such as what crops to produce, the amount of inputs to use, and how much produce to sell.' Zhang *et al.*, (2006: 6) also describe it as occurring when women gain greater access to agricultural incomes or 'dominate the execution of specific agricultural activities in which income is collected'. De Brauw *et al.* (2012) however add that this form of feminisation of agriculture is difficult to measure, and consequently, they simply define it as occurring when the household is headed by a woman.

Although it may be true that due to the absence of men, women in FHHs may have greater autonomy over farm matters than those in MHHs, simply associating feminisation of farm management to FHHs may be too simplistic. Firstly, it assumes that FHHs are one homogeneous group and neglects the differences that exist in decision-making between de jure and de facto FHHs. Takane (2007) observes that variations exist between de jure and de facto FHHs, not only in terms of incomes, but in terms of household and farm decision-making as well. Similarly, a study by Kennedy and Peters in 1992 on the interaction of income and gender of household head on food security in Malawi and Kenya, highlighted that in de facto FHHs, although it is the women who manage farms and households for long periods of time, the absent men still retain decision making powers over important matters (Kennedy and Peters, 1992). This includes such decisions as what crops to grow, how to utilise subsidised fertilisers, and where to sell their produce. In de jure FHHs on the other hand, the female heads are solely involved in such decision making. The FAO (1995) also made similar assertions regarding the de facto FHHs created in many African countries due to male-migration from rural areas. As Kennedy and Peters (1992) therefore argue, simply engaging in a dualistic comparison between male-headed and FHHs in discussing decision making over farm matters may mask the complex processes that distinguish various types of FHHs (Kennedy and Peters, 1992).

Secondly, associating feminisation of farm management only with FHHs assumes that women in MHHs are not involved in decision making over farm matters. A study by Chirwa *et al.* (2011) on intra-household use of fertilisers based on the Malawi FISP found that, usually, households had several plots which were controlled by different household members. They documented the existence of female-controlled plots within MHHs and highlighted that women in MHHs mainly make decisions pertaining to food crop production, including the usage of fertilisers on plots growing food crops. Their analysis therefore raised the visibility of women in MHHs. As Chant (2003) considers, women in MHHs are usually overlooked because of perceptions that FHHs are the poorest of the poor – that poverty is concentrated in households headed by women.

Lastly, the association of feminisation of farm management with independent decision making by female farmers overlooks the various circumstances that limit independent-decision making by rural households. In many parts of Africa, evidence suggests that due to poverty, households, particularly those headed by women, are unable to make their preferred decisions. Codjeo (2010) observes that due to their lack of factors of production, FHHs are usually forced to take less than optimal farming decisions. Similarly, Uttaro (2002) cites 'distress sales' of maize as a case where farmers sell their crops at lower prices and buy back later in the season at higher prices. The choice to sell crops is therefore forced on them by their desperate need for other basic livelihood requirements during the harvest period. Therefore, although the environment may be suitable for independent decision making (due to male-absence), the livelihood situation of women may not allow it.

It is therefore evident from the above discussion that feminisation of agriculture is multi-faceted and that the involvement of female farmers in the sector varies not only according to household type, but according to socio-cultural and economic conditions as well. Because this research is grounded in the case of Malawi as a case study, it is noted here that the most common form of feminisation of agriculture in the country is feminisation of smallholder agriculture where women from all household groups are increasingly getting involved in more farm activities. Female farmers, and more particularly those from FHHs, are also increasingly engaging in paid agricultural casual work. Whilst it is important to recognise these various forms of feminisation of agriculture, it is even more important to understand their implications. The following section therefore focuses on this, discussing in detail the conditions in which female farmers operate and the consequences thereof.

3.4 Implications of feminisation of agriculture

Feminisation of agriculture has implications for household and national food and agricultural production, as well as for the economic and social welfare of female farmers. The literature that discusses impacts of feminisation of agriculture on women's welfare has largely suggested that despite the increasing participation of women in agriculture, the benefits have remained limited (Vepa, 2005, Fontana, 2009; Lastarria-Cornhiel, 2006). Although some scholars see the increased decision making on farm matters associated with feminisation of farm management as a positive development for female farmers {see for example Zhang (2002) and Lastaria-Cornhiel (2006)}, there are several reasons that suggest that female farmers may not be benefiting from the phenomenon.

Firstly, in terms of feminisation of agricultural wage labour, several authors have emphasised the growing vulnerability in working conditions for women in the non-traditional agro-export industries discussed in Section 2.3.1. (see Fontana, 2009; Barrientos *et al.*, 2003, Kabeer, 2003; Tallontire *et al.*, 2005; Dolan *et al.*, 2002). Because women are mainly recruited on a non-permanent basis, either as seasonal or casual workers, they are generally excluded from normal employment benefits such as maternity leave, housing benefits, severance pay or trade union representation (Tallontire *et al.*, 2005: 565). These concerns have also been documented by Dolan *et al.* (2002), based on a review of the flower industry in Kenya. Their analyses revealed that the flower industry in Kenya had little consideration for women's reproductive roles. Consequently, they were subjected to compulsory overtime, denied sick pay, maternity-leave or child care services. Other evidence has also shown that generally women employed in these industries get lower wages compared to those earned by men (Fontana, 2009; Barrientos and Dolan, 2003, Kabeer, 2003; Tallontire *et al.*, 2005; Dolan *et al.*, 2002, Vepa, 2005). Women however still accept such employment due to their urgent needs and a lack of alternative income generating activities (Lastarria-Cornhiel, 2006).

Even for the case of *ganyu* in Malawi, there is consensus in the literature that women are paid less than their male counterparts (Leach, 1995; Whiteside, 2000; Kerr, 2005; Peters, 1988; Takane, 2008; Anderson, 2012). A review of *ganyu* payment rates in Balaka district by Whiteside (2000) showed that men earned about Malawi Kwacha 20 per day, compared to Malawi Kwacha 5-10 per day for women. She also indicated that women were restricted to *ganyu* opportunities close to their homes, whereas men could

go beyond their villages in search of more rewarding *ganyu* opportunities. As will be discussed later in Section 3.4.2, the need to fulfil reproductive and community roles means that women are constrained in the manner that they can pursue and fulfil their productive roles (Moser, 1989). The challenges with *ganyu* for female farmers go beyond low wages. Other evidence suggests that *ganyu* perpetuates food insecurity for participating households. Peters (1998) observes that because *ganyu* is commonly practised during the rainy season (growing season), labour is used on other farmers' farms at a time when it is also required for their own crop production. The result is therefore not only a double labour burden for farmers engaged in *ganyu*, but lower crop production and productivity on their farms as well.

It is therefore seen that feminisation of agricultural wage labour, whether in terms of *ganyu* or employment in the non-traditional agro-export industries, has not had a positive impact on women's welfare. As Vepa (2005: 2563) concludes, 'the first major implication of feminisation of agriculture is the increasing burden of work on women and a lowering of their labour compensation'.

Secondly, empirical evidence also suggests that even in terms of feminisation of smallholder agriculture, female farmers are also disadvantaged. The available evidence is however mainly from China as there is a paucity of research on the implications of feminisation of smallholder agriculture for female farmers in Africa. De Brauw *et al.* (2012), Song (1998) and Song and Jiggins (2000) have all looked at the implications of feminisation of smallholder agriculture on women in China. De Brauw *et al.* (2012) hold that the increased workloads and responsibilities for women reduce their welfare. Song (1998) comments that women are being forced to work more hours and take on increased responsibilities, which could reduce their utility. Furthermore, Song and Jiggins (2000) also argue that the increased involvement of women as principal farmers or wage labourers reduces their opportunities for more rewarding off-farm employment. Women are therefore seen to be both economically and socially disadvantaged by increasing their participation in agriculture. While this information is beneficial for understanding the implications for feminisation of smallholder agriculture for female farmers, its focus on China (where the socio-cultural and economic conditions are different from Africa) makes it less relevant for understanding the implications of this phenomenon for female farmers within the African context.

Within the general agricultural policy literature however, the concerns with feminisation of agriculture have been more on the implications of the phenomenon on food and

agricultural production at national and global levels. The literature has highlighted how food and agricultural production are being negatively affected because women, who are the key farmers, face many challenges that reduce their crop production and productivity (Codjoe, 2009; Katz, 2003; Song and Jiggins, 2000; de Brauw *et al.*, 2012). It is widely acknowledged that because of a lack of access to factors of production, fields cultivated by FHHs and female farmers have a lower productivity than those cultivated by men (Hill and Vigrieri, 2009; Holden *et al.*, 2001; Quisumbing and Otsuka, 2001; Udry, 1996; and World Bank, 2001). This is widely accepted despite criticisms on how the differences in productivity between male and female farmers are measured. Quisumbing (1995) for example, criticises the use of the production function in econometrics to estimate labour productivity differences by gender. She highlights the challenges of isolating a man's and a woman's labour input where a plot is jointly cultivated, as is the case for most farms in Africa. In addition, she argues that by measuring labour contribution in time units, one overlooks the fact that labour is not uniformly and consistently applied over a period of time.

Notwithstanding such criticisms, extensive literature that has discussed why female farmers are less efficient producers highlights women's limited access to factors of production such as land, credit, labour, technology and extension services as key factors affecting their productivity (Peterman *et al.*, 2009; Hill and Vigneri, 2009; The World Bank *et al.*, 2009; Morrison *et al.*, 2007; Doss, 2001). It is therefore acknowledged that women's lower productivity is not as a result of innate biological differences, but as will be discussed below, a result of institutional and cultural factors that limit their access to factors of production.

3.4.1 Women's access to land

Firstly, access to land is one of the major challenges affecting women farmers' productivity. Access to land is a basic requirement for farming and those who have ownership and control over land usually also command wealth, status and power in many societies (Agarwal, 1994). In agrarian economies, land is more than just a resource on which to undertake farming. In many places, it is also used as collateral for accessing credit (King *et al.*, 2007; Storey, 2004; Diagne *et al.*, 2000). Moreover as presented by Cotula *et al.* (2006), secure access to land creates an incentive for the owner to invest their labour and other resources in order to increase the value of the land and make it more productive.

Across geographical regions, women typically have limited access to land, and usually farm on less fertile and smaller land holdings than MHHs (Doss, 2001; Takane, 2007; Gladwin *et al.*, 2002; Quisumbing and Pandolfelli, 2010; Kevane, 2004). In Africa, it is documented that women only own about 1 percent of titled land on the continent (Actionaid, 2010). Without access to and control over land, women fail to make long term farming investments, which may be required to boost their farming output and productivity. It is therefore seen that lack of access to one factor of production is likely to have implications for access to or use of another.

It is held that women have less access to land than men for a variety of legal and cultural reasons (Kevane, 2004; Peterman *et al.*, 2009). In many places in Africa, legislation undermines women's access to land and security of tenure (Kevane and Gray, 2008). In talking about redistributive land reforms, Razavi (2007) maintains that in most developing countries where they are being implemented, they have not succeeded in reasonably improving women's access to land. He argues that irrespective of the lack of comprehensive empirical data, 'a judicial reading of the existing evidence points to the severe limitations of land markets as a channel for women's inclusion' (Razavi, 2007: 1486). Peters (2010) finds that the introduction of formal titles has led to erosion in women's land rights which existed in matrilineal societies, because male household heads were consistently being designated the official title holder. This supports general arguments made in reference to land reforms in most parts of Africa that they have led to the concentration of land in the hands of those who can proclaim ownership, such as community leaders and male household heads, at the expense of poor rural women (Behrman *et al.*, 2011; Lastarria-Cornhiel, 1997).

It has also been observed that even where a conducive legislation or a conducive legislative framework is in place, other factors may still limit women's land rights (Amanor, 2006). Quisumbing and Pandolfelli (2010) note that in some cases, a lack of knowledge on the legal provisions by women and weak implementation of legislation contributes to women's failure to exercise their land rights. Fletschner and Kenney (2011: 3) make a similar observation when they highlight that even in countries where laws are designed to protect women's land rights, women's access to those rights is limited because the laws tend to be loosely regulated and implemented. In Malawi, Mbaya (2002) contends that although legislation pertaining to the acquisition of freehold land does not discriminate between the sexes, women do not enjoy equal rights as men mainly due to the biases of those responsible for land administration. Moreover, in some cases, customary practices contradict legal provisions. Obeng-Odoom (2012) highlights the case of South Africa where the state passed the Communal Land Rights Act (2004) which contained explicit provisions for improving women's access to land. In practice however, women failed to benefit from the reforms because they were grounded in customary systems that were largely biased against them. Similar observations have been made by Kishindo (2004) regarding the new land policy in Malawi. Prior to the enactment of the policy, Kishindo (2004: 223) observed that its objective of providing 'gender-neutral' access to land was contrary to existing cultural norms especially in patrilineal societies. As such, it was likely to cause resentment among traditional leaders as well as those who benefited from the status quo, such as chiefs and village heads.

In many sub-Saharan African countries, the majority of the land remains under customary law where land rights are held by the communities as a whole and local chiefs exercise trusteeship on behalf of the community (Behrman *et al.*, 2011; Deininger *et al.*, 2003; Markelova and Meinzen-Dick 2009; Matchaya, 2009; Chirwa, 2008). In Malawi, most of the land cultivated by smallholder farmers falls under this category and amounts to approximately 69% of the total land in the country (GOM, 2001). This means that cultural systems have a significant influence on how land is acquired, utilised or even disposed of in the country; and in most cases, this is biased against women.

Although in principle, matrilineal systems of land ownership in the country are supposed to favour women, evidence suggests otherwise (Mbaya, 2002). Holden *et al.* (2006) argue that securing land rights is a challenge, not only in most parts of Africa that have patrilineal traditions, but even in Malawi with predominantly matrilineal

systems of land ownership. Similarly, a study by Oxfam in 2010 revealed that even in matrilineal societies where women had customary access to land in their own right, the lack of legal or statutory capacity prevented them from acting independently in such matters as property transfer, application for credit and all other legal transactions. This has also been confirmed by Mbaya (2002) who contends that while women's primary rights to land in matrilineal systems in the country may exist in theory, in practice, the woman's tenure is at the discretion of her maternal uncle. Despite their rights to the land therefore, the women do not have any power to control the use of the land or its products.

In general therefore, Malawi's case demonstrates and supports arguments that in many parts of Africa, women are disadvantaged in terms of both statutory and customary land tenure systems (Behrman *et al.*, 2011; Kevane, 2004; Peterman *et al.*, 2009; Agarwal 1994; Lastarria-Cornhiel 1997). Consequently, even when women are increasingly engaging in farm activities, their limited access to and control of land means that they cannot control the output from land, or even make decisions on utilisation of land. They increasingly become agricultural workers and not beneficiaries.

3.4.2 Women's access to labour

Another productive resource that women (and FHHs) lack is labour (Vepa, 2005; de Brauw *et al.*, 2012). With specific reference to FHHs, it has been mentioned that one of the main reasons why they have limited labour availability is the 'missing or absent man' in the household. Due and Gladwin (1992) note that FHHs, with no able bodied male (or additional adult female) present in the household, are usually smaller in size than joint-headed households, which have both a man and a woman. Consequently, they have less labour available for agricultural production which has a higher impact in labour intensive farming systems, such as are common in African economies. In addition, Meinzen *et al.*, (2010) also remark that in most cases, FHHs have limited resources for hiring extra labour which may be required for labour-intensive cultivation. They also lack resources for buying labour saving technologies, which paradoxically are meant to assist women (Paris *et al.*, 2001; Quisumbing and Pandolfelli, 2008). Because of this shortage of labour, FHHs are usually forced to adjust their cropping patterns or farming systems. In most cases, less productive or rewarding patterns and farming systems are adopted, leading to reduced crop production and productivity (Codjoe, 2009).

As discussed before, several scholars have argued that feminisation of agriculture is increasing the pressure on women's labour. Lastaria-Cornhiel (2006) contend that while women are increasing their participation in agricultural production, there has been little change in the gender division of labour within the household with regard to both productive and reproductive work. This means that as women increase their time in wage work and cash cropping, their traditional responsibilities within the home are not assumed by men. Statistics by the FAO reveal that in Africa, women perform 80 percent of the work associated with rural domestic tasks, including collecting water and firewood, preparing and cooking meals, processing and storing food, and making household purchases. The implications of further adding to their workload are therefore a lowering of their agricultural productivity (Blackden and Wodon, 2006; Quisumbing and Pandolfelli, 2008).

As highlighted by Moser (1989: 1801), in many developing countries, women's labour is severely constrained by the burden of simultaneously balancing reproductive, productive and community roles –women's triple roles. Women perform reproductive work, which includes child bearing and rearing responsibilities, which are necessary for the maintenance and reproduction of the labour force. In addition, they participate in

productive work in order to generate extra income for the household. Women also engage in local community work, especially in cases where state provision of basic services is inadequate.

Based on Moser's triple roles, Peterman *et al.* (2010) maintains that these roles have a non-trivial impact on women's farming activities. This is especially critical in a country like Malawi where the agricultural sector is highly labour dependent due to low mechanisation (GOM, 2002). Firstly, in order to fulfil all these roles, women have to work very long hours. Studies have shown that in Asia and Africa, women work as much as 13 hours more per week than men (IFAD, 2011). In Malawi, women work an average of 16 hours a day, much higher than the 6 hours that men work (Anderson, 2012; GOM, 2006). In most cases, the issue is not only about the long hours of work, but of the nature of work as well. Porter (2008) observes that much of the work that women in Africa do is hazardous. For example, women carry heavy loads (including agricultural produce) over long distances while pregnant or carrying a baby on their back. The health implications of such burdens would also be significant for their agricultural production.

Secondly, because the triple roles usually happen simultaneously, fulfilling the requirements of one role may sometimes conflict with the requirements of another. For example, fulfilling reproductive roles may interfere with engagement in the productive or community roles. Doss (1999) submits that the additional burden of pregnancy that women bear means that they may be unable to perform some farm activities, particularly during the latter stages of pregnancy.

In recent years, HIV/AIDS has also increased the labour burdens for women. Based on in-depth interviews and focus group discussions held in one district in Uganda on the impacts of HIV/AIDS on agriculture, Parker *et al.* (2009) provide supporting evidence. They explain that just as is the case in many sub-Saharan African countries, women in Uganda provide most of the care for sick children and relatives. Due to the nature of HIV and AIDS-related illnesses, this therefore means long periods of absence from the farm by women, resulting into delays in performing some key farm activities such as weeding, tillage or planting. Because of the time sensitivity of most farm activities, the ultimate result becomes reduced crop output and productivity. Alwang and Siegel (1999) for example report that delayed weeding or planting in Malawi are estimated to reduce yields by approximately 20-30 percent. Furthermore, and as observed by Shah *et al.* (2002), Drinkwater (2005) and Ngwira *et al.* (2001), HIV/AIDS is leading to a

reduction in agricultural labour as affected members spend more time looking after the sick, burying the dead or fulfilling community responsibilities of visiting the sick and attending funerals. Usually, it is women who are mainly responsible for these roles and it is therefore mainly their labour that is affected (Parker *et al.*, 2009).

Lastly, women's labour is also affected by the fact that in some societies, cultural values give powers to men to control their wives' labour (see Kabeer, 1996). Abdourahman (2010: 17) contends that patriarchal societies, including those in Africa, have developed and perpetuated gender roles that allow men to control women's time and labour. Similarly, key informant interviews conducted by Anderson (2012) revealed that in patrilineal societies in northern Malawi, payment of a bride price, 'lobola', gives a husband and his family ultimate control over both her reproductive as well as productive labour. This means that women may be unable to utilise their labour in a manner that they desire or perceive to be most productive.

All these challenges in the use of and access to labour for female farmers therefore have implications for agricultural production and are likely to make them less productive compared to their male counterparts.

3.4.3 Women's access to credit and farm inputs

Formal credit is another resource that is largely unavailable to female farmers in many developing countries. Diagne and Zeller (2001: 4) define access to credit as existing when a household is able to borrow from a credit source, even though for various reasons, it may choose not to. In general terms, access to financial services provides farmers with opportunities for improving their production output as well as their food security (Fletschner and Kenney, 2011). Credit is also important for producers who are unable to cover their short term expenses, or those who want to make capital-intensive and long term investments. Without access to credit, women fail to make the necessary upfront investments to boost their productivity or to bear the additional risks that may be necessary to enhance their livelihoods (Boucher *et al.*, 2008; World Bank, 2007). Detailed studies from Latin America, South Asia, and Sub-Saharan Africa consistently reveal gender inequalities in access to credit and rural financial services (Fletschner, 2009; Diagne *et al.*, 2000). It is illuminating that women's limited access to formal credit is usually not because credit institutions deliberately discriminate against women

applicants, but due to the gender blindness of their services. Based on a review of rural financial services conducted as background research for the State of Food and Agriculture (2010-2011), Fletschner and Kenney (2011) contend that in most cases, women are unintentionally excluded from credit services due to the way the credit services are designed or provided:

‘...the vast majority of rural credit, savings and insurance programmes do not take into account that women’s legal, social and economic position in their communities differ from men’s’ (Fletschner and Kenney, 2011: 3).

It is only when one analyses women’s access to credit using a gender lens that one is able to see the inter-connection between access to credit services and the vulnerable and subordinate position of female farmers. Firstly, women’s limited access to land, livestock or other property that may serve as collateral discourages them from applying for loans (King *et al.*, 2007; Storey, 2004; Diagne *et al.*, 2000; Fletschner and Kenney, 2011). In Malawi however, Chirwa (2002: 11) elucidates that most microfinance schemes in the country resort to group-based lending, as a substitute for collateral. Calling it ‘the biggest innovation in the microfinance revolution’, he explains that it improves access to credit for vulnerable households, including FHHs who are unable to raise collateral requirements demanded by formal financial institutions. Although Chirwa indicates that many micro-credit institutions in the country are targeted at women, other evidence reveals that women’s access to credit services for on-farm agricultural production is still lower than that of men (GOM, 2010; 2012). As Swaminathan *et al.* (2010) also confirm, credit for rural women in Malawi is targeted more at off-farm income generating activities whereas men are provided with more credit for on-farm activities. This reflects a disconnection with the reality of feminisation of agriculture as it is women who are more involved in on-farm agricultural work in the country. Simtowe (2010: 205) also notes that even when women access credit, they may not have full control over its use because men in the household dominate the decision-making over such matters. As a consequence of this, women’s expansion of on-farm agricultural activities remains hampered by this lack of required credit facilities.

Secondly, and as Doss (1999) explores, women’s access to credit may also be restricted by the connection of credit services to cash crop production. Because farmers are expected to prove their ability to pay back their loans, lenders demand confirmation that they will produce a marketable surplus. The extent to which women’s cash crop production is limited, as discussed above, means that most credit institutions

may not be willing to include them. A study of national rural credit institutions in Malawi by Diagne and Zeller (2001) revealed that the services provided by these institutions were largely geared towards income generation. In particular, they were targeted at tobacco and hybrid maize – both of which have been noted to be male-dominated (Mathiassen *et al.*, 2007).

In recent years, the Malawi Rural Finance Company has furthered the gender gap in access to farm inputs credit by limiting its on-farm portfolio to tobacco only (Diagne and Zeller, 2001: 10-11). In the case of Ghana, Schindler (2010) contends that as a result of the formal sector's reluctance to loan to women, women usually rely on informal services for credit such as friends and relatives, money-lenders, or pawnbrokers. Unfortunately, such services are often provided on exploitative terms. Paradoxically, numerous studies have shown that women are more likely than men to repay loans (Diagne *et al.*, 2000). In a study of 350 microfinance institutions in 70 countries, d'Espallier *et al.* (2009) conclude that women are a better credit-risk for microfinance institutions. They note that lending to women is associated with a lower portfolio-at-risk, lower write-offs, and lower credit-loss provisions. Similar observations have also been made regarding the situation in Malawi. Diagne and Zeller (2001) report that high default rates by men in the Malawi Mudzi Fund Credit Scheme led to the exclusion of men from the targeted group.

Fletschner and Kenney (2011) also note that many rural financial programmes have been largely designed and implemented with the male head of household as the intended client. Such programmes fail to appreciate that 'women are active, productive and engaged economic agents with their own financial needs and constraints' (Fletschner and Kenney, 2011: 2). The implications of targeting household head and not individual household members are discussed in Section 3.5 below.

In addition to these factors, it has also been claimed that some cultural norms contribute to limiting women's access to credit and financial services. Such norms include those that restrict women's movements or those that restrict their interaction with members of the opposite sex other than a close relative (Aina, 2006; Esenu *et al.*, 2005). Such restrictions limit women's access to financial training or participation in meetings where they can be informed of credit opportunities. A study by Fletschner and Mesbah in Paraguay in 2010 also found that women were 15-21 percent less likely than men to have basic information about financial programmes in their areas. Without such information therefore, women may even fail to take advantage of any existing opportunities. Even in societies which do not limit women's movements, their

reproductive responsibilities may still limit their movements from the homestead and thus affect their access to financial services.

This lack of access to credit services by female farmers has a direct impact on their agricultural production as it affects their ability to acquire and use inputs such as improved seed, fertilisers and pesticides, which are necessary to increase crop productivity (Hill and Vigneri, 2009). Evidence suggests that typically, less fertiliser is applied to female-managed plots compared to male-managed plots (Chirwa *et al.*, 2011). Over the last decade, various recommendations for improving women's access to fertilisers and other farm inputs have been made. These have ranged from providing credit to women farmers for the procurement of fertilisers, providing subsidised fertilisers to cash-poor female farmers through the use of vouchers, and making fertilisers available to women in smaller packs than the conventional 50 kg bags (see Gladwin, 2002; Quisumbing and Pandolfelli, 2008). In analysing these options, Gladwin (2002) argues that a fertiliser subsidy scheme using vouchers would serve the needs of women better than providing credit for inputs. This is because women may be too poor or may lack control over a cash crop that would have allowed them to get income to repay their loans:

'Without a cash crop, the risk of borrowing is particularly high for women, because they probably have to sell some of their subsistence crop in the hungry months and deny their children food in order to repay the loan. Rather than take that risk, they will often decide not to get credit, not to use fertilizer, and not to increase their yields' (Gladwin, 2002: 21).

The assumption behind making fertiliser available in smaller packs than the conventional 50 kgs was that it would make it more affordable for cash-constrained farmers and that it would also be more portable and thus easier to transport from the market to the farmers' homestead, particularly for female farmers (Gladwin, 2002). Whilst this assumption may hold in theory as it is mainly women who usually head-load agricultural inputs and output between the farm and homestead (Porter *et al.*, 2012), evidence provided by Uttaro (2002) from a case study in Malawi finds that the smaller packs actually have a higher unit price per kg compared to the 50 kg bag. Other evidence has also shown that small bags may be bought by both male and female farmers, but they are usually used on "men's" cash crops and not "women's" food crops (Gladwin *et al.*, 2002). Female farmers therefore lack both the required farm inputs as well as credit services through which they could access the inputs.

3.4.4 Women's access to agricultural research and extension

In addition to credit and farm inputs, agricultural research and extension are other resources that are also disproportionately unavailable to female farmers. Extension is necessary for the speedy transfer of technology and for the provision of training and information to farmers in order to increase their knowledge on farming practices and techniques (Umeta *et al.*, 2011; Feder *et al.*, 2004). In addition, extension services allow flow of information from farmers to researchers so that the development of new crop varieties and farming technologies can incorporate farmers' needs (Anderson, 2007). The need for both research and extension to be gender-sensitive has been highlighted by Meinzen-Dick *et al.*, (2010). They assert that even when progress is made in developing gender-sensitive extension systems, complete gains will never be realised unless research also takes into account women's needs - i.e. both delivery and delivery method must be gender-sensitive. Empirical evidence however reveals gender inequalities in the accessibility of extension services across many developing countries. A recent FAO survey conducted in 97 countries found that female farmers received only 5% of all agricultural extension services (FAO, 2012).

Reflecting on recent trends in extension services in most developing countries, Quisumbing and Pandolfelli (2010) observe that extension services are transforming from being top-down, technology-driven and male-dominated to being bottom-up, demand-driven and gender-sensitive. Although such a transformation seems ideal for addressing women's needs, there is inadequate evidence to confirm that this is also reflected in practice. Malawi is one such country that has undergone such a transformation and an assessment by Masangano and Mthinda (2012) on the impacts of the new Malawi Agricultural Extension Policy finds that the new policy has increased focus on women farmers. The study claims that both government and non-governmental organisations working in the agricultural sector indicate female farmers and small-scale subsistence farmers as their main clientele. Unfortunately, the study does not indicate whether these indications were also reflected in practice. Because the institutions were merely asked who their main clientele were, it was possible for them to simply mention female farmers because they knew that this was the expectation of the new policy. More accurate findings would have been obtained by assessing or observing the situation in practice. More specifically, rather than talking about female farmers, it would have been more valuable to talk to them.

It is widely documented that research and extension services in many developing countries are marred by gender biases and blindness (see Gilbert *et al.*, 2002; Spring, 1995; World Bank and Government of Malawi 2007; World Bank and IFPRI, 2010). A key issue is that even when services are delivered in a way that is supposed to be gender neutral, by not taking into account the specific needs and constraints of women, they actually become gender blind. Many extension providers simply assume that female farmers, just like all other farmers, will benefit equally from their services. As such, efforts are not made to understand, let alone address, the specific needs of women. As Spring (1995) contends, by assuming that technology is gender neutral and that it could be used in a similar way by all farmers, research fails to develop appropriate technologies for female farmers.

Understanding women's specific needs is key to improving access to and benefits from agricultural research and extension. Gender planning, spearheaded by Moser (1989) holds that women and men play different roles in society and consequently have different needs. She therefore argues that policy interventions need to be gender-aware, failure of which may jeopardise the policy implementation and also worsen the position of women. Gender sensitive extension services would therefore need to take into consideration the gender implications of such things as their selection of extension delivery venue, timing and style. As Quisumbing and Pandolfelli (2008) observe, women with lower education levels may be unintentionally excluded from extension that requires high levels of literacy or literacy in an official language such as English that is not the farmers' mother tongue. Place *et al.*, (2007) also note that because of high levels of illiteracy among female farmers in Kenya, women were only able to excel in the adoption of soil fertility technologies that were explained in a simplified way. Similarly, a study in Tanzania by Due *et al.* (1997) found that most women could only attend demonstrations and training courses if they were carried out in their villages, and not in distant areas.

Quisumbing and Pandolfelli (2008) also record that because most research and extension systems do not consult end-users, especially female ones, many new varieties and technologies do not take into account women's needs, preferences and constraints. Evidence suggests that in most cases, women usually have different preferences and needs from those of men (Bourdillo *et al.*, 2007; Spring, 1995). Paris *et al.* (2001) have documented this gender differential in preference for rice varieties in rural India. They found that rather than just productivity, the women placed more importance on such traits as weed-competitiveness, ease of processing and suitability

for food preparation. In order therefore for agriculture research and extension to be gender-inclusive, it needs to go beyond productivity, and must include food quality, ease of processing, resilience, storage capabilities, maturity periods, taste, colour and other characteristics that are particularly important to women (Meinzen-Dick *et al.*, 2010). Spring (1995) has argued that if such women-specific preferences and desirable traits are not taken into account, technology adoption for female farmers will remain low.

Another factor that influences women's access to research and extension is the staffing and conduct of agricultural research and extension staff. It has been observed that in most developing countries, there are significantly more male agricultural scientists and extension agents than women (Meinzen-Dick *et al.*, 2010). In sub-Saharan Africa, Beintema and Marcantonio (2010) note that only one in four of agricultural researchers is female. This lack of gender balance among agricultural researchers could therefore mean that 'women's voices are less heard in critical and often male-dominated policy debates and decision making processes' (Meinzen-Dick *et al.*, 2010: 23). Furthermore, the gender of research and extension staff also has implications on who (between male and female farmers) receives extension services, how it is delivered, and how it is adopted. This is particularly the case in highly sex-segregated societies where for example, meetings between women and men outside the family nucleus are not allowed. In those cases, male extension workers mainly work with male farmers, and female farmers prefer or are expected to work with female extension workers (Farnworth, 2010; Quisumbing and Pandolfelli, 2008). The low numbers of female extension workers therefore affects receipt of extension services by female farmers.

Lastly, women's access to research and extension services is also affected by their lack of complementary inputs (Hill and Vigneri, 2009). Based on an analysis of nationally representative survey data from Ghana, Doss and Morris (2001) note that extension workers tended to focus on farmers who had land, had already adopted an improved technology or had a larger area planted with maize. A similar claim is made by Meinzen-Dick *et al.* (2010) who assert that most extension services are targeted at farmers who own land, or those who are willing and able to obtain credit or otherwise invest in inputs and technological innovations. They also cite a report by the World Bank and IFPRI in 2010 that documented that in Ethiopia, extension workers preferred to work with household decision makers, mostly men, because the extension workers were evaluated by the level of technology uptake. The assumption in such cases is usually that if extension services are provided to the household head, they will trickle

down to the rest of the household members, including female members (Udry, 1996). This perception has however been questioned based on evidence that men do not usually discuss production decisions with their wives or otherwise pass on extension messages to them (Kacharo, 2007; World Bank, 2008; Saito and Spurling, 1992). Extension messages provided to the male household head therefore simply remain with him.

3.5 Limitations of previous efforts to address gender inequalities in agriculture

The discussions above have revealed the inter-dependence of the resource constraints that female farmers face. For example, women's lack of access to land may affect their access to credit, agricultural extension or subsidised inputs. Furthermore, as Blackden *et al.* (2006) note, the access of female farmers to agricultural inputs and technologies may be constrained by their lack of access to credit and membership of rural organisations, as well as their limited education. Similarly, Doss and Morris (2001) also provide evidence that FHHs are less likely to adopt improved technologies than MHHs due to their lack of complementary inputs. It is therefore important that in order to ensure impact on women's welfare, development policies must consider the interaction among inputs and not treat each input in isolation (Quisumbing and Pandolfelli, 2008).

It needs highlighting that whereas during the 1980s it was necessary to make a strong case for agricultural policies to specifically target women farmers, recent years present a different scenario. Evidence of feminisation of agriculture, coupled with evidence of feminisation of poverty, (i.e. the fact that more women and FHHs are poorer than men and male headed households – see Chant, 2003) has simplified the case. The evidence has demonstrated that women are a special group, which needs special consideration when implementing policies targeted at the poor in general (Bradshaw, 2002; de Brauw *et al.*, 2006 and Chant, 2007). Regardless of the indisputable and significant contribution of women to agricultural production and their subordinate position regarding access to factors of production, agricultural policy debates do not comprehensively engage with gender issues. These debates, which are limited and barely internalised, do not engage with such issues as why female farmers remain subordinate to their male counterparts, how they should be targeted by agricultural policies and why previous efforts have had limited effect. This section will therefore discuss why previous efforts have not been fully successful in addressing gender inequalities in the agricultural sector.

Firstly, from the 1990s, there have been increasing concerns that many institutions, both at national and international levels, have been paying lip service to gender issues (Garcia, 2001; Alston, 2006; Fawole and Olajide, 2012). Moser (1993) has noted that since the endorsement of the 1985 UN Forward Looking Strategies for the Advancement of Women by the World Conference to Review and Appraise the

Achievements of the United Nations Decade for Women, many countries felt the need to demonstrate that they were doing something to address gender inequalities. For many developing countries therefore, the motivation to address gender issues arose from a need to fulfil donor and international requirements and not a local or national commitment to address the issues (This is further discussed in Chapter 4).

Secondly, concerns have also been made about policy interventions that are targeted at households instead of directly targeting women (Fletschner and Kenney, 2011). Based on the assumption that if the male household head is targeted, the benefits will spill over to the rest of the household, women have only been directly targeted when they were assumed to have taken over the role of a family head, i.e. when there is no man in the household. Such interventions have, however, not succeeded in addressing women's issues. Firstly, this is mainly because the interventions are based on western planning theories and western notions of the household, and so may not apply in the context of most developing countries (Alderman *et al.*, 1995; Becker, 1991; Bergmann, 1995; Moser, 1993). Such notions place more importance on the household over its individual members, and assume that the household is a nuclear family consisting of a male household head and a dependent woman and children. The household is therefore assumed to function as a single socio-economic unit in which there is equal control over resources and decision-making between all adult members in matters affecting the household's livelihood (Fletschner, 2008). In addition, they also assume clear division of labour within the household with the man primarily being involved in productive work outside the home and the woman taking overall responsibility for the household's reproductive and domestic work (Moser, 1989). These assumptions do not hold in practice for most developing countries, and more so within the African context. Moser (1993) and Abdourahman (2010) have observed that in these contexts, the woman's position is usually subordinate to that of the man and allocation of her labour and other resources is usually under the control of the man.

Furthermore and as argued by Evans (1989), it is not possible for the male household head always to allocate the resources or set goals in the best interests of the entire household. He may be influenced by his own individual goals, which may in fact be in conflict with those of other family members, including the woman. Considerable evidence exists which shows that households do not act in a unitary manner when allocating resources (Meinzen-Dick *et al.*, 2010; Alderman *et al.*, 1996; Haddad *et al.*, 1997). Fletschner (2008: 669) observes that 'the assumption that family members pool their resources and allocate them to their most efficient use may be incorrect. Intra-

household dynamics tend to be complex: spouses may hold conflicting preferences, and they may not fully share their labour, assets, or information’.

A study by Chirwa *et al.* (2011) on intra-household decision making on fertilisers and income use in Malawi confirms this assertion:

‘There was a general perception among women’s groups that when men control resources, they tend to use it for selfish purposes such as beer, at the expense of the welfare of the household’ (Chirwa *et al.*, 2011: 6).

The last factor that may explain why previous policy interventions have not been successful in addressing gender inequalities in the agricultural sector is the difficulty in identifying deserving women. It has been argued that even when a decision has been made to target women with a specific intervention, the process of identifying the intended women can sometimes be complicated. Firstly, as observed by Quisumbing *et al.* (2001), the assumption that women in MHHs are better off than those in FHHs may lead to their exclusion from interventions when they should have been included. In spite of feminisation of poverty, the fact that not all FHHs are poor also provides a channel for spillage of benefits to non-poor households (Chant, 2003). For example, de facto FHHs are usually argued to be less cash poor than de jure FHHs. In addition, it has been noted that FHHs may become male-headed over time through remarriage or cohabitation, thereby resulting in a leakage of benefits to MHHs and thus the exclusion of other deserving FHHs (Buvinic and Gupta, 1997).

Policy interventions may also fail to target the right female farmers due to some cultural norms that make the process of identifying targeted beneficiaries difficult. Chant (2003) makes this observation in particular reference to de facto FHHs. She cites examples where for cultural reasons, women with absent husbands may not be classified as female-headed, even though the husband is not involved in the household’s affairs in any way. Where no customary or legal nullification of the marriage has been made, women with an absent husband may still be classified as married, and their household male-headed, although the contributions of the husband to the household may be very minimal, if at all. Such women may therefore be excluded from interventions on the basis that they are not FHHs, although their individual poverty profile may be worse than that of some FHHs.

While all these factors may be useful in explaining the persistence of gender inequalities in the agricultural sector, this research will build on them and explain

further the role that agricultural policy interventions have played in maintaining these inequalities. This is discussed in detail in Chapter 4.

3.6 Conclusion

The chapter has reviewed literature on the role of women in agriculture, particularly focussing on their increasing involvement in the sector. Although women have long been involved in agriculture, their contributions are becoming more evident. This is not only due to their increasing involvement but also because of improvements in data collection on women's work. In this vein, the chapter has highlighted two main points:

There is a growing recognition of the invaluable role that women are playing within agricultural sectors in many parts of the world, and more particularly in developing countries. Even though there are variations based on socio-cultural and economic factors, evidence provided by various studies has demonstrated that contrary to previous understanding, women are the farmers in most developing countries. Secondly, within the agricultural policy literature, there is an increasing realisation that the reason agriculture is underperforming globally is because women face many restrictions that limit their productivity. More specifically, they face challenges in accessing such factors of production as land, labour, credit and extension services. Agricultural policies therefore need to be targeted at addressing these gender inequalities in order to improve food and agricultural production.

This chapter has also argued that in spite of the above acknowledgement on the link between gender and food security, academic and policy debates on improving food security do not adequately engage with this nexus. As highlighted in the chapter, in spite of their significant contributions to food and agricultural production in many parts of the world, female farmers remain subordinate and more food insecure than their male counter-parts. The focus of agricultural policy debates mainly on national and global food security at the expense of household food security also means that important gender dimensions are excluded. While this chapter has focussed on exploring why gender issues need to be at the core of food security and agricultural debates, the following chapter will engage more on why agricultural policies in Malawi have failed to address the dual and inter-linked challenges of food insecurity and gender inequality. This will be based on a literature review and document analysis of key national agricultural and development policies in the country.

Chapter 4: Gender Integration in Malawi's Agricultural Sector

4.1 Introduction

The significant contribution that women make to Malawi's agriculture is clearly evident. Over 95 percent of women (compared to 88 percent for men) work in agriculture, contributing over 70 percent of the labour force and producing over 80 percent of the food (Sekitoleko, 2004: 92; Mathiassen *et al.*, 2007: 13; GOM, 2002: 89). In spite of this significant contribution, female farmers hold a subordinate position in the country's agricultural sector. Specifically, they face many gender-related challenges that affect their access to and control over nearly all factors of production such as land, labour, credit and farm inputs, resulting in lower crop productivity and output for them. As discussed in detail in the previous chapter, female farmers in the country generally farm on smaller and less fertile land (Takane, 2007); are excluded from accessing extension and other support services (Simtowe, 2010); and are largely denied access to credit services for on-farm agricultural production (GOM, 2010; Swaminathan *et al.*, 2010). However, what is even more striking is the fact that these gender inequalities have persisted despite the government's stated commitment to addressing them. For example, key policy documents in the country indicate that 'gender issues are an integral part of the overall national development agenda' (GOM, 2006: 43) and that gender inequalities in accessing productive resources, development opportunities and decision making need to be addressed in order to positively affect economic growth and development (GOM, 2010).

The objective of this chapter is therefore to engage with these paradoxical issues and explore why the policies and their commitments to addressing gender inequalities have not been successful in achieving their goals. This chapter therefore focuses on answering the research question: 'How are gender issues addressed in Malawi's agricultural and development policies?' Specifically, the chapter intends to shed light on the policy-related factors that have not only caused but have also contributed to sustaining these inequalities. While acknowledging the validity of explanations provided by some Malawian scholars that the persistence of gender inequalities in the country is due to patriarchal values that dominate public institutions and policy making processes and therefore choke efforts to address gender inequalities (see Ngwirira *et al.*, 2003; Semu *et al.*, 2004), the chapter argues that this explanation is only partial. Patriarchal

values do indeed play a role, but that role is only to drive a wider process embedded in the country's policy making process which facilitates and reinforces these gender inequalities. This chapter therefore takes a more holistic approach and argues that the paradoxical issues would be better understood through a comprehensive assessment of the development process and implementation of agricultural-related policies and programmes in the country. Consequently, based on a document analysis and literature review of key recent (post 2000) agricultural and national development policies in the country, the chapter will engage with and analyse how and why, gender issues have been, or why they have not been, incorporated in these policies. The policies to be reviewed include the Malawi Poverty Reduction Strategy Paper (MPRSP), the Malawi Growth and Development Strategy (MGDS), Malawi Economic Growth Strategy (MEGS), and the Agricultural Sector Wide Approach (ASWAP).

In order to set the context, the chapter first provides background information on the structure of agriculture in Malawi, and this also includes a discussion on the position of female farmers in the sector. This section, 4.2, also highlights the importance of agriculture for the livelihood of the majority of Malawians as well as for the wider economy, which justifies the government's agricultural-centred development agenda.

Section 4.3 provides the conceptual framework adopted in this analysis. The framework builds on concepts used by Moser *et al.* (2004) in their framework for assessing gender mainstreaming of gender 'policy evaporation', 'invisibilisation' and 'resistance'. 'Policy evaporation' occurs when 'good policy intentions fail to be followed through in practice', whereas 'invisibilisation' is when 'monitoring and evaluation procedures fail to document what is occurring on the ground'; and 'resistance' to gender issues happens 'when effective mechanisms block gender mainstreaming, with opposition essentially "political" and based on gender power relations, rather than on "technocratic" procedural constraints' (Moser *et al.*, 2004: v). In addition, the chapter also uses the concept of 'sectorisation' of gender issues, as used by Beall and Davila (1994), which refers to the treatment of women's issues as separate from mainstream issues or sectors. Building on these four concepts, which are explained in more detail in section 4.3, the chapter develops what it calls a 'Female Subordination Cycle' to explain and illustrate the cyclical process that facilitates and reinforces gender inequality in the agricultural sector. It therefore argues that although gender issues are mentioned as a key cross-cutting issue in all key development and agricultural policies in the country, they are seldom or appropriately addressed in practice due to this Female Subordination Cycle.

As section 4.4 explores and argues, this Female Subordination Cycle is evident in Malawi's key agricultural and national development policies. Based on a critical analysis of these policies, the chapter argues that addressing challenges that are specific to female farmers has not been a central focus of the government. On the contrary, incorporation of gender issues in policies has mainly been donor-driven - done to satisfy western donors' and international agencies' requirements. Consequently, gender issues are mainly included in policies that are developed with significant influence from the donor community, and/or based on programming by the World Bank and IMF (such as the MPRSP and the ASWAp). However, even in such cases, gender integration is more evident in the policy documents than in practice as they are either evaporated or sectorised and therefore excluded from the mainstream interventions of the policies. On the other hand, for policies whose development is not directly influenced by the World Bank or IMF programming (such as the MGDS and the MEGS), gender issues are resisted and thus not considered.

The implication of this is that the policy acknowledgements that women are the key players in Malawi's agricultural sector and that gender inequalities in the sector need to be addressed in order to address food and agricultural production become mere rhetoric that translate to nought in practice. This is revealed in Section 4.5 where the chapter focuses on the case of the Malawi Farm Input Subsidy Programme (FISP). This is one of the biggest agricultural programmes in Malawi in recent years in cost terms but also one that has attracted a great deal of national and international interest. Although the programme has made international headlines as a big success in addressing national food security and agricultural production in the country, little is known about how female farmers have been specifically affected by the programme; they are effectively invisible to policy makers. Macro level issues such as its impacts on total national food production, total national agricultural output and average productivity have taken precedence over gender and intra-household issues as key issues of concern to both the government and donor/international agencies. It is for this reason that academic and policy-related research on the programme has mainly focussed on the impacts of the programme on these macro-level factors and has largely neglected gender issues. This chapter will therefore highlight the extent as well as the implications of the invisibilisation of female farmers from the FISP specifically and from Malawi's agricultural policies in general.

4.2 The role and structure of agriculture in Malawi

Agriculture is the most important sector for most economies in sub-Saharan Africa, where it represents the principal economic activity (Diao *et al.*, 2007; Salami *et al.*, 2010; Mucavele, 2009; World Bank, 2008). The sector accounts for 30 to 40 percent of Africa's total gross domestic product (GDP) and almost 60 percent of its total export earnings (IFPRI, 2009). In terms of the significance of agriculture to the economy, Malawi represents a typical sub-Saharan country. This is significant because it makes the findings from this research relevant not only for Malawi, but for other agricultural-dependant African economies as well.

Agriculture in Malawi contributes over 80 percent of the total foreign exchange earnings and accounts for 39 percent of GDP. Over 80 percent of Malawians live in rural areas and derive their livelihood from agriculture (GOM, 2006; GOM, 2009). In such an agriculture-dependent economy, agricultural development is essential for improving growth, food security and reducing mass poverty (Cervantes-Godoy and Dewbre 2010; OECD, 2006; Zimmermann *et al.*, 2009; World Bank, 2008; Meijerink and Roza, 2007; Stringer and Pingali, 2004; Mucavele, 2009). It is therefore not surprising that since independence, Malawi's development resources, strategies and policies have been heavily biased towards agricultural development (GOM, 2010).

In Malawi, agriculture is divided into two sub-sectors; the large scale (estate) and the smallholder sector (GOM, 2010; Chilowa, 1998). The smallholder sector is the larger of the two in that it contributes over 70% of agricultural GDP (GOM 2010: 1; Tchale, 2009). The sub-sector also dominates the production of food crops such as maize, cassava, sweet potatoes, pulses and rice. Smallholder farmers produce approximately 75% of Malawi's staple food crop, maize. In terms of cash crop production, smallholder farmers dominate the production of burley tobacco (GOM, 2010; Jaffee, 2003). Tobacco is the main cash and export crop in Malawi, generating 60% of the country's export earnings (Tchale, 2009: 102; Orr, 2000; Takane, 2005: 93). On the other hand, estates are dominant producers of tea, sugar, coffee and macadamia, Malawi's other export crops (GOM, 2010; Eldring 2003).

In terms of land holdings, smallholder farmers are challenged by small and declining land sizes (Chirwa, 2008). Ownership of land by smallholders is customary where traditional authorities maintain powers to transfer and distribute land (GOM, 2010; Matchaya, 2009; Takane, 2007). Due to the growing population (at 3 percent per

annum), customary land has become ever more fragmented and land holding sizes continue to decline (Gough *et al.*, 2002). Average land holding per capita declined from 1.53 hectares in 1968 to 0.83 hectares in 2006 (GOM, 2006; Chirwa, 2008, Blackie and Mann, 2005). Land pressure is particularly high in the southern region where the per capita average landholding size is 0.178 hectares compared to 0.257 hectares and 0.256 hectares for central and northern regions respectively (Chinsinga, 2008: 8). National average land holding per household for smallholder farmers is 1.2 hectares (GOM, 2010). The picture is however very different for estates. About 30,000 estates in the country own a total of over 1.1 million hectares of land, with average landholding sizes ranging from 10 to 500 hectares (Chirwa, 2008: 6).

These small land holdings for the majority of farmers in the country have major implications for land utilisation and crop productivity. Not only do they lead to over-intensive land use and therefore land degradation, they also result in low crop output. Consequently, even with good crop yields, the average smallholder farms are inadequate to produce enough food for an average household for an entire year (Harrigan, 2005). However, even regardless of the small land holdings, the productivity of smallholder farmers in Malawi is low. For example, while potential yields for hybrid maize range from 5 to 8 metric tonnes per hectare, the average yield in Malawi stands at around 1.2 metric tonnes (Akinefisi *et al.*, 2006). For groundnuts, over the last decade, average yields have ranged from 400 to 700 kg per hectare, which is significantly lower than the average obtained in Asia at 1600 kg per hectare (Bapu *et al.*, 1994: 216; Abate *et al.*, 2012; Tchale, 2009: 103). While there are many factors that contribute to this low productivity (such as over dependence on rain-fed farming, which increases vulnerability to weather-related shocks; poor and infertile soils arising from inappropriate natural resources management practices; and low utilisation and uptake of technology), significant impact arises from the limited usage of improved crop varieties and fertilisers (GOM, 2010). This is compounded by high costs of imported fertilisers, particularly since the removal of the fertiliser subsidies in 1994/ 95, and the devaluation of the local currency during the same period, which made fertilisers highly unaffordable to many farmers (Harrigan, 2005; Levy, 2005; Nyirongo, 2005; Gough *et al.*, 2002).

Within the smallholder agricultural sector, women play a particularly important role. They contribute 70 percent of the workforce and produce 80 percent of the food for home consumption (GOM, 2012). In some areas of the country, agriculture is almost entirely a female occupation. For example, in many lakeshore areas, men are mostly

involved in fishing which leaves farming almost entirely to women (GOM, 2007). Moreover, and as observed by Simtowe (2010), in these lakeshore areas, women seem to be locked in agriculture as their main source of livelihood because they face gender-related challenges (such as lack of capital, labour, credit or time) that affect their ability to diversify into fishing or fish selling.

Agricultural production is however less rewarding for female farmers compared to male farmers because, as discussed in chapter 3, they face many challenges that affect their production and productivity. As is the case in many sub-Saharan countries, female farmers in Malawi are more disadvantaged than men in terms of access to and control over agricultural production assets, resources and services such as land, credit, farm inputs, extension and training. Average land holding for FHHs is 0.803 hectares, lower than the average for smallholder farmers in general at 1.2 hectares (GOM, 2007: 8; GOM, 2010: 26). Women also struggle to access output markets, due to such factors as limited negotiation skills, limited access to market information, lack of transport, and failure to meet quality standards. Consequently, women's participation in cash cropping is limited, which negatively affects their incomes (GOM, 2007; GOM, 2012). They also have limited access to credit facilities. The government records that women's access to credit is as low as 10-15 percent, and when women access credit, the control over its use usually rests with the men in their households (GOM, 2010).

The rest of this chapter will therefore engage with these issues to explore why this disadvantaged position of female farmers in the country has remained despite the government's recognition of the issues and the subsequent inclusion of gender issues in national agricultural and development policies.

4.3 The Female Subordination Cycle

In trying to explain why gender inequalities have persisted in the country, the Malawi National Gender Policy (2007-2011) records that they are deep-rooted in the society due to historic patriarchal values that have continuously put women at a disadvantage (GOM, 2012: 14). Malawian scholars, Linda Semu, Naomi Ngwira and Garton Kamchedzera also make similar observations and argue that it is these patriarchal values that dominate public institutions and policy making processes and choke efforts to address gender inequalities (see Ngwira *et al.*, 2003; Semu *et al.*, 2004). Whilst this acknowledgement has some merit, it does not present a comprehensive diagnosis of the issues. Specifically it does not capture the complete process that is embedded in the policy making processes that promotes and reinforces these gender inequalities.

A more complete and comprehensive diagnosis is presented in the Female Subordination Cycle below. This cycle builds on concepts used by Moser *et al.* (2004) in their framework for assessing gender mainstreaming of gender ‘policy evaporation’, ‘invisibilisation’ and ‘resistance’, as well as the concept of ‘sectorisation’ of gender issues as used by Beall and Davilla (1994).

Moser *et al.* introduced the above three concepts in their gender audit of the implementation of the DFID-Malawi office’s gender mainstreaming strategy that was commissioned by DFID in 2004. Although, a decade has passed since these terms were first introduced, it is noteworthy that these issues remain relevant and applicable today as will become evident in the analysis in section 4.4 below. Moreover, although many international agencies, including DFID, have been commissioning independent reviews and assessments of their gender mainstreaming efforts during the last decade (see Ngwira, 2004; Semu *et al.*, 2004; Eerdewijk, 2013; Whitehead, 2003; Moser and Moser, 2005; Zuckerman, 2002; MacDonald, 2003), little progress seems to have been made in terms of prioritising and ensuring that gender issues are accurately, appropriately and adequately integrated into their programming. For example, the existence of gender policy evaporation has been confirmed in one of such assessments conducted recently on the gender mainstreaming efforts in four key Dutch development NGOs (see Eerdewijk, 2013). This therefore means that these concepts are still relevant to provide insights for explaining the persistence of gender inequality.

Resistance to gender issues is defined as occurring ‘when effective mechanisms block gender mainstreaming, with opposition essentially “political” and based on gender

power relations, rather than on “technocratic” procedural constraints’ (Moser *et al.*, 2004: v). As also supported by Ngwira *et al.* (2003) and Semu *et al.* (2004) in direct reference to the situation in Malawi, gender resistance occurs when the basis to any opposition to gender equality is patriarchal gender power relations and a lack of political will and not a lack of knowledge about the subject. Consequently, resistance is also revealed in the way the term ‘gender’ is defined, interpreted or otherwise used within an institution or in policy making processes.

In the gender audit of DFID’s gender mainstreaming strategy, Moser *et al.* (2004:6) argue that in Malawi, the term ‘gender’ usually carries a definition that is considered to be more appropriate to policy makers or one that is more in line with patriarchal values. They note that the vernacular (*Chichewa*) translation of the term ‘gender’ is ‘*kusasiyanitsa pa kagwiridwe ka ntchito pakati pa amai ndi abambo*’ - which literally means ‘not differentiating between the participation of men and women in different activities’. This interpretation of gender mainly focusses on participation and implies that this is the main aspect of gender integration. More importantly, it fails to highlight that participation is particularly problematic for women due to their subordinate status (also see White, 2003). Resistance to gender therefore not only relates to the refusal to see prevailing gender inequalities or to accept the subordinate position of women, but more importantly, it relates to a refusal to acknowledge that the basis of those gender inequalities is gender power relations that are driven by patriarchal values.

The second concept used in this analysis is gender policy evaporation. The term was first coined by Sara Longwe (1995) to describe the process where ‘good policy intentions fail to be followed through in practice’ (Moser *et al.*, 2004: v). Moser *et al.* therefore used it to describe situations where gender issues that are mainstreamed at policy design are not translated into gender specific programmes, objectives or activities. As Eerdewijk (2013:1) puts it, this is the process where gender-rich policies tend to turn into gender-poor practice (also see Pialek, 2008). One common way through which gender issues tend to evaporate is when the specific focus on women is replaced by general welfare concerns for the poor or vulnerable groups in general. Unfortunately, when women are subsumed under the broad groups of the poor or vulnerable, the policy concerns become mainly on their economic situation and not on gender inequality. Moreover, as discussed in chapter 3, such an approach cannot be effective in addressing gender inequalities because it only addresses women’s practical gender needs and not their strategic ones as well.

Thirdly, the analysis adopts the concept of 'invisibilisation' of gender issues which refers to a 'failure in monitoring and evaluation procedures (and associated reports) to document what is occurring 'on the ground', resulting in inaccurate information on gender-related outcomes and impacts' (Moser *et al.*, 2004: 2). Particularly in cases where women are subsumed under the poor or other vulnerable groups as discussed above, the tendency is to report on the broad group of the poor and not really engage with who the poor are and the circumstances that lead to their vulnerability. Particularly within the agricultural policy literature, female farmers tend to be invisibilised when they are assumed to be represented in the broad groups of 'smallholder farmers' or 'poor farmers'. In the few cases where smallholder farmers are disaggregated, the disaggregation tends to be by income levels, and the reference to female farmers or FHHs inadvertently comes by virtue of their being in the lowest income group. Other than that, the reference to female farmers is usually more implicit than explicit. Therefore and as Moser (2005) observes, the lack of information on gender issues is a result of gender policy evaporation and is also due to a failure to mention observed gender disparities or gendered outcomes even in cases where gender issues have not evaporated.

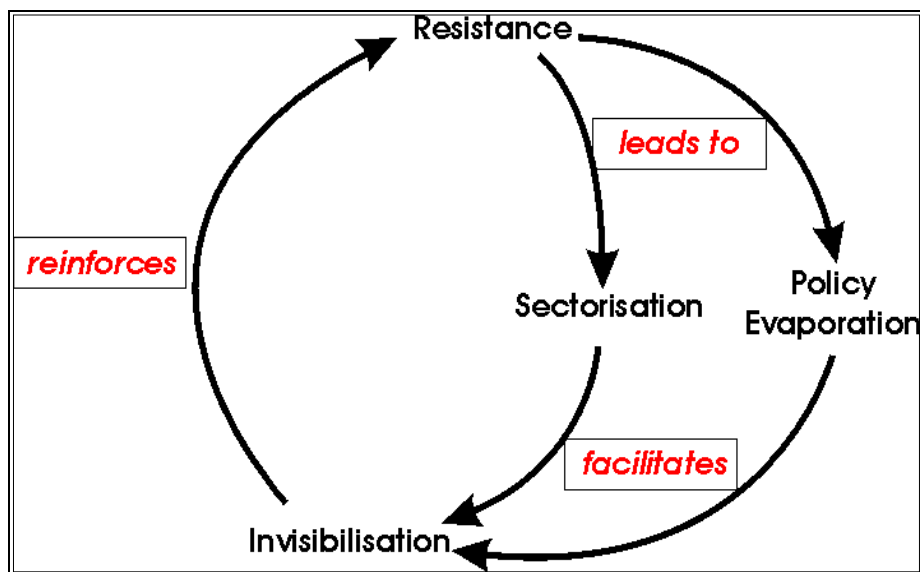
Lastly, the chapter adopts the term 'sectorisation' of gender issues, as used by Beall and Davila (1994). This refers to the treatment of women's issues as separate from mainstream issues or sectors. Beall and Davilla (1994: 2) argue that a resulting tendency of this is the confinement of women's issues to separate women's projects, or the marginalisation of the issues into under-financed and poorly resourced women's ministries, bureaux, offices and desks. Therefore, instead of evaporating the gender issues, the institutions may simply sectorise them so that they are kept (barely) alive, and that mainly for when gender assessments are carried out and in keeping with requirements from most international organisations. Gender may therefore appear in their organisational structures as a part of the institution, or be mentioned in their reports, but the reality is that this is usually of limited value because of the limited institutional and financial support that the gender programme gets. Furthermore and as Eerdewijk (2013) observes, in some organisations, gender is sectorised when gender mainstreaming is treated more as an individual than an institutional affair. In this case therefore, the entire responsibility of ensuring gender mainstreaming is left to this one individual (usually female) who ends up with an insurmountable task of bringing about institution-wide change.

Although these four concepts have been used by the above-cited scholars to explain different processes affecting gender mainstreaming, it is critical to note how they are inter-connected and how they inter-face with each other. Specifically, these four concepts do not only represent different processes affecting gender mainstreaming, but they represent different stages of one process that is embedded in the policy making cycle, which explains why gender inequalities persist in spite of policy commitments to address them. This process is encapsulated in the Female Subordination Cycle as illustrated in diagram 4.1 and explained below. The process, which is fuelled by patriarchy, starts with gender resistance – a refusal to take on board gender issues. In the current situation where gender has become a catchword in development practice and therefore expected to be included in all development policies and initiatives (Pearson, 2000), it is not easy (even for institutions that resist gender) to simply leave it out of their policies. Instead, gender is either evaporated or sectorised. This means that it may indeed be included in policy but with no intention to take it through to programme implementation. Alternatively, it may be simply sectorised, usually to a sub-section titled ‘cross-cutting issues’. The reason sectorisation or evaporation may occur therefore is because of a lack of political will as opposed to a lack of knowledge about the need for gender integration. Resistance to gender issues therefore leads to either sectorisation or evaporation depending on the requirements (usually from international agencies) that the institution may be responding to.

When gender issues are sectorised or evaporated, invisibilisation can easily occur, i.e. where gender issues that were indicated in policy documents are not implemented in practice, or are implemented separately from mainstream interventions, invisibilisation is facilitated as the gender issues become no longer a key aspect of the programme. Consequently, monitoring and evaluation systems developed to support the programmes are unlikely to have gender-disaggregated data or include gender indicators. At best, only a few of the objectives that relate to the cross-cutting issues section would be gendered. Not surprisingly, when gender disparities or gendered outcomes of government policies and programmes are excluded from reports and other monitoring and evaluation systems, resistance can become reinforced. As Moser *et al.*, (2004: 10) note, the ‘failure to mention the importance of gender disparities or gendered outcomes lessens programme leverage to continue to address important gender issues in future initiatives’. Without an appreciation of the need for gender integration based on data that indicates gender disparities, resistance can be reinforced, which starts the process through to evaporation, sectorisation and invisibilisation all over again. As diagram 4.1 illustrates, this means that the process will

keep repeating itself, with resistance leading to either sectorisation or policy evaporation, and the two facilitating invisibilisation of gender issues, which in turn also reinforces resistance. Consequently, although gender issues may seem to be included in policies, they are likely to be inadequately or inappropriately included, which only serves to perpetuate prevailing gender inequalities.

Diagram 4. 1: The Female Subordination Cycle



Source: Based on concepts used by Moser *et al.* (2004) and Beall and Davilla (1994).

The Female Subordination Cycle is therefore defined here as a cyclical process that starts with resistance to gender issues and leads back to the same through gender policy evaporation, sectorisation and invisibilisation, and influences the persistence of gender inequalities in development practice. It is therefore not only these four concepts of resistance, evaporation, sectorisation and invisibilisation that are a concern for gender mainstreaming, but more importantly, it is their interaction with each other that is critical. This argument and the way in which the Female Subordination Cycle works to perpetuate gender inequality would best be substantiated by practical evidence. The next two sections will therefore critically analyse how this cycle and its embedded processes have influenced how gender issues are incorporated in Malawi's policies. Section 4.4 will focus on the country's agricultural and national development policies, while section 4.5 will take the analysis further down to the level of program

implementation. This analysis will respond to the sub-question; 'How are gender issues addressed in Malawi's agricultural and development policies?'

Notwithstanding the importance of this cycle in its entirety, it is invisibilisation that provides the entry point of this work into the Female Subordination Cycle. By critically analysing how female farmers have been affected by the FISP, it aims at de-invisibilising them from the programme. Although this de-invisibilisation by itself is inadequate to address gender inequalities, it is still relevant as a first step in disrupting the Female Subordination Cycle. It provides the ammunition with which to attack gender resistance, and consequently the rest of the cycle.

4.4 The Female Farmer and National Policies in Malawi

This section will critically discuss if and how gender issues have been included in Malawi's national policies, post 2000. As explained in chapter 1, this period is significant given that it is the time when debates on the effectiveness of neo-liberal policies promoted by the Bretton Woods institutions have intensified. These debates have been propelled by the failure of Structural Adjustment Programmes (SAPs) and related neo-liberal policies to achieve expected economic growth and development in most of the countries where they were implemented (Chilowa, 1998; Chirwa, 2004; Holden and Lunduka, 2010b). Consequently, this is a period when new propositions of a desirable public role in markets are gaining ground (Hodgson, 2009).

Since the focus of this research is on female farmers, as opposed to women in general, the review will concentrate on the agricultural aspects of national policies and on national policies/strategies that are specific to the agricultural sector. This will therefore include the following: The Malawi Poverty Reduction Strategy (MPRSP), the Malawi Economic Growth Strategy (MEGS), the Malawi Growth and Development Strategy (MGDS), and the Agricultural Sector Wide Approach programme (ASWAp). Each of these is examined in turn in this section, including both an analysis of the policy documents as well as a review of the development process of the policies.

4.4.1 Malawi Poverty Reduction Strategy Paper (MPRSP) (2002)

The Malawi Poverty Reduction Strategy Paper (MPRSP) is one of the policies where all the stages of the Female Subordination Cycle (resistance, evaporation, sectorisation and invisibilisation) are evident. Malawi developed and launched this strategy in 2002 and its overall goal was to achieve 'sustainable poverty reduction through socio-economic and political empowerment of the poor' (GOM, 2002: xi). The MPRSP, like Poverty Reduction Strategies Papers (PRSPs) in other countries, contained an assessment of poverty in the country and a description of the macroeconomic, structural, and social policies and programmes that the country would pursue over several years in order to promote growth and reduce poverty (IMF Fact sheet, Bwalya *et al.*, 2004). The MPRSP was prepared by the government through a participatory process involving domestic civil society, private sector, and external development partners, including the IMF and World Bank (Jenkins and Tsoka, 2003).

A review of the MPRSP finds that the agricultural sector is scantily engendered and that the strategy invisibilises gender issues. Apart from an implicit statement on women's limited access to agricultural labour, the MPRSP does not disaggregate farmers by gender or comprehensively highlight the specific challenges faced by female farmers. Instead, it states that:

'The term "farmers" throughout this document refers to both female and male farmers' (GOM, 2002: 22).

It also states that:

'Throughout this document the term "poor" is inclusive of women, men, girls and boys' (*Ibid.*: 1).

As highlighted above, such subsuming of female farmers under the broad groups of the poor or farmers is undesirable because it leads to a neglect of the specific circumstances or gender-related challenges facing female farmers, which in most cases are not faced by other sub groups. The above statements therefore indicate that the MPRSP did not consider addressing gender-related challenges that are specifically faced by female farmers as critical to the success of the agricultural improvement plans. By implying that the same strategies were adequate to address the needs of both male and female farmers, the MPRSP was gender-blind and therefore unlikely to meet female farmers' needs. As concluded in Chapter 3, female farmers are a special group that requires special attention when designing policies or programmes targeted at the poor in general. Moreover, interventions targeted at the poor in general rarely suffice to address gender strategic needs (Moser, 1989; Whitehead, 2003).

In spite of feminisation of agriculture, and even feminisation of poverty, the two phenomena that justify the need for agricultural policy to focus on female farmers (Chant, 2003; Bradshaw, 2002; de Brauw *et al.*, 2006 and Chant, 2007), the MPRSP still reflected a resistance to gender. Specifically, and as Mutume (2003) observes, gender issues were only mentioned in the MPRSP in response to requirements set by the World Bank. Chapter ten of the sourcebook for PRSPs published by the World Bank in 2001 solely concentrated on why and how to integrate gender into the PRSPs. The World Bank's position was that 'gender-sensitive development strategies contributed significantly to economic growth as well as to equity objectives by ensuring that all groups of the poor shared in program benefits' (Bamberger *et al.*, 2001: 335). Gender issues therefore had to be mentioned in response to these requirements.

Consequentially, gender issues were evaporated from the main themes of the MPRSP and became sectorised to the cross-cutting themes. Firstly, and as Whitehead (2003) contends, gender evaporation from the MPRSP was evident in that the elaborate policy prescriptions on gender integration were not supported by budget commitments. Without supporting budgets, the policy statements and broad commitments could not progress into action aimed at counteracting women's vulnerability (Longwe, 1997; Moser *et al.*, 2004; Moser and Moser, 2005; Ngwira, 2010). Secondly, gender issues in the MPRSP were treated as an 'add-on' and not integrated in the policy prescriptions of the different sectors. Moser *et al.* (2004) observes that although the MPRSP recommends that gender is mainstreamed in all the pillars of the strategy, gender issues were sectorised and not adequately reflected in the economic sections of the document. This observation is consistent with arguments by Zuckerman and Garrett (2003) and Whitehead (2003) who indicated that for most countries adopting PRSPs, it was typically health and education sectors that tended to be gendered, neglecting the economic sectors.

For the MPRSP, a likely source of this sectorisation is the development process of the strategy. During the development process, where thematic working groups were formed to lead the process of identifying strategies for each of the key sectors, all gender specialists were allocated to one group – the gender and empowerment thematic group. This meant that they had to address all gender issues relating to all the sectors such as education, health, agriculture. However, by not being part of the other thematic groups, it was likely that their discussions and plans were disjointed from what the other thematic groups were planning. A better integration of the plans and strategies would have been achieved by including gender specialists in each of the thematic groups for the different sectors, particularly for those where women play a significant role, such as agriculture (as discussed in section 4.2 above).

Although some of the thematic groups highlighted gender inequalities as challenges, as a consequence of this sectorisation, coupled with their lack of gender mainstreaming skills (Semu *et al.* 2004), their monitoring frameworks did not include any gender disaggregated data. For example, although the agricultural thematic working group highlighted gender inequalities in access to factors of production, it did not have any specific strategies for addressing them and the monitoring framework did not include any gender disaggregated indicators or targets that were specific to female farmers.

This lack of comprehensive gendered monitoring meant that it was unlikely for any shortfalls in the MPRSP regarding gender integration to be highlighted. Ngwira (2010) and Whitehead (2003) observe that gender was 'invisibilised' during the implementation of the MPRSP such that there was inadequate monitoring or reporting of any gendered programmes that may have been implemented. Unfortunately, this was the case even for donor-led monitoring. Zuckerman and Garrett (2003) argue that most Joint Staff Assessments done by World Bank and IMF staff to assess the extent to which the PRSPs addressed poverty, environment, gender and other issues, contained negligible information about gender integration. Similarly, Holvoet (2007: 9) asserts that generally, donors did not seem too worried about the way in which partner countries handled gender issues in the PRSPs. She observes that Joint Staff Advisory Notes (formerly Joint Staff Assessments Notes), drafted by the World Bank and the IMF with assessment and advice on the quality of the PRSPs, 'were remarkably silent on gender'; and that in judging the programmes, the donors paid little attention to the way that gender issues were treated. Simply mentioning women and gender issues (even though not followed through in the implementation strategies and monitoring framework) seems to have been adequate to satisfy the requirements of the Bretton Woods institutions, and earn a tick on the checklist for gender incorporation.

In general, it has been suggested that Malawi demonstrated a lack of commitment to the MPRSP (and not only to its gender aspects). Chirwa *et al.* (2006) for example indicates that the allocation of resources in the national budget did not reflect the MPRSP priorities. There were several instances where sectors with a lower priority in the MPRSP were provided more financing than higher priority sectors. In addition, the fact that it took Malawi less than two years before it started formulating another development policy, the Malawi Economic Growth Strategy, also strengthens the argument that the Government had little commitment to the MPRSP (Sahley *et al.*, 2005).

4.4.2 Malawi Economic Growth Strategy (2004)

The Malawi Economic Growth Strategy (MEGS) presents a different scenario from the MPRSP, both in the way that it was developed as well as in how it addressed gender issues. Unlike the MPRSP case where all the stages of the Female Subordination Cycle were evident, the MEGS only reflected resistance – and this was mainly due to the fact that it was developed without linkages to any external development or funding framework. The MEGS was developed in 2004 by the Malawi Government in close collaboration with the country's private sector. The rationale behind the MEGS was to improve on the MPRSP which was deemed inadequate to achieve the sustained annual economic growth of at least 6 percent per annum required to reduce poverty by half by the year 2015 (GOM, 2004). The government stated that the MEGS reflected a joint realisation by the Government of Malawi and the private sector of the need to reverse the negative growth trends that the country was experiencing. In order to reverse these trends, they argued that rapid broad-based growth was necessary. This growth would help to expand sectoral sources of growth, deepen and sustain the gains made from smallholder agriculture in leading growth and poverty reduction, and make the country less susceptible to external shocks such as weather, changes in terms of trade, political developments in the region and fluctuations in aid flows' (GOM, 2004: i).

The focus of the MEGS was therefore broad-based economic growth as opposed to poverty reduction, and gender issues were completely resisted. The strategy assumed that the country needed to focus on economic growth and that poverty reduction would be an outcome of the growth (Chirwa *et al.*, 2006). This was in spite of the fact that evidence from other countries suggests that although economic growth and development may promote poverty reduction, the impact is usually not sufficient, immediate or automatic (IMF and World Bank, 2001). This means that unless certain deliberate strategies are taken, economic growth may not lead to poverty reduction. As Klasen (1999) argues, one essential strategy for this transformation of growth into poverty reduction is giving attention to inequalities, including gender-related ones.

Paradoxically, the failure for growth to translate into poverty reduction is an experience already known in Malawi's economic history. It is well documented that growth in the country during the 1970s did not lead to poverty reduction nor did it benefit poor households (GOM, 2002: 13; Chirwa *et al.*, 2006). In her publication, 'Gender and Poverty Reduction', Malawian Economist Naomi Ngwira argues that one of the reasons for this was the neglect of gender issues in the economic growth strategies that were

pursued. This failure to include gender issues in the MEGS as a deliberate effort to translate economic growth into poverty reduction is therefore noteworthy.

The MEGS did not include any gender issues nor did it mention any need to deliberately target women. Within agriculture, the MEGS focussed on a more commercial approach that emphasised efficient utilisation of resources through more private initiatives and greater commercialisation of smallholder agriculture (GOM, 2004: 23). It highlighted the need to implement agricultural programmes that were outward-looking and more export-oriented. Targeted crops in the MEGS included tobacco, cotton, tea and sugar cane (GOM, 2004), crops whose production is dominated either by male farmers or large scale commercial farmers (Chirwa *et al.*, 2006). Although female farmers in Malawi are not involved in the production of most of these crops in their own right as smallholder farmers, they are still heavily involved through the provision of *ganyu* labour (See Chapter 2). By neglecting women's contributions and role in agricultural production, the policy demonstrated a perception that women had no role in economic development, a perception that was challenged by Boserup's 'Women's role in economic development' (Boserup, 1970) discussed in Chapter 2.

Because the MEGS was developed without reference to any donor funding framework, there were no requirements relating to gender issues that the strategy was supposed to incorporate. This therefore provided an opportunity for the patriarchal values that dominate policy making processes in the country to flourish (Ngwira, 2010: Semu *et al.*, 2004). Consequently, there was no need for any window-dressing of gender issues through either sectorisation or evaporation. Based on the experience of the MPRSP (and later strategies such as the ASWAp), one can only speculate that it is likely that had donors been involved in the development process or in financing the implementation of the MEGS, a section on cross-cutting issues (which normally includes gender) could have been included.

The MEGS was however never fully pursued as it was replaced by a new strategy. In 2004, Malawi had both the MPRSP and MEGS, creating confusion as to which policy document was to guide development in the country (Chirwa *et al.*, 2006). Although the new government of Bingu wa Mutharika favoured growth-led development and placed more emphasis on MEGS, calls (mainly from the civil society) to keep the MPRSP led to discussions about merging the two documents (Sahley *et al.*, 2005). This is what led to the formulation of the Malawi Growth and Development Strategy (MGDS) discussed below.

4.4.3 Malawi Growth and Development Strategy (2006-2011)

Just like the MEGS, the MGDS reflected a resistance to gender issues as it largely neglected the role that women play in economic growth and development. The MGDS was Malawi's overarching operational medium-term strategy designed to attain the country's Vision 2020. It was built on the principles of both the PRSP and the MEGS, and therefore involved the simultaneous pursuit of growth and poverty reduction goals (GOM, 2006). The government stated that the MGDS would maintain a balance between the economic and social sectors of the economy.

The document was quite elaborate in the description of its gender objectives as these two statements from the strategy demonstrate:

'Gender issues are an integral part of the overall national development agenda. Gender inequalities in accessing productive resources, development opportunities and decision making affect economic growth and development' (GOM, 2010: 51).

'The MGDS addresses gender by integrating targeted programs for women to enable women be part of economic growth such as targeted programs for business development and micro-finance. The strategy for gender directly targets mainstreaming gender into the programs of Government and disaggregates information by gender' (*Ibid.*: 5).

Irrespective of these statements, gender was resisted in the strategy and not included among the thematic areas that were identified to be a guide on the socio-economic growth and development priorities for the country (Ngwira, 2010). The resistance to gender issues in the MGDS was also evident in the way that gender issues were downplayed in the document. Rather than highlighting the disadvantaged position of women and therefore instituting specific interventions targeted at them, the strategy presented issues in gender-neutral terms that lost the focus on women. For example, the goal for the gender sub-theme of the strategy stated that:

'...The long-term goal is to mainstream gender in the national development process to enhance equal participation of both sexes for sustainable development' (GOM, 2006: 51).

This therefore meant that instead of focusing on gender inequalities and female subordination in particular as the main issues for gender integration, the MGDS focussed on equal participation of both sexes. While it is correct that one of the objectives of gender mainstreaming is equal participation of the sexes, it is misleading not to emphasise that this participation is currently biased against women. The concern in the MGDS should therefore not only have been one of ensuring equal participation between men and women, but more importantly of ensuring that women acquire as equal participation as men.

As described in the Female Subordination Cycle, this resistance to gender issues in the MGDS led to sectorisation where gender issues were not integrated in all the thematic areas but were only included as a sub-theme under the social development theme (Ngwira, 2010). Women's role in agriculture or other economic sectors was therefore neglected, with women being mainly perceived as a marginalised or vulnerable group, in need of only social development initiatives. Because of this, the MGDS did not consider the specific challenges facing women in their productive role as farmers (see chapter 3 on women's triple roles). On the contrary, women were grouped together with other groups such as the youth and urban poor, in a manner that demonstrated the superficiality with which women's issues were being addressed. For example, the MGDS stated that in order to achieve economic empowerment, there was need to '...increase the productivity of rural communities and businesses, employment and income, increase the number of women and youth who are actively participating in public and private sectors and to ensure that the urban poor are able to contribute to economic development' (GOM, 2006: 30-31). The strategies that followed however did not relate to agriculture, and the focus on women was quite remote. There was no indication in the strategies of the government's appreciation of women's role in agricultural production.

Because the MGDS was not developed in response to any donor funding framework, (although donor funding was still expected to support its implementation), the above challenges reflect the government's lack of commitment to gender issues. This view that the Malawi Government lacks commitment to gender issues is not unsupported. As raised before, several scholars have asserted that in Malawi, the patriarchal values that dominate policy-making processes lead to a lack of appreciation of gender issues and the need to integrate them in policies (see Semu *et al.*, 2004; Moser *et al.*, 2004; Ngwira, 2010). Ngwira (2010: 3) argues that because top policy making positions are dominated by men who were brought up in the 'domestic science school of dealing with

women's issues', there is a lack of will to move the gender agenda forward especially at top policy making and planning levels. These assertions were also confirmed by a review done by the Gender Sector Working Group in Malawi in 2010. The review concluded that gender integration does not have sufficient presence within government ministries, both at Central and district levels. It is the government's resistance to gender that prevents proper integration of the issues in the country's development policies. This resistance has been clearly manifested in the MEGS and MGDS, national development strategies that were developed without reference or direct linkages to donor funding mechanisms.

4.4.4 Agricultural Sector-Wide Approach Programme (ASWAp) (2010)

The ASWAp demonstrates very close similarities with the MPRSP in that all the stages of the Female Subordination Cycle are evident in the programme. The ASWAp was developed by the government, in consultation with other stakeholders involved in agriculture and food security in Malawi, in 2010. It aimed at operationalising the MGDS in the areas of agriculture and food security. It offered a strategy for supporting priority activities in the agricultural sector in order to increase agricultural productivity, improve food security and increase the contribution of agro-processing to economic growth (GOM, 2010).

Just as with the MPRSP, the ASWAp was developed based on an international development programme – the sector-wide approach. This is an approach that brings together governments, donors and all other stakeholders within a sector to develop a comprehensive single policy for the sector. It is a way of engaging in development cooperation based on the principles of coordinated support for a locally-owned programme (OECD, 2002). It also involves developing a common realistic expenditure programme, common monitoring arrangements, and more coordinated procedures for funding and procurement among the key stakeholders (Brown *et al.*, 2001; Hutton and Tanner, 2004).

In principle, the all-encompassing approach of these sector-wide programmes offers opportunities for the integration of transversal themes like gender. As Holvoet (2007) observes, if gender is properly mainstreamed at this level, a much broader and sustainable impact on gender equality would be made than what could be created by small-scale projects. A review of sector-wide programmes in different countries

however reveals that although this opportunity exists, most of them are not properly gendered (Bell, 2000). Despite the endorsement of a comprehensive approach to gender relations, SWAPs in health, education and agriculture have focussed on narrowly defined investments in women or girls rather than addressing the underlying conditions that produce unequal access for males and females. Most SWAPs restrict their objectives to increasing the number of women involved in the programmes, neglecting the reasons behind their limited access and their ability to take advantage of opportunities in the same way as men (OECD, 2002). SWAPs gender-related actions are therefore mainly targeted at addressing women's practical needs, neglecting their strategic needs. (See chapter 3 on women's practical and strategic needs).

With specific reference to agricultural SWAPs, Gallina and Chidiamassamba (2010) argue that addressing gender specific needs in agricultural SWAPs is more challenging because agriculture (like other productive sectors) is strongly perceived to be a male domain, compared to other sectors such as health or education, which are traditionally associated with women. This explanation by Gallina and Chidiamassamba supports claims made in the World Development Report (2008) that many development policies continue to assume that farmers are predominantly men. Given that the available evidence is clear on women's role in agriculture, it is explicit that such sentiments that suggest that agriculture is a male domain arise from a resistance to gender issues. This is clearly demonstrated in the case of the ASWAp.

The ASWAp highlights the need to address gender issues and inequalities within the agricultural sector as the statement below confirms:

'In order to ensure gender equity, ASWAp interventions should target at least 50% women farmers considering the prevailing gender disparities and roles' (GOM, 2010: 66).

Irrespective of such statements and the fact that gender is mentioned in many parts of the ASWAp, the strategy falls short of appropriate gender integration. Other statements made in the strategy on gender reflect resistance and seem to lack an appreciation of the fact that the particular challenges that women face are due to their subordinate status. For example, the introduction to the ASWAp indicates that:

'Gender issues are mainstreamed in the ASWAp document in order to reduce gender disparities and enhance capacity of the youth, women and men to contribute to agricultural productivity' (GOM, 2010: xiii).

Not surprisingly, gender issues and disparities are discussed in broad contexts that include the youth, women and men, without acknowledging that it is women who bear the brunt of these disparities. Gender issues therefore both evaporate and are sectorised to non-productive sectors of the programme, in line with the Female Subordination Cycle. Ngwira (2010) contends that although the ASWAp identifies the key constraints to agricultural growth (such as small land-holding, low inputs use due to unfavourable input output ratios; declining investment in the agriculture sector; deteriorating agriculture services; low value addition), it does not acknowledge that in all these areas, women have a greater disadvantage. In addition, Ngwira also observes that gender mainstreaming is only included as a sub-theme in one of the four focus areas i.e. institutional and human capacity building. In the other three focal areas, (food security and risk management, commercial agriculture and market development, and sustainable agricultural land and water management), gender is not mentioned. She further argues that it is however in these other areas that gender disparities are experienced and should therefore have been included as well.

Sectorisation of gender issues in the ASWAp is even more evident in that the document clearly mentions that gender issues affecting the sector are addressed in a separate strategy - the Agriculture Gender, HIV and AIDS Strategy (2012- 2017). This is a strategy that seeks to strengthen gender mainstreaming in the agriculture, food and nutrition security sectors, as well as ensure that gender issues are mainstreamed throughout all activities relating to HIV and AIDS. Although there is an association between gender and HIV/AIDS (see Anderson, 2012), the strategy is unlikely to be sufficient to address gender inequalities in the agricultural sector if the focus is simply on the link between gender and HIV/AIDS. Although HIV/AIDS may deepen the challenges that women face, it needs to be appreciated that the challenges would still be there even in the absence of HIV and AIDS. Moreover, it seems likely that the idea to include both gender and HIV and AIDS in the same strategy may have stemmed more from the perception that they are both cross-cutting issues affecting agriculture and not because HIV/AIDS' female face has major implications for agricultural production. This statement below from the Agriculture Gender, HIV and AIDS Strategy confirms this:

'...gender disparities and HIV issues are among the major constraints that affect its contribution to sustainable development in the country. The Ministry of Agriculture, Irrigation and Water Development is committed to addressing gender, HIV and AIDS issues in the sector' (GOM, 2012: 6).

The devolving of gender mainstreaming from the ASWAp to the Agriculture Gender, HIV and AIDS Strategy therefore means that the ASWAp's commitments to gender issues are lost. As is the case with other SWAPs, the result is that in spite of gender being mentioned in the programme, no real action or budget commitment is provided to address the identified issues (Fong, 2002).

If gender issues are resisted, evaporated, sectorised and invisibilised from all the national agricultural-related policies and strategies as revealed in this analysis, how is it handled at programme implementation level when the policies have to be operationalized? This is the issue that the next section will consider and explore. The section will review one agricultural programme, the Farm Input Subsidy Programme (FISP), in terms of its development process, the objectives behind its development and content, the manner of its implementation and its results. As discussed in Chapter 1, the Malawi FISP is the biggest (in terms of costs) single intervention to be implemented in Malawi's agricultural sector in the last decade and one that has attracted a great deal of international attention as a successful food security intervention. As a result, the way in which it treats gender is therefore highly significant.

4.5 Agricultural Programmes in Practice: The Case of Farm Inputs Subsidy Programmes

This section explores what the implications of the Female Subordination Cycle evident in the national policies are for the implementation of agricultural programmes in Malawi. It will analyse if and how gender issues are included at programme implementation level, recognising that processes of resistance, evaporation, sectorisation and invisibilisation happened at the policy level. In this regard, the analysis will focus on the case of the Malawi Farm Input Subsidy Programme (FISP), the main empirical focus of this analysis. This will be put into context by first providing a brief discussion of the Starter Pack and Targeted Input Programmes, being FISP predecessor programmes whose results may have influenced the conception of the FISP.

4.5.1 The Starter Pack Programme

The Starter Pack was a farm inputs intervention that was implemented by the government of Malawi with support from international donors from 1998/9 to 2003/4 in which small packs containing fertilisers, maize seed and legume seed enough for 0.1 hectare of land were distributed to smallholder farmers in the country (Levy, 2005; Harrigan, 2007). In the first two years of its implementation, the programme was universal in that it covered the entire smallholder community of about 3,000,000 households. Following recommendations from the donor community, the programme was scaled down in 2000 to about half of the households originally targeted in the first two years. It therefore became known as the Malawi Targeted Input Programme (TIP) to reflect this change in focus. However, following the 2002 food crisis in Malawi, the TIP was further expanded to almost universal level and became known as Extended TIP (Levy *et al.*, 2004; Cromwell *et al.*, 2001).

The manner in which these programmes were implemented, including the way programme adjustments that were effected annually were influenced, indicates two main factors that are critical for this analysis. Firstly, the manner in which the programmes' objectives and target groups were changed reflected the significant influence and control that donors operating in the country had on government programmes. The neo-liberal-influenced position of the donors was one that favoured deregulation and liberalisation as being more pro-poor as opposed to government interventions in the market. They therefore opposed the idea of a universal farm inputs

subsidy programme and instead recommended a safety-nets programme that was targeted at the most vulnerable (Rubey, 2003; Harrigan, 2003; Longley *et al.*, 1999). Although the Malawi government had an opposing ideology, it was forced to adopt this recommendation (Levy and Barahona, 2002; Harrigan, 2008; Potter, 2005). As Sahley *et al.* (2005) observes, for aid-dependent Malawi (where donors provide up to 80 percent of Malawi's development assistance and contribute about 50 percent of Malawi Government's annual recurrent costs), donor influences and not government priorities usually dominate policy choices.

In the case of the Starter Pack Programme, this quotation from a member of a Maize Productivity Task Force quoted by Harrigan (2008: 245) confirms this donor influence:

'Alas, this small holder productivity programme was hijacked by the donor determination to transform it into a safety net programme, targeted to the poorest. . .The shift to safety net also muted the focus on productivity...The African solution was distorted substantially as filtered through donor lenses – targeting replaced universal coverage'.

This preponderant role that donors have assumed in designing development strategies and implementing programmes in the country was also evident during field work for this research when key informant interviews with some donors acknowledged that the donors had taken a leading role in developing a medium term strategy for the Malawi FISP. One donor representative indicated as follows:

'...the government had no plans to develop a medium term strategy, but we think it is very important to have this strategy. It will stop the government changing the programme anyhow and using it for political patronage. We have therefore taken the lead in developing this strategy...' (Representative, donor agency).

Interviews with farmer organisations and civil society organisations indicated that they were not aware about this FISP medium term strategy, which confirmed that it was mainly the donors who were involved in its development and therefore the ones influencing its content as well. Although this may have some advantages, for example in terms of encouraging accountability, it is unlikely to have any significant benefits in as far as gender integration is concerned. As emphasised in section 4.4, many of the donor and international agencies do not have a real commitment to gender integration. Although many of them develop gender strategies and frequently highlight the need to

include gender in their programming, their declarations seem to be more rhetorical as gender considerations are rarely emphasised in their practice.

In the case of the Starter Pack programme, this neglect of gender issues is particularly evident in the scaling-down of the programme from being universal to targeted. Although as a targeted programme, the TIP prioritised the poorest of the poor, it is striking that FHHs were not explicitly included amongst the targeted groups. Instead, the government isolated the following groups to be prioritised: 'widows/widowers with no source of income, the aged without any support, and families keeping orphans without support' (Lawson *et al.*, 2001: 16). Reference to FHHs was therefore only made in light of their position as single-headed households - in the same way as households headed by widowers. As argued in Chapter 3, the challenges that FHHs face in agriculture are more than just about the lack of a man in the household (and therefore a lack of extra labour or income source) but more about the gendered challenges that lead to a lack of almost all factors of production including land, credit and extension services. The vulnerability in terms of agricultural production is therefore not the same for widows and widowers. Moreover, this vulnerability includes *de facto* FHHs, who despite not being widows, still face similar challenges as widowed female farmers. The reality therefore is that gender considerations were not considered as a critical element of the targeting in the Targeted Inputs Programme. Instead the focus was on poverty profiles with the assumption that female farmers or FHHs would indirectly be reached through this poverty focus, which as highlighted above is gender-blind and therefore usually unsuccessful (Whitehead, 2003).

As a consequence of the neglect of gender issues in these programmes, gender issues were also excluded from independent evaluations of the programmes that were commissioned by the government and DFID between 1999 and 2002. Final reports of the evaluations compiled by Levy and Barahona (2001; 2002) did not reflect on gender issues, but focussed on the poor in general. They focused on the impacts of the programme on household and national food security, on markets, and on agricultural productivity but there was limited attention given to the gender dynamics at play in these issues. This invisibilisation of gender issues was also evident in another evaluation by Longley *et al.* (1999) that was aimed at analysing the effectiveness of the programme in supporting household food security. Despite having a thorough discussion on the programme beneficiaries, the evaluation gave little attention to female farmers. Apart from mentioning that a third of the households that participated in the survey were female-headed, and that slightly more women than men had never

used fertilisers in their fields, no other information was provided on FHHs. There was no attention given to monitoring the participation of women in the programme, or any other gender aspects. Therefore, although the general message from the evaluations and other reports was that the programme had been largely successful in positively affecting food security in the country, very little, if at all, was reported and therefore known about the gendered implications of the programme. This information would however have been useful for eliminating the invisibilisation of gender issues from the programmes and therefore would have highlighted important (gender) issues for consideration in future programmes of a similar nature, such as the Malawi FISP.

4.5.2. The Malawi Farm Input Subsidy Programme (FISP)

This section provides a critical analysis and literature review of the Malawi FISP in order to explore and explain if and how gender issues were incorporated in the programme, and if so why. The section highlights that the Malawi FISP was implemented against a backdrop of national policies whose acknowledgement of the need for agricultural policies to specifically target female farmers was riddled with the Female Subordination Cycle. This means that although gender issues were mentioned in the policies, they were unlikely to be adequately or appropriately implemented in practice due to resistance, evaporation, sectorisation and invisibilisation. Furthermore, the development and implementation of this targeted farm subsidy programme could not benefit from lessons learnt on gender integration from the Starter Pack and Targeted Inputs Programme due to the fact that gender issues were also invisibilised in these programmes. This section therefore explores what the implications of these two factors have been for the Malawi FISP. In order to provide the contextual and background information, particularly for the empirical chapters 5 and 6, the section will initially provide a brief description of the programme, its development process as well as its implementation modalities.

4.5.2.1 Influences behind the introduction of the FISP

Introduced in the 2005/6 growing season, the objective of the FISP was to make required agricultural inputs (mainly fertiliser and hybrid seeds) accessible to resource poor farmers in order to improve food security and increase farmers' incomes (through increased food and cash crop production) (Dorward and Chirwa, 2011; Chibwana and Fischer, 2011; Chinsinga, 2008). Although in recent years other African countries such as Kenya, Rwanda and Tanzania have also implemented farm inputs subsidy programmes, the Malawi FISP is one that has attracted a lot of international and academic attention. As Denning and Sachs (2008) observe, the Malawi experience with the FISP has stimulated a new wave of interest in the subject of farm input subsidies (also see Department for International Development (DFID), 8 May 2007; Reuters Africa, 24 July 2009; New Agriculturalist, 2008, Perkins, 10 July 2009). Apart from the programme's success in improving national food security, another contributory factor to this interest is the fact that Malawi started implementing the FISP against strong resistance from many of the donors operating in the country (Chinsinga, 2008). The dominant neo-liberal position of the donors was one that opposed subsidies (and therefore this programme) due to the fact that they are market distorting; a strain on

national budgets; usually less effective due to diversions to other less-deserving groups instead of the target group; and are therefore a grossly inefficient way to target the poor (Dorward and Chirwa, 2011; Chinsinga, 2008; Denning *et al.*, 2009; Dorward, 2008; Wiggins and Brooks, 2010).

Although having a conflicting agenda or ideology between the government and the donors was not uncommon, it was unprecedented for the government to openly reject the donors' prescription. As Chinsinga (2008) argues, domestic politics played a key role in influencing Malawi's determination to reject the donors' recommendations and commence the programme. He argues that because of the memories of the 2002 and 2004 food crises in Malawi, pursuit of household and national food security had become a central theme for Malawians. In addition, the positive experience with the Starter Pack and Targeted Inputs Programmes had made input subsidy programmes very attractive to them. Consequently and as Dorward and Chirwa (2011) also confirm, input subsidies and food security dominated the agenda of political parties during the campaigns for the 2004 Presidential and Parliamentary General Elections. The FISP was therefore a key campaign promise by Bingu wa Mutharika, who ended up winning the 2004 Presidential elections.

Although the political processes involving the FISP are beyond the scope of this research, it is worth highlighting here that this politically-connected origin of the programme had significant implications for the objective of the programme and therefore the targeted group and other implementation modalities. Specifically, it meant that more than simply focussing on improving food and agricultural production, the government would also have considerations for the programme to be implemented in a way that was politically popular as well. This means that the government's focus on the programme would be on its impacts on national level and aggregate factors as opposed to inter or intra household level factors. This explains why, as argued in section 4.5.2.3 below, the main concerns with the programme by both donors and the government have been on its impacts on national food production, national food security and national average yield productivity for maize. Little attention has been given to understanding its impacts at the household level.

4.5.2.2 Implementation of the FISP

Unlike the Starter Pack Programme which had blanket targeting, the FISP targets specific groups of smallholder farmers. Out of the eligible 3 million households, only about 1.5 million are targeted every year, and the actual number depends on the available funding for the programme, as one official from the Ministry of Agriculture and Food Security confirmed in a key informant interview in this research. It is because the number of targeted households is always lower than the number of eligible households that selecting FISP beneficiaries has become one of the most challenging aspects of the programme (Chinsinga, 2011; Dorward and Chirwa, 2011). According to the programme guidelines, the programme is supposed to target resource poor farmers who own a piece of land, with special considerations given to vulnerable households such as female-headed, child-headed, orphan-headed, HIV infected households or those looking after physically challenged persons (see GOM, 2008). Based on these selection criteria, Village Development Committees (VDC) are expected to facilitate the process of pre-registering farmers in their villages. Several scholars have however observed that these guidelines are not strictly followed (Chirwa *et al.*, 2010; Dorward and Chirwa, 2011; Holden and Lunduka, 2010b). This was also confirmed during the field research where most focus group discussions indicated that these criteria are not adhered to and that there are usually many cases where the selected farmers are outside the groups of those listed for special consideration. Interviews with local chiefs also indicated that the main criterion used by the Village Development Committee in practice is simply, 'the poor'. In a country like Malawi, where the majority of the population are poor, this targeting criterion is too wide and fits more households than the programme intends to target. It therefore means that the real criterion to be used is likely to be subjectively determined by the VDC.

Empirical evidence provided by previous studies on the Malawi FISP shows that in most cases this subjective selection of FISP recipients has worked to the disadvantage of FHHs. The evaluations indicate that FHHs have largely been excluded as beneficiaries in this programme. FHHs have been less likely to receive the subsidised inputs (Dorward and Chirwa, 2011; Chirwa *et al.*, 2011), and when they have, they have received less inputs than MHHs (SOAS *et al.* 2008; Dorward *et al.* 2010; Chibwana *et al.*, 2010). Although many of the farmers received less than the full subsidy package, (which in 2009/10 and 2010/11 consisted of one 50 kg bag of basal fertiliser, one 50 kg bag of top dressing fertiliser, one 5 kg packet of maize seed, and one 2kg packet of legume seed), FHHs received much less than MHHs. In a survey of

the 2008/9 FISP, Holden and Lunduka (2010) found that only an average of 11% of female-headed households and 29% of MHHs received the full subsidy package.

It transpired during field research that one of the main reasons that farmers receive less than the full package is because local traditional authorities encourage an egalitarian practice where those farmers who receive the full subsidy package are asked to share with those not on the list of recipients (Holden and Lunduka, 2010b; Dorward and Chirwa, 2011). Dorward and Chirwa note that these modifications of coupon allocations are made at local levels, particularly in the southern and central regions, so that more households would receive one fertiliser coupon, rather than fewer receiving two. This therefore means that even if FHHs would have been prioritised as recipients, they would still have ended up sharing their inputs with other farmers, who may have been even less poor and therefore less deserving than themselves.

Therefore, in terms of targeting, the general impression from the FISP is that the programme does not reflect any acknowledgement of feminisation of agriculture and therefore the important role that female farmers play in the agricultural sector. Moreover, the practice shows gender resistance particularly by the VDC, as they prefer to replace the specific targeting criteria with a broad category of the poor. Within that broad category of the poor, FHHs are invisibilised.

Despite the fact that FHHs are not prioritised in the programme, the subsidy package is designed in a way that should benefit both male and female farmers. Maize, the main crop targeted in the programme is grown by both male and female farmers. Moreover, even the other secondary crops that have been included in the programme in recent years such as groundnuts and soya beans are also crops grown by both sexes. In fact, anecdotal evidence suggests that groundnut is a 'woman's crop', implying that it is mainly grown by women. Therefore, although few FHHs are accessing the FISP, the package seems to be gender sensitive and therefore should have been of benefit to women. A table indicating the subsidy package and composition from 2006 is provided in appendix 1.

Input distribution and logistics

The FISP is administered through vouchers whereby identified beneficiaries receive coupons that enable them to buy farm inputs at reduced prices. In 2011, when the field work for this research was conducted, a fertiliser coupon entitled the holder to buy a 50 kg bag of fertiliser at MK500, compared to around MK5,000 on the commercial market. A coupon of maize seed had a face value of MK1,500 and farmers were supposed to top up depending on the price being offered by the seed traders. In most cases, this top-up was not more than MK100 per packet of seed. Coupons for legume seed were exchanged for the seed at no cost to the farmer.

With the exception of seed, the FISP fertiliser is sold only through parastatal Agricultural Development and Marketing Corporation (ADMARC) and Smallholder Farmer Fertiliser Revolving Fund of Malawi (SFFRFM) outlets. Seed is sold at private dealer outlets, in addition to these two outlets. Chinsinga (2011) observes that the inclusion of private traders in seed sales was only made possible due to pressure from USAID who argued that the total exclusion of private traders would stifle the private sector and destroy any gains made in the sector in recent years. The private sector is however not allowed to sell subsidised fertilisers, which is the main product in the FISP package. Because of this limitation, the distribution of FISP inputs is frequently riddled with delays and other logistical challenges, and this leads to long queues and congestion at ADMARC and SFFRFM outlets. During field research, many farmers indicated that this was a major challenge that they faced in accessing the subsidised inputs. Most reported sleeping at ADMARC depots for several nights before they could buy their inputs as they could not afford to walk the long distances every day to check if the inputs had arrived at the depot. In addition, this opened up the programme to corruption where better-off farmers paid ADMARC officials in order to jump the queues. The gender implications of these two factors are explored in more detail in Chapter 5.

4.5.2.3 Research Focus on the FISP

As highlighted in Chapter 1, the preoccupation of the government (as well as donors) has been with the impacts of the Malawi FISP on national food security. Since its inception, the programme has been a major subject of policy debates both locally and internationally (Chinsinga, 2011). Consequentially, the programme has attracted significant research interest in recent years. Research by several scholars has confirmed that in broad terms, the programme has been successful in addressing food insecurity in the country. Economists Andrew Dorward and Ephraim Chirwa who have conducted yearly evaluations on the programme since its inception and have also written extensively on the programme, provide evidence of a positive impact of the FISP on food security through increased national maize production output (see Dorward and Chirwa, 2009; Dorward *et al.*, 2008; Dorward, 2009). They document that since the introduction of the programme, national maize production output has increased beyond the national food requirement. This is presented in Table 4.1 below.

Table 4. 1: Malawi's National Maize Production, 2000–2001 to 2006–2007

Indicator	Season						
	2000-1	2001-2	2002-3	2003-4	2004-5	2005-6	2006-7
National average yield (MT/ha)	1.18	1.05	1.28	1.05	0.76	1.59	2.04
National production	1.71	1.56	1.98	1.61	1.23	2.58	3.44
Food requirement met	88	78	97	83	57	118	153

Source: Denning *et al.*, 2009: 5

The national food requirement, i.e. the amount of maize needed to feed the entire population, is estimated at an average of 2.2 million metric tonnes per annum (GOM, 2009b: 11). Since 2000, it is only after the introduction of the FISP that this requirement was exceeded by the national maize output. Denning *et al.* (2009: 1) observe that the highest maize surplus was recorded in the 2006/7 season when 3.44 million metric tonnes were produced. From a 43 percent national food deficit in 2004/5, Malawi thus achieved a 53 percent surplus during that year.

Dorward and Chirwa (2011) provide further evidence of the increase in national maize output in the country. By comparing net maize imports in the eight years before the FISP and the FISP implementation period, they find that only 1,000 metric tonnes of maize have been imported into the country during the subsidy years. This is contrasted with nearly 132,000 metric tonnes in the eight year period before the FISP. They note that if seasons of extreme shortages due to droughts are excluded, the average net maize imports prior to the FISP amount to 21,000 metric tonnes per annum which is still significantly higher than the 1,000 metric tonnes since the introduction of the subsidy. Similar findings are presented by Denning *et al.* (2009), Chinsinga (2011) and Mucavele (2010). As Harrigan (2008) observes, because of the high costs of importing maize, Malawi has always favoured policies that contribute to increased maize self-sufficiency. This therefore explains the high value that is attached to the FISP.

In addition to increased maize output, and as Table 4.1 above clearly demonstrates, the FISP is also reported to have led to an increase in maize productivity (also see Tchale, 2009). The evidence suggests that productivity of maize also increased to an all-time high of 2.04 metric tonnes per hectare in 2006/7 from 0.76 metric tonnes in 2004/5.

While these studies have provided useful insights on the impacts of the FISP on national and aggregate level factors, they have obscured household level or factors that relate to specific groups of farmers. Although, based on focus group discussions held with farmers in 2007 and 2008, Dorward and Chirwa (2011) document improved household food sufficiency as a result of the FISP, they do not provide further details on intra or inter household level factors. Their analysis is based on smallholder farming households in aggregate terms as they do not disaggregate them by household type. Has the maize output of farmers belonging to different household types increased in comparable ways? More specifically, how has the production of female farmers been affected by the programme? Whilst it is known that the FISP has led to improvements in food security for smallholder farmers in general, there is a research gap on how female farmers in particular have been affected. This focus on female farmers and FHHs is necessary because, as established in Chapter 3, women are increasingly becoming the key players in agricultural production in the country. Research on agricultural programmes and interventions therefore needs to take cognizance of this fact because the effectiveness of these programmes cannot be discussed without considering their impacts on the dominant players in the field – female farmers.

In general terms therefore, gender issues in the FISP have been invisibilised as research on the programme has focussed on smallholder farmers in general and paid limited attention to female farmers. The available gender analyses have mainly gone as far as highlighting the disproportionate receipt of the subsidised inputs in favour of MHHs. Studies by Dorward and Chirwa (2011), Chirwa *et al.* (2011), SOAS *et al.*, 2008, Chibwana *et al.* (2010), Ricker-Gilbert and Jayne (2009) and Holden and Lunduka (2010) all indicate that female headed households have been disadvantaged in terms of access to the subsidised inputs. They find that FHHs have been less likely to receive the subsidised inputs (Chirwa *et al.*, 2011), and when they have, they have received less than MHHs (SOAS *et al.* 2008; Dorward *et al.* 2010). For example, Holden and Lunduka (2010) find that in 2008/9, only 11% of female headed households received the full subsidy package, as compared to 29% for male headed households. Chirwa *et al.* (2010: 4) report that on average, FHHs received 49 kg of fertilisers, compared to 53 kg for MHHs. Because of the economic focus of these studies however, they do not go into any analyses or discussions to explain these gender inequalities – neither their causes nor implications. Apart from Dorward and Chirwa (2011: 12-13) who broadly conclude that the disproportionate receipt of the subsidies inputs ‘by MHHs with more land and other assets means that many households who are not food self-sufficient may not have benefitted directly from incremental production from subsidised input use’, there are no detailed analyses on the actual implications of this for FHHs. Lower receipt of subsidised inputs may not automatically translate into lower production output. For example, a farmer may receive more coupons but decide to sell them and not use them on his or her fields. In this case therefore, although they received more, their agricultural production may be less than that of another farmer who may have received fewer coupons but used all the inputs on their fields. A better understanding of how the subsidised inputs are actually utilised is therefore required in order to make such conclusions.

In this regard, a paper by Chirwa *et al.* (2011) on gender and intra-household differences in the utilisation of fertilisers provides some insights. The paper aimed to investigate the gender differences in the application of both subsidised and commercially-acquired fertilisers on plots controlled by men and those controlled by women. Their analysis found that there were no gender biases in the way fertiliser acquired from the FISP was utilised in the household. They found that female-controlled plots in MHHs (MHHs) had the same likelihood of being fertilised as male-controlled plots. This was however not the case when the household used commercially-acquired fertilisers. In this latter case, there was more bias towards male-

controlled plots. As they also observe, the reason that usage of FISP fertiliser is not biased against female-controlled plots is because this fertiliser is targeted at maize, a crop which is grown by both male and female farmers. Because female farmers usually prioritise food production, they usually grow maize in the plots that they control. The conclusion from this analysis therefore seems to suggest that there is no gender bias in the FISP because male and female-controlled plots have a similar chance of being fertilised using fertiliser from the programme. While this analysis may be significant for understanding the intra-household usage of the FISP fertilisers, particularly in MHHs, it does not significantly shed light on inter-household variations. Specifically, it does not explain whether there are any differences in the way FISP fertiliser is utilised between MHHs and FHHs (FHHs), or between de jure FHHs and de facto FHHs. It is this kind of analysis that is however required in order to understand the gendered implications of the FISP that to date have been overlooked or neglected in the research agenda as well as in policy circles.

4.6 Conclusion

This chapter has engaged with and explored why female farmers remain subordinate to male farmers despite agricultural policy commitments to address gender inequality in the sector. To this end, the chapter has critically analysed how gender issues are incorporated in national and agricultural policies and strategies in Malawi. The analysis has adopted concepts used by Moser *et al.* (2004) in their framework for assessing gender mainstreaming of resistance, evaporation and invisibilisation. In addition, it has also adopted the concept of sectorisation as used by Beall and Davila (1994). Building on these concepts the chapter developed a Female Subordination Cycle which as has been argued, explains the cyclical process which influences agricultural policies in a way that perpetuates gender inequalities in the sector. This cycle and its processes have therefore been applied in the analysis of Malawi's key agricultural and national development policies, including the MPRSP, MEGS, MGDS and ASWAp.

The chapter has argued that there is limited commitment and a resistance to addressing gender issues in the country due to patriarchal values that dominate various institutions in the country. The government is however compelled by donor and international agency requirements to include gender issues in its policy statements. Consequentially, the government pays lip service to the issues by making broad declarations on gender objectives in the policies. As this is sufficient to satisfy the donors' gender requirements, gender issues are either evaporated or sectorised, where the policy issues are not followed through in programme implementation or are considered separately from mainstream interventions. This evaporation and sectorisation facilitates the invisibilisation of gender issues where gender disparities and other related issues are excluded from monitoring and evaluation systems. When information on the gendered implications of government programmes is unavailable, it becomes difficult to generate evidence to justify the need for gender integration. Unfortunately, this only works to reinforce the resistance which influenced the gender policy evaporation and sectorisation in the first place. It is this cyclical process that has perpetuated gender inequalities in the agricultural sector in Malawi.

The implications of this cycle are evident in the case of the Malawi FISP. Although gender issues are declared as an integral part of the development process in Malawi, the focus on female farmers and gender issues in general in the FISP is limited. Consequently, despite being listed as a priority group for the programme, fewer FHHs receive subsidy coupons and when they do, they receive less than male farmers.

Preoccupation by both the donors and the government on impacts of the programme at macro levels (e.g. national food security and agricultural output) means that the gender aspects of the programme are obscured and therefore not discussed. The FISP continues to make international headlines as a successful programme in addressing food security, but little is known about either the gender aspects of that food security impact or the gendered results of the programme in general. Such analysis that recognises the different kinds of female farmer, differentiating between household types, is however important because it is now well established that even when agricultural policies appear to be gender-neutral, they have different outcomes for men and women. More research is therefore required to investigate in more detail the experiences of female farmers with the FISP and the results thereof.

Chapter 5: The Malawi Farm Input Subsidy Programme (FISP) and its Impact on Food Production for Female Farmers

The obstacles that confront women farmers mean that they achieve lower yields than their male counterparts. Yet women are as good at farming as men...Achieving gender equality and empowering women is not only the right thing to do; it is also crucial for agricultural development and food security.

- Jacques Diouf, FAO Director General¹

5.1 Introduction

This is the first of two chapters that will present and discuss findings from the field research. The discussions in this first chapter will focus on the impacts of the FISP on food (maize) production, while the next chapter will focus on impacts on food access through market-oriented crop production (for groundnuts and maize). In both chapters, the analyses will involve three kinds of comparisons and their interactions: Differences between households that received subsidised inputs through the FISP (FISP-recipients) and those that did not (FISP non-recipients); differences between women belonging to the three household types (i.e. de jure FHHs, de facto FHHs and MHHs); and differences between the women from the different geographic regions (i.e. Mzimba in the North, Mchinji in the Centre and Mangochi in the southern region). As outlined in the methodology section in Chapter 2, the analyses and discussions will mainly draw on the quantitative data from the survey of 540 female farmers, which is triangulated with data from focus groups discussions, key informant interviews and observations during the fieldwork.

The main research question that this chapter addresses is: How has the Malawi FISP affected food production for female farmers belonging to different household types? To answer this question, the chapter will initially address the following sub-questions:

1. What has been the impact of the FISP on maize production for female farmers belonging to the three household types?

¹ Foreword in FAO (2011), 'The State of Food and Agriculture 2010 – 2011'

2. In what ways has the FISP influenced the maize production patterns for women belonging to the three household types and the three districts?

As discussed in Chapter 1, this research takes a more holistic approach in its definition of food security. It holds that although in Malawi, food availability through maize production is generally considered as the main means for achieving food security for most rural households (GOM, 2010), widely accepted notions of food security extend beyond food availability. The analysis therefore acknowledges the multi-dimensional nature of food security. Specifically, it adopts the World Food Summit (1996) food security definition. This definition has gained wide recognition globally as satisfying the multi-dimensional aspects of food security which include food availability, food access, utilisation, as well stability of both availability and access (Burchi and de Muro, 2012; Clover, 2003; FAO, 2006; Clover, 2003; Tiongco, 2011; Gross *et al.*, 2000; Pinstrup-Andersen, 2009):

‘Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life’ (FAO, 1996).

The appropriateness of this definition was also confirmed during the fieldwork where it emerged that from the point of view of rural women, food security is more than just about maize production. Particularly important is the aspect of food preference, an aspect also highlighted in the World Food Summit definition provided above. Although the government and many scholars writing on food security in Malawi mainly relate food security to maize production in general terms, farmers, particularly female ones, also take into consideration the variety of maize that is grown. Specifically, there is a higher association with food and local maize varieties as opposed to hybrid ones. On this basis therefore, this research collected and considered disaggregated data for local and hybrid maize varieties in order to generate a more thorough understanding of how the FISP has affected farmers’ food security.

The findings thereof support previous evidence that the programme has generally had a positive impact on food security (see Dorward and Chirwa, 2011; Dorward *et al.*, 2008; Dorward, 2009, Denning *et al.*, 2009; Chinsinga, 2011; Mucavele, 2010). A more significant finding however is the variation in both the maize output and production patterns between MHHs and FHHs, as well as between de jure and de facto FHHs. It is found that although the FISP has led to improvements in food security for all

beneficiaries regardless of their household type, the nature and extent of that impact has varied across household type as well as geographic region. Apart from the receipt of subsidised inputs, other key factors that have influenced these variations include the farmers' access to alternative sources of farm inputs; to alternative sources of food and income; and to other factors of production such as credit, extension and land. These discussions are the core of the differential gender impacts identified and will be expanded on in Section 5.3.

The rest of the chapter is structured as follows: Section 5.2 discusses the demographic characteristics of the households that were interviewed. The analyses will centre on the differences between households that received subsidised inputs and those that did not, differences between female farmers belonging to the different household types, as well as differences according to geographic regions. Following the gender and food security discussions in Section 5.3, a conclusion will be presented in Section 5.4 arguing that because of invisibilisation of gender issues, women and their needs are not adequately considered in the FISP. Consequently, the impacts of the programme on maize production have been lower for FHHs (both de jure and de facto) compared to MHHs.

5.2 Demographic Factors of the Interviewed Households

A discussion of the demographic characteristics of the interviewees is necessary in order to provide a general understanding of their socioeconomic status, which will also help explain why the FISP may have varying impacts for the different groups of female farmers interviewed in this research. To this end therefore, the demographic factors analysed are those that are typically included in agricultural-related studies conducted in rural Malawi, and those that have been argued to have an impact on agricultural productivity and production.

Based on an econometric analysis of determinants of farm efficiency in Malawi, Tchale (2009) found the following to be significant factors that influence household agricultural productivity: land-holding size, household size, livestock ownership, age and education level of the household head. This has also been confirmed by other studies such as Holden and Lunduka (2010), Kamanga (2002), GOM and World Bank (2007) and Takane (2005).

The significance of land-ownership for agricultural production cannot be overemphasised, as land is considered the most important resource for agriculture (Kishindo, 2004). Generally in Malawi, small land-holding sizes are associated with low agricultural production (Chirwa, 2004; Phiri *et al.*, 2012; Chirwa *et al.*, 2006; GOM, 2002; GOM, 2010). In terms of productivity however, Tchale (2009) found that small maize farms in Malawi were more efficient than larger ones. He argued that in labour-surplus economies, small farms are often more efficient than larger ones because of their use of family labour. He contended that family labour tends to be more motivated than hired labour, and therefore more efficient and easier to supervise than hired labour. Although this may be a plausible argument, it is flawed in that it assumes that labour is a resource that is in plentiful supply for all types of households. It neglects the fact that, as discussed in Chapter 2, FHHs are usually constrained in their access to labour for farm work due to the challenges associated with their triple roles, their high engagement in *ganyu* work, their lack of resources to hire extra labour, and the 'missing' man in their households. Therefore even when they have lower land-holding sizes, they may not have higher productivity than the better-resourced MHHs. It can therefore not be generalised that smaller farms have higher farm productivity without giving due consideration to FHHs and the labour-related constraints that they face.

Secondly, household size is another factor that has been argued to affect agricultural production. Tchale (2009) argued that household size in Malawi is positively correlated with agricultural production. Because of the labour-intensive nature of agriculture in the country, smaller households, with less labour availability, are usually disadvantaged in their agricultural production and productivity. Furthermore, and as Due and Gladwin (1991) have argued, households with fewer adults (and more dependent children) such as single-headed ones, struggle to mobilise enough farm labour and are likely to have lower agricultural production. The higher number of dependants in these households however requires a higher agricultural output. Consequently, small household sizes are not only associated with low agricultural production, but with food insecurity as well (also see GOM and World Bank, 2007). This is particularly true in Malawi where household food self-sufficiency, i.e. the ability to produce one's own food, is considered the main means for achieving food security (van Donge *et al.*, 2001).

Education and literacy levels are also important socio-economic indicators that have been argued to positively affect agricultural production and productivity (GOM and World Bank, 2007; Bravo-Ureta and Pinheiro, 1997; Tchale, 2009; Mkwambisi *et al.*, 2010). Tchale (2009) who found a strong positive correlation between farm efficiency and education level, argues that educated farmers are better able to access and utilise extension services, and are also less risk-averse and therefore more willing to try out modern farming technologies. The Malawi Poverty Reduction Strategy (2000) makes a similar assertion. It however identifies a threshold effect and observes that completion of primary education is necessary to have a significant impact on farm productivity. It indicates that households that are headed by an individual who did not complete primary school are likely to have a lower agricultural production and to be more food insecure than those headed by a primary school leaver (GOM, 2002).

Lastly, livestock ownership is also considered an important factor for agricultural production since in many countries in sub-Saharan Africa, it is used as a source of farm power, supplementing human labour (Muvirimu and Ellis-Jones, 1999). In Malawi however, the situation is different. Not only is livestock ownership in the country lower than in most African countries, the kinds of livestock that are commonly available are also different (GOM and World Bank, 2007). Ownership of such livestock as cattle that can be used to provide farm power is quite limited, with smaller livestock such as chickens, being the most common. For Malawi therefore, livestock ownership does not influence agricultural production through the direct provision of farm power, but through improving farmers' liquidity position, thereby ensuring that farmers are able to respond

rapidly to demands for cash to buy inputs and other required resources (Tchale, 2009). Freeman (2008) also observes that livestock is not only an important investment option that is usually monetised or bartered during periods of food shortage or other emergency household and farm needs, it is also an important source of food. In recent years however, increased depletion of livestock at household level has been observed in most parts of the country (GOM, 2010; Ngwira, 2001; Ngwira *et al.*, 2001). Ngwira *et al.* (2001: 15) allude to a general depletion of livestock in Malawi arising from the impacts of HIV/AIDS. They argue that adults who are absent from home for long periods to nurse sick relatives in hospitals cannot properly care for and guard their livestock. Moreover and as observed in the Malawi ASWAp, many poor households have been forced to sell their livestock in order to meet other emergency needs, which in most cases are linked to sickness or death in the household.

As a consequence of the above, livestock ownership in many parts of Malawi is associated with household wealth and well-being. It is observed that wealthier households own more and bigger livestock such as goats and cattle compared to poorer households who typically own fewer and smaller livestock such as chickens (GOM and World Bank, 2007; van Donge *et al.*, 2001). Although there are no livestock that are called 'female livestock' or 'male livestock' as is the case for crops, FHHs being poorer than MHHs are more likely to own smaller livestock than those owned by MHHs. This is because smaller livestock are cheaper to buy and maintain. Livestock ownership by FHHs has also been affected by livestock thefts that have been prevalent in Malawi's rural areas in recent years (Ngwira *et al.*, 2001). Although this is a challenge facing all households, it is more so for FHHs as the absence of a man in the household already places them in a vulnerable position against such incidences.

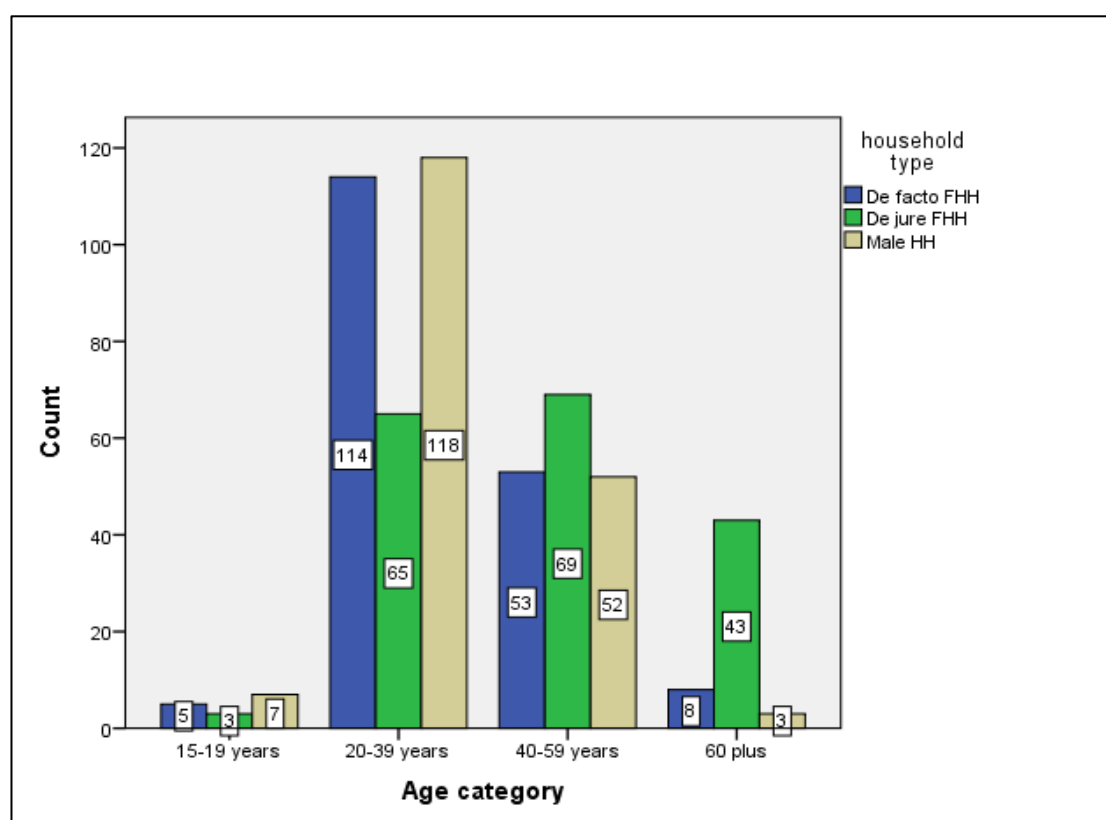
The association between livestock ownership and wealth was also confirmed during the field research where focus group discussions in Mzimba and Mchinji reported that livestock ownership was a key indicator of an individual's socio-economic status. Moreover, in the northern region of the country, where livestock is used as a bride price, it also carries significant social values. This is discussed further in the next section.

In order therefore to shed light on the socio-economic status of the interviewed farmers, and highlight the factors affecting their agricultural production, the next section will provide an analysis of the above-discussed demographic factors for all interviewees.

5.2.1 Differences in Demographic Factors According to Household Type

Analysis of the demographic factors revealed that differences existed, not only between MHHs and FHHs, but also between de jure and de facto FHHs. Firstly, the women in de jure FHHs were generally older than those in both de facto FHHs and MHHs. As Graph 5.1 below illustrates, out of the 180 interviewees in each of the three household types, de jure FHHs had the highest number of persons above 60 years of age. There were 43 women within the de jure FHH group who were over 60 years, compared to 8 and 3 for de facto FHH and MHHs respectively. On the other hand, the majority of the women from MHHs (118 out of 180) and de facto FHHs (114 out of 180) were between 20 and 39 years old. These women may therefore have higher agricultural productivity because they fall within what is considered the most productive ages in Malawi of 19 – 49 years (Mwapasa, 2009).

Graph 5. 1: Age of interviewees by household type (in years)



A chi-square test was performed and it found that there was a statistically significant relationship between age and household type, $p = 0.000$.

This is in line with findings from the FAO (2011) that female heads of households in Malawi tend to be older than their counterparts in MHHs. Although the FAO does not

provide a definite explanation for this pattern and concludes that it is an area for further study (FAO, 2011b: 10), one probable explanation for this could be that women who are widowed at an older age are less likely to remarry compared to younger ones. During the field research, when women were asked their marital status, a common response by elderly widowed ones was 'who can marry me at this age?' The inference was that someone who was widowed at a younger age had a better chance of remarrying than them and was therefore unlikely to be a de jure FHH for a long time.

Being older therefore, women in de jure FHHs are likely to have lower labour productivity than their counterparts in MHHs or de facto FHHs. In addition and as was also revealed during the survey, elderly farmers also faced extra challenges in accessing subsidised inputs. Many farmers reported that they had to spend several nights sleeping outside ADMARC depots or wait for many hours in queues at the depots in order to exchange their FISP coupons for inputs. Although this was challenging for almost all beneficiaries, it was more so for vulnerable groups such as the elderly, or those infected or affected by HIV/AIDS, which as will be discussed below, are likely to be from de jure FHHs. In Mangochi and Mchinji, focus group participants mentioned that some elderly women would faint or fall ill as they waited in the queues. As a consequence, some of such women would simply abandon their efforts to buy the subsidised inputs and simply sell off their FISP coupons to other farmers who were more willing and able to bear such harsh conditions.

In addition to age, analysis of the demographic factors also highlighted household size as another factor that would put de jure FHHs at a more disadvantaged position for agricultural production compared to MHHs or de facto FHHs. De jure FHHs had smaller household sizes, albeit slight, than both MHH and de facto FHHs (see table 5.1). The average household size for de jure FHH was 4.80 compared to 5.12 and 5.39 for de facto FHHs and MHHs respectively. This means that the labour availability of de jure FHHs may not only have been affected by the age of the household heads, but by the unavailability of household labour as well.

Table 5. 1: Household size by household type (in number of persons)

Household type	Mean	N	Std. Deviation
De facto FHH	5.12	180	2.44
De jure FHH	4.80	180	2.20
Male HH	5.39	180	2.09
Total	5.11	540	2.26

A one-way ANOVA test, $p = 0.043$ shows that the differences in the household sizes across the three household types was statistically significant at 5% level.

It is not possible to make comparisons between the number of household members who were actually involved in farm activities for each household type because that specific data was not collected during the survey. It was however evident from some of the focus group discussions that de jure FHHs faced more labour constraints than the other groups. After some lengthy discussions on the labour contribution of men to farm work in MHHs, one focus group discussion involving women from MHHs in Mchinji concluded that it was better to have a man in the household even though some men left most of the farm work to their wives. The men's labour contributions helped the households to complete some time-sensitive farm activities, such as planting, weeding and fertiliser application more quickly than was the case for FHHs. They indicated that the fact that most of the fields that were weeded late were those belonging to de jure FHHs was an indication that the FHHs were unable to mobilise enough household or hired labour in a timely fashion. The implications of inadequate and untimely weeding for agricultural production are non-trivial. Gianessi (2009: 6) demonstrated their significance when he argued that a one week's delay in the first weeding may reduce maize yields by as much as one-third, and a two weeks' delay in second weeding may reduce the yields further by a quarter.

Furthermore, the labour situation of de jure FHHs is worsened by the fact that they have a higher dependency ratio compared to MHHs because of the impacts of HIV and AIDS. Several studies record that, as a consequence of HIV and AIDS affecting the most productive age groups, more grandmothers are being left with the responsibility of caring for orphaned children (who in some cases may also be HIV positive and sickly) (Muula *et al.*, 2003; Drimie, 2002; de Wagt and Connolly, 2010; Funkquist *et al.*, 2007). De Wagt and Connolly (2010) note that in Malawi, almost 40% of all FHHs care for orphans. Therefore, not only do de jure FHHs have lower crop productivity because

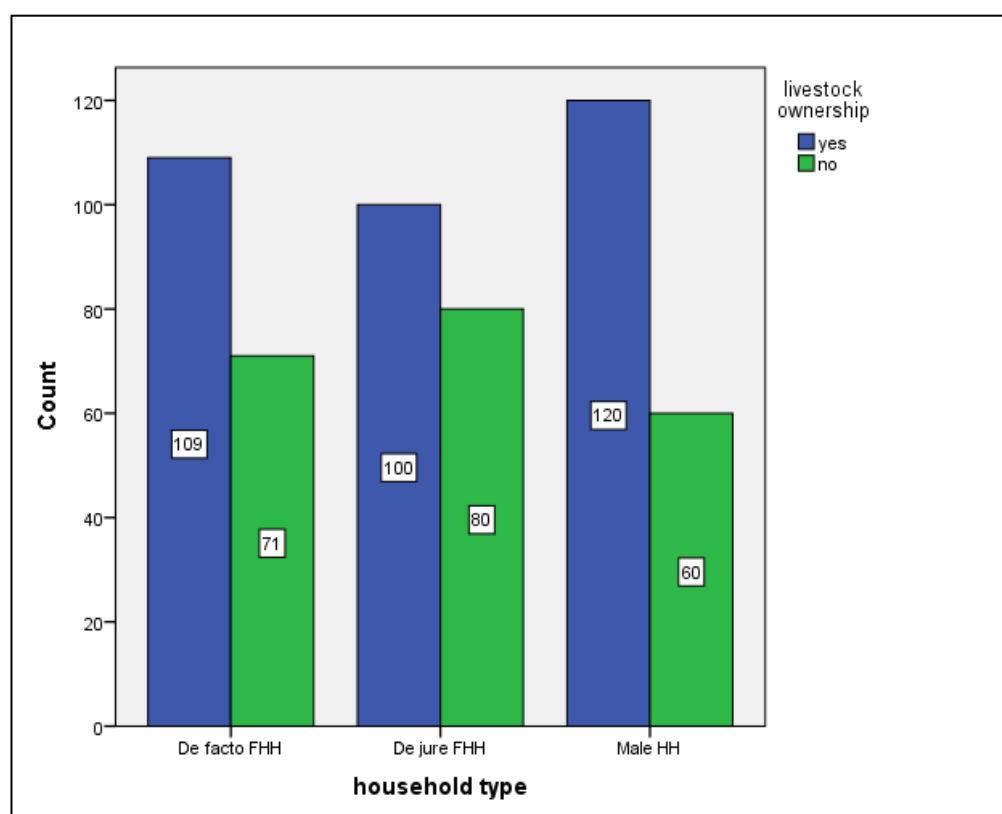
they are older and lacking extra support from a man in the household, but their labour availability is also affected by the need to provide care for orphaned or sick children/grandchildren.

While the older women in de jure FHHs may be affected by HIV/AIDS as described above, evidence from most parts of Southern Africa suggests that the younger ones within this group are likely to be directly infected by it (Schatz *et al.*, 2011; Shisana *et al.*, 2010). Schatz *et al.* (2011) observe that in South Africa, younger female-heads are more likely to have been recently widowed due to AIDS. They note that ‘...older women are more likely to deal with the illness and death of adult children; younger women are more likely to be affected by the death of spouses’ (Schatz *et al.*, 2011: 601). Either way therefore, the implications of HIV/AIDS for the labour availability of de jure FHHs are acknowledged.

It is widely documented that HIV and AIDS are having devastating impacts on the agricultural production of infected and affected households in Africa. The impacts include reducing labour availability for farm activities, permanent erosion of livestock, household reserves and other economic assets; as well as a reduction of time spent on farm work or agricultural extension and training (Drimie, 2002; Ngwira *et al.*, 2001; Mbaya, 2002). The fact that FHHs, and more specifically de jure FHHs tend to be more affected by HIV/AIDS therefore means that they face a larger share of these challenges compared to women in other household groups.

The disadvantaged position of de jure FHHs compared to MHHs and de facto FHHs is also evident in terms of livestock ownership. Graph 5.2 below reveals that only 56 percent of de jure FHHs owned livestock compared to 61 percent and 68 percent for de facto FHH and MHHs respectively. The majority of de jure FHHs who did not own livestock indicated that lack of finances to acquire livestock was the main contributing factor. It is also likely that the gap between de jure and MHHs may have been larger than indicated in Graph 5.2 at other periods as 25% of the MHHs without livestock indicated that they used to have livestock but they had lost most of it due to disease outbreaks.

Graph 5. 2: Number of households owning livestock in 2010 (by household type)

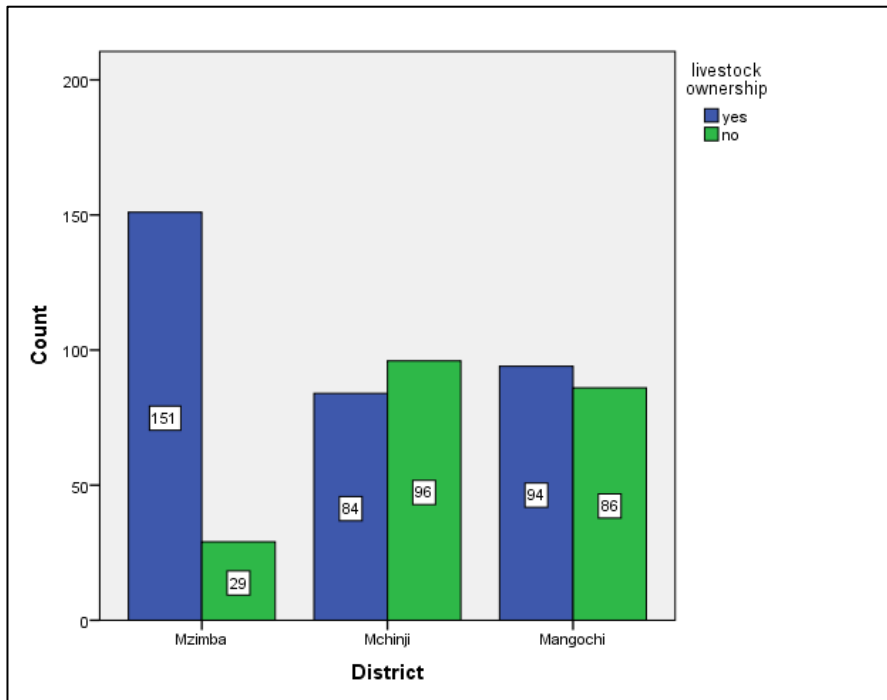


Chi-square test (2-sided): $p = 0.096$ indicates that the association between household type and livestock ownership is not statistically significant

During farmer interviews, some women indicated that livestock was a big asset that was useful both as a source of food as well as a source of income, particularly during emergencies. As one interviewee in Mchinji reported, '*pakhomo popanda ziweto sipasililika*', literally meaning 'a household that does not own livestock is not admired'. However, a Chi-square test performed on the survey data found that the association between livestock ownership and household type was not statistically significant. For this reason therefore, differences in livestock ownership will not be considered in explaining any differences in the agricultural patterns of the three household groups.

Further analysis of the data however found livestock ownership to be statistically different by geographic region. Graph 5.3 below shows that livestock ownership in Mzimba was statistically significantly higher than in both Mchinji and Mangochi.

Graph 5. 3: Number of households owning livestock in 2010 (by geographic region)



Chi-Square test (2-sided) $p = 0.000$ indicates that the association between livestock ownership and geographic region is statistically significant at 1% level

During the field research, several 'kraals', i.e. enclosed areas for keeping livestock, were observed in Mzimba, which was not the case in the other districts. The higher ownership of livestock in Mzimba was also evinced by the fact that out of the 39 households that indicated that they owned some cattle (out of all the 540 interviewees), 35 were from this district, with only 4 from Mchinji and none from Mangochi. In Mzimba, ownership of livestock, particularly cattle, carries economic as well as social value. Cattle is commonly used as bride price (lobola) among the Tumbuka and Ngonis that dominate the district as well as the northern region in general (Kerr, 2005). A focus group discussion involving men confirmed the social value that livestock ownership has in the district. One participant explained that 'a real *ngoni* household must have cattle', implying that if a household did not have cattle, it would not be able to fulfil the traditional requirement of paying bride price in the form of cattle. They explained that although it was possible to pay a cash equivalent, it was often more valued within the communities if the payment was made in the form of cattle.

Another area where the position of de jure FHHs was found to be less conducive for agricultural production compared to that of MHHs was land ownership. Table 5.2 below illustrates that while MHHs owned an average of 2.72 acres per household, de jure FHHs owned 2.05 acres. This difference was statistically significant at the 1% level.

Although the data showed that de jure FHHs owned slightly more land than de facto FHHs (at 2.00 acres per household), the difference between their two groups is not statistically significant.

Table 5.2: Land-holding sizes by household type (in acres)

Household type	Mean	N	Std. Deviation
De facto FHH	2.00	180	1.28
De jure FHH	2.05	180	1.39
Male HH	2.72	180	1.59
Total	2.26	540	1.46

A one-way ANOVA test found that the difference in land-holding sizes among the three household types to be statistically significant, $p = 0.000$. Tukey HSD Post Hoc test found that de jure FHHs had significantly lower land-holding sizes than MHHs. The difference between de jure and de facto FHHs was however not statistically significant.

Variations in land-ownership were also observed according to geographic regions. As is evident in Table 5.3 below, the average land-holding size in Mzimba was 3.12 acres per household, which was substantially higher than for both Mchinji and Mangochi districts at 1.65 and 2.01 acres respectively. These regional differences in land holding sizes are mainly as a result of variations in population densities. The Northern region has the lowest population density in the country at around 63 people per square kilometre. It is followed by the centre which has a population density of 154 per square kilometre. The southern region has the highest at 185 people per square kilometre (GOM, 2008b).

Table 5. 3: Average land-holding sizes per household by geographic region

District	Mean	N	Std. Deviation
Mzimba	3.12	180	1.63
Mchinji	1.65	180	1.30
Mangochi	2.01	180	.95
Total	2.26	540	1.46

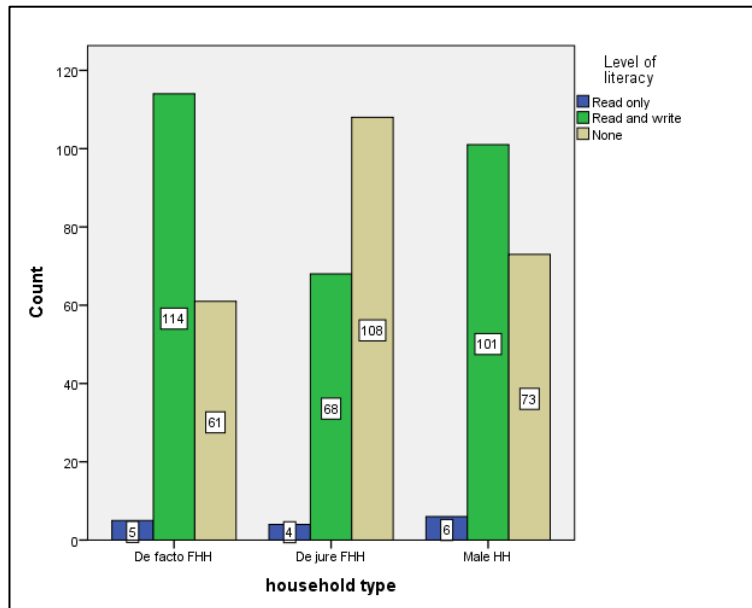
Anova Test: $p = 0.000$ shows the differences in the means are statistically significant at 1% level. Tukey HSD Post hoc test shows significance across all three regions.

Other scholars, such as Dorward and Chirwa (2011) and Chirwa (2004) have also documented that land pressure in the northern region is less intense than in the other regions due to higher average land-holding sizes. Dorward and Chirwa (2011: 2) observe that the northern region has fewer people who own less than one hectare of land per household at 31.4 percent, compared to 54.4 and 40.6 percent for the southern and central regions respectively. Access to farmland in Mzimba district and most parts of the northern region is therefore a lesser challenge than in the other regions. This was also evident during the field research where pockets of fallow land or land that was still forest and had never been cultivated before were observed in Mzimba. The opposite was true in the south, particularly for Mangochi district, where all the land seemed to be intensively cultivated.

Despite having larger land-holding sizes, the trend in Mzimba is similar to the other two districts where MHHs own larger pieces of land than FHHs. It is therefore seen that regardless of availability of land, FHHs are predominantly disadvantaged in their ownership of land across the country. Furthermore, this finding suggests that land ownership is a challenge for FHHs, whether they belong to matrilineal societies such as in Mchinji and Mangochi or patrilineal ones such as in Mzimba. This supports the observations made in Chapter 2 that women in Malawi generally face challenges in accessing land, and this is the case even in matrilineal societies where in principle women are the ones who have legitimate access to land.

Another area that indicated that de jure FHHs had worse farming conditions compared to either de facto FHHs or MHHs was education and literacy levels. As illustrated in Graph 5.4 below, women in de facto FHHs were more literate than those from de jure FHHs and even than those from MHHs. Out of the 180 women interviewed in each of the household types, de facto FHHs had the lowest numbers who could not read or write at 61, compared to 73 for MHHs and 108 for de jure FHHs.

Graph 5. 4: Literacy levels by household type



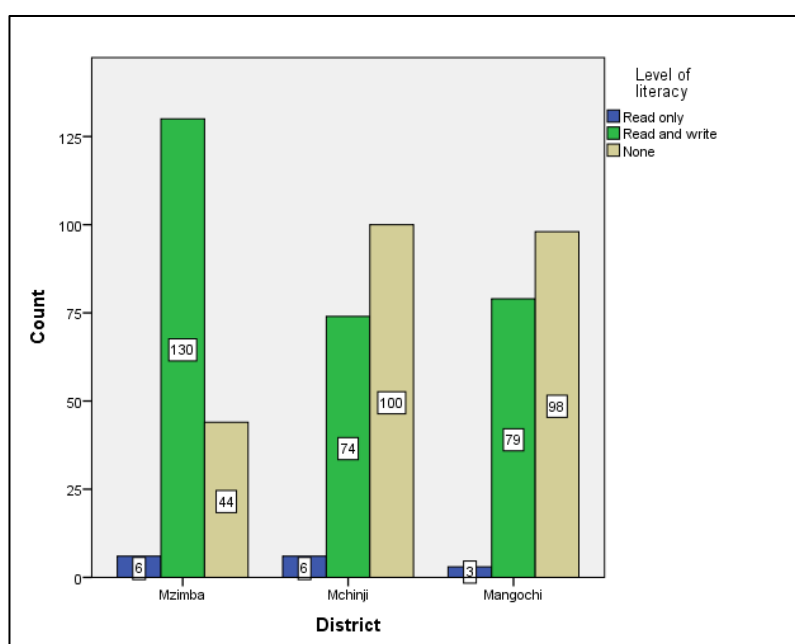
A Chi-square test, $p = 0.000$ shows that the association between literacy level and household type was statistically significant at 1% level.

It is well documented that in Malawi, women and girls are less literate compared to men and boys. The FAO (2011) reports that 80 percent of the men in Malawi are literate compared to only 60.5 percent for women. Some of the reasons for this include preference to educate sons (especially where resources are inadequate to educate all the children in a household) (Mkandawire, 2012; Halfyard *et al.*, 2005); cultural practices that force girls into early marriages (Halfyard *et al.*, 2005; Clark, 2004; Kadzamira and Rose, 2003; Chimombo, 2005) and engagement of girls in domestic roles which keeps them from schools (Porter *et al.*, 2012; Nankhuni and Findeis, 2003; Chimombo *et al.*, 2000; Nankhuni, 2005). Although gender inequalities in access to education still exist, there has been an improvement in recent years due to the implementation of some government programmes such as the USAID-funded Girls Access to Basic Education (GABLE) and the Free Primary Education initiative implemented from the early 1990s. It is possibly for this reason that de jure FHHs, being older than women from the other household types, were more illiterate as is demonstrated in Graph 5.4 above, since they did not have access to such initiatives during their youth. As discussed above, literacy levels are a key factor that may influence agricultural decisions as well as participation in agricultural related extension and training services, which in turn affect agricultural production.

Just as in the case of land and livestock ownership, variations were also observed in literacy levels according to geographic regions. Mzimba had the highest numbers of

interviewees who were literate. As Graph 5.5 below reveals, of those interviewees who could not read or write, only 18 percent were from Mzimba compared to 41 percent each for Mchinji and Mangochi. This difference in literacy levels was also evident during both the farmer interviews as well as the focus group discussions. In Mzimba, some women were not only able to read and write the local languages, but were also able to read and speak English as well. English is the official language in Malawi and the one used in schools, particularly from senior primary school onwards. Being able to speak English therefore usually indicates that an individual has had some formal education above junior primary school (Matiki, 2003).

Graph 5. 5: Literacy levels by geographic region



Chi-Square Test (2-sided): $p = 0.000$ indicates a statistically significance association between literacy level and geographic region.

These findings are in line with previous studies that have reported that districts in the Northern region generally have higher literacy rates than those in the central and southern regions (see GOM and World Bank, 2007; Nankhuni, 2006, FAO, 2011). The FAO (2011) records that the average literacy rate in the Northern region is 87.2 percent, and this is well above the national average of 70 percent. It also observes that the Northern region has less gender differences in adult literacy compared to the central and southern regions. While the gender literacy gap in the northern region is 11 percentage points, in the southern and central regions it rises to just over 20. In the southern and central regions, roughly 56 percent of women are literate, compared to 78 percent and 76 percent of men, respectively.

The higher literacy levels among women in Mzimba district were also demonstrated by the extent of their knowledge of household and farm transactions, including those carried out by the male head of the household in MHHs. Whereas most women in MHHs in Mzimba were able to explain farm and household decisions taken by their husbands, including the associated income and expenditures, the opposite was true in Mangochi. Several women in the district were unaware of farm and household matters involving cash. A typical case was their lack of knowledge about how much money had been made in crop sales where the transaction had been carried out by the male head of the household. The lack of such knowledge may not only be a reflection of lower literacy levels, but may also point to the extent of male-domination in the district. A study by Concern Universal Malawi (2012) on formal and informal rural financial services in Malawi noted that male-domination was particularly strong among the Yao, such as those in Mangochi, where women were usually unaware of the financial transactions in the households.

In summary therefore, analyses of the above demographic factors revealed that differences exist not only between MHHs and FHHs, but between de jure and de facto FHHs as well. Most notable are the disparities between de jure FHHs and MHHs. Based on all the demographic factors examined, i.e. land-holding sizes, livestock ownership, age and education level of interviewee, de jure FHHs had the poorest farming conditions, whereas MHHs had the best. This not only confirms the difference between FHHs and MHHs but the heterogeneity of FHHs as well, the implications of which are discussed in the next section.

Variations were also observed according to geographic regions. Farmers in Mzimba district in the northern region consistently had better conditions for farming than either Mchinji or Mangochi districts in the central and southern regions respectively. They were more literate, owned more livestock and had larger land-holding sizes. Despite having these better conditions, gender inequalities were still evident in the district, just as was the case in Mchinji and Mangochi. De jure FHHs in the district were the least literate; and FHHs owned less land compared to MHHs. Women in MHHs in Mzimba however were more informed of household and farm activities compared to those in Mchinji and Mangochi, a reflection of the better education levels for both men and women in the district. All the above-discussed demographic differences existing amongst these three household types and the three districts are therefore critical to this analysis and will be reflected on in the discussions on the impacts of the FISP on food security in Section 5.3 below.

5.2.2 Differences in Demographic Factors According to FISP Receipt

This section will analyse and discuss the differences in the demographic factors between the FISP-recipient households and non-recipients. As discussed in Chapter 3, selection of FISP beneficiaries is facilitated by a Village Development Committee, which includes traditional authorities, local government and Ministry of Agriculture and Food Security staff, and other local stakeholders such as NGOs. The selection process is guided by criteria provided by the government in the FISP implementation guidelines. The guidelines specify that FISP beneficiaries must be resource-poor farmers who own a piece of land, with special consideration given to vulnerable households such as female-headed, child-headed, orphan-headed, HIV infected or those looking after physically challenged persons (GOM, 2008).

The comparison of demographic factors between FISP-recipients and non-recipients does not however show any consistent pattern or that the recipient households were considerably poorer or more food insecure than the non-recipients. In some areas the FISP-recipients had better farming conditions than non-recipients, and in others the reverse was true. For example, when land-holding sizes are considered, it is found that FISP-recipients owned more land than non-recipients, see Table 5.4 below.

Table 5. 4: Land-holding size by FISP-receipt (in acres)

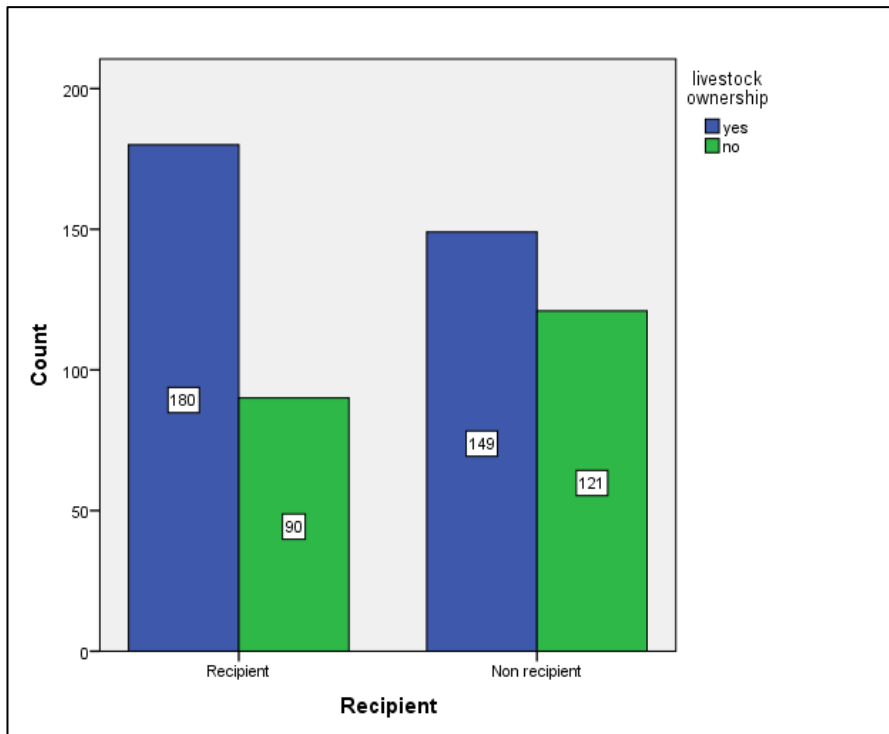
FISP receipt	Mean	N	Std. Deviation
Recipient	2.42	270	1.49
Non recipient	2.10	270	1.42
Total	2.26	540	1.46

Independent t-test, $p = 0.012$ shows that the average land-holding for FISP-recipients was 0.3 acres bigger than that of non-recipients and that was statistically significant at 5% level.

FISP-recipients had larger land-holding sizes at 2.42 acres compared to non-recipients at an average of 2.10 acres. As discussed above in Section 5.2, smaller land-holding sizes are associated with poverty and food insecurity. The fact that the FISP-recipients owned more land than non-recipients could therefore be an indication that fewer poor and food insecure households were selected as FISP-recipients.

Similarly, in terms of livestock ownership, more FISP-recipients owned livestock compared to non-recipients. 66.7 percent of FISP-recipients indicated that they owned cattle, compared to only 55.1 percent for non-recipients.

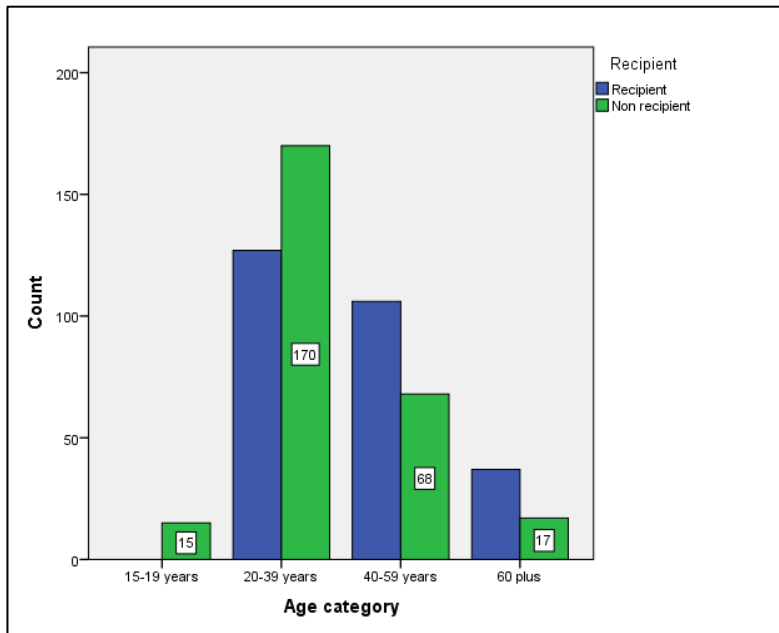
Graph 5.6: Livestock ownership by FISP receipt



Fisher's Exact Test $p = 0.008$ shows that the association between livestock ownership and FISP receipt is statistically significant at 1% level.

Therefore based on bigger land-holding sizes and livestock ownership, it is seen that FISP-recipients had better conditions for agricultural production compared to non-recipients. This conclusion is however challenged when the age and literacy levels of the interviewees are also considered. In terms of age, there were more FISP-recipients, compared to non-recipients, who were over 60 years. Graph 5.7 below indicates that out of 270 FISP-recipients and same number of non-recipients interviewed, there were 37 recipients, compared to only 17 non-recipients, who were above 60 years of age. 14 percent of the FISP-recipients were therefore above 60 years compared to only 6 percent for non-recipients.

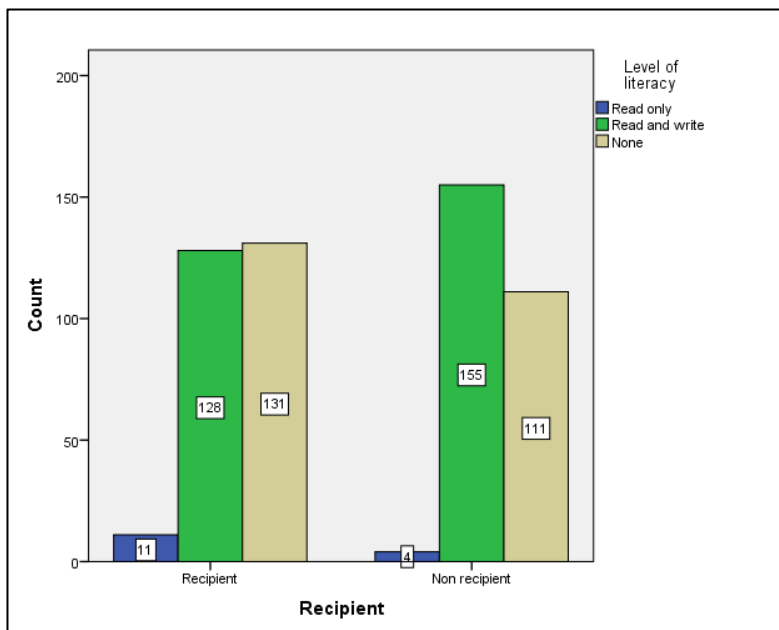
Graph 5.7: Age of interviewee by FISP receipt (in years)



Chi Square Test (2-sided): $p = 0.000$ indicates that the association between age and FISP-receipt is statistically significant at 1% level.

The analysis also showed more FISP-recipients were illiterate compared to non-recipients. Graph 5.8 below illustrates that 72.7 percent of recipients were illiterate, compared to 61.7 percent for non-recipients. Therefore, on the basis of age and literacy levels, recipients had worse conditions for farming compared to non-recipients.

Graph 5.8: Comparison of literacy levels by FISP receipt



Chi-Square test $p = 0.024$ indicates that the association between FISP-receipt and literacy levels is statistically significant at 5% level.

Based on these factors therefore, it cannot be categorically declared whether FISP-recipients had better farming conditions than non-recipients or not since the results were mixed. FISP-recipients were older and less literate than non-recipients, but on the other hand, had more land and more of them owned livestock compared to non-recipients. This however demonstrates the ineffectiveness of the FISP beneficiary selection criteria in selecting households that were most vulnerable in terms of agricultural production. Specifically it demonstrates that those households that were selected as beneficiaries may not have been any more deserving or more fitting to the selection criteria than those that were not selected. This is however not too surprising as the government has openly stated that of the deserving 3 million smallholder farm families, only 1.5 million are targeted every year to receive the subsidised inputs, due to resource constraints. The fact that as many as 3 million households, which is basically every smallholder-farming household in the country, qualify to be FISP beneficiaries reveals that the selection criteria have not been appropriately formulated to target the most vulnerable and may in fact be too broad to serve its targeting function effectively (Chirwa *et al.* 2010). Because poverty in Malawi is endemic with over 52% living below the poverty line, it is necessary for government interventions to have a well-defined target group according to their objectives. Failure to have this well-defined target group inevitably leads to many malpractices and irregularities, as is now the case with the FISP.

During the field work, it was noted that there was no clearly defined description of a FISP recipient that guided the Village Development Committees in their job of selecting beneficiaries. Interviews with local chiefs (who form part of the Village Development Committees) indicated that they followed the criteria set out by the government by selecting the poorest farmers. This was however refuted in most focus group discussions involving non-recipients. They claimed that the chiefs followed their own criteria, and usually favoured their relatives or those who had stayed in the village for long periods of time and were therefore close to the chiefs. Although there was no other evidence available during the field research to support this claim that the chiefs favoured those who had stayed longer in the villages, the fact that the FISP-recipients were generally older than non-recipients (See Graph 5.7 above) would seem to support this claim.

That notwithstanding, the analysis shows that the criteria used by the Village Development Committee to select FISP beneficiaries were not completely clear to the farmers. However, it is explicit that although the government had specified vulnerable

households such as FHHs, HIV infected or affected households, these were not really prioritised in practice. To the contrary, beneficiaries were prioritised according to the subjectivity of the VDCs. Because FHHs were largely excluded from the programme (as observed by Dorward and Chirwa, 2011; Chirwa *et al.*, 2011; SOAS *et al.*, 2008; Chibwana *et al.*, 2010; Ricker-Gilbert and Jayne, 2009; and Holden and Lunduka, 2010) despite being more vulnerable and therefore more deserving of the subsidised inputs than MHHs, would suggest that the VDC criteria was patriarchal-driven. Furthermore and as highlighted in Chapter 3, processes of the Female Subordination Cycle evident in the agricultural policies had eliminated any requirements or expectations for the prioritisation of female farmers or FHHs in this programme. If gender issues were prioritised and not resisted, evaporated or invisibilised from the country's agricultural policies, there would have been a firm requirement from the government for female farmers to be prioritised in ensuing agricultural programmes and interventions as well. In the case of the FISP, the requirement to prioritise FHHs as provided in the FISP guidelines was neither specific nor firm, with no quotas for example provided for proportions of FHHs to be included in each district. Furthermore, FHHs were not appropriately targeted in their position as key players in the agricultural sector, but as a vulnerable group similar to child-headed, orphan-headed or HIV infected households. As discussed in Chapter 2, in spite of their vulnerability, FHHs are increasingly becoming the farmers. Agricultural interventions should therefore prioritise them on both fronts and not only on the basis of their vulnerability. Moreover, the vulnerability of female farmers is not innate but driven more by social injustices.

5.3 Food Production Comparisons

In order to analyse how the FISP has affected food production for the different groups of female farmers included in this research, questions were asked during the farmer interviews and focus group discussions on the following:

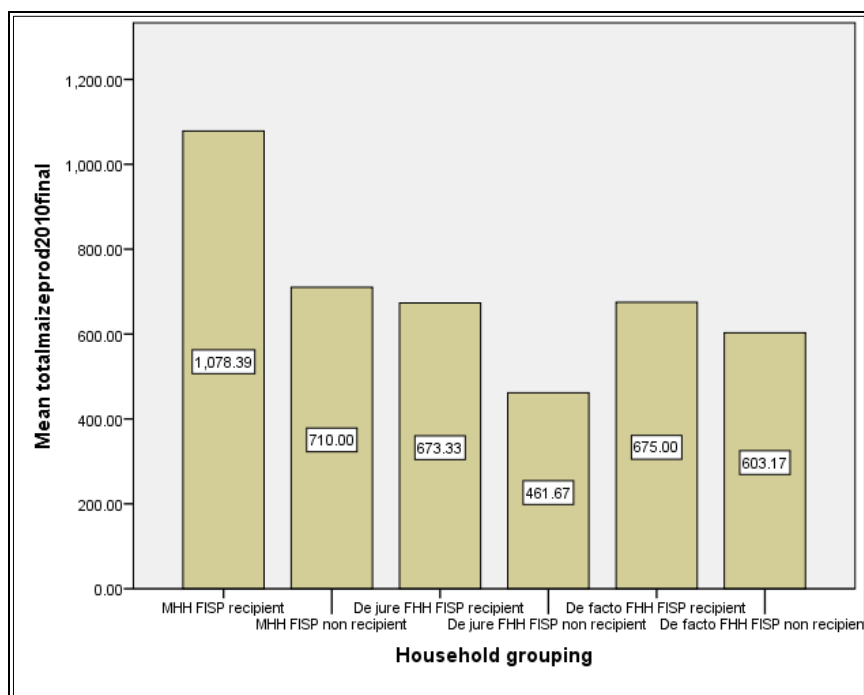
- Volume and varieties of maize produced
- Factors influencing the choice of maize varieties to be grown
- Quantities and types of inputs used, and their source
- Proportion of land allocated to maize production
- Number of months that the maize produced by the household lasted after harvesting
- Household coping strategies during periods of food shortage
- Maize sales and purchases
- Perception of their food security status

As highlighted in the introduction, the food production comparisons were undertaken based on the following three main areas and their interactions- differences between FISP recipients and non-recipients, differences amongst the three household types, and differences according to geographic region. These are presented in the next four sub-sections.

5.3.1 Differences in food production between FISP-recipients and non-recipients

In terms of volume of total maize produced, it was found that, regardless of household type, households that received subsidised inputs produced more maize than those that did not. Graph 5.9 shows that for each of the household types, FISP-recipients had higher maize production than non-recipients. In addition, Table 5.5 also indicates that FISP-recipient households produced an average of 217.3 kgs more per annum than non-recipients.

Graph 5. 9: Average combined maize production in 2010 per household (kgs per annum)



Anova test: $P = 0.000$ indicates statistical significance in the mean difference at 1% level.

Table 5.5: Average household maize output by FISP-receipt

FISP receipt	Mean	N	Std. Deviation
Recipient	808.90	270	675.74
Non recipient	591.61	270	636.72
Total	700.26	540	664.87

Independent t-Test, $p = 0.000$ shows statistical significant in the mean differences at 1% level.

As discussed in Section 5.2.2 above, there was no conclusive evidence to suggest that FISP-recipients had substantially better farming conditions than non-recipients. Therefore, their higher maize production compared to non-recipients presents a case for suggesting that the FISP had in general terms, positively contributed to increased maize production at household level. This was also confirmed during both the farmer interviews and the focus group discussions where the majority of the recipient households indicated that they felt that the FISP had led to an improvement in their maize production. This impact of the FISP on maize production is one of the main reasons that has made the programme particularly popular in the rural areas. As far as

farming is concerned, the FISP has taken centre stage in most communities, with every household wanting to be registered as a beneficiary. This was evident in all three districts where women who had not been sampled to participate in the survey would still come to the meeting venues and demand to be interviewed or to simply write down their names. Their perception (which was duly corrected) was that the names of those who were interviewed, particularly the non-recipients, would be submitted to the government to be included as recipients in the following year. Many of the non-recipients tried to present a case on why they should have been included as the programme's beneficiaries.

Although it is not uncommon in Malawi for rural households to seek to be included as beneficiaries in any government or NGO projects, the case of the FISP is somewhat different. Usually households compete for free hand-outs or for projects where their own contribution or input is minimal (Tambulasi and Kayuni, 2005). The value attached to the FISP by farmers was however demonstrated by the challenges that the households were willing to bear in order to buy their subsidised inputs. As indicated in Section 5.2.1 above, in all districts, both farmer interviews and focus group discussions indicated that there were many cases where FISP recipients would sleep at the ADMARC depots for several nights awaiting the delivery of the inputs. They indicated that sleeping at these ADMARC depots (where the subsidised inputs were sold) was necessary in order to ensure that when the inputs arrived, they would be amongst the first to buy. This seemed to have been a wise strategy since it was common for inputs to run out at the depots before all beneficiaries had a chance to buy. An interview with a Ministry of Agriculture official confirmed that input deliveries during the year had been disrupted by nationwide fuel shortages in the country and other logistical challenges. Consequently, in many of the depots, input deliveries were made in phases and sometimes too late for the inputs to be of any good use in the fields.

The conditions that farmers faced at the buying centres were however very unsuitable, revealing their desperate need to access subsidised inputs. In Mchinji, where one focus group was held close to an ADMARC depot, participants pointed to an overgrown bush where they were sleeping, cooking and using as toilet facilities as well. They explained that although they would have preferred to sleep within the ADMARC compound, which was safer and clearer of bushes, the guards at the depots would not allow them. There were therefore many stories of women sleeping with the guards just to be allowed to sleep close to or within the ADMARC compound or some would sleep with the depot's officials so that they could be allowed to jump the queue when the inputs arrived.

Sleeping at the ADMARC depots was an even bigger challenge for FHHs with young children as it meant that they had to take their children with them and expose them to such a hostile environment. The women preferred taking their children with them as they went to buy the inputs as they did not usually know how many nights they would have to spend at the depots. Some women indicated that they could sleep at the ADMARC depots for as many as eight nights. Although there were some who would simply decide to sell off their coupons and not go through these challenges, many were willing to endure them. This clearly demonstrates the challenges that women, particularly those from FHHs, have to face in order to balance their time and fulfil their triple roles, as discussed in Chapter 2. As one female participant in a focus group discussion in Mangochi affirmed:

‘...as a mother, one is prepared to take this challenge, otherwise there will be no food for the rest of the year for the children.’ (Participant, Focus Group Discussion 2.1, Mangochi)

The value of the FISP for household food production is therefore appropriately confirmed. In the same district, a participant in a focus group discussion involving FHHs that had received the subsidised inputs described how maize production in the district had become revitalised because of the FISP. She indicated that farming had now become more meaningful because many households were able to at least harvest something from their fields. She claimed that before the FISP, it was only rich households that could have a ‘*nkhokwe*’ (maize granary) within their compounds. In Malawi, anecdotal evidence suggests that construction of a ‘*nkhokwe*’ is an indicator of improved food security as it is normally done when a household expects a good maize harvest. Therefore, in as far as household food (maize) availability was concerned, the statistical data, the farmer interviews and focus group discussions all provided evidence that the FISP has had a positive impact. Not only are FISP-beneficiary households producing more maize than non-recipients, the recipient households are also able to testify to it.

The food security improvements however seemed to be relative. Most of the focus group discussions highlighted that the amount of subsidised inputs received was not enough to completely resolve their food insecurity. They emphasised that although the FISP had led to improvements in their food security status, they were still food insecure. The quantitative data also reflected this. As Table 5.6 below illustrates, there were very few households (only 20.6 percent of the interviewed households) who

produced enough maize to last the whole year. Although the FISP-recipients in each household type had their maize lasting longer than non-recipients, their numbers were still very low.

Table 5.6: Percentage of farmers producing enough food to last the whole year, by household type and FISP receipt

Household type	Percentage of interviewees whose maize lasted the whole year
Male headed FISP recipient	4.1
Male headed FISP non recipient	1.9
De jure FHH FISP recipient	5.0
De jure FHH FISP non recipient	2.8
De facto FISP recipient	4.8
De facto FHH FISP non recipient	2.0
Total	20.6

Chi-square test, $p = 0.065$ shows no statistical significance in the association between household type and month when maize runs out at 10% level

In Malawi, food security is both chronic and transitory (World Food Programme, 2010). While some people experience chronic food shortage, many more households become food insecure between November and March, a period commonly called the ‘hunger season’ (Cammack, 2006; Miller *et al.*, 2011; Ntata, 2010; Gondwe *et al.*, 2005). It is during this time, when households run out of the maize that they harvested, that food insecurity becomes even more widespread. In many rural areas, maize becomes both unavailable as well as inaccessible, i.e. it becomes largely unavailable and when available, it is very expensive. The fact that only very few households interviewed in the survey indicated that their maize lasted the entire year suggests a limited impact of the FISP on this transitory food insecurity experienced during the hunger season. Furthermore, focus group discussions confirmed that maize prices in the areas remained high and volatile, especially during the hunger season. In Mzimba, one participant elaborated it this way:

‘...receiving a (FISP) coupon doesn't mean that you will not need to buy maize. Almost everyone in this village needs to buy maize at some point in the year. Unfortunately, maize prices have continued to go up. In January, we are only able to buy maize in small basins, because we don't have enough to buy a whole bag.’ (Participant, Focus Group Discussion 3.3, Mzimba).

Dorward and Chirwa (2011) have also documented these high maize prices during the hunger season, even during the FISP years. By looking at maize prices before and during the FISP period, they concluded that maize prices were lower in the eight marketing seasons prior to the FISP compared to the marketing seasons following the programme. They however argued that the higher prices did not lead to any reports of widespread suffering and distress as was the case with previous years of high prices (e.g. 2001/2 and 2004/5). They attributed this to an improvement in incomes and welfare of rural households as a result of the FISP. Whilst this may be the case for rural households in general, it is unlikely that it reflects the situation of FHHs. FHHs, being usually income poor and having limited means of generating cash would be most affected by high maize prices. Such gender disaggregated data is however not available because of the invisibilisation of gender issues from the FISP, as discussed in Chapter 3. Challenges that relate specifically or largely to female farmers are bound to be overlooked, missed or neglected. This analysis will therefore (in Chapter 6) explore mechanisms employed by the households aimed at acquiring food during the hunger months and how these affect their food security status.

5.3.2 Comparisons of maize production outputs by the different household type

Regardless of the fact that all FISP-recipients produced more maize than non-recipients, the data reveals that the output of de jure FHHs was generally lower than that of both de facto FHHs and MHHs.

Table 5.7: Annual average household maize production in 2010 by household type (kgs)

Household type	Mean	N	Std. Deviation
De facto FHH	639.08	180	683.21
De jure FHH	567.50	180	515.53
Male HH	894.19	180	734.32
Total	700.26	540	664.87

One way Anova test $p = 0.000$ indicates that there was statistical significance in some of the means at 1% level. Tukey HSD post hoc test however reveals that the statistical significance is only between the FHHs and MHHs and not between de jure and de facto FHHs.

Considering the demographic factors for de jure FHHs discussed in Section 5.2 above, it is not too surprising that in general, this group of women had the lowest production output of all three household types. What is more noteworthy however is the difference in maize production output between the two groups of FHHs (i.e. both de jure and de facto) and MHHs. The extent of the low maize production by FHHs is evinced by the fact that even when they received subsidised inputs, their maize output was less than that of MHHs. Table 5.8 below indicates that the FHHs recipient households produced less maize than MHHs (both recipients as well as non-recipients).

Table 5.8: Annual Average household maize production in 2010 by household type and FISP-receipt (kgs per annum)

Household grouping	Mean	N	Std. Deviation
MHH FISP recipient	1078.39	90	839.22
MHH FISP non recipient	710.00	90	558.20
De jure FHH FISP recipient	673.33	90	560.30
De jure FHH FISP non recipient	461.67	90	444.89
De facto FHH FISP recipient	675.00	90	501.73
De facto FHH FISP non recipient	603.17	90	827.32
Total	700.26	540	664.87

One way Anova test $p = 0.000$. Tukey HSD post hoc indicates that the only statistically significance difference was that between MHH FISP recipients and the rest of the groups.

Tukey HSD Post hoc tests however reveal that the differences between the FHHs FISP-recipients and the MHH non-recipients are not statistically significant. Of course, it would have been even more noteworthy if this was significant, indicating that even when FHHs are provided with subsidised inputs, their total maize production is still less than that of MHHs who did not receive the subsidised inputs. In the above case however, the results only indicate that when all three household types are provided with subsidised inputs, the two groups of FHHs produce significantly lower maize output than the MHHs.

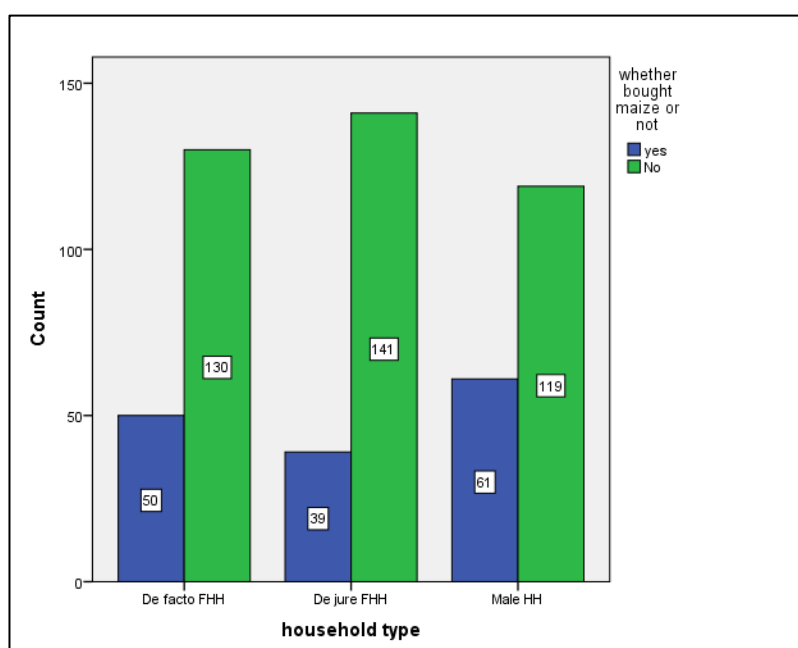
The impression created by this then is that the FHHs face many other challenges that affect their agricultural production. Therefore, even when cheaper inputs are provided to them, they are still unable to produce as much maize as MHHs. For example, during the focus group discussions, most of the female farmers indicated that they had never received any maize production training. Because there were some men (and even women) in the same areas who indicated that they had received maize training in the last two years, it meant that the trainings were actually provided in the areas, but most of the female farmers did not attend or access them. When asked the reasons for not attending the trainings, most indicated that they were not aware of such training in their area. This issue was however clarified during key informant interviews with farmer organisation staff and leaders in the areas where it transpired that most of the

agricultural trainings in the area were provided by farmer organisations (and in some cases NGOs) and not government extension workers. Consequently, it was mainly members of the farmer organisations who were aware of any training opportunities and therefore could attend. The women, who were not registered as members of farmer organisations, (because the organisations mainly targeted cash crop producers), were therefore excluded. In all three districts, NASFAM was the main farmer organisation operating in the areas and on average female membership was between 30 and 35 percent.

Therefore, as highlighted in Chapter 3, female farmers face many and inter-related challenges such that a gender analysis is usually necessary in order to develop interventions that would successfully address their food insecurity. In this case for example, providing subsidised inputs to the female farmers without improving their access to agricultural extension is likely to nullify any gains from the former.

Although both de jure and de facto FHHs produced lower volumes of maize than MHHs, there were more de jure FHHs who did not buy any maize to supplement their production. This is shown in Graph 5.10 below. There were 141(out of 180 for each group) de jure FHHs who did not buy any maize, compared to 130 and 119 for de facto and MHHs respectively.

Graph 5.10: Number of households that bought supplementary maize



Chi-square test, $p = 0.035$ shows a statistical significance in the association between maize purchase and household type at 5% level.

Even when the volumes of maize purchased are considered, it is found that de jure FHHs still bought the lowest volumes of all three groups. Table 5.9 below shows that on average, MHHs bought approximately 58 kgs of maize per annum to supplement their own-production. De facto FHHs bought approximately 56kgs, and de jure FHHs only bought about 34 kgs.

Table 5.9: Volume of maize purchased per household per annum (in Kgs)

Household type	Mean	N	Std. Deviation
De facto FHH	55.78	180	107.43
De jure FHH	34.31	180	79.37
Male HH	57.92	180	108.07
Total	49.33	540	99.59

Anova test $p = 0.045$ shows the difference in the means is statistically significant at 5% level.

The higher maize purchases by de facto FHHs compared to de jure FHHs confirms the assertions discussed in Chapter 2 that unlike de jure FHHs, de facto FHHs are not usually income poor due to remittances (Horrell and Krishnan, 2007). Because de jure FHHs had the lowest average maize production volumes of all three household types and yet did not buy much supplementary maize, indicates that they either had other means of acquiring supplementary maize or they survived on lower maize volumes than other households.

In discussing what coping mechanisms the farmers employed during periods of food shortage, focus group discussions highlighted involvement in *ganyu* work, winter cropping, selling livestock and reducing the frequency of meals as the main ones (see Chapter 2 for more on the involvement of female farmers in *ganyu* works in Malawi). Being self-reported, it is probable the interviewees only isolated strategies that are perceived to be legitimate within the communities as well as in the country as a whole. For example, despite evidence of the use of transactional sex as a strategy used by some women in Malawi to access food and other material needs as reported by Swidler and Watkins (2007), Bryceson and Fonseca (2006) and Shah (2002), the issue was not directly raised in the farmer interviews. A study by Bryceson and Fonseca (2006) on peasants' responses to hunger and HIV/AIDS in Malawi observed that transactional sex was increasingly being incorporated into *ganyu*, where men would demand sex in order to offer the women *ganyu*. Although cultural norms in the country

discourage public discussions about sexual matters, as Anderson (2012) observes, FGDs revealed that transactional sex was being used by some women in order to quickly access subsidised inputs at the ADMARC depots.

Participation in *ganyu* work was however mentioned repeatedly by almost all the farmers, irrespective of their household type. Payment for *ganyu* was either in terms of cash or maize, although most women indicated that they preferred payment in maize. The rationale behind this was to circumvent the extra challenges that they faced in purchasing maize. These included unavailability of maize within the communities such that they had to travel long distances to get it, or spend a long time trying to find a place where it was available. In addition, when they got it from the Trading Centres, the prices were usually very high. Getting paid maize for *ganyu* services therefore seemed a more direct and easier way of accessing much-needed maize.

Despite this advantage of *ganyu*, key informant interviews with farmer organisations in the areas indicated that *ganyu* had one major drawback: It was most common and/or needed during the hunger months, between November and March when the maize that the farmers had harvested between April and June ran out. This period however also coincided with the crop production period when land preparation and weeding were also required in the farms of those engaged in *ganyu*. The intensive involvement of any farmer in *ganyu* therefore meant that although they would be able to get more maize (as payment for the *ganyu*), activities on their own farms would suffer, thereby affecting their next maize harvest.

In Mchinji, some participants in a focus group discussion involving FHH non-recipients indicated that in order to balance their labour and time between their own farms and *ganyu*, they tended to do *ganyu* work in the mornings and then work on their farms in the afternoons. They indicated that *ganyu* activities were prioritised because the payment they received was desperately needed to meet the immediate food needs of their households. Evidently, this may create a vicious cycle of food insecurity as the failure to work on their own farms at the right times could affect the production and productivity of their crops. In addition, it also increases the work burden for farmers. This is particularly significant for female farmers because they already work very long hours. As highlighted in Chapter 2, women work an average of 16 hours a day, compared to only 6 for men (Anderson, 2012; GOM, 2006). This has implications not only for their quality of life but for their crop productivity as well (Peterman *et al.*, 2010).

Winter cropping was the other option that farmers used to supplement their main maize crop harvest. This was most commonly mentioned in Mchinji and Mzimba where the conditions are more suitable for this kind of cropping. Winter cropping is done during the winter months (between May and August) as opposed to the main cropping period of November to April. It is commonly done in *dimba* (wetland) areas, where farmers plant a 'second' maize crop. In these two districts therefore, this was a good source of maize that was harvested when the first harvest was running out or had already run out.

A practice similar to this that was mentioned in all three districts was early harvesting of maize that had just passed the green maize stage. It was explained in the focus group discussions that if the maize ran out just a few weeks before their crop was ready for harvest, they would still harvest it and put it out in the sun to dry, instead of waiting for it to dry on the cob in the garden. However, this was not a preferred option for harvesting maize as some women in Mangochi testified. They explained that because immature grains usually shrivel when put out in the sun to dry, the farmers end up getting less maize from their field than they would have if they had waited for the maize to fully mature.

The extent of the food security challenges facing FHHs is therefore clear. FHHs and more particularly de jure FHHs were unable to produce enough maize to meet their annual requirements. Consequently, they engaged in various coping mechanism including *ganyu* work, winter cropping and early harvesting. Unfortunately, these strategies also created some challenges that exacerbated their food insecurity rather than reducing it.

5.3.3: Comparisons of maize varieties grown by the different household types

Another significant factor that was revealed during the field research was the importance of food preference as an element of food security. It was evident from both the focus group discussions and farmer interviews that within the communities, food security was more than just about maize production. Considerations were also made on the variety of maize grown, where local maize varieties were more preferred as a source of food compared to hybrid varieties. The quantitative data presented in Table 5.10 below shows that the FHHs (both de jure and de facto) produced substantially more local than hybrid maize varieties. This was however not the case with MHHs. MHHs produced almost equal amounts of hybrid and local maize varieties, whereas de facto FHHs produced over twice as much local maize as they did hybrid maize varieties. De jure FHHs also produced considerably more local than hybrid maize.

Table 5.10: Average local and hybrid maize production for 2010 (kgs per annum)

Household grouping (N=90 for each group)		volume harvested of local maize	volume harvested of hybrid maize
MHH FISP recipient	Mean	567.83	525.22
	Std. Deviation	672.89	734.42
MHH FISP non recipient	Mean	347.44	360.33
	Std. Deviation	446.01	552.15
De jure FHH FISP recipient	Mean	410.06	200.94
	Std. Deviation	484.86	309.14
De jure FHH FISP non recipient	Mean	281.94	182.50
	Std. Deviation	379.87	332.69
De facto FHH FISP recipient	Mean	475.11	196.00
	Std. Deviation	436.22	400.47
De facto FHH FISP non recipient	Mean	412.39	190.78
	Std. Deviation	535.42	496.81
Total	Mean	415.80	275.96
	Std. Deviation	507.19	562.82

One way Anova tests shows statistical significance in the means $p = 0.004$ and $p = 0.000$ for local and hybrid maize respectively at 1% level.

It is probable that men, being more educated, and more exposed to agricultural extension and training, are able to appreciate that both hybrid and local maize varieties have pros and cons. Because they are also better resourced (and thus able to afford hybrid seeds and fertilisers), they can decide to produce both hybrid and local varieties as may be necessary for their needs. The situation is unlikely to be the same for FHHs because, even if they were to understand and appreciate that hybrid maize varieties have yield advantages compared to local varieties, they may still not be able to grow them for lack of the necessary inputs such as seeds, fertilisers, as well as training and extension services on how to grow these newer varieties.

In discussing this trend, focus group discussions with both FISP recipients and non-recipient female farmers revealed that women preferred to grow local maize varieties because they have better storage traits (i.e. not easily destroyed by weevils), have better cooking properties, have a better taste, and can also be grown using recycled seed. These properties therefore made local maize varieties more suitable for household subsistence use than hybrid varieties.

A comment from one female farmer in a focus group discussion with FISP non-recipients in Mangochi confirmed the significance attached to desired food traits when selecting maize varieties:

‘One can harvest a lot of hybrid maize but when they make flour from the maize, they find that they have to use a lot more flour to make *‘nsima’*. With local maize, although one can harvest less, you find that they need less flour to make *‘nsima’*. The end result is that the one who harvested ten bags of hybrid maize will finish her flour faster than the one who harvested fewer bags of local maize’. (Participant, Focus Group Discussion 2.2, Mangochi)

When the group was asked the validity of this statement, there was an overwhelming chorus that this was true and had been the experience of many. Sentiments were also made that the local maize varieties made better *‘ufa woyera’*, because of its hard kernels. *Ufa woyera* is made by a type of processing that involves removing the husks before milling the maize into flour. Although it has been argued by some scholars that *ufa woyera* is less nutritious than *mgaiwa* (made from whole grain maize), many households in Malawi prefer it to the *mgaiwa* on the basis of its taste (Kaunda, 2002).

It was however apparent that the food-related traits were mainly appreciated by women, being the ones who prepare '*nsima*', the main dish made from maize flour, and are usually the ones charged with the responsibility of producing, storing, processing and preparing food for their households (Uttaro, 2002). Focus group discussions with men in the same district downplayed the importance of these factors. Instead, they only listed better storage qualities and ability to recycle the seed as the main advantages of the local maize varieties. In terms of storage qualities, the explanation was that unlike local maize which they could keep on the cob in maize granaries for some months, the hybrid maize varieties were easily attacked by weevils, sometimes even right in the field before the maize was harvested. As such, hybrid maize had to be shelled and treated with pesticides, which meant extra work as well as extra costs. Cash constrained farmers therefore, which are likely to include FHHs, are further discouraged from growing hybrid maize varieties because of the requirements to fumigate the maize and the associated high costs.

Another factor that was mentioned by both the male and female interviewees as having influenced their preference for local maize varieties was the ability to recycle the seed. In Mzimba, one elderly looking female farmer indicated that she had always used local maize because she was able to recycle the seed year after year. She indicated that she picked the best maize cobs from her harvest every year and stored for seed for the following season. That way she only had to worry about buying fertilisers. Picking up on the same, another participant indicated that although she never kept the seed herself, she was always assured that she would be able to get some seed from her mother who lived in a nearby village and always kept some seed from each year's local maize harvest. For resource-constrained households therefore, using recycled seed enables them to reduce their costs of production by only buying fertilisers, rather than having to buy both fertilisers and seed every year.

Another female focus group discussion in the same district also indicated that most of the farmers continued to grow local maize even when cheaper subsidised hybrid maize seed were provided because they did not want to lose their local varieties. Consequently, many FISP recipients only planted the hybrid seed that they received as part of the FISP package, and wherever necessary, supplemented it with local maize. As one farmer considered;

'I don't want to suffer when the FISP is discontinued and I am unable to buy commercial hybrid maize seed. I still grow some hybrid maize, but I can never ignore the local variety'. (Participant, Focus Group Discussion 3.1, Mzimba)

This preference for local maize varieties by the smallholder farming households was also confirmed by the quantitative data obtained during the survey. As demonstrated in Table 5.11 below, all household groups put more of their land to local maize production than to hybrid maize. Even FISP-recipient households, who had received subsidised hybrid maize seed, also allocated more land to local maize production than to hybrids, providing a strong case for local varieties preference, particularly for FHHs.

Table 5. 11: Area of land put to hybrid and local maize production per household in 2010 (acres)

Household grouping N=90 for each group		Area grown hybrid maize	Area grown local maize
MHH FISP recipient	Mean	.70	.93
	Std. Deviation	.83	.87
MHH FISP non recipient	Mean	.62	.81
	Std. Deviation	.79	.88
De jure FHH FISP recipient	Mean	.46	.78
	Std. Deviation	.63	.75
De jure FHH FISP non recipient	Mean	.36	.64
	Std. Deviation	.60	.55
De facto FHH FISP recipient	Mean	.34	.86
	Std. Deviation	.60	.66
De facto FHH FISP non recipient	Mean	.33	.76
	Std. Deviation	.63	.63
Total	Mean	.47	.80
	Std. Deviation	.70	.74

One way Anova tests $p = 0.000$ and $p = 0.007$ indicates statistical differences in the means for both hybrid and local maize respectively at 1% level.

Even though MHHs also allocated more land to local maize production, their output for hybrid maize was higher than that of local maize (see Graph 5.10 above). The main

explanation behind this was that in MHHs, priority for fertiliser application was given to hybrid maize. On the contrary, FHHs applied more fertiliser to local maize. When asked the source of their fertiliser, most of the FISP-recipients reported that although the FISP fertilisers were targeted at hybrid maize, they used them on either local or hybrid maize depending on their choice. Table 5.12 below shows that the fertiliser that most of the FISP-recipients applied to their local maize was from the FISP, rather than from private traders. For de jure and de facto FHH, over 90% indicated that the UREA (basal) fertiliser that they used on local maize was from the FISP and over 85% indicated that FISP was the source of their 23:21:0 (top-dressing) fertiliser. Although the government expects farmers to apply the FISP fertiliser to hybrid maize (hence the provision of both these inputs in the programme), the farmers still find it worthwhile to use some of the FISP fertiliser on their local maize gardens.

Table 5. 12: Source of fertilisers used in local maize in 2010

	% within group sourcing UREA from FISP	% within group UREA sourcing from private traders	% within group sourcing 23:21:0 from FISP	% within group sourcing 23:21:0 from private traders
MHH FISP recipient	75	23.1	69.6	28.3
MHH FISP non recipient	0	57.5	0	69.2
De jure FHH FISP recipient	94.7	5.3	87	11.1
De jure FHH FISP non recipient	0	37.5	0	42.3
De facto FHH FISP recipient	90.2	8.2	86.0	12.3
De facto FHH FISP non recipient	0	40	0	45.2

Chi-square test, $p = 0.007$ and 0.03 shows statistical significance in the association between household type and source of Urea and 23:21:0 fertilisers respectively.

Interestingly, none of these issues were raised in the key informant interviews with the government, donors, farmer organisations or even NGOs working in the agricultural sector in Malawi. It is unlikely that this was due to a lack of knowledge about the issues as they have also been observed in some government publications. The Malawi Poverty and Vulnerability Assessment (2006) states that 'men are more likely than women to utilise higher yielding hybrid strains that require fertilizer, rather than the lower yielding, seed bearing strains chosen by women for domestic use' (GOM and World Bank, 2007: 9). Research evidence shows that hybrid maize varieties respond better to fertilisers than local varieties and that they have a higher productivity per unit area than local maize (Smale, 1995; Chirwa, 2005). Under smallholder conditions, local maize varieties have a productivity of 350-500 kgs per acre, compared to 800-1200 kgs per acre for hybrid varieties. The potential however, as obtained at research stations, is as high as 4000 kgs for hybrid varieties and 1200 kgs for local varieties.

Most of the key informant interviews demonstrated greater concern with maize productivity as opposed to food preferences as the general view obtained from them was that the FISP was beneficial because it was making high-yielding hybrid maize varieties available to smallholder farmers. The farmers therefore had to be rational and start growing these 'better' varieties instead of the local varieties. While this position may be sound on the basis of maize output, it reflects a disconnection to and an implicit devaluation of grassroots concerns and preferences. As highlighted above, yield potential was not the only factor that the households considered in selecting their maize variety. Moreover, as indicated in Mchinji, where many of the households grew hybrid maize compared to the other districts, hybrid maize only performed well when fertilised. Consequently, households without or with limited access to fertilisers or other means of acquiring fertilisers (which in most cases were female-headed), preferred to grow local varieties. This evidence therefore suggests that unless these needs of female farmers are considered in the FISP, the maize production of female farmers will never compare to that of male farmers. Specifically, it shows that the maize production of female farmers will not be adequately improved by the mere provision of hybrid maize seed and fertilisers. It is necessary to also consider their food preferences as well as their other needs that influence their preference for local maize over hybrid maize. Unfortunately, these issues do not feature enough in the FISP due to the fact that female farmers and their needs are invisibilised from the programme.

5.3.4 Comparison of maize production by geographic region

The research also sought to analyse how the FISP has affected the food production of interviewees according to geographic region. Specifically, it sought to analyse how regional variations in the demographic factors discussed in Section 5.2.3 may have affected the utilisation of subsidised inputs and therefore agricultural production output and patterns of the different household groups. The first notable factor in this respect is that households in Mzimba had the highest maize production volumes of all three districts, as indicated in Table 5.13 below.

Table 5.13: Average maize production in 2010 by geographic region (kgs per annum)

District	Mean	N	Std. Deviation
Mzimba	1007.14	180	837.50
Mchinji	616.53	180	595.49
Mangochi	477.11	180	351.06
Total	700.26	540	664.87

Anova Test $p = 0.000$ shows the differences in the means is statistically significant at 1% level.

Compared to Mangochi and Mchinji, climatic conditions in Mzimba are more suitable for crop production, with higher annual rainfall averages (around 700mm), favourable soil conditions and better cropping patterns (Tanganyika *et al.*, 2011; MVAC, 2005). This has a significant impact not only on production output but on productivity as well. A key informant interview with an official from one of the national farmer organisations also confirmed that generally the northern region had higher agricultural output compared to the other regions. He attributed this not only to better climatic conditions, but to good demographic factors in the region as well. This claim is also supported by the quantitative data, as Mzimba, which had the highest maize output as shown in Table 5.13 above, also had the best demographic factors for agricultural production of all three districts (as discussed in Section 5.2.3). Therefore, in addition to favourable climatic conditions, higher literacy levels, bigger land-holding sizes and higher livestock ownership all contributed to higher maize output in the district.

In order to discuss in greater detail the agricultural production patterns in the three districts, the following section considers each district consecutively.

I. Mangochi

Apart from having the lowest average annual maize output (as shown in Table 5.13 above), Mangochi district in the southern region also had the lowest volume of hybrid maize production of all three districts. This is shown in Table 5.14 below.

Table 5. 14: Average hybrid maize output per annum per household in 2010 (kgs)

District	Mean	N	Std. Deviation
Mzimba	388.61	180	691.98
Mchinji	350.44	180	414.96
Mangochi	88.83	180	263.03
Total	275.96	540	506.92

Anova Test $p = 0.000$ shows that the differences in the means is statistically significant at 1% level. Tukey HSD Post Hoc Tests show the significance is in the difference between Mangochi and the two districts and not between Mchinji and Mzimba.

In the district, hybrid maize production was low even for those households that received subsidised hybrid seed as part of the FISP package. See Table 5.15 below. Although there was no statistically significant correlation between hybrid maize receipt and hybrid maize production in all three districts (*Pearson correlation: $r = -0.006$, $n = 98$, $p = .952$ indicates no statistically significant correlation*), the table reveals interesting practices regarding hybrid maize production.

Table 5. 15: Mean volume of hybrid maize produced and volume of hybrid maize seed received by household type in Mangochi district (in kgs)

	Volume of hybrid maize seed received	Volume of hybrid maize produced	Volume of local maize produced
MHH FISP recipients	5.75	107	486.50
MHH non-recipients	0	211	298.67
De jure FHH recipients	5.33	88	488.67
De jure FHH non-recipients	0	68	275.00
De facto FHH Recipients	3.5	0	454.17
De facto FHH non-recipients	0	58	326.67

As the table reveals, de facto FHHs FISP-recipient households, who received on average 3.5 kgs of hybrid seed did not grow any hybrid maize in the year. Although this group received the lowest volume of FISP maize seed compared to all FISP-recipients, (which was also lower than the 5 kgs that is included in the FISP package), they should have still produced some hybrid maize using the little seed that they received. This therefore raises questions on how they used the subsidy seed and may point to possible leakages from the programme either to other uses such as '*dimba*' or winter maize production, or to other farmers.

Interestingly, MHH non-recipient households that did not receive the subsidised hybrid seed were the ones who produced the highest volume of hybrid maize in the district. When asked the source of their hybrid seed, they indicated various sources. This ranged from buying from other farmers within the village, from informal vendors, from private formal traders as well as gifts from their friends or relatives within the village. It is therefore likely that the female-headed FISP-recipient households may have sold their seed coupons or seed to non-recipients in order to access cash for other needs.

Focus group discussions in the district involving non-recipients confirmed that this practice of selling FISP coupons to non-recipients was happening in the district, although no one admitted to having bought or sold the coupons themselves. This was

not unusual considering that the collective and open nature of focus group discussions makes it less appropriate and effective for collecting personal or sensitive data, especially that which may be deemed to be socially unacceptable (Tonkiss, 2004). On the other hand, these issues also demonstrated an advantage with FGDs in that participants were able to raise sensitive issues that they would not normally raise in individual interviews.

II. Mchinji

Whilst Mangochi district had generally low production of hybrid maize, Mchinji district presented a very different scenario. The average volume of hybrid maize produced per household for all the household types in the district was generally high. In addition, for all household types, FISP-recipients produced more hybrid maize than non-recipients as is evident in Table 5.16 below. This indicates that receiving subsidised maize seed contributed to the decision by farmers to grow hybrid maize in the district.

Table 5. 16: Mean volume of hybrid maize produced and volume of hybrid maize seed received by household type in Mchinji district (in kgs)

	hybrid maize seed received	hybrid maize produced	Volume of local maize produced
MHH FISP recipients	7.06	654	497.00
MHH non-recipients	0	355	227.00
De jure FHH recipients	7.08	407	48.33
De jure FHH non-recipients	0	187	161.83
De facto FHH Recipients	5.44	371	248.00
De facto FHH non-recipients	0	127	216.33

Another noteworthy finding in the district was that all the household groups, except de facto FHH non-recipients, produced more hybrid maize than local varieties. Mchinji is therefore the only one of the three districts where production of hybrid maize was

generally higher than that of local maize. It is likely that this was influenced by the extensive crop trading activities in the district. In addition to four big private traders who had established shops in the area, there were many informal vendors going about looking to buy maize in the villages. Being close to the Capital City, Lilongwe, many traders (both informal and formal) operate in the district, buying maize at low prices, and transporting it to Lilongwe to sell at much higher prices. In Mchinji therefore, it is likely that the extensive private trader activities had led to a commercialisation of maize, where maize production was not only considered as a source of food by the households but as a source of income as well. This will be further explored in Chapter 6.

III. Mzimba

The quantitative data on maize production outputs also reveals that FHHs (both de jure and de facto) in Mzimba district produced more local than hybrid maize. For MHHs, the situation was slightly different as they did not produce substantially more local than hybrid maize. MHH FISP-recipients produced more hybrid than local maize, and the non-recipients produced only slightly more local maize than hybrid maize. This is shown in Table 5.17 below.

Table 5. 17: Mean volume of hybrid maize produced and volume of hybrid maize seed received by household type in Mzimba district (in kgs)

	hybrid maize seed received	hybrid maize produced	local maize produced
MHH FISP recipients	8.33	833	676.00
MHH non-recipients	0	515	523.33
De jure FHH recipients	5.00	88	682.17
De jure FHH non-recipients	0	292	400.67
De facto FHH Recipients.	5.00	217	734.83
De facto FHH non-recipients	0	387	694.17

Although FHHs in Mzimba had the most conducive conditions for agricultural production compared to FHH in Mchinji and Mangochi, they still produced more local than hybrid maize varieties. It is therefore evident that the decision by FHHs to grow more local than hybrid maize varieties is not simply influenced by their lack of factors of production. Even FHHs that have better farming conditions than others still prefer local maize. The inference from this therefore is that hybrid maize varieties promoted in the FISP may not be adequately addressing the needs of female farmers.

During the 1990s, in the Starter Pack programme (details provided in Chapter 3), the government promoted the use of two newly developed semi-flint hybrid maize varieties (MH 17 and MH 18) which were higher yielding than the local varieties but also had better storage and hand processing qualities (Cromwell *et al.*, 2001; Blackie and Mann, 2005; Barahona and Cromwell, 2005). The varieties were however later replaced by open pollinated varieties (OPV) on recommendations from donors who were funding the programme. Although there were debates on whether OPVs were higher yielding than hybrid maize varieties, the donors argued that the OPVs were advantageous because they were higher yielding than the local varieties and the seeds could also be recycled for at least a few years without significantly affecting the productivity (Potter, 2005). The donors therefore only made their decision based on productivity and seed costs, neglecting the other factors such hand processing qualities, which as discussed above are particularly valued by female farmers. It is a similar focus on maize productivity, evident in the FISP, which has led to an invisibilisation of the needs and preferences of female farmers.

5.4 Conclusion

This chapter has analysed the quantitative and qualitative data obtained from field research to explain how food availability for female farmers belonging to different household types and in different geographic regions has been affected by the FISP.

The findings in this chapter have challenged the dominant views in the literature as well as in policy circles that portray the FISP as having been an absolute success in addressing household food security in the country. Although in general terms the FISP has led to improvements in food security, the improvements have neither been sufficient nor uniform across all household groups. Specifically, although FISP-recipients from all household groups in all three districts of the study were able to produce more maize than non-beneficiaries, the improvements in maize production were not uniform across household types or districts. The Female-headed recipient households (both de jure and de facto) had lower maize output than those from MHHs, even though it was higher than that of non-recipient FHHs. De jure FHHs had the lowest maize output of all three groups, demonstrating the extent of their vulnerability. The analysis has revealed that the FHHs face many other challenges that affect their crop productivity such that providing them with subsidised farm inputs alone is inadequate to make significant impacts on their maize production output. The constraints that FHHs face for example were evidenced in their lower land-holding sizes, lower literacy levels, lower ownership of livestock, and limited labour availability. In all the above, although the position of de jure FHHs was worse than that of de facto FHHs, the position of both groups of FHHs was worse compared to that of MHHs.

Because of these challenges that FHHs face, FHHs are unlikely to respond to government interventions in a similar manner as their MHH counterparts. As has been demonstrated in this chapter, although the government has been promoting higher yielding hybrid maize varieties, and provided both seed and fertilisers to assist farmers to increase their maize productivity, FHHs have continued to mainly grow local varieties. However, as the analysis has revealed, local maize production by FHHs is not only due to the challenges that they face in the production of hybrid varieties but it is also due to their preference for the food properties associated with local varieties. Although it is commonly cited that food security in Malawi is generally associated with maize production, the findings from this field research demonstrate that FHHs attach more value to local maize as a determinant of food security. This reveals a mismatch between objectives where policy makers are more concerned with hybrid or maize

production in general, but rural communities, particularly female farmers, are more concerned with increasing the production of local maize, which is their preferred food.

The invisibilisation of gender issues, particularly the disparities in maize output arising from the programme between MHHs and FHHs, demonstrate the extent to which gender issues in the FISP have been neglected. Despite mentioning FHHs as one of the groups to be prioritised as FISP beneficiaries, gender issues are resisted, even at the local implementation level. In addition, the criteria for selecting FISP beneficiaries demonstrate a resistance to acknowledge feminisation of agriculture and women's high and significant contributions to agricultural production in the country. FHHs are targeted not as the key players in the sector but as a vulnerable group just like child-headed households, orphan-headed, HIV infected households or those looking after physically challenged persons. Moreover, the specification of land-ownership as one of the criterion for selecting FISP beneficiaries may automatically exclude female farmers who, as discussed in Chapter 2, face many challenges in accessing land. This failure to appropriately focus on female farmers therefore affects the extent to which they can benefit from the programme and thereby the extent to which food security can be improved.

The chapter has also highlighted the extent of female subordination in the country. The analysis has revealed that even in districts with better socioeconomic conditions like Mzimba, the position of FHHs is still disadvantaged compared to that of MHHs. Moreover, the position of FHHs was not any better in matrilineal societies (such as in Mchinji and Mangochi) where women are supposed to have legitimate access to land. It is for such reasons therefore that the maize production practices for FHHs were similar across all the three districts of this study. Regardless of the prevailing socio-economic conditions, local maize production dominated over the production of hybrid maize for most FHHs. The significance of the maize variety grown is therefore an important determinant of food security that needs to be considered in the design of the FISP if the programme is to effectively address food security challenges facing female farmers.

Chapter 6: The Impact of the Malawi FISP on market-oriented crop production for female farmers

‘...domestic and international markets for agricultural produce are changing rapidly and dramatically, with smaller producers finding it increasingly hard to participate in these markets. Challenges are even greater for women farmers, who constitute the majority of farmers in Africa.’ (African Smallholder Farmers Group, 2013: 2).

6.1 Introduction

This is the second of the chapters discussing findings from the fieldwork and the focus in this chapter is on the impacts of the FISP on market-oriented crop production. As discussed in Chapter 3, the objectives of the FISP are to achieve food self-sufficiency and increased incomes for resource-poor households through increased food and cash crop production (GOM, 2008). The programme is therefore expected to contribute to improvements in food availability (mainly through its impact on maize production) and to improvements in food access (through its impacts on the production of crops produced for sale). Because the impacts on maize production have been covered in the previous chapter, this chapter will explore and analyse how the FISP has affected the production and sales of groundnuts. The analysis will also include impacts on maize sales as the focus in chapter 5 was only on maize production. Because maize and groundnuts are both food and cash crops, the term used in this chapter is ‘market-oriented’ crop production as opposed to ‘cash’ crop production. The analysis will therefore centre on the maize and groundnuts that are sold and not what is consumed within the households.

This focus is particularly important because apart from studies by Holden and Lunduka (2010) and Chibwana *et al.* (2012) on whether the FISP has led to a crowding out of other crops in favour of maize, previous studies on the Malawi FISP have largely focused on maize, and specifically as a food crop. See for example SOAS *et al.* (2008), Denning *et al.* (2009), Chirwa *et al.* (2008), Minde *et al.* (2008), Dorward (2009), Tchale (2009), Dorward and Chirwa (2011), and Chirwa *et al.* (2011). While it cannot be disputed that maize is the most important food crop in the country, being grown by 97% of farming households (Denning *et al.*, 2009: 3), and the main crop targeted by

government interventions, the FISP has also targeted other cash crops, such as groundnuts and soya beans. It is therefore important to also consider what the impact of the FISP has been on these other crops. As explained in Chapter 1, groundnut was selected because of two main reasons: Firstly, from 2009, groundnut seeds have been included in the FISP package. The government has stated that the objective for this inclusion is to improve household nutrition and farmer incomes. Secondly, groundnuts are grown by both male and female farmers in the country (Edriss, 2005). This therefore makes the crop suitable for the analysis in this research as opposed to other cash crops such as tobacco, which are predominantly grown by men (GOM, 2006). In line with the proposition of food access as an aspect of food security (Burchi and de Muro, 2012; Clover, 2003; FAO, 2006), the chapter holds that groundnut production and sales can contribute to food security through the generation of cash for the purchase of food. Furthermore, households that are able to sell groundnuts are also able to reduce or eliminate their need to sell off their maize in order to acquire cash for other household needs.

The objective of this chapter is therefore to examine how the Malawi FISP has influenced the market-oriented production and sales of maize and groundnuts by female farmers belonging to the three household groups. As discussed in Chapter 3, previous evidence suggests that female farmers in Malawi are predominantly food crop producers because they face many constraints that limit their involvement in cash crop production. Not only do they have limited access to physical markets, they also lack marketing skills and relevant social networks. More importantly, cash crop production requires good and stable access to farm inputs (particularly fertilisers and seed), credit and capital, all of which are factors that most female farmers lack (Gladwin, 2002). This analysis therefore considers to what extent improving access to farm inputs is likely to improve the engagement of female farmers in market-oriented crop production. Specifically, the research question that this chapter addresses is as follows:

- How has the FISP affected the market-oriented crop production for female farmers belonging to different household types?

This question is answered and broken down in two parts as follows:

- How has the FISP influenced the production and sales of groundnuts for female-farmers belonging to the three household groups?
- How has the FISP influenced maize sales for female-farmers belonging to the three household groups?

These questions will be answered through a triangulation of quantitative and qualitative data. The quantitative data was collected in the farmer survey where questions on the following were asked for both maize and groundnuts:

- Crop sales information (volumes and prices)
- Marketing information (on buyers, timing of markets and prevailing practices)
- Preferred crop marketing modes
- Challenges experienced in crop marketing

Most of the qualitative information was obtained through focus group discussions conducted in the three districts. The discussions centred on the role of ADMARC, formal private traders, and other informal traders in crop marketing; the challenges faced by farmers in selling their crops; and factors that influence farmers' decisions on how, where and when to sell their crops. Other information was also obtained from interviews with formal and informal private traders and through observations of crop marketing activities during the field research.

The chapter commences with a discussion of crop marketing processes and developments in the country in order to provide contextual background. Section 6.3 then discusses how female farmers are doubly disadvantaged by engaging in maize sales. It argues that due to the gendered challenges that these female farmers face, they fail to engage in maize sales at a time and in a manner that could be profitable or could meaningfully contribute to addressing their food insecurity. Similar challenges are also experienced in the case of groundnut as Section 6.4 reveals. For groundnuts however, the challenges start at the production level where FHHs fail to produce as much groundnuts as their counterparts in MHHs. This is a critical finding as it challenges prevailing anecdotal evidence in the country which suggests that groundnut is a woman's crop that is mainly and easily grown by female farmers. Section 6.4 therefore explores the factors that affect the production of groundnuts by FHHs and considers whether and how these factors are considered in the design of the FISP. Although regional variations are incorporated throughout the discussions, a more focussed discussion on the same is presented in Section 6.5.

The chapter concludes in Section 6.6 that the policy interventions aimed at improving crop market access for smallholder farmers in the country are not gender-aware. Specifically, they do not take cognisance of the practical and strategic gender needs that female farmers have and therefore fail to address them. Consequently, both de

jure and de facto FHHs remain disadvantaged in their access to markets for their crop produce.

6.2 Crop marketing processes and developments in Malawi

Smallholder farming in Malawi is predominantly rain-fed and therefore revolves around the rainfall season which runs from November to March (GOM, 2010). Many farmers start preparing their fields from August and simply wait for the first rains to come in order to plant their crops. Depending on the geographical region and variety, groundnuts and maize are typically harvested between May and August. Crop planting and harvesting in the country commence in the southern region where rains come earlier, and move to the central and northern regions consecutively. The three to four month period following crop harvesting is commonly referred to as the crop marketing season, a period when farmers sell their produce. This normally runs from May to August.

Because of this seasonality of farming in Malawi, prices for most crops, and especially maize, can be considerably volatile. Prices are usually at their lowest during and immediately following harvest and increase as the marketing season progresses (Minot, 2013). For maize, the price normally peaks during the hunger period between November and March. This volatility is usually worse in years when the national output is reduced due to droughts or other natural disasters. For example, Oygard *et al.* (2003) note that between May 2001 (harvest period) and January 2002, maize prices in Malawi increased by 450 percent. Although this was extreme and mainly due to low national output as a result of a drought, it still demonstrates the volatility of maize prices in the country.

During the 1970s and early 1980s, crop marketing activities were mostly provided by the parastatal marketing board, ADMARC, which played a major role as a monopsony buyer of smallholder farmers' produce (Chirwa *et al.*, 2008). Created in 1971, ADMARC's mandate was 'to market agricultural produce and inputs, and to facilitate the development of the smallholder agricultural subsector through marketing activities and investments in agro-industry enterprises' (Kutengule *et al.*, 2006: 416). In addition, ADMARC was given a social role of buying and selling smallholder crops in remote areas, and financial subsidises provided by the government enabled it to offer pan-

territorial (i.e. similar across all areas) and pan-seasonal (similar across the entire season) prices.

During the 1980s, ADMARC was very active in remote rural areas, buying farmers' produce, providing grain storage across seasons and selling back grain to them later on in the season. By 1990, ADMARC enjoyed a monopoly in maize marketing and storage and had 1,300 seasonal markets, 217 unit markets, 80 area offices, 12 district headquarters, 3 regional offices and 18 storage depots across the country (*Ibid.* 418). During this time however, as part of the wider liberalisation process taking place in the country, a programme for restructuring ADMARC was recommended by the World Bank. This involved a rationalisation of its asset portfolio, closure of many of its market outlets with low turnovers, and improved efficiency in its operations (Nthara, 2002). Consequently, the government abolished the monopsony privileges that ADMARC enjoyed and liberalised the marketing of smallholder agricultural produce. The Agriculture (General Purpose) Act of 1987 that required private traders to obtain trading licenses in order to engage in crop marketing in the country was relaxed and from 1996, private traders were permitted to engage in crop marketing activities anywhere in the country without a licence (Chirwa, 2006; Chirwa *et al.*, 2008). Several scholars have argued that this rationalisation of ADMARC has had a negative impact for smallholder farmers, particularly those in very remote areas (see for example, Simtowe *et al.*, 2010; Chilowa 1998; Kutengule *et al.*, 2006; Chirwa *et al.*, 2005). They have argued that the private sector has failed to fill the gap left by ADMARC in those areas, leaving many smallholders without access to markets for their produce.

This observation was confirmed during the field research where many farmers explained that one of the biggest challenges they faced was a lack of markets, particularly in very remote areas. Since the field research was conducted during the crop marketing period, the farmers' reports were confirmed as it was observed that many of the formal private traders were only operating from Trading or Town Centres, and did not set up markets in areas very far away from these centres. Trading Centres are the hub of social and economic activities within the district where most of the formal public and private institutions operate, where one would find a big market, big shops, a hospital, a school and other necessary government and commercial services. Although most villages are within 20-30 km of a Trading Centre, poor road networks make it difficult to access these centres, making villages physically very remote.

During the field research, it was mainly informal, small-scale traders who were seen buying farmers' produce in remote areas. These informal traders, who are commonly called 'vendors' in the villages, operated mobile markets which could easily be moved from one village to another, depending on the availability of crop supplies. They usually put up a weighing scale on a tree and hang an empty sack on it to indicate their intentions to buy crop produce from that area. Informal traders were also able to buy any volume of crops that farmers brought, unlike formal traders who had minimum volumes at which they would start buying crops. In addition, and as many of the interviewees confirmed, one of the biggest advantages with the vendors was that they started buying the farmers produce early in the season, and this gave the farmers an opportunity to start earning much-needed cash quickly.

In recent years, as one way of regulating and monitoring the operations of the private sector, the Malawi Government has reintroduced a minimum price setting policy in the country. This intervention, which started with tobacco in 2006, has been expanded to include all other major food and cash crops i.e. maize, rice, sorghum, millet, wheat, soya beans, beans, groundnuts, pigeon peas, cow peas, grams, bambara nuts, chick peas, sesame, castor oil, sunflower, paprika, chillies and cotton (Ministry of Agriculture press statement, 2010). The intervention involves the government setting and announcing minimum prices at which traders should be buying farmers' produce. Its stated objective is to safeguard smallholder farmers against low produce prices and to ensure that farmers get a fair share of the world market (Chirwa, 2009).

Although the government has explained that the minimum prices are set through negotiations with key stakeholders and by taking into consideration the cost of production for the crops (see Mutharika, 9 September 2009), the private sector has contrary opinions. Key informant interviews with some formal private traders indicated that the minimum prices are arbitrarily set, set too high and at unprofitable levels for them. They argued that it is only tobacco prices that are normally discussed with traders before their announcement, not any other crop. The government simply announces the minimum prices a few weeks before crop marketing starts, a time that many of the traders considered too late for their financial and procurement planning.

These minimum prices are supposed to be adhered to by all traders, including ADMARC. The challenge however, and as has been observed over the last few years, is that although the government may set these prices, it cannot be guaranteed that all the crop output will be absorbed by the market at those prices. For example in the

2008/9 crop growing season, differences between private traders and government on the minimum price set for cotton led to a standoff between the government and the traders. The private traders insisted that the prices were set too high and were not in line with prevailing world prices (African Economic Outlook, 2011; Masina, 2009). Most of the smallholder cotton was therefore left unsold, seriously affecting farmers' incomes (Somanje, 2009).

The complications of setting minimum prices, particularly for food crops have also been highlighted by Dorward (2009) and Barrett (2008). They have argued that the potential of price setting in addressing food security for net food buyers or meeting income needs of net sellers depends on the level at which the minimum price and price ceiling are set. Particularly for food crops, the price needs to be set high enough in order to encourage production and contribute to food security. At the same time, it needs to be set low enough to protect farmers who are net food buyers (Dorward, 2009), who as will be noted below, are the majority of FHHs in Malawi. These farmers are therefore both producers who would utilise an input subsidy and consumers who would benefit from lower food prices i.e. they would be affected both by interventions targeted at production such as input subsidies, as well as interventions targeted at marketing, such as minimum price setting (Barrett, 2008). Dorward (2009: 11) therefore argues that this raises the challenge of a price/productivity tightrope, which is the dilemma in poor agrarian countries where '...on the one hand, high food prices are needed to stimulate production for farmers but, on the other hand, such prices damage poor consumers who spend a large part of their income on staple foods, and thus undermine poor consumers' welfare and wider pro-poor growth'. It was with this understanding therefore and to generate an accurate assessment of the marketing issues that the farmer interviews collected information not only on prices and volumes for crop sales and purchases, but also on the timing of sales and purchases. Furthermore, information was also collected on where trading took place and the associated terms.

6.3 Impact of the FISP on maize sales among female farmers

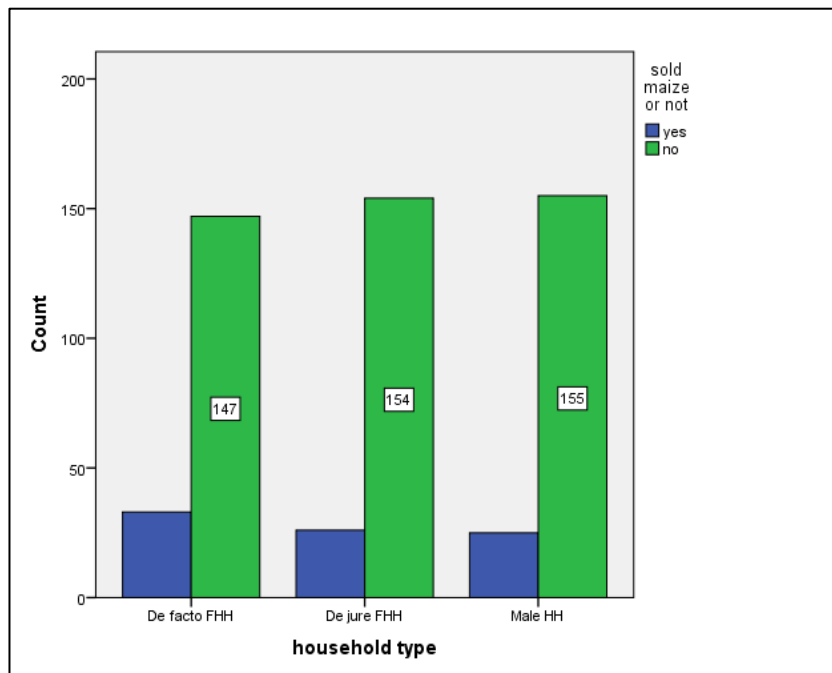
This section explores and analyses the impacts of the FISP on maize sales for the female farmers belonging to the three household types.

6.3.1 Maize sales by FHHs and FISP-recipient households

Although maize in Malawi is generally classified as a subsistence crop because large quantities of the crop produced in the country are consumed within households and villages (Dorward and Chirwa, 2011; Chirwa *et al.*, 2008), it is still significantly traded. SOAS *et al.* (2008) estimates that about 60 percent of smallholder farmers in the country are net buyers of maize, although only about 10 percent are net sellers. They did not however discuss in any detail who these net buyers or net sellers are, but it is likely these figures relate to smallholder farmers in general. The information is therefore limited in its use for policy planning as it obscures variations that may exist amongst different household groups. The results obtained from this analysis are therefore critical as they provide an insight into which groups of smallholder farmers are likely to be net buyers or net sellers. Data from the quantitative analyses indicated that only 20 percent of the interviewed households sold any maize during the 2009/10 season. The majority of the households that sold some maize did so even though their production was insufficient to meet their own household consumption needs for the entire year. Only 20.6 percent of the 540 interviewed households indicated that the maize that they harvested was sufficient until the next harvest.

Even though there were only a few farmers in general who sold their maize, Graph 6.1 below indicates that there were more de jure FHHs who sold maize compared to the other household types. Out of the 122 households who sold some maize during the season, 55 were from de jure FHHs, 37 from de facto FHHs and only 30 from MHHs.

Graph 6. 1: Number of farmers who sold maize in 2010 (by household type)



Chi square $p = 0.005$ indicates the association between household type and number of maize sellers is significant at 1% level

When asked the factors that influenced them to sell some of their maize, most of the households indicated that they sold their maize in order to acquire cash for other household needs. The most mentioned needs were buying relish, taking a sick relation to the hospital, buying medicine or sending children to school. The perception created by the participants was that selling maize was the quickest way to get the cash that they desperately needed. In Mangochi, one farmer from a de jure FHH who sold some maize despite having harvested only little maize expressed it this way:

‘...what else can you do when you have a sick child and no money with which to take +her to the hospital? You know that no one will lend you money because they fear that you will not be able to pay back. We just sell the maize and decide that we will worry about how and where to get more maize at the time that it actually runs out’ (Participant, Focus group discussion 2.1, Mangochi).

In Mzimba, some participants also expressed similar sentiments. A female interviewee indicated that by the time the maize harvesting period comes, she usually has many needs that would have accumulated throughout the year. Therefore, the maize harvesting period is always anticipated because it means the end of food shortage but

also a chance to earn some cash. Other farmers in the same district also indicated that although they could also sell some groundnuts, maize was always harvested first and therefore offered the first chance for generating cash. In Mchinji, a focus group discussion with male farmers highlighted that although maize sales were common in the area, most households did not willingly engage in the sales. The participants called selling maize during the harvest period '*kubetsa*', literally meaning 'allowing someone to steal from you'. They indicated that selling maize during the harvest period was usually a sign of desperate need for cash as they knew that the prices during this time were usually very low.

Spitz (1980) has argued that in circumstances where farmers only earn cash income during one period in the year, they face contradicting forces that influence their decisions on how to utilise their food crop produce. He describes these as 'forces of retention' i.e. the need to retain food for subsistence consumption and 'forces of extraction' i.e. the need to sell their food produce in order to meet other non-food needs. Unfortunately, because of their desperate and immediate need for cash, many smallholder farmers succumb to forces of extraction as they are unable to hoard their maize produce until such time that prices would have increased. During the field research, it was noticed that maize prices had already increased by around 67 percent from around MK15 per kg in May to around Mk20-25 per kg at the beginning of July. With such volatility, farmers who sell their maize during the harvest period are therefore doubly disadvantaged in that they get lower returns for their sales but have to part with more money later on in the season to buy back the same maize (Devereux, 2009).

The fact therefore that more de jure FHHs sold maize compared to the other households, and yet as discussed in Chapter 5, their maize output was the lowest of all three household groups, confirms that the sales were made in desperation. Moreover, many of the FHHs who sold some maize indicated that they started selling their maize immediately after harvesting - a time when the prices were at their lowest. The extent of vulnerability of de jure FHHs is therefore not only demonstrated in that they produced less maize than other households, but that they also engaged in maize trading practices that were unfavourable to them. MHHs, on the other hand, did not face similar challenges as they produced more maize and were also least engaged in desperate maize sales. As observed by Due and Gladwin (1991), although MHHs may face similar cash needs as FHHs, they normally have more options available to them for earning extra cash. In addition, by having at least two adults in the households who can both engage in income generating activities, men in MHHs are usually in a better

position to take up paid work outside the homestead where they can earn (more) cash instead of relying on maize sales alone (Chipande, 1987).

The position of de facto FHHs was intermediate. Farmer interviews, particularly in Mchinji and Mangochi, revealed that there were a good number of de facto FHHs who were also forced to engage in desperate maize sales. Despite the assertions that de facto FHHs are not usually income poor due to remittances (see Horrell and Krishnan, 2007), the evidence generated in this research suggested otherwise. The de facto FHHs were not always guaranteed to receive remittances. Moreover, because the timing of remittances was never certain, usually haphazard, and not always coinciding with periods when they had immediate or urgent cash needs, many de facto FHHs also indicated that they faced urgent and desperate cash needs at times. There were some de facto FHHs who indicated that they had been without remittances from their husbands for between one and three years. This was mainly the case for men who had gone outside the country (to Mozambique, Zambia and South Africa) seeking employment. As a consequence of this delayed or lack of remittances, some of the women from de facto FHHs expressed their suspicion that their husbands had abandoned them, as one participant in Mzimba explained:

'I don't think I should consider myself married. I suspect that my husband has found another wife in Zambia because at first he used to frequently send me some money. These days he no longer does, and even when we send him messages informing him about our cash needs, he does not respond' (Participant, Focus group 3.2, Mzimba).

A study by Chilimampungu (2007) on the impacts of rural-urban migration on household food security conducted in Mangochi and Chiradzulo also confirmed the uncertainty of receipt of remittances. Of the 100 households that he interviewed, just over half (53 percent) indicated that they were getting any remittances from a migrant household member. Although his study was not focussed on de facto FHHs per se and also included cases of migration by women for marriage purposes, it still underlines the uncertainty of remittances. It is this uncertainty that also exposes de facto FHHs to desperate maize sales, albeit not as much as de jure FHHs.

Another participant in Mchinji indicated that she considered herself divorced although if her husband came, she would still welcome him as a husband. She indicated that traditionally divorce would only be possible if the husband indicated that he wanted to

divorce her, and the two families agreed by returning the chickens that were exchanged during the union. In the absence of that, she was considered as still married although there had been no communication or remittances from her husband for several years. She expressed her frustration that although her situation was similar to that of a de jure FHH, she was not considered as vulnerable as the de jure FHH. She explained that the local authorities took her vulnerability as temporary which would be resolved when the husband returned. Her perception therefore was that she had been excluded from the FISP because of such (mis)conceptions. However, when one considers how FISP beneficiaries were selected and the lack of prioritisation given to de jure FHHs (as discussed in Chapters 3 and 5), there is no guarantee that she would have been selected as a beneficiary even if the authorities appreciated that she was receiving no support from her husband and was therefore in a similar position as a de jure FHH.

6.3.2 Volume of maize sales by FHHs and FISP-recipient households

In terms of volumes of maize sold, the data shows that annual maize sales were generally low for all households, averaging 25.99 kgs per household, representing only 3.5 percent of total production. Table 6.1 below presents the details. Such low volumes of maize sales would explain the farmers' continued growing of local maize varieties and that all household types allocated more land to local maize production than to hybrids (refer to Chapter 5). Since the maize was mainly grown for household consumption and not for sale, local varieties with better qualities for home consumption than hybrid varieties were deemed more suitable.

Table 6. 1: Volume of maize sold by FISP recipient (in Kgs)

FISP receipt	Mean	N	Std. Deviation
Recipient	31.06	270	93.97
Non recipient	20.914	270	81.94
Total	25.99	540	88.22

Anova test $p = 0.181$ shows that the differences in the means are not statistically significant

The data shows that FISP recipients sold an average of 31.1 kgs of maize compared to 20.91 kg for non-recipients. This is not too surprising as the FISP-recipients also

harvested more maize than the non-recipients did. An Anova test done on the data however showed that the difference in the means was not statistically significant. A further breakdown of the data by household type and FISP receipt also shows that for both groups of FHHs, FISP-recipients sold more maize than non-recipients. Amongst the de jure FHHs, FISP-recipients sold an average of 27.7 kgs, whilst the non-recipients belonging to that household type only sold 7.5 kgs. For the de facto FHHs, FISP-recipients sold 32.9 kgs, whilst the non-recipients sold an average of 21.1 kgs per household. The opposite was however true for MHHs where the FISP-recipients sold less maize (32.5 kgs) compared to non-recipients (34.1 kgs). This is presented in Table 6.2 below.

Table 6. 2: Volume of maize sold by household type (in Kgs)

Household grouping	Mean	N	Std. Deviation
MHH FISP recipient	32.56	90	96.77
MHH FISP non recipient	34.11	90	119.84
De jure FHH FISP recipient	27.74	90	92.73
De jure FHH FISP non recipient	7.56	90	31.38
De facto FHH FISP recipient	32.89	90	93.32
De facto FHH FISP non recipient	21.06	90	67.75
Total	25.99	540	88.22

Anova test $p = 0.301$ shows that the differences in the means are not statistically significant

Although the difference in the means is not statistically significant, the analysis raises important issues. Specifically, the high volume of maize sales by MHHs that did not access subsidised fertilisers is noteworthy. In Mzimba, focus group discussions involving both male FISP-recipients and non-recipients confirmed that most of the MHHs that did not receive subsidised inputs were normally engaged in other off-farm income generating activities (IGAs), and did not solely depend on farming for their livelihoods. Although they were still engaged in farming, and in some cases farming more land than FISP-recipient households, farming was not their sole source of income. The most common IGAs that they were engaged in included running grocery shops, selling fish and selling small wares at the local markets or selling firewood. By engaging in these activities, they were able to generate extra income even outside the crop-marketing season. Consequently, although they sold more maize, as Table 6.2

above demonstrates, their expectations were that they would be able to generate cash for the purchase of maize or other foods whenever required.

In a study on smallholder livelihoods in rural Malawi, Takane (2007) also observed that households that engaged in non-farm income generating activities were able to generate income (although on a small scale) throughout the year which allowed them to have smoother expenditure patterns. Her study however focussed on variations based on geographical areas and poverty profile and did not include gender. However, from the poverty profiles, it could be inferred that it was mainly MHHs who engaged in off-farm IGAs because as Chant (2003) observes, MHHs are usually less income poor compared to FHHs.

The engagement of MHHs in off-farm IGAs was also confirmed through observations in Mchinji and Mangochi districts in the central and southern regions respectively. In some cases, this was through a male focus group participant indicating that they had chosen to delay going to the market or to their shops in order to participate in the research. In other cases, it was through female participants from MHHs indicating that their husbands were at the market selling different wares. In Mangochi, many of the non-recipient male household heads were engaged in fish sales where they would go and buy fish at the lake and resell at the local market or Trading Centre. Although such activities did not take them away from their homes for long periods of time, the indication was that this led to some periods where the farm work was left entirely to the women. As discussed in Chapter 2, typically, feminisation of agriculture is associated with male migration from villages in search of employment or other sources of income in urban areas or abroad. In this case, feminisation of agriculture seems to be happening in MHHs even without the male head migrating from the village. As cities and urban areas are also facing rising costs of living and unemployment (see Mkwambisi *et al.*, 2011), rural-urban migration seems to be getting less attractive. Rural households struggling with low agricultural production are therefore forced to seek alternative sources of livelihood within their areas and not migrate out.

For FHHs, *ganyu* was the main and most common alternative source of income and their engagement in off-farm IGAs was quite limited. In all three districts, the women were involved in off-farm IGAs that were usually small, seasonal and irregular. For example, in Mzimba some women indicated that they were occasionally involved in selling vegetables from their wetland gardens. This however mainly happened during a few months of the year and not throughout the year. Moreover, the women indicated

that although they would have preferred to sell their vegetables at the Trading Centre where prices were slightly higher than in the villages, they could not afford to spend long hours away from their homestead and its responsibilities. It was therefore for this reason that even in cases where a MHH had an off-farm income generating activity; it was mainly the man who would be involved in it as the wife had to take care of her reproductive and community responsibilities as well. Furthermore, in Mangochi district, the non-involvement of women in off-farm IGAs was likely to have been compounded by the Yao culture which limits women's involvement and interactions with the public economic sphere.

Engaging in other farm or off-farm IGAs had clear benefits in terms of generating cash for input purchases, as discussed in Chapter 5, MHHs that did not access subsidised inputs were still able to buy and apply fertilisers to their fields. Data on sources of fertilisers acquired by households showed that of all household groups, MHHs had the highest number of people purchasing both basal (23:21:0) and top dressing (Urea) fertilisers for maize from private traders. The fertilisers were bought at an average price range of MK4500 – MK7500 per bag, which is significantly higher than the MK500 per bag for the subsidised fertiliser. Without income from other sources, it would be extremely difficult to buy the fertilisers at such prices. As Chinsinga and O'Brien (2008) and Chirwa *et al.* (2011) observe, at the prevailing market prices, commercial fertilisers are beyond the reach of most smallholder farmers in the country. It is therefore for this reason that the consumption of fertiliser by smallholder farmers is only 34 kgs per hectare compared to 150 kgs for estate farmers (GOM and World Bank, 2007).

Clearly, MHHs had a higher likelihood of surviving without the use of the subsidised fertilisers because they were more able than FHHs to buy their fertilisers on the commercial markets. The result is evident on Graph 5.9 (in Chapter 5) where MHHs who did not access subsidised fertilisers were able to produce more maize than both *de jure* and *de facto* FHHs who accessed subsidised inputs. The implication therefore is that FHHs are more dependent on the FISP for their agricultural production compared to MHHs. Without access to subsidised inputs through the FISP, they are unlikely to find alternative sources of fertilisers and hybrid maize seed in required volumes compared to MHHs. Paradoxically, it is these FHHs who are largely excluded from the FISP. As highlighted in Chapter 3, fewer FHHs accessed subsidised inputs under the FISP compared to MHHs, and when they did, they got lower volumes than the MHHs. It is evident that gender issues are both resisted in and invisibilised from the FISP. As highlighted in Chapter 5, this refusal to systematically consider and/or

prioritise female farmers, as well as the failure to document the specific experience of female farmers in the FISP arises from the processes in the Female Subordination Cycle that have marred the inclusion of gender issues in the country's agricultural policies. The resistance, sectorisation, evaporation and invisibilisation of gender issues in the country's agricultural policies have knock on effects on the FISP as well.

6.4 Impact of FISP on groundnut production and sales

In terms of groundnuts, the quantitative analysis shows that FISP-recipient households produced more groundnuts compared to non-recipients. As illustrated in Table 6.3 below, FISP-recipients produced an average of 157 kgs of groundnuts per household per annum, compared to 123 kgs for non-recipient households.

Table 6. 3: Volume of groundnuts harvested per household per annum (kgs)

Recipient	Mean	N	Std. Deviation
Recipient	157.09	270	164.29
Non recipient	123.47	270	170.5
Total	140.28	540	168.11

Anova test $p = 0.02$ indicates the difference between the two means is statistically significant at 5 % level.

This is a critical finding in as far as the impact of the FISP on crop production is concerned. It shows that not only did FISP recipients grow more maize than non-recipients (as discussed in Chapter 5), they also grew more groundnuts as well. One factor that influenced this was that FISP-recipients allocated more land to the production of the crop than non-recipients. Table 6.4 below shows that for all household types, FISP recipients allocated more land to groundnut production than non-recipients, with MHHs allocating the most of all three household types.

Table 6. 4: Area allocated to groundnut production by household type and FISP receipt (acres)

Household grouping	Mean	N	Std. Deviation
MHH FISP recipient	.75	90	.52
MHH FISP non recipient	.49	90	.42
De jure FHH FISP recipient	.52	90	.41
De jure FHH FISP non recipient	.47	90	.53
De facto FHH FISP recipient	.51	90	.50
De facto FHH FISP non recipient	.47	90	.47
Total	.54	540	.49

Anova test $p = 0.001$ indicates statistical significance of the mean differences at 1 % level

It needs noting though that for all household types in all three districts, the area allocated to groundnuts was generally lower than that which was allocated to maize. Similar findings were reported by Chibwana *et al.* (2012) who found that FISP recipients allocated less land to groundnuts, but allocated more land to maize and tobacco. Their conclusion was therefore that the FISP was crowding out other crops in favour of maize and tobacco. The results from the analysis in this research however contradict this conclusion as it is seen that although the FISP-recipients allocated less land to groundnut production compared to maize, non-recipients allocated even less land to groundnut production than the recipients did. Therefore, although FISP-recipients grew fewer groundnuts compared to maize, receipt of the subsidised inputs did not lead to a crowding out of groundnuts. On the contrary, it seems that FISP-receipt actually encouraged groundnut production amongst the recipient households.

The underlying reason behind this higher production of groundnuts by FISP-recipients is however unclear because that specific information was not collected during the farmer interviews or the focus group discussions. This is because it was not anticipated during the field research that the data would show such a disparity in land allocated to groundnut production between the FISP-recipients and non-recipients. Findings by Ricker-Gilbert (2011) on how fertiliser subsidies affect agricultural labour markets in Malawi could however provide one possible explanation. His study found that FISP-participants reduced off-farm agricultural labour by 9.6 percent, increasing the possibility of concentrating more on their own-farm production. Such households could therefore be able to farm more land and farm better, resulting in higher output for maize, groundnuts and any other crops that they may have been farming.

More significantly, other information collected during the field research suggested that the higher groundnut production by FISP recipients was not a direct result of improved access to groundnut seed through the programme. Most of the recipient households indicated that they had not received coupons to buy the subsidised groundnut seeds. Only 26 of the 540 interviewees had received the coupons, 20 of which were from Mchinji. This was in spite of the inclusion of groundnut seed in the FISP package from 2009. In Mzimba, participants in one focus group discussion involving male FISP-recipients indicated that they had only heard on the radio about this inclusion but were not aware of any households in their area that had received the groundnut or legume seed coupons. In the district, of the 180 households interviewed, only four indicated that they had received these coupons.

Key informant interviews with an official from the International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), the international research institute responsible for groundnuts research in the country, confirmed that most of the FISP-recipients did not receive groundnut seed. He explained that the government had been unsuccessful in sourcing adequate groundnut seed to be included in the programme. In 2009, only around 4 percent of the targeted volume of seed was sourced and distributed and consequently, reached very few households. He indicated that priority was given to districts that normally had high groundnut production, such as the ones included in this research. The evidence provided above however suggests that even in those districts, receipt of the groundnut seed coupons was almost negligible.

As explained by the ICRISAT official, Malawi has a general shortage of seed for groundnuts (and other legumes such as soya beans) because commercial seed companies are not involved in breeding, multiplying or distributing such seeds. This is because, unlike hybrid maize seed, which needs to be bought every year, farmers can recycle legume seed for some 2-3 years with limited effect on yields. As such, it does not offer good profit prospects for the seed companies because demand cannot be guaranteed every year. This was also confirmed in interviews with input suppliers, who indicated that groundnut seed in Malawi can only be bought from research institutions and not directly from regular farm inputs shops, where it would be expensive and therefore unaffordable for most smallholder farmers. As Goyder and Mang'anya (2009: 7) consider, most smallholder farmers in Malawi are not prepared to pay a premium for high quality legume seed when they can alternatively use grain as seed. They further argue that even if farmers were better informed about different varieties, the majority of smallholder farmers would not have sufficient resources to purchase the seed, due to lack of capital and affordable credit. Similar assertions have also been made by Simtowe *et al* (2010) who observe an absence of a stable and commercially viable groundnut seed market in the country. They note that the seed problems in the country were aggravated by liberalisation policies, and the closure of some rural ADMARC markets that previously acted as major sources of groundnut seed.

Interviews with ICRISAT and NASFAM Commercial also confirmed that it was for these reasons that the government decided to include legume seed in the FISP package. They indicated that in a bid to increase the volumes of seed supplied as well, the government introduced seed multiplication projects with the Seed Traders Association of Malawi so that they could multiply groundnut seed for the programme. The projects only started in 2010 and had not reached the required volumes of seed at the time of

this research. Most of the households that grew groundnuts therefore used their own recycled seed as had been the practice before the FISP. In Mzimba, participants explained that they kept groundnut seed in shell until the next growing season when they would shell and select the healthiest looking grains for planting. In the district, groundnuts are normally stored in small mud granaries that are built next to dwelling houses. In Mchinji and Mangochi, groundnut 'seed' is kept either in the maize granaries together with maize or in sack bags kept inside the homes. It was evident from the focus group discussions in all three districts that although there were some farmers who would fail to grow groundnuts because of lack of seed, access to seed was not the biggest or main challenge. On the contrary, for most, high labour requirement was cited as the main challenging aspect of groundnut production because it required bigger ridges than those made for maize. In addition, the weeding requirements for groundnuts were also higher as late or inadequate weeding seriously affected productivity. As one participant in Mzimba explained:

'...the advantage with groundnut is that it does not require expensive fertilisers. That is why you see that many households in this village are able to grow it. The only problem is that groundnut production is very labour intensive and requires that the field should always be clean, without any weeds. But because we have to care for maize fields as well, this is not possible and many times we fail to weed at the right time' (Participant, Focus Group Discussion 3.4, Mzimba).

Another participant from Mangochi expressed in this way:

'...*mtedza ndi wa bwino chifukwa siulila zambiri, umangovuta kupalila*' meaning groundnut is a good crop to grow because it does not require many inputs, but the only challenge arises during weeding (Participant, Focus Group Discussion 2.1, Mangochi).

The high labour demands associated with groundnut production is therefore the main challenge that makes it difficult for some households to grow the crop. This observation has also been made by Naidu *et al.* (1999) who argue that groundnut production in many parts of sub Saharan Africa is often affected by late weeding which is itself due to labour constraints and the preoccupation of farmers with other food and cash crops. They note that most smallholder farmers in sub Saharan Africa put priority on the production of their staple food crop (mostly maize), and only tend to groundnut fields once the maize fields are already planted. Although Naidu *et al.* indicated that these

challenges affected all smallholder farmers in general; it is probable that FHHs were more affected than MHHs. This is because as the evidence presented in Chapter 5 indicated, FHHs already face challenges in mobilising enough labour for their maize production and this is likely to have knock-on effects on their groundnut production. Because of the ‘missing man’ in de jure FHHs and the ‘absent man’ in de facto FHHs, these households are likely to struggle significantly to balance their labour between maize and groundnut production. The result would therefore be a failure to comply with recommended crop production practices such that even if they had access to other required inputs such as seeds, their output would still be compromised. On the other hand, MHHs who are able to split farm work and responsibilities between the man and his wife, are in a better position to ensure that most farm activities are done at the recommended times. Moreover, MHHs are also in a better position to hire extra labour because of their higher income earning potential. Consequently, their output is likely to be higher than that of FHHs. Table 6.5 below indicates that FHHs harvested fewer groundnuts compared to MHHs, with de jure FHHs having the least output. MHHs produced an average of 171.5 kgs per household per annum, compared to 125.3kgs and 123.9 kgs for de facto and de jure FHHs respectively.

Table 6. 5: Annual volume (kg) of groundnut harvest per household

Household type	Mean	N	Std. Deviation
De facto FHH	125.38	180	169.01
De jure FHH	123.93	180	145.88
Male HH	171.53	180	183.79
Total	140.28	540	168.11

Anova test $p = 0.006$ shows that the differences in the above means are statistically significant at 1% level.

This difference in groundnut production amongst the three household types, and particularly that the FHHs produced less groundnuts than MHHs, is noteworthy. General perceptions and anecdotal evidence in Malawi and other countries in the region suggests that groundnut is a ‘woman’s crop’, that is mainly grown by women (Edriss, 2005). The perception is that because the crop does not require expensive inputs, even women who are usually income constrained, are able to grow it. The evidence provided in Table 6.5 above and from the focus group discussions however reveals the inaccuracy of this perception. The evidence suggests that not all female

farmers find it easy to grow the crop. Specifically, both de jure and de facto FHHs are more constrained in growing the crop compared to women in MHHs.

A baseline survey conducted by Economist David Rohrbach in 2000 in Tsholotsho in Zimbabwe also found evidence that challenged the common perception that groundnuts were a female crop (see Rohrbach, 2000). His analysis found that de jure FHHs had the smallest area planted to groundnuts compared to de facto FHHs or MHHs, and that the MHHs planted as much as three to four times more groundnuts than FHHs. He however argued that this difference was not due to labour constraints as none of the household types faced any significant labour constraints. He asserted that the differences in access to draft animal power and cash were the main contributory factors as farmers who had these resources were able to plant larger total farm areas as well as more groundnuts. Consequently, de jure FHHs, being constrained in the access to both draft animal power and cash were unable to grow more groundnuts compared to the other household types.

Although the context is clearly different (as smallholder farmers in Malawi hardly use draft animal power), Rohrbach's findings are quite similar to the findings in this research as presented above. The perception that groundnuts are a woman's crop is therefore questioned. FHHs generate a lower groundnut output due to low productivity, which arises from a lack of various factors of production, which for the case of Malawi is mainly labour. Table 6.6 below demonstrates that even though de jure FHHs had the lowest groundnut output of the three household types, they had allocated slightly more land to the crop compared with the other two household types, although the difference with de facto FHHs was only slight. De jure FHHs put 0.5 acres of land to groundnut production, compared to 0.62 and 0.49 acres for MHHs and de facto FHHs respectively. The low output was therefore likely due to low productivity as a result of late planting and/or late and inadequate weeding as discussed above. As discussed in detail in Chapter 5, both groups of FHHs faced significant labour challenges due to the missing or absent man and the need to fulfil their triple roles (Moser, 1989). Moreover, the labour situation was worse for de jure FHHs due to the fact that they were generally older than those from de facto FHHs, as discussed in section 5.2.1 of Chapter 5.

Table 6. 6: Area allocated to groundnut production per household (acres)

Household type	Mean	N	Std. Deviation
De facto FHH	.49	180	.48
De jure FHH	.50	180	.48
Male HH	.62	180	.49
Total	.54	540	.49

Anova test $p = 0.01$ shows the difference in the means is statistically significant at 1% level

Although most of the participants raised the issue of labour unavailability in relation to the production of groundnuts in the field, some participants also highlighted how the issue affected the marketing of their crop produce. In Mchinji, one focus group discussion with FHHs highlighted that labour requirements affected the way that they sold their groundnuts and consequently their incomes from the sales. They indicated that formal private traders who usually offered better prices than informal traders normally required shelled (and graded) groundnuts. Groundnut shelling was however a very labour intensive activity that demanded significant amounts of time from them. As one participant explained:

‘...when one needs to sell groundnuts at the Trading Centre, she has to shell and grade the nuts before taking to the market. Shelling nuts is always a big job for women because we have to make sure we do it ourselves and not leave it to children or other members of the household.’ (Participant, Focus group discussion 1.2, Mchinji).

Her explanation was a classic demonstration of the challenges women face due to their triple roles, as discussed in Chapter 3. She explained that unlike maize, where other household members could be given the responsibility of shelling by themselves, groundnut shelling required the women to be present as well. She indicated that this was necessary to ensure that the household members did not eat (too many of) the nuts as they did the shelling. This is however difficult to manage since the crop post-harvest period between August and October is a busy time for women in most parts of Malawi as it is the time when weddings and other community and cultural functions are commonly held (see Gondwe and Wollny, 2007). As explained by some women in Mzimba, it is normally women who are required to spend some days helping with the preparations as well as attending the functions.

This involvement in such community responsibilities means that women became further constrained in utilising their labour for the post-harvest handling of maize, groundnuts or other crops that they may have grown. When all these responsibilities are added to their mothering responsibilities of taking care of children and/or the sick, it is not too surprising that they struggle to find time to shell and process their groundnuts in good time. The late shelling of groundnuts created further problems as it meant that some of the formal private buyers that had set markets at the Trading Centres would have stopped buying by the time their nuts were ready. Consequently, the only available markets would be those that were set up by informal traders (commonly called 'vendors') close to their homesteads. Although these buyers were willing to buy the groundnuts in shell, their other buying terms were generally unfavourable to the farmers. This is discussed further below.

In addition to the high labour demands, access to good markets was another challenge that many of the groundnut producers highlighted. Of the 540 interviewed households, as many as 319 indicated that they had faced challenges in selling their groundnuts in the year. The main reasons provided included lack of markets, poor prices, and long distances to markets. Although all household types faced these challenges, the quantitative data suggests that the impact was higher for FHHs. As evident in Table 6.7 below, MHHs were able to sell higher volumes of groundnuts than either de jure or de facto FHHs.

Table 6. 7: Volume of groundnuts sold per household per annum by household (kgs)

Household type	Mean	N	Std. Deviation
De facto FHH	49.62	180	97.73
De jure FHH	41.86	180	84.29
Male HH	72.63	180	114.10
Total	54.70	540	100.13

Anova test $P = 0.01$ indicates that the differences by household type in the mean volumes of groundnut sold is statistically significant at 1% level

It was observed during the field research, particularly in Mchinji and Mangochi where crop marketing had already commenced that informal traders were the main buyers of groundnuts. They established their 'buying centres', which were basically a weighing scale and empty sacks hung on trees or other building structures within the villages.

Although by establishing buying centres close to villages vendors improved physical access to markets for communities, they still did not improve the incomes that households earned from crop sales. Farmer interviews and focus group discussions in all three districts indicated that most farmers did not prefer to sell their produce to vendors. They indicated that they would have preferred if ADMARC was still buying farmers' produce in rural areas. Unfortunately, ADMARC had stopped buying in many of the areas, and as such farmers had no other option but to sell to vendors.

In all three EPAs where research was conducted, ADMARC had a warehouse and a shop building. No crop trading activities were however observed, despite it being the peak of the crop-marketing season. During key informant interviews, staff at the ADMARC depot in Mchinji reported that they had been buying crops earlier in the season but had stopped due to lack of funds. This was however disputed by farmers during focus group discussions, who insisted that ADMARC had stopped buying farmers' produce a few years earlier. They reported that ADMARC no longer bought farmers' produce but was only involved in the sale of subsidised inputs under the FISP. Data from the survey also confirmed this as there were no farmers who indicated that they had sold their groundnuts to ADMARC. Most of the households (71.7 percent) sold their groundnuts to vendors, with only 28.2 percent selling to formal private traders. The survey thus noted that the increased vendor activity in rural areas had led to some improvements in market access for smallholder farmers as most of the interviewees were able to sell all the crop produce that they intended to sell, albeit not on their preferred terms. This is noteworthy because from the late 1990s, following the adoption and implementation of the IMF and World Bank-led liberalisation policies by the Malawi Government, many remote rural areas in the country lacked access to markets. This was mainly due to the failure by the private sector to fill the gap left by the parastatal ADMARC and other government interventions in the agricultural sector (Kutengule *et al.*, 2006). The impact of vendors' activities in improving market access for smallholder farmers is therefore commendable. Inopportunately, the vendor activities did not seem to adequately address the rest of the marketing-challenges facing smallholder farmers.

The interviewees and focus group participants listed many challenges that they faced as they sold their produce to vendors. They indicated that vendors bought their crops at low prices and in most cases lower than government minimum prices; were not consistent in their prices and would just change their prices arbitrarily; used weighing scales that were untrustworthy and usually under-weighed farmers' produce; and were

unreliable such that farmers never knew when they were going to start or stop buying produce. It was for these reasons that they indicated a preference to sell their produce to ADMARC or to formal traders who they indicated adhered to minimum prices and used 'trustworthy' weighing scales i.e. scales that had been certified by the Malawi Bureau of Standards and had not been tampered with. They nonetheless sold to vendors either because they were the only buyers operating in their areas, or they started buying earlier than formal traders. Many farmers, who were desperate for cash by the beginning of the crop marketing season, ended up selling to the first buyer who came to their doorstep, which was invariably a vendor.

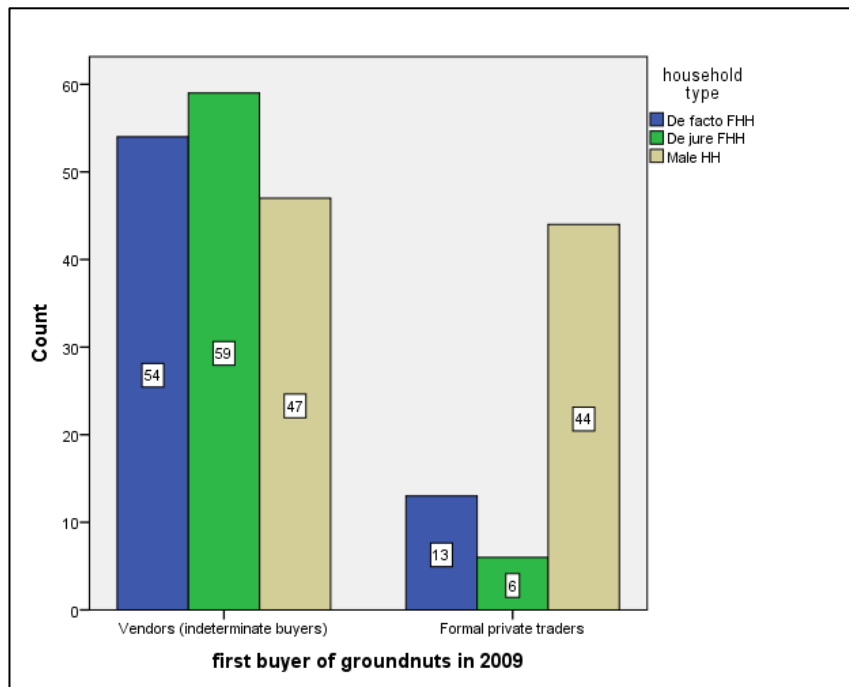
The lack of adherence to government set minimum prices was also verified through observations as several vendors were seen buying groundnuts (and maize) at lower prices than the minimum ones. These (lower) prices were clearly displayed on trees or on the walls of the buildings where they were buying. For example, in Mzimba, vendors were buying groundnuts at MK50 – 60 per kg, when the government had given MK70 as the minimum price. When asked if they felt it was illegal or unethical to buy at lower prices than the set minimum prices, the informal traders responded that it was to the farmers' benefit for them to buy their produce because ADMARC or bigger formal traders were not going to operate in those remote areas. They further argued that it was market forces that dictated prices at which to buy the farmers' produce. They gave examples where when supply was low, prices automatically increased, usually beyond the minimum prices. In the case of excess supply, however, the opposite was the case. They also indicated that the prices had a tendency to start low at the start of the marketing season, and to adjust upwards later on in the season, when buyer competition for the crop supplies was higher.

Some of the formal traders admitted that since the reintroduction of minimum price setting by the government in 2009, they had stopped buying from remote areas because it was unprofitable. They claimed that minimum prices were set too high, and arbitrarily without due consideration for costs of production and prevailing market conditions. They also explained that by being pan-territorial, minimum prices put those buyers operating in more remote areas at a disadvantage, since they had to face high transport costs to bring the produce to the major cities for processing. They further indicated that unlike vendors, they were obliged to adhere to minimum prices since it was easy for government to monitor their activities. Consequently they had resorted to no longer buy in remote areas and were mainly buying from the Trading or Town Centres where farmers were supposed to bring their produce. In Mchinji, it was noted

that some of the vendors buying in the villages were agents or suppliers for some of the formal private traders that had set up buying operations at the Trading Centre at Waliranji. Most of the formal traders operating in the cities of Blantyre and Lilongwe had set high minimum volumes at which they started buying, and this meant that they were no longer buying from individual smallholder farmers but from vendors who had gone to the remote areas and had bought the crops at prices lower than the set minimums.

It is therefore seen that although intended to protect smallholder farmers from exploitation by buyers, the minimum prices seem to have deepened the marketing challenges by causing a withdrawal of formal private traders from remote rural areas. Just as was the case when ADMARC was forced to close some of its remote markets and stop operating in those areas, it is female farmers and FHHs who are likely to be affected the most. Female farmers bear the brunt of this challenge as they are the ones least able to access distant markets. Specifically, the need to fulfil their triple roles (Moser, 1989) means that they are usually time-constrained and therefore would struggle to engage in activities that take them away from home. Moreover, and as was especially evident in Mangochi, women's ability to access distant markets may also be affected by cultural practices that limit their movements from their homestead. In all the study districts, it was also evident that women's limited participation in farmer organisations also contributed to this challenge. By not participating in these organisations, female farmers cannot take advantage of collective marketing opportunities that these organisations offer, which also includes improving access to formal private traders. As Graph 6.2 below illustrates, it was mainly MHHs who sold their groundnuts to formal private traders. Both de jure and de facto FHHs mainly sold to vendors. Therefore, the fact that the FHHs mainly sold to vendors means that they faced a larger share of the marketing challenges associated with vendors discussed above.

Graph 6. 2: Number of households who sold groundnuts to vendors and formal private traders by household type



Chi-square test $p = 0.000$ indicates that the association between type of buyer and household type is statistically significant at 1% level

Of those who sold to formal traders, 44 were from MHHs while 13 and 6 were from de facto and de jure FHHs respectively; and of those who sold to vendors, 59 were from de jure FHHs, 54 from de facto FHHs while 47 were from MHHs. Although generally, both de jure and de facto FHHs had low access to formal private traders, in Mzimba and Mchinji districts, it was de jure FHHs who had the least access, with most of them selling to informal traders. The situation was however different in Mangochi as in this district it was de facto FHHs who had the least access to formal private traders. As some participants in the district explained, movements of de facto FHHs are more closely monitored by the communities (and especially the husband's kin) than those of de jure FHHs. They explained that with their husbands being away, there are higher expectations for them to conduct themselves in a manner that shows that although their husbands are away, they are still respectable married women. The women's movements are therefore significantly restricted by their husbands' kin, which ends up affecting their efforts to sell their groundnuts at the Trading Centre. These limitations were also likely to have been influenced by the fact that most of the traders (both informal and formal) were male, and their interaction with female farmers was always under scrutiny. It was easier to monitor women's interaction with informal traders who came to the villages than the formal ones, operating at Trading Centres. In a study on

mobility constraints and their implications for rural women and girls, carried out in Malawi, Ghana, and Nigeria, Porter (2011) highlights how women's mobility is linked to prostitution. She observes that women's mobility to distance (and often more rewarding) markets is not only limited by limited resources to pay for transport but also by male and cultural attitudes that associate female mobility with female sexual misdemeanour (Porter, 2011: 67).

It is therefore evident from the above discussions that labour constraints and limited access to good markets are the main challenges facing groundnut farming households. For both challenges, the impacts are greater for FHHs than they are for MHHs. Consequently, addressing these challenges is necessary, not only to improve groundnut production in general, but to address the gender disparities in the production of the crop discussed above as well. Although the provision of good quality (and subsidised) groundnuts seed may be necessary to improve productivity and quality of groundnut produce, access to seed did not seem to be a priority need amongst female farmers as it was not mentioned and highlighted as such. Moreover, even though the participants knew that they were meant to be receiving groundnut seed coupons as part of the FISP, there were no significant complaints that they had never accessed them. The indications therefore are that the provision of subsidised groundnut seed, without due consideration for labour challenges and poor access to markets, may be inadequate to significantly address the challenges that cause FHHs to have lower groundnut production outputs. Agricultural interventions need to be gender-aware if they are to benefit female farmers and FHHs. Moreover, because women are increasingly becoming 'the farmers', it is imperative that gender considerations are included in the interventions. Without that, the interventions would not only fail to address the needs of the female farmers, but they would even fail to achieve their very objectives.

6.5 Regional differences in market-oriented crop production for female farmers

This section will discuss regional variations in maize sales as well as in the production and sales of groundnuts. Most of the areas where the findings were similar across the three districts have already been discussed in sections 6.2 and 6.3, this section will therefore mainly focus on areas of substantial variation across the three districts.

For maize, the analysis indicates that in general terms, households in Mzimba district in the North sold more maize than those in Mangochi or Mchinji. Table 6.8 below shows that households in Mzimba sold an average of 52.2 kgs compared to 12.1 and 13.6 kgs for Mchinji and Mangochi respectively.

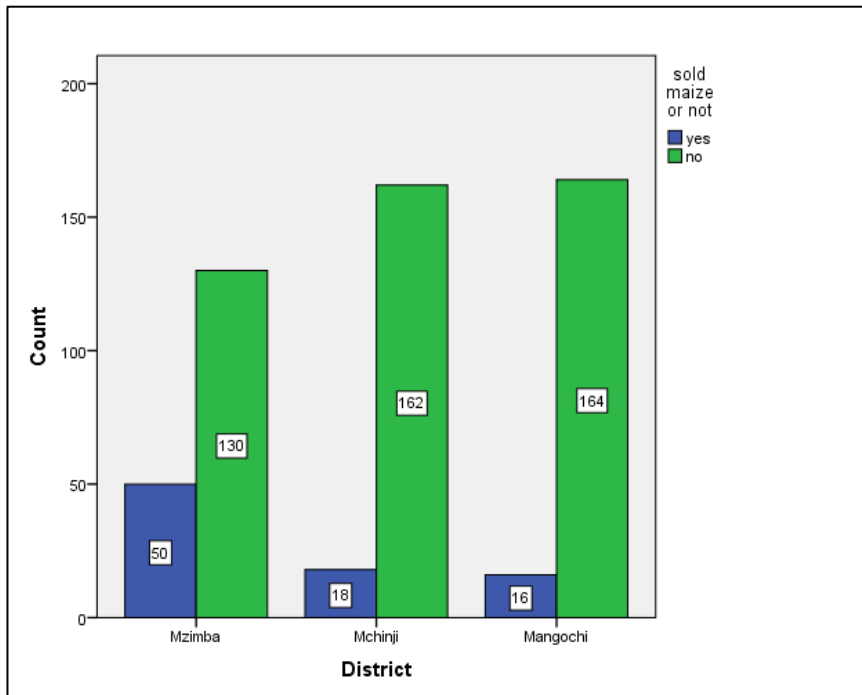
Table 6. 8: Volume of maize sold by district (in Kgs)

District	Mean	N	Std. Deviation
Mzimba	52.1944	180	120.02212
Mchinji	12.1222	180	59.68976
Mangochi	13.6389	180	66.57384
Total	25.9852	540	88.22431

Anova test $p = 0.000$ shows the differences in the means is statistically significant at 1% level.

There were also more farmers in Mzimba who indicated that they had sold some maize during the season compared to Mchinji and Mangochi as indicated in Graph 6.3 below. Mangochi had the lowest number of maize sellers of all three districts.

Graph 6. 3: Number of farmers by district who sold maize (in Kgs)



Chi-square test $p = 0.000$ indicates the association between district and volume of maize sales is statistically significant at 1% level.

The first factor that may have influenced the high maize sales in Mzimba was the high maize production output in the area. Households in Mzimba had the highest maize output per annum at 1044 kgs, compared to 665 and 505 for Mchinji and Mangochi respectively. As discussed in Chapter 5, households in Mzimba had better access to favourable resources and conditions for farming which enabled them to have a higher output compared to the other two districts. They had more land, were more literate and owned more livestock than those in Mchinji and Mangochi. Climatic conditions in the district are also more suitable for crop production than the other districts. This aspect is however beyond the scope of this research as it requires different methods, and was therefore not explored in detail.

The advantaged position of households in Mzimba is also shown in Table 6.9 below which shows that despite having the highest maize sales of all three districts, they sold a lower proportion of their total output compared to households in both Mangochi and Mchinji.

Table 6. 9: Volume and proportion of maize output sold per household in 2009

District	Volume sold (kgs)	Volume produced (kgs)	Proportion of maize production sold (%)
Mzimba	23.50	1043.89	2.20
Mchinji	15.12	668.53	2.25
Mangochi	18.64	504.82	3.57
Total	25.99	739.08	3.52

Anova test $p = 0.000$ shows statistical significance in the mean differences; and chi-square test $p = 0.000$ indicates statistical significance in the association between region and volume of maize sales

This and other evidence collected during the focus group discussions in Mzimba showed that households in this district were less dependent on maize sales as the sole source of cash income. The indications were that higher ownership of livestock by most households allowed them to use livestock as a source of both food and cash thereby avoiding frequent or unproportionally high maize sales. For example, some female participants from MHHs explained that whenever they had guests, they normally did not require cash to go and buy some relish as they could easily get a chicken or eggs from their kraals. They indicated that in the district it was considered improper for a guest to visit and not be given a meal. The inference obtained from this practice was that households in the district were not as food insecure as those from the other two districts, otherwise that practice would not have been sustained if most of the households in the district had been short of food.

Another factor that suggested that the households in Mzimba may not have been as vulnerable as those from the other two districts was the quality of their houses. It was observed that generally houses in Mzimba were of better quality compared to those in Mchinji, and particularly those in Mangochi. Most of the houses in the district were built using burnt bricks and had iron sheet roofs, whereas many houses in Mangochi were made of mud and had grass thatch. Some of the participants in the district explained that following good crop harvests and sales, they had recently removed grass thatch from their houses and replaced it with iron sheets. Others also indicated that they had been able to put cement floors in their houses in recent years. As Gine and Young (2007) have observed, housing quality is a symbol of improved socio-economic status in most areas in Malawi. This therefore means that most of the households in Mzimba were able to earn more cash from their maize sales and/or that they had more or other

sources of cash in addition to maize sales. As Table 6.10 below indicates, one definite source of this cash was groundnut sales.

Table 6. 10: Volume and proportion of groundnuts produced and sold per household in 2009

District	Volume sold (kgs)	Proportion of groundnut production sold (%)	Volume of groundnuts harvested (kgs)
Mzimba	88.65	72.5	122.30
Mchinji	127.02	55.8	227.77
Mangochi	164.68	66.1	248.89
Total			195.17

Anova test $p = 0.000$ shows that the differences in the means are statistically significant at 1% level

Although households in all three districts generally sold a higher proportion of groundnuts than of maize, Mzimba district had the highest proportion of groundnut sales. Farmers in Mzimba sold 72.5% of their groundnuts, compared to 55.8% and 66.1% for Mchinji and Mangochi respectively. By selling a higher proportion of their groundnut output, households in Mzimba were therefore able to sell a lower proportion of their maize and therefore preserve their maize harvest for their household food security needs.

6.6 Conclusion

This chapter has analysed how the FISP has influenced sales of maize and groundnuts amongst female farmers belonging to the three household types. Analysis of the quantitative data has revealed that although maize sales were generally low across all household types and districts, they were higher amongst FHHs (both de jure and de facto) that received subsidised inputs compared to non-recipient FHHs. The opposite was true for MHHs as within the group, maize sales were generally higher amongst non-recipient households. This variation between the FHHs and MHHs is noteworthy because it provides a clear demonstration of how female farmers belonging to different household types are likely to respond to a single policy intervention differently. It is for this reason that gendered planning, monitoring and evaluation are essential in order to understand such variations and ways to address them.

In order to get a more profound understanding of how the different groups of female farmers have been affected by the FISP, this analysis has gone beyond the impacts of the FISP on maize production and looked at the utilisation of maize output. Based on this analysis therefore, this chapter has argued that because of the limited opportunities available to FHHs (particularly de jure FHHs) for earning cash income, increases in maize production were welcomed as a new income stream for them. Their desperate need for cash for other household needs therefore forced them to succumb to forces of extraction and sell off some of their maize harvest. However, as the chapter has highlighted, the mode and timing of crop sales for FHHs was more disadvantageous than advantageous to them. By selling their maize during the harvest period when prices were at their lowest, they were doubly disadvantaged because they ended up selling at low prices and had to buy back later in the season at much higher prices. They therefore earned lower incomes from their maize sales but had to spend high sums of money for their food needs later on in the season. This practice therefore eroded the potential benefits on food security that the increased maize production would have brought for FHHs.

The maize sales by both de jure and de facto FHHs were also affected by the fact that they had limited access to formal private buyers compared to MHHs. Households that sold to these formal private traders gained more benefits since the formal traders were more likely to adhere to minimum prices set by the government compared to vendors. Lack of enforcement of minimum prices in remote areas and a general monitoring of crop marketing activities by the government has led to practices where informal traders

buy crop produce at the farmers' doorsteps at lower prices than the set minimums. Therefore, FHHs who face time and other cultural limitations that affect their movements are forced to sell to these vendors, whereas MHHs can seek the formal private traders at the Trading Centres where these traders normally operate from and so benefit from better prices.

These two findings therefore suggest that the FISP is an inadequate tool for improving food access through maize sales for FHHs. As the analysis has shown, even de facto FHHs who are generally considered to be less cash poor than de jure FHHs struggle to resist forces of extraction and end up selling their maize at the wrong time and to the wrong buyers, just like de jure FHHs. Interventions aimed at improving maize sales for smallholder farmers must therefore specifically consider women's triple roles, as well as the socio-cultural and economic limitations that affect the involvement of FHHs in maize marketing.

In terms of the impact of the FISP on groundnut production and sales, it was not possible to clearly demonstrate whether the provision of groundnut seed has had an impact on groundnut production because most of the research participants did not receive groundnut seed coupons. However, since the government has (since 2009) embarked on a programme to multiply groundnut seed to be included in the FISP, it is possible that more households will receive the groundnut seed coupons in future growing seasons. This is therefore an area where future research may be necessary to address the above research gap. The current analysis however found that although the provision of groundnut seed in the FISP may be important for improving the productivity of the crop, it is not a priority intervention necessary to improve groundnut production and address the associated gender inequalities. Consequently, although households that receive groundnut seed coupons are likely to produce more groundnuts than non-recipient households, the gender inequalities in the production of the crop remain unaddressed. As the chapter has revealed, although groundnuts are commonly considered a woman's crop, gender inequalities in access to on-farm labour and crop markets means that FHHs, particularly de jure FHHs, are unable to produce as much groundnuts as MHHs.

The extent to which that the government considered the provision of subsidised seed as an intervention aimed at improving groundnut production amongst poor smallholder farmers demonstrates the extent of invisibilisation of gender issues in the programme. Because of a lack of gender analysis of the intervention, and more specifically

gendered monitoring and evaluation, the programme has been designed in a way that is gender-blind. Moreover, even though the programme has since its inception undergone several amendments aimed at improving its efficiency and effectiveness, none of the amendments have been directly aimed at improving access to and benefits from the programme by FHHs. Therefore, although FHHs are specified as one of the priority-targeted groups of the programme, the design does not reflect this as the specific practical and strategic needs of FHHs are not incorporated into the programme. Gender sensitivity would for example have led to the provision of herbicides as a complementary input. These would have significantly improved labour availability for labour-constrained FHHs as the herbicides control weeds, leading to a reduction in weeding requirements for farmers. This chapter therefore concludes that because women are increasingly becoming 'the farmers', agricultural policies that exclude or neglect their specific needs and challenges are ill-designed to achieve their objectives.

Chapter 7: Conclusion

7.1 Introduction

Female farmers in Malawi and in many other African countries remain subordinate to and more food insecure than their male counterparts. It is paradoxical that this status quo has persisted in spite of two significant factors: their high and increasing involvement in food and agricultural production, and policy commitments at both national and international levels to address the gender inequalities prevailing in the agricultural sector. This research has engaged with these issues and used the case study of the Malawi FISP to critically explore and analyse how and why national agricultural policies have not been successful in addressing prevailing gender inequalities. The research therefore posed and was guided by the research question: 'How and why have female farmers belonging to different household types been affected by the Malawi FISP?'

The Malawi FISP is significant for this research because it continues to make international headlines as a government intervention that has been successful in addressing food security challenges in the country. As evident in Chapter 3, several studies conducted since the inception of the programme in 2006 have confirmed its positive influence on aggregate maize output and hence food security in the country. Because of this success, 'Malawi has become a regular feature in global policy discussions about food security and the possibility of a uniquely African green revolution' (Chinsinga, 2010: 1). The programme has therefore enjoyed growing research interest in recent years. In spite of the growing literature however, there has been a knowledge gap on the gender aspects and implications of the programme. Previous studies have mainly looked at its impacts on smallholder farmers in general and on aggregate national factors such as maize output and productivity. Research that has thoroughly analysed the impact of the programme on smallholder farmers belonging to different households is limited, if not non-existent. Specifically, there is a knowledge gap on how the food security status of female farmers belonging to different household groups has been affected by the programme.

This research has therefore contributed to filling this research gap. Based on extensive empirical work, combining document analysis, a survey, key informant interviews and focus group discussions, the analysis has shed light on this, and highlighted the

various ways through which FHHs have earned fewer benefits from the FISP compared to MHHs. The thesis has argued that in spite of feminisation of agriculture, development policies in Malawi still largely consider men as '*the farmers*' and therefore neglect women as farmers and obscure the complexity of gender relations. Consequently, agricultural interventions that are developed based on these policies are designed and implemented in a manner that overlooks and fails to adequately or appropriately address women's needs, and are therefore unlikely to benefit them. In fact, the way in which the gender issues are pursued within the policies and programmes only works to facilitate and reinforce the inequalities instead of addressing them.

To explore these issues, and to answer the main research question indicated above, the following research sub-questions were posed and addressed:

1. What are the roles, involvement and position of female farmers in the agricultural sector in Malawi?
2. How are gender issues addressed in Malawi's agricultural and development policies?
3. How has the Malawi FISP affected food production for female farmers belonging to different household types?
4. How has the FISP affected crop sales for female farmers belonging to different household types?

Chapter 3 has addressed the first sub-question through a review of food security, agricultural policy and gender and development literature, focussing on the concept of feminisation of agriculture. This chapter also provided the conceptual basis for this thesis. Although the analysis in the chapter was contextualised in the case of Malawi, it was broadened to include literature from other developing countries as well, particularly in Africa. This sub-question has therefore been answered from a more general or broader perspective and not only in specific reference to Malawi (which is the case for sub-questions 2 to 4).

Research sub-question 2 has been addressed through a critical analysis of Malawi's (post 2000) national development and agricultural policies in Chapter 4. Based on the Female Subordination Cycle and its embedded processes of gender policy

evaporation, resistance, sectorisation and invisibilisation as the analytical framework, the analysis involved both a document analysis as well as literature review of the Malawi Poverty Reduction Strategy, the Malawi Economic Growth Strategy, the Malawi Growth and Development Strategy and the Agricultural Sector-Wide Approach Programme. The development process and content of these policy documents, as well as their implementation, were therefore all reviewed in exploring how gender issues have been incorporated in the policies and the reasons thereof.

The last two sub-questions have been addressed in chapters 5 and 6, with Chapter 5 focussing on sub-question 3 (How has the Malawi FISP affected food production for female farmers belonging to different household types?) and Chapter 6 focusing on sub-question 4, (How has the FISP affected crop sales for female farmers belonging to different household types)? These draw on the rich primary data principally generated from interviews with female farmers, and triangulated with information from key informant interviews and focus group discussions.

This conclusion chapter returns to these research sub-questions, presenting the answers to each one in turn. The chapter also highlights the major and salient findings from this analysis and provides the overall conclusion to the thesis. Furthermore, in Section 7.3, the chapter discusses the originality claims of this thesis and highlights the contributions to knowledge made by this work. The chapter concludes in Section 7.4 with some thoughts on the policy implications of the findings, as well as implications for further research. The latter is based on the identified limitations of this research and some inconclusive findings identified in the empirical chapters.

7.2 How and why have female farmers belonging to different household types been affected by the Malawi FISP?

7.2.1 What are the roles, involvement and position of female farmers in the agricultural sector in Malawi?

The conceptual basis and point of departure for this research is feminisation of agriculture. By examining literature on this concept, the analysis sought to understand the place of women in agriculture. The analysis established that despite being a global phenomenon, feminisation of agriculture is manifested in varied forms across cultures, geographic regions and time periods. Several authors have discussed its various forms which include feminisation of smallholder agriculture, of agricultural labour, of cash crop production and of farm management – forms that may occur simultaneously or unilaterally. Although the defining factor for all these forms is the same, being the high and increasing involvement of women in the agricultural sector relative to men, this appreciation of the complexity of the phenomenon led to the isolation of feminisation of smallholder agriculture as the primary focus for this research. This is the most common form in Malawi and one in which many women in the country are involved. This however does not imply complete non-existence of the other forms but is simply a reflection of relative significance. Reference to feminisation of agriculture, particularly in the empirical chapters (Chapters 4 to 6), was therefore made in relation to feminisation of smallholder agriculture.

The analysis in Chapter 3 has revealed that irrespective of the under-enumeration of women's economic and productive activities reported in many developing countries, the high involvement of women in the agricultural sector is increasingly becoming evident. Since the publication of Esther Boserup's seminal work in 1970, many scholars have analysed and mobilised evidence on the important but neglected role of women in the agricultural sector (for example, Bryson, 1981; Jiggins, 1998; Saito *et al.*, 1994; Creevy, 1986). Available national and global data also confirm women's increasing involvement in the sector. It is now well known and established that women produce over 50 percent of the global food, and that this contribution is even higher in sub-Saharan Africa (Mehra and Rojas, 2008; SOFA team and Doss, 2011). In Malawi, women provide over 70 percent of the agricultural labour force (GOM, 2002).

Although women play this high and significant role in the sector, they continue to face many challenges that affect their production. In Malawi and many other developing countries, gender inequalities exist in accessing essentially all critical factors of production such as land, labour, farm inputs and credit. For example, a study conducted by the FAO in 97 countries found that female farmers only receive 5 percent of all agricultural extension services (FAO, 2011). Another study by Actionaid (2010) reported that women only own about 1 percent of titled land in Africa. Furthermore, evidence from Malawi suggests that women generally farm on smaller and less fertile land compared to male farmers. Despite the progress made by feminist scholars over the last three decades in bringing to the fore these gender inequality issues and the subsequent articulation of the necessity of ways to address them, the inequalities have persisted. It is for this reason that understanding reasons behind the persistence of these inequalities has been a key area of academic enquiry over the last two decades.

A critique of Boserup's work highlighted above revealed that although this work has been influential in raising the profile of women in agriculture through presaging enquiry that led to the confirmation of feminisation of agriculture, its production and economic-centred analyses may also have contributed to reinforcing gender inequalities. Specifically, it is responsible for introducing perceptions that gender issues deserve policy attention if and when they matter economically, and that the solution to women's subordination is through addressing economic and social relations outside the household. It is noteworthy that similar shortfalls were evident in the Women in Development (WID) approach, which was promoted by international agencies in a bid to address gender inequalities in development practice during the 1970s. The approach put more emphasis on women's productive roles at the expense of their reproductive functions and maintained that that the reason women were subordinate was their exclusion from the market sphere and economic processes. Consequently, development interventions that were influenced by this approach were mostly limited to cases where the economic argument was strong, and focussed on meeting women's practical needs, neglecting their strategic gender needs. As has been highlighted in Chapter 3, it is only when women's strategic needs (i.e. needs women identify because of their subordinate position to men in their society) are met as well that women can achieve greater equality and therefore challenge their subordinate position.

This importance of addressing women's strategic needs was confirmed in the way female subordination transcended social-economic factors. Specifically, gender inequalities and female subordination were evident even in areas with higher income

levels or better farming conditions, indicating that the inequalities were not just about poor socio-economic conditions (practical needs). For example, maize production in all three study areas reflected a bias against female farmers as they produced less than male farmers. This was irrespective of the fact that female farmers in Mzimba had better socio-economic conditions which should have assisted in their crop production. Even in terms of land ownership, female farmers had poor access even in matrilineal societies where land ownership is supposed to favour women. This confirmed that the crop production of female farmers would not be significantly improved by only addressing their practical needs, but by understanding and addressing related strategic needs as well.

The analysis in Chapter 3 has further revealed that two decades on, the perception that gender is important because it matters economically is still evident. This is in spite of the GAD approach that replaced the WID approach and was promoted to address the weakness discussed above. Recent statements by the FAO (2012) on the need to address gender inequalities in agriculture in order to improve global agricultural production are evidence of this. Attention is being drawn to women's issues due to their impact on national and global food security, demonstrating that gender blindness still blurs agricultural policy processes. It raises questions on whether gender inequalities would be a concern if they were not considered to be contributing to the underperformance of the global agricultural sector. On this consideration therefore, the research adopted a gender-aware approach, ensuring that the focus of analysis was not limited to women's economic roles. On the contrary, the analysis strongly reflected on women's triple roles and their interactions. In addition, although female farmers were the main research participants, male farmers were also consulted in focus group discussions to get a clearer understanding of gender relations.

Chapter 3 has therefore highlighted that although women continue to face many challenges that affect their agricultural production, they play a significant role in many countries. This is not only evident in national statistics, but has also become clearer with feminisation of agriculture. As more male heads of households migrate from agriculture and rural areas in search of alternative livelihoods, women are left with more responsibilities over farm work. Having fewer options for alternative livelihoods due to poor socio-economic conditions, which are themselves propelled by gender inequalities, women are increasingly making agriculture their main livelihood source. This is the case not only in Malawi, but in many other African and developing countries as well.

7.2.2 How are gender issues addressed in Malawi's development and agricultural policies?

This question has been answered in Chapter 4 of the thesis which presented an analysis of development and agricultural policies in Malawi, reviewed in the context of feminisation of agriculture and using the Female Subordination Cycle and its embedded processes as the analytical framework. The analysis established that the design and implementation of development and agricultural policies in Malawi has been substantially influenced by donor and international agencies. A comprehensive review of the development process and content of Malawi's national development and agricultural policies since 2000, including the MPRSP, MEGS, MGDS and ASWAp, confirmed observations made by previous scholars that for aid-dependent Malawi, it is mainly donors' ideologies that have influenced the content of the country's policies. While donor influence on Malawi's policies seems more widespread and not only specific to gender issues, the influences on gender are particularly noteworthy. This is because the gender agenda of the international agencies is itself weak and ill-founded, based on the premise that gender issues deserve policy attention because they matter economically (as discussed in section 7.2.1 above), and has therefore not succeeded in making Malawi's policies (appropriately) gender-sensitive. On the contrary, it has only succeeded in promoting superficial gender integration in the country where the incorporation of the issues has been driven more by a need to fulfil the donors' requirements as opposed to a sound commitment to addressing inequalities. Although the Malawi Government has claimed to be gender-sensitive and included gender as a key cross-cutting issue in all key development and agricultural policies, a critical review of the MPRSP, MEGS, MGDS and ASWAp in the chapter has challenged the gender-sensitivity of these policies. The evidence therefore led to the conclusion that gender integration has remained an agenda of the international agencies that has failed to actualise in practice.

Building on terms used by Moser *et al.* (2004) and Beall and Davila (1994) in their frameworks for assessing gender mainstreaming, this chapter developed a Female Subordination Cycle and argued that gender integration in the country has been marred by a cyclical process involving resistance to gender issues, gender policy evaporation, sectorisation and invisibilisation. Firstly, Malawi's policy processes are dominated by gender resistance. Consequently, although gender issues are mentioned as a key cross-cutting issue in all the key development and agricultural policies in the country, they are seldom addressed in practice due to gender policy evaporation and

sectorisation. In this case, gender integration becomes more evident in policy documents than it is in practice. This argument is clearly exemplified in the case of the Malawi FISP. Although Malawi's development and agricultural policies clearly acknowledge the high involvement of women in the country's agricultural sector and highlight the need to incorporate them in all agricultural programmes, this is not substantially reflected in the FISP. Reference to female farmers in the programme is only made pertaining to their position as vulnerable farmers and not as key players in the sector.

Moreover, despite being listed as one of the priority-targeted groups for the programme, fewer FHHs receive FISP coupons compared to MHHs; and when they do, they receive fewer coupons than their male counterparts (see Section 4.5.2.3). Unfortunately, such gender aspects of the programme have been largely ignored due to preoccupation by both the donors and the government on the general impacts of the programme on national and aggregate food security, agricultural output and agricultural productivity. It is almost certain that both the government and donors (funding the programme) are aware of the disproportionate receipt of subsidised inputs in favour of MHHs as this has been presented in some FISP review reports submitted to the government (for example SOAS *et al.*, 2008), and was also presented at a FISP evaluation dissemination workshop attended by both groups in June 2012 in Lilongwe. There have however not been any noticeable efforts to redress the situation. It is even more noteworthy that although the FISP has undergone several amendments since 2006 aimed at improving its effectiveness and efficiency, none of the amendments have reflected the above gender issues. The changes have mainly focussed on efficiency improvements such as the inclusion of private suppliers as distribution outlets and other implementation arrangements.

Although there have been changes made on the range of inputs included in the FISP package to include such crops as groundnuts, the motivating factor has not been gender considerations. The knowledge that FHHs are disadvantaged in their receipt of the FISP coupons has therefore not induced changes to the design or implementation of the programme. The inference from this therefore is that improving access to subsidised inputs for female farmers is not considered a priority by the government or donors to improve the effectiveness of the programme. This lack of appreciation of the need to address gender issues in the FISP has not only led to a failure to address gender inequalities but has also reduced the effectiveness of the programme in addressing food insecurity. The nexus of food security and gender integration is that

women are the key food producers and food security interventions that are blind to their specific needs cannot be successful in achieving their objectives.

As demonstrated in the Female Subordination Cycle, such gender policy evaporation has been facilitated by a resistance to gender issues that dominates policy processes in the country. Patriarchal values at both household and national levels systematically reject and refuse to take on board gender issues. Consequently, even when donor requirements force gender integration, the policies become scantily or inappropriately engendered. This resistance is reflected in the MPRSP for example, which demonstrates a refusal to acknowledge the gender inequalities experienced by female farmers or to comprehensively highlight the specific challenges faced by them compared to male farmers. Instead, it claims to be gender neutral by explaining that the term 'farmer' in the strategy refers to both male and female farmers. While it is correct that both men and women are farmers, it is erroneous to imply that they operate under similar circumstances and not highlight the significant gender inequalities between them that affect their agricultural production and productivity. Although a thorough review of the MPRSP clearly reveals that the strategy does not adequately consider female farmers, it is noteworthy that simply adding this statement that the term 'farmer' refers to both male and female farmers creates an impression that it is gender sensitive, and therefore earns a tick for gender integration by the donor community. The analysis has therefore revealed that gender integration has simply become a symbolic recognition that is included in policy documents with no intentions to be carried through to programme implementation and therefore is unsupported by material resources or political commitment.

Secondly, the analysis has also found that even when gender issues are included in programmes, this resistance as discussed above leads to sectorisation of the issues where they are addressed separately from mainstream interventions. Usually, gender issues are presented at the end of the documents in a section called 'cross-cutting issues', which typically includes gender and HIV/AIDS, and in some cases the environment as well. Because gender issues are relegated to this 'add-on' section, many opportunities for gender integration throughout the documents are lost. It is this sectorisation and gender policy evaporation discussed above that facilitate the invisibilisation of gender issues i.e. a lack of gendered planning, monitoring and evaluation. Gender invisibilisation diminishes the opportunities for understanding or highlighting the gendered implications of the programmes, which rationalises and perpetuates gender insensitivity and further reinforces the resistance that led to the

gender policy evaporation and sectorisation in the first place. This self-perpetuating cycle will persist until efforts are made to address each stage of the cycle. Interventions that only affect any one of the stages may be inadequate to ensure appropriate gender integration that will have real impact on gender inequalities in development practice.

Lastly, the analysis in Chapter 4 has also revealed that even such programmes as the FISP that are claimed to be gender-sensitive may still generate lower benefits for female farmers compared to their male counter-parts. It has been argued that gender sensitivity is more than just ensuring that agricultural policies and programmes target female farmers so that their practical needs are met. To the contrary, it requires that the policies and programmes reflect on and incorporate women's strategic needs as well. It is how these strategic needs are met that determines whether policy interventions will be successful in meeting women's practical needs. In the case of the FISP, the issue is not simply about providing subsidised inputs to female farmers. More significantly, it is about which types of inputs are included in the FISP package, how the inputs are distributed to farmers, where the inputs can be accessed, and how eligibility criteria are determined. In the case of types of inputs in the FISP package, and as chapter 6 highlighted, the provision of groundnut seed in the FISP does not have a substantial impact on groundnut production for female farmers or address gender disparities in the production of the crop. It is the provision of labour saving technologies (such as herbicides), that would ease the burdens and challenges that female farmers face in producing groundnuts. Such issues would be highlighted if women are not invisibilised from agricultural policies and interventions.

7.2.3 How has the Malawi FISP affected the food security status of female farmers belonging to different household types?

As mentioned in the introduction section above, one of the main factors that has made the Malawi FISP increasingly popular in policy debates and influenced many studies on the programme is its impact on maize production and consequently food security in the country. The dominant view in the literature is that the programme has been successful in addressing food security challenges, making the Malawi case an example worth emulating. It is only from the commencement of the FISP in 2006 that national aggregate maize output in the country exceeded the national requirement of 2.2 million metric tonnes. Even maize productivity has increased from around 0.8 metric tonnes per hectare prior to the commencement of the programme to around 2.4 in 2006 (Denning *et al.*, 2009). While not disputing these findings, the analysis in this research has revealed that these findings have only presented a partial picture.

The evidence has shown that although improvements in maize production output were observed among all households that received the subsidised inputs irrespective of their household type, the magnitude of the improvement was not uniform across household types or districts. Specifically, although both *de jure* and *de facto* FHHs who received subsidised inputs were able to produce and harvest more maize compared to non-recipients within their household groups, their total output was still lower than that of MHHs. *De jure* FHHs had the lowest maize output of all three groups, demonstrating the extent of their vulnerability. On average, among the FISP-recipient households, MHHs had an average annual maize output of 1078 kgs per household, compared to 673 and 675 kgs for *de jure* and *de facto* FHHs respectively. This is compared to 710 kgs, 603 and 462 kgs for non-recipient MHHs, *de facto* FHHs and *de jure* FHHs respectively. It is therefore seen that although accessing subsidised inputs plays a role in improving maize output for FHHs, the impact is not that significant especially when the output of MHHs is considered. The gendered differences in crop output between male-headed and FHHs that have been confirmed in many studies (for example, Key *et al.*, 2000, Fafchamps, 1992) are therefore still maintained and not adequately addressed or resolved by the FISP. This is significant as it highlights that although limited access to required inputs is one of the key factors affecting the crop production and productivity of female farmers, they face (many) other challenges that affect their production. Consequently, providing them with subsidised maize seed and fertilisers is inadequate to improve their maize output to similar levels as those achieved by MHHs.

A study by Tchale (2009) on factors that influence crop productivity helped the research to identify labour, land, livestock ownership, age and literacy levels as factors that have influenced the variations in maize output across the three household groups. Owning less land and livestock, and having less labour, both de jure and de facto FHHs are unlikely to produce as much maize as MHHs. In addition, de jure FHHs typically have less education than the other household groups. This does not only affect their access to and utilisation of extension services and the quality of their labour input, it also makes them less likely to appreciate and adopt new farming technologies. One way through which this is evident is their choice of what maize varieties to grow.

Although the government has, through the FISP, been promoting higher yielding hybrid maize varieties, and providing both the seed and fertilisers to ensure that farmers can increase their maize productivity, FHHs have continued to grow more local than hybrid maize varieties. Even households that receive subsidised hybrid seed still grow more local than hybrid maize varieties. Although MHHs also grow local maize varieties, the analysis has found that women have a higher preference for local maize varieties because they are perceived to have more suitable food properties such as ease of processing, storage and taste. The significance of this finding is that it reflects a disconnection between policy makers and rural communities in their definitions and pursuit of food security. Although policy makers in Malawi mainly define food security in terms of maize availability (GOM, 2010), rural communities, particularly female farmers, place more emphasis on food preference. Although the 1996 World Food Summit definition of food security is acknowledged in Malawian food security-related policies as an appropriate food security definition that incorporates all the critical elements of food security (namely availability, access, utilisation and sustainability), the practice has been to concentrate on food (maize) availability. Interventions aimed at improving food security in the country have therefore mainly focussed on this aspect, neglecting the other three. Even where efforts have been made to ensure the inclusion of nutrition (food utilisation) within food security interventions, they have remained low, uncoordinated and inconsistent.

Interestingly, this almost exclusive focus on food availability is also reflected in the academic literature where statements like 'in Malawi, maize is life' (Smale, 1995) have been coined. As the interviews with female farmers in this research have revealed, the above statement is incomplete if it is not appropriately qualified – 'In Malawi, maize is life, and for most female farmers, local maize is the food'. It is therefore necessary that this preference is taken into account in the formulation of food security policies,

programmes and interventions. It is necessary to understand that the issue is not only about providing subsidised hybrid maize seed to female farmers, but also about providing targeted extension programmes as well as the development of hybrid maize seed varieties with the food traits required by female farmers. Without that, female farmers will continue to grow more local than hybrid maize varieties, which compromises their food security through the lower productivity associated with local maize varieties.

Another way in which the food security status (in terms of food availability) of female farmers is affected is through the mode and timing of maize sales. The quantitative data from the farmer interviews has revealed that there are gender disparities in terms of the utilisation of maize output at household level by household type. Increased maize production by FISP-recipients induced higher maize sales amongst FHHs. This is because with feminisation of agriculture, female farmers are becoming even more constrained (mainly by labour availability) to engage in other off-farm income generating activities. Consequently, having fewer options for generating cash income, they are pulled into desperate maize sales where they sell their maize at low prices during the harvest season. By selling their maize during the harvest period when prices are at their lowest, these women are doubly disadvantaged because they end up selling at low prices and have to buy back later in the season at much higher prices. They therefore earn lower incomes from their maize sales but have to spend high sums of money for their food needs later on in the season. MHHs, with more options for generating cash income, do not face similar challenges. This means that they can engage in maize sales at more opportune times as they are better able to withstand forces of extraction as coined by Spitz (1980).

Furthermore, the maize sales by FHHs are also affected by the fact that they have limited access to formal private buyers compared to MHHs. Households that sell to these formal private traders gain more benefits than those that sell to informal traders because the formal traders are more likely to adhere to minimum prices set by the government. Although minimum price setting was a positive intervention that would have enabled smallholder farmers to get good prices (i.e. prices that at least cover the cost of production) for their produce, the manner in which the intervention has been implemented has eroded this benefit, particularly for female farmers. Lack of enforcement of minimum prices in remote areas by the government has led to practices where informal traders buy crop produce at the farmers' doorsteps at lower prices than the set minimums and sell to formal traders at Trading Centres at the minimum or

higher prices. Therefore, FHHs who face time and other cultural limitations that limit their movements from their villages are forced to sell to these vendors, whereas MHHs can seek out the formal private traders at the Trading Centres. Unfortunately, such negative implications of government interventions are missed due to the invisibilisation of gender issues where limited attention is placed on understanding the gender implications of the interventions through gendered monitoring and evaluation systems.

In conclusion therefore, while supporting previous findings that the programme has increased maize output for FISP recipients, the research has qualified the conclusions alluding to broad improvements in household food security arising from the FISP. It has demonstrated that the food security improvement experienced by FHHs have been compromised by a lower output due to limited access to necessary resources for farming such as land, labour, livestock and extension services, as well as poor demographic factors such as high illiteracy levels and old age. In addition, food security improvements have also been eroded by unfavourable crop marketing arrangements. Even in districts with better socio-economic conditions like Mzimba, the position of FHHs is still disadvantaged compared to that of MHHs. In addition, the position of FHHs is not any better in matrilineal societies (in Mchinji and Mangochi) where women are supposed to have legitimate, and therefore better access to land. This work has therefore generated new knowledge on the gendered impacts of the Malawi FISP by demonstrating that the broad assertions that the FISP has led to improved household food security are mainly reflective of the position of MHHs with respect to measures on output production. Moreover, they are also focused on a limited definition of food security that mainly considers food availability and neglects other aspects such as access, utilisation and preferences.

7.2.4 How has the FISP affected crop sales for female farmers belonging to different household types?

Although most of the policy and academic debates on the impacts of the FISP have focussed on food security, the objectives of the programme clearly extend to the improvement of incomes through the production of cash crops. While empirical evidence on the participation of women in the production of cash crops remains divided, some scholars have argued that with feminisation of agriculture, women are not only increasing their involvement in food crop production, but in cash crop production as well (see Mehra and Rojas, 2008; Saito *et al.*, 1994; Doss, 2001). A substantial amount of literature however maintains that women's involvement in cash crop production remains limited because they typically lack access to commercial inputs (such as fertilisers and hybrid seed) and other factors of production that are required for cash crop production (see Brown, 2008; Gladwin *et al.*, 2002; Enete and Amusa, 2010; Gladwin, 2002). It is further argued that even for such crops as maize that can be both a food and cash crop, female farmers are less involved in the production of hybrid varieties which are mainly produced for sale (Mathiassen *et al.*, 2007). In order therefore to answer the above question on what role the FISP has played in influencing market-oriented crop production and sales, the research has considered and analysed the impacts on the sales of groundnuts and maize.

Based on analysis of farmer interviews on groundnut production and sales, three key findings are worth highlighting. Firstly, the evidence has revealed that FHHs are more constrained in their production of the crop than MHHs. This suggests that the reference to groundnut as a woman's crop is misleading because it gives the impression that the crop can be easily grown by female farmers. Although female farmers may find it easier to grow groundnuts compared to other cash crops (such as tobacco) because of the low input (fertiliser) requirements, many female farmers still face significant challenges in the production of the crop, mainly related to limited labour availability. Consequently and as the analysis has revealed, MHHs produce more groundnuts than both *de jure* and *de facto* FHHs. The fact that groundnut is an easier crop to grow than other cash crops due to its low input requirements, therefore does not specifically relate to women only, but to all smallholder farmers in general. This reveals that assessing the ease of growing groundnuts only in the context of the lower fertiliser requirements does not provide a holistic picture.

In this regard, the analysis revealed that the biggest challenge that most smallholder farmers face in producing groundnuts is the associated high labour requirements. Groundnut production typically requires high labour input especially for weeding, and this often competes with the labour requirements for maize production. Whilst both male and female farmers face this challenge, the challenge is higher for FHHs than it is for MHHs. As discussed in Chapter 5, this challenge is worsened by the absent or missing man in de facto and de jure FHHs respectively, as well as the advanced age of most women in de jure FHHs. Moreover, labour availability for female farmers is further constrained by their need to fulfil reproductive and community roles. Consequently, both de jure and de facto FHHs struggle to mobilise adequate labour in a timely manner for their groundnut production. As the quantitative data indicated, in the 2010 growing season, de jure FHHs had an annual production volume for groundnuts of 123.9 kgs. De facto FHHs only produced slightly more at 125.3 kgs, while MHHs were able to produce as much as 171.5 kgs per household per annum. An appreciation of women's triple roles is necessary to fully understand how the high labour requirements associated with groundnut production affect female farmers.

On this basis therefore, it has been argued that although the provision of groundnut seed may lead to an improvement in groundnut production, it is inadequate to address the gender disparities in the production of the crop. There is need for complementary interventions targeted at improving labour availability, particularly for FHHs. For example, the provision of herbicides or other labour saving technologies, coupled with training and extension services on their use, would have improved the effectiveness of the FISP in improving groundnut production for FHHs.

Lastly, the research has found that although all households that received subsidised inputs, regardless of household type, produced more groundnuts than non-recipients, there were variations in the sale of the crop, particularly in terms of where they sold the groundnuts. In all three districts, both de jure and de facto FHHs mainly sold to informal traders, whereas MHHs sold more to formal private traders. As discussed above in relation to maize sales, most farmers preferred selling their crop produce to formal private traders because they offered better marketing services than informal ones. However, the need to care for children and perform other reproductive functions means that women have largely been confined to farm gate markets, selling to informal traders. In some areas like Mangochi, this confinement was also influenced by a culture that limits women's movements outside the home. Therefore by being limited to farm gate sales and failing to access markets at Trading Centres where minimum

prices are adhered to, FHHs generally lost the benefits derived from increased groundnut production. The FISP has therefore not been successful in improving groundnut or maize sales for FHHs.

7.3 Relevance of this research

7.3.1 Contributions to knowledge

As highlighted in the introduction chapter, in spite of feminisation of agriculture, food security and agricultural policy debates as well as research agendas do not adequately address gender issues. Particularly for the case of Malawi, there is a paucity of gender scholars in these fields which are dominated by agronomists, crop and animal scientists and economists. This research is therefore significant in that it is situated at the intersection between food security, agricultural policy and gender and development literature. Its contributions therefore cut across these three fields, bringing to the fore connections across them that are critical for understanding and consequently addressing the subordination of female farmers. These connections culminate in what has been termed in this research 'the Female Subordination Cycle', as introduced in chapter 3 and explored throughout the thesis.

The cycle has been argued to explain the processes that are embedded in the development and implementation of agricultural and food security policies which facilitate and reinforce the subordination of female farmers within the agricultural sector. Building on concepts used by Moser *et al.* (2004) and Beall and Davilla (1994) in their frameworks for assessing gender mainstreaming, the novelty comes in the conceptualisation of the cyclical inter-linkages between the terms and associated processes. Resistance to gender issues leads to gender policy evaporation and sectorisation, which in turn facilitate invisibilisation, and therefore reinforce resistance. This extended framework of the Female Subordination Cycle is particularly important for generating a more comprehensive analysis and therefore understanding of the sources of gender inequalities and how they can be addressed. By highlighting the inter-connections between the cycle processes, it points to the key areas that need to be understood and appropriately considered in analysing gender inequalities. This means that the choice of research methods and research participants must ensure that all the four concepts will be analysed. In this vein, although this research is mainly

targeted at addressing the invisibilisation of gender issues from food security and agricultural policies, it is still aware of and informed by the linkages to the other three concepts and the implications thereof. The cycle is therefore not only helpful in understanding gender inequalities; it is also useful in generating more comprehensive understanding of each of the processes of the cycle as well.

Although the cycle has been developed in the context of the agricultural sector in Malawi, the framework could be applied in other sectors where gender inequalities exist, such as the education sector or in other countries. Future research could therefore explore the applicability of the framework in other contexts or sectors.

Secondly, the research has contributed to debates on an appropriate food security definition – debates that have persisted since the notion of food security was first introduced in the 1970s. As observed in Chapter 1, the pluralism of themes and sub-themes associated with this notion is evident in the fact that over thirty definitions were used between 1975 and 1991. Although in recent years, these debates have waned as the 1996 World Food Summit definition has increasingly gained wide acceptance globally, the notion remains complex, multi-faceted and dynamic. In this regard, this research has shed light on the value of understanding the perspectives of female farmers, and ensuring that they are appropriately incorporated in academic and policy discourses. Specifically, it has demonstrated the inadequacy of the focus on ‘food availability’ as the main aspect of food security in Malawi. While this patriarchal-driven focus may reflect the goals and objectives of policy makers and male farmers, it neglects those of female farmers and their attention to food preference. The significance of food preference as a critical aspect of food security, particularly for female farmers, has been revealed in their choice of local over hybrid maize varieties. While not disputing previous assertions that the low adoption of hybrid varieties by female farmers is caused by their limited access to factors of production (Chirwa, 2005; Zeller *et al.*, 1998), this research has also revealed the role that food preferences play in determining what crop varieties to grow. It has argued that the choice of local maize varieties over hybrids is influenced by preference for local varieties, which is logically determined based on such factors as ease of storage and processing.

On this basis therefore, this research has also questioned the tendency in development practice to downplay the significance of food preference as another key aspect of food security:

‘Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food **preferences** for an active and healthy life’ (FAO, 1996).

Although food preference is mentioned in the 1996 WFS definition as shown above, it does not receive similar attention in the literature as the four elements of ‘food availability’, ‘access’, ‘utilisation’ and ‘stability’ that have been singled out from the above definition as adequately satisfying the multi-dimensional aspects of the notion (Burchi and de Muro, 2012; Clover, 2003). Food preference therefore needs to be appropriately highlighted as an important element of food security, just like the above mentioned four elements. Moreover, as the investigation has revealed, although food preferences are logically-determined, they are also context specific and therefore should not be generalised but need to be properly understood in the right context. This analysis has therefore highlighted availability, access, utilisation, stability and preference as the five key aspects of food security and for all these aspects, gender considerations need to be included as an integral part.

Thirdly, the research has also systematically challenged the implicit reference to ‘the farmer’ as a man as is prevalent in most policy documents. Even in the academic literature, a farmer is typically portrayed as male and only addressed as ‘she’ when making specific reference to a female one or for cases where there is no man in the household. The high involvement of women in farm activities in Malawi and other developing countries makes this reference inappropriate and misleading. Although the Malawi Poverty Reduction Strategy (MPRSP) argues that the term ‘farmer’ in the strategy refers to both male and female farmers (see GOM, 2002: 22), it is unlikely to be interpreted as such due to the tendency for female farmers and their issues to be invisibilised from policies. Therefore, male farmers or female farmers need to be clearly referred to as such in both the literature and policy documents. Moreover, female farmers need to be specifically targeted by food security and agricultural policies and not because of their vulnerable position but as key players in the sector.

Lastly, the research has also contributed to debates on FHHs, particularly on the homogeneity and heterogeneity of de jure and de facto FHHs, and the implications for

agricultural production. Although these debates and discourses have mainly dominated the feminisation of poverty literature, they also have relevance within the feminisation of agriculture literature. Clearly, the homogeneity and heterogeneity of de jure and de facto FHHs has significant implications for their agricultural production.

While supporting previous studies that have acknowledged the heterogeneity of FHHs mainly in terms of access to cash income from remittances (see for example Horrell and Krishnan, 2007; Takane, 2007), this research has systematically analysed and identified the differences in the socio-economic conditions between de jure and de facto FHHs and how these differences affect their farm decisions and practices. It has argued that although de facto FHHs may have more cash, be more literate or have more livestock than de jure FHHs, they still face challenges in their agricultural production as do de jure FHHs. This is because the challenges that female farmers face are not only related to their practical gender needs, but more importantly, to their strategic needs as well. The analysis has revealed that the subordination of both de jure and de facto FHHs to MHHs goes beyond their socio-economic conditions. Moreover, as presented in the Female Subordination Cycle, it is the processes involved in policy making and implementation that facilitate and reinforce gender inequalities and female subordination. Since female farmers and their needs are resisted and invisibilised by these processes, women from both groups of FHHs are likely to be disadvantaged. In fact, the challenges experienced by de facto FHHs may be even greater than those of de jure FHHs because the former are not normally considered by policy makers to be as vulnerable. However, for both groups, the labour challenges that they face due to the missing or absent men and the requirements to fulfil their triple roles, not only affects their crop production capacity but their crop marketing opportunities as well. Additionally, since the receipt or timing of remittances for de facto FHHs may not always be guaranteed, it is usually difficult for de facto FHHs to make timely and appropriate farming decisions.

The analysis thus concludes that because the agricultural production and practices of de facto FHHs are closely related to those of de jure FHHs, agricultural policy interventions targeted at FHHs need to target both groups. However, the research has further noted that because most of the women from de facto FHHs are younger and more literate than those from de jure FHHs means that they may respond better to government interventions compared to their counter-parts from de jure FHHs.

7.3.2 Originality claims

The originality claims of this research are based on four main points. Firstly, the analytical framework used in analysing gender integration in this research is novel. The framework builds on and combines concepts used by Moser *et al.* (2004) and Beall and Davilla (1994) in their frameworks for assessing gender mainstreaming to develop a 'Female Subordination Cycle'. Although the concepts of gender policy evaporation, resistance, sectorisation and invisibilisation have, since they were introduced, been used by many other scholars, none have considered them in this cyclic and reinforcing manner. This research has therefore enriched literature by elaborating how these concepts are inter-linked and the implications thereof. As highlighted in Section 7.3.1 above, the resultant Female Subordination Cycle presents a new framework for understanding gender inequalities.

Secondly, the research has provided insights into the gendered impacts of the Malawi FISP. Despite the growing research interest in the programme, knowledge on its gender aspects has been limited. Previous studies that have analysed the impacts of the programme (mainly using quantitative/econometric analyses) have largely considered smallholder farmers in general and have not disaggregated them by gender. This disaggregation by gender is however necessary, especially in light of feminisation of agriculture and the government's commitment to addressing gender issues in the agricultural sector.

The gendered analyses of the programme that are available in the literature have only gone as far as highlighting the disproportionate receipt of subsidised inputs by MHHs (see Section 3.5). There is only one study by Chirwa *et al.* (2011) whose analysis has gone beyond the receipt of subsidised inputs, and looked at intra-household decisions on the use of the subsidised inputs. Even then, their analysis only went as far as the use of subsidised inputs and did not explore gendered differences in the utilisation of crop outputs. Therefore, although this study by Chirwa *et al.* unearthed significant findings on the processes of decision making in households on whether to apply fertilisers on male or female-controlled plots, it still did not shed light on the decisions and processes following crop harvest. In this regard therefore, this research has been the first to comprehensively analyse what the impact of the FISP has been on female farmers belonging to different household groups. Moreover, it has also generated original knowledge by looking beyond the impact of the FISP on crop production, and

analysing the differences by household type in the utilisation of the crop output derived from the FISP.

Thirdly, the research has also generated new knowledge regarding the impact of the FISP on other crops, and more specifically on groundnuts. As indicated in Chapter 6, previous studies on the Malawi FISP have largely focused on maize, and particularly on it as a food crop. Although maize is the main crop targeted by the FISP, and the main crop associated with food security in the country, it is likely that the FISP would still directly or indirectly affect the production of other crops. This is not only because the programme has also targeted other crops since 2008 by including legume seed in the FISP package, but also because the impacts of the programme on maize are likely to have knock-on effects on the production of other crops.

In this regard, studies by Holden and Lunduka (2010); Chibwana *et al.* (2010) and Chibwana and Fischer (2011) on whether the FISP has led to a crowding out of other crops in favour of maize provided valuable insights. However, their analyses were based on smallholder farmers in general and did not provide any gendered perspectives. This research has therefore contributed to knowledge to this aspect of the FISP by explaining how groundnut production and sales for female farmers belonging to different household types have been influenced by FISP.

Lastly, and more broadly, the research has contributed to the literature on feminisation of agriculture in Malawi. Malawi's economy is highly dependent on agriculture, and as highlighted above, women play a particularly significant role, contributing over 70 percent of the agricultural labour force (GOM, 2002: 22). In spite of this, a review of the literature on feminisation of agriculture demonstrates the limited attention that Malawi has received. Since Spring's (1995) work on 'Agricultural Development and Gender Issues in Malawi', there have been few detailed studies on the changing role of women in the country's agriculture. A rich literature however exists on feminisation of agriculture in other regions such as Latin America, China, India, and sub-Saharan Africa. Within sub-Saharan Africa, attention has been on the West African countries of Ghana and Nigeria, and East Africa's Uganda and Kenya. This research has therefore enriched the feminisation of agriculture literature and in particular, generated new knowledge regarding the manifestation of this phenomenon in Malawi.

In this vein, the utilisation of mixed methods in this analysis is also noteworthy as previous studies on the impacts of the FISP have mainly used quantitative

(econometric) methods. The triangulation of quantitative methods with qualitative ones in this research has therefore allowed the generation of in-depth and detailed findings to complement and more fully explain the quantitative data. This has also been facilitated by the large number of participants involved in this research. There is currently no known research on the Malawi FISP that has involved such a large number of female farmers. This is therefore unique research that has shed light and brought to the fore a detailed expose of the perceptions of female farmers regarding the programme.

7.4 Policy implications

The findings from this thesis are significant, not only for enriching the extant literature as discussed above, but for shedding light on some policy considerations as well.

Although this research is grounded in the Malawian context which could be different from other countries, the findings may still be relevant for other African countries, particularly those with similar programmes and scenarios. As noted in Chapter 1, other countries within the region, such as Ghana, Nigeria, Tanzania, Kenya, Rwanda, Mali and Senegal are already learning from the Malawi FISP and developing similar input subsidy programmes (see Denning *et al.*, 2009). Moreover, as noted in the review of feminisation of agriculture presented in Chapter 3, the roles, involvement and challenges facing females within the region are similar in many ways. As these countries face the dual challenges of improving agricultural production and reducing gender inequalities in the sector, it is necessary to consider the issues highlighted in this research. The three key recommendations in this respect are therefore as follows:

Firstly, because of the critical role that women are playing in the agricultural sector, agricultural policies and interventions will not succeed in meeting their objectives if they neglect gender issues. Gender issues should therefore be incorporated in agricultural policies on this understanding and not simply in response to donor and international agency requirements. Gender integration must be embraced as vital for food and agricultural production and not resisted, evaporated, sectorised or invisibilised. It is particularly important to overcome resistance as it the process that starts off the Female Subordination Cycle. Without resistance, gender issues would not be evaporated or sectorised, which would in turn reduce their invisibilisation.

Secondly, it is necessary to address the invisibilisation of female farmers and their issues from such government interventions. When policy makers are blind to the practical and strategic gender needs of women, and fail to recognise the need for including them in policy planning, they are likely not only to aggravate the subordinate position of the female farmers, but to also fail in meeting the policy's basic objectives.

Lastly, gendered monitoring and evaluation is an essential aspect that needs to be included in the implementation of interventions. Because women can become invisibilised even from monitoring and evaluation exercises, it is imperative that both qualitative and quantitative data collection tools be used. Typically, monitoring and

evaluation exercises by the government utilise quantitative or econometric tools, and mainly involve male farmers or household heads. Gendered monitoring and evaluations should therefore deliberately include women as well, and also ensure that the tools used are appropriate for generating the required information from them.

The Female Subordination Cycle is an apt framework for generating a deeper understanding of gender inequalities. The framework identifies the areas /processes that need to be included in any such analyses. Furthermore, it also points to the need for the involvement of wider groups as research participants so that all four stages of the cycle can be appropriately understood. Apart from the farmers themselves (both male and female), this would also include local authorities, extension workers and other government officials.

Specifically for the Malawi government, these findings also point to areas that need to be addressed if farmers from FHHs are to derive similar benefits from the FISP as those from MHHs. Apart from ensuring that more FHHs are targeted by the programme (for example by being more specific in the eligibility criteria), it is necessary that complementary interventions that address the highlighted gender-specific challenges are introduced. Interventions must therefore target both women's practical and strategic gender needs. In particular, there is need to introduce labour saving technologies that would allow the female farmers to better fulfil not only their production roles, but their reproduction and community roles too. In addition, there is also need to ensure improved access to more rewarding markets to female farmers by either facilitating crop marketing activities in remote areas or enforcing the minimum prices. For the medium to long term, improving the road network and infrastructure would make rural areas more accessible to formal private traders. Consequently, these traders, which are preferred by rural communities because of their better marketing services and adherence to minimum prices, would be able to operate in remote areas. Although improvements in crop marketing are required by all smallholder farmers in the country, as indicated in the Malawi ASWAp, they are more so for female farmers. For these farmers, any gains in crop production derived from the FISP are likely to be eroded if the government does not place adequate efforts on improving crop marketing in their areas. It needs highlighting that although the FISP may appear successful on the basis of some aggregate and macro-level factors, its impacts will not be sustainable if the needs of women, who are the farmers, are not appropriately incorporated.

7.5 Areas for further research and concluding remarks

This research does not claim to fill all research gaps regarding female farmers and the FISP or the feminisation of agriculture in Malawi. Although it has generated knowledge on the impacts of the FISP on groundnut production and sales, there is still need for more comprehensive understanding of how receipt of subsidised and certified groundnut seed has affected groundnut production. In this analysis, it was not possible to assess whether and to what extent the provision of groundnut seed has had an effect on groundnut production because most of the research participants did not receive the groundnut seed coupons that were supposed to be distributed as part of the programme. As discussed in Chapter 6, this was mainly because of a general shortage of certified groundnut seed in the country. However, because the government has since 2009 embarked on a programme to multiply groundnut seed to be included in the FISP, it is possible that more households received the groundnut seed coupons in the 2011 and 2012 crop-growing seasons. Future research on this may therefore be able to shed light on the significance of certified and subsidised groundnut seed for groundnut production in the country.

Secondly, while this research has generated original knowledge on inter-household impacts of the FISP, there is still need for more detailed research on intra-household impacts arising from the FISP. Chirwa *et al.* (2011) dwelt on intra-household decisions on the usage of subsidised inputs but did not consider the entire FISP chain. More research is therefore required to understand the intra-household dynamics at play in such aspects as receipt of subsidised inputs, utilisation of the FISP inputs, and utilisation of the crop output (both for maize and other food or cash crops). Specifically, this research has mainly considered the food security aspects of food availability, access and preference. It has not explored how the FISP has affected food utilisation at the household level. Because evidence suggests that in some food insecure settings, intra-household food distribution may be skewed against women or girl children (Pinstrup-Anderson, 2009), it is necessary to explore whether food security improvements arising from the FISP are adequate to address that.

Lastly, the findings from this analysis also raise more broad questions about the real value or benefit of targeted farm input subsidy programmes in achieving food security. Considering that FHHs are not benefiting as much as MHHs, and that even the food security improvements for the MHHs are not sufficient to achieve food security for the entire year, it becomes worth asking and exploring whether this is the best intervention

for addressing food insecurity. Moreover, in spite of spending over 60 percent of the annual budget to the Ministry of Agriculture and Food Security and 10 percent of the national budget on the FISP in the 2012/13 crop growing season (Chirwa and Dorward, 2014: 1), the Malawi Government still needs over US\$65 million to respond to the food insecurity situation in the country until the next crop harvest in April 2014 (FEWSNET, 2014). The Malawi Vulnerability Assessment Committee estimates that almost 2 million Malawians in 24 of the 29 districts require humanitarian support. This therefore demonstrates that the food security improvements arising from the FISP have been inadequate, not only for FHHs but for smallholder farmers in general, and this raises questions about whether the programme can indeed provide lessons for achieving and sustaining food security in Africa as claimed by FANRPAN (2008), Holden and Lunduka (2010), Sachs (2008) and Denning and Sachs (2007), see Chapter 1. More research is therefore required to explore alternative and complimentary interventions or design improvements (apart from being more gender-sensitive as argued in this research) that could generate more significant food security improvements. Future research should not only focus on whether farm input subsidy programmes lead to improved food security but whether they are the most effective and efficient way of attaining food security at both the household and national level.

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Appendices

Appendix 1: Summary of key FISP aspects from 2005/6 to 2011/12

Year	Inputs (metric tonnes)	Package	Targeted Beneficiaries	Total Cost in Million
2005/2006	120,000 maize	2 x 50 kg bag	1.2 million	4,480
	20,000 tobacco	2 x 50 kg bag	0.2 million	
2006/2007	150,000 maize	2 x 50 kg bag	1.5 million	10,346
	20,000 tobacco	2 x 50 kg bag	0.2 million	
	4,000 maize seed	1 x 2 kg pack		
2007/2008	150,000 maize	2 x 50 kg bag	1.5 million	13,362
	20,000 tobacco	2 x 50 kg bag	0.2 million	
	4,000 maize seed	1 x 2 kg pack	1.5 million	
	1,000 legume seed	1 x 2 kg pack	0.2 million	
	400 cotton seed			
	400 pesticides			
2008/2009	150,000 maize	2 x 50 kg bag	1.5 million	33,922
2009/2010	20,000 tobacco	2 x 50 kg bag	0.2 million	15,526
	4,000 maize seed	1 x 2 kg pack	1.5 million	
	1,000 legume seed	1 x 2 kg pack	0.2 million	
	400 cotton seed	2 x 50kg bag	0.04 million	
	400 pesticides	1 x 50kg bag	0.2 million	
	Coffee fertiliser	2 x 50kg bag	1.6 million	
	Tea fertiliser	1 x 5 kg pack	1.6 million	
	160,000 maize	2 x 50 kg pack	1.6 million	
	8,000 maize seed	1x 5kg/10 pack	1.6 million	
	3200 legume seed	1x50ml/2x200ml	1.6 million	
2010/2011	160,000 maize	2 x 50kg bag	1.6 million	21,868
	8,000 maize seed	1 x 5 kg pack	1.6 million	
	3200 legume seed	1 x 2 kg pack	1.6 million	
	Maize Storage	1x200g bottle		
2011/2012	140,000 maize	2 x 50kg bag	1.4 million	23,455
	7,000 maize seed	1 x 5 kg pack	1.4 million	
	2800 legume seed	1 x 2 kg pack	1.4 million	

Source: Own compilation based on data from Chirwa *et al.*, 2013 and Dorward and Chirwa, 2011

Appendix 2: Details of Persons Interviewed in Key Informant Interviews

Category	Institution	Department/Position	Date/Place of Interview
Government	Ministry of Agriculture and Food Security	Deputy Director	30/06/11, Lilongwe
	Ministry of Finance	Principal Officer	21/06/11, Lilongwe
	Parliamentary Committee of Agriculture and Natural Resources	2 Committee Members	29/06/11 and 30/06/11, Lilongwe
Farm inputs/ Output Traders	ADMARC	Officer	9/07/11, Mchinji
	Rab Processors Limited	Manager	27/06/11, Lilongwe
	Agricultural Resources Ltd.	Director	24/06/11, Lilongwe
	Transglobe Limited	Senior Executive	15/06/11, Blantyre
	NASFAM Commercial	2 Department Managers	22/06/11, Lilongwe
	Seed Traders Association of Malawi	Senior Executive and Officer	23/06/11, Lilongwe
	Grain Traders and Processors Association of Malawi	Senior Executive	28/06/11, Lilongwe
Support Services	International Crop Research Institute for the Semi-Arid tropics (ICRISAT)	Senior Executive	23/06/11, Lilongwe
	National Food Reserve Agency	2 Senior Executives	28/06/11, Lilongwe

Farmer Organisations	Farmers' Union of Malawi (FUM)	Senior Executive	10/06/11, Lilongwe
	National Smallholder Farmers' Association of Malawi (NASFAM)	Senior Executive and Manager	10/06/11, Lilongwe
	Mzimba Smallholder Farmers' Association	Committee Member	30/08/11, Mzimba
	Mchinji Area Smallholder Farmers' Association	Board members	5/07/11, Mchinji
	Balaka Area Smallholder Farmers' Association	Board Member	2/08/11, Mangochi
Non-governmental Organisation	Civil Society in Agriculture Network (CISANET)	Senior Executive	23/06/11, Lilongwe
Donor Agencies	European Commission	Department Head	21/06/11, Lilongwe
	Irish Aid	Senior Executive	22/06/11, Lilongwe
	World Bank	Senior Executive	24/06/11, Lilongwe
	UK Department for International Development (DfID)	Senior Executive	1/07/11, Lilongwe

Focus Group Discussions

Area	Number	Group
Mchinji	1.1	FHH FISP-recipients
	1.2	FHH non-recipients
	1.3	Women in MHHs (FISP-recipients)
	1.4	Women in MHHs (non-recipients)
	1.5	Men in MHHs (FISP-recipients)
	1.6	Men in MHHs (non-recipients)
Mangochi	2.1	FHH FISP-recipients
	2.2	FHH non-recipients
	2.3	Women in MHHs (FISP-recipients)
	2.4	Women in MHHs (non-recipients)
	2.5	Men in MHHs (FISP-recipients)
	2.6	Men in MHHs (non-recipients)
Mzimba	3.1	FHH FISP-recipients
	3.2	FHH non-recipients
	3.3	Women in MHHs (FISP-recipients)
	3.4	Women in MHHs (non-recipients)
	3.5	Men in MHHs (FISP-recipients)
	3.6	Men in MHHs (non-recipients)

Appendix 3: Farmer Questionnaire

Impact of Government Interventions in Agricultural Markets: The Case of Input Subsidies and Price Setting in Malawi

QUESTIONNAIRE IDENTIFICATION

QUESTIONNAIRE NUMBER	
HOUSEHOLD NAME	
HOUSEHOLD IDENTIFICATION NUMBER	
REGION	
DISTRICT	
EXTENSION PLANNING AREA	
NAME OF ENUMERATOR	

A. SOCIO-ECONOMIC CHARACTERISTICS

1. Name of respondent _____
2. Sex of respondent 1=Male 2=Female
3. Household Type. 1=De facto female-headed household
2=De jure female-headed household
3=Male-headed household
4. What is the marital status of the interviewee?
1=Single (not married before) 2=Married (monogamist) 3=Married (polygamist)
4=Divorced 5=Widowed 6=Separated; 7=Other (specify) _____
5. Age category of the interviewee (If s/he does not know, estimate the age group)
_____ Years
1=15-19 years, 2=20- 39 years 3=40- 59 years =>60 years
6. How many people including yourself, currently live and eat in your house?
7. What is the highest educational level attained by the interviewee?
1= None; 2= Std 1-5(Jr. Primary) 3=Std 5-8 (Snr. Primary)
4=Form 1-2 (Jr. Secondary) 5= Form 3-4 (Snr. Primary) 6=Tertiary
7=Adult literacy
8. Level of literacy: 1=Read only 2=Read & write 3= none

9. What productive assets have you acquired in the last two years?

Code	Asset	Quantity	Price
1.	Plough		
2.	Bailing jack		
3.	Maize shellers		
4.	Ox cart		
5.	Cell phone		
6.	Treadle pump		
7.	Sprayer		
8.	Car		
9.	Solar panel		
10.	Other please specify		

10. Do you have your own house?

01=Yes

02=No

11. If yes, what type of housing do you have?

BUILDING MATERIALS	Changes made since 2009
• Unburnt bricks	
• Burnt bricks	
• Mud	
• Poles	
FLOOR TYPE	
• Cement	
• Mud-made	
ROOF TYPE	
• Iron sheets	
• Tiles	
• Grass Thatch	
WINDOW TYPE	
• Glass	
• Wood/Block Board	
• Holes/ Grass (Bango)	

11. Do you own livestock? 1=Yes 2=No (If no, specify reasons)

12. What and how many livestock species are you keeping? (Please, rank three key livestock)

Code	Type	No.	Mode of Acquisition	When acquired
1	Chicken			
2	Ducks			
3	Guinea Fowl			
4	Pigs			
5	Goats			
6	Cattle			
7	Rabbits			
8	Doves			
9	Sheep			
9	Other (specify)			

Codes for mode of acquisition

1= Inherited 2= Own purchase 3=Gift from a friend/relative 4= Village livestock loan scheme 5= Exchange with maize 6=Others (specify) _____

B. LAND HOLDING, CROP PRODUCTION AND INPUT USE

13. Please indicate your land ownership and use (in acres) in the table below.

Year	Owned	Farmed	Rented in	Land rented out
2009				
2010				

14. If you rented in more land, please indicate why

15. If you rented out some land, please indicate why

16. What crops did you grow in 2009?

Code	Crop	Variety	Area produced	Volume harvested (Kgs)
1	Maize			
2	Groundnuts			
3	Tobacco			
4	Soya beans			
5	Common beans			
6	Cassava			
7	Sweet potatoes			
8	Vegetables			
9	Other - specify			

17. What crops did you grow in 2010?

Code	Crop	Variety	Area produced	Volume harvested (Kgs)
1	Hybrid Maize			
2	Local maize			
3	Groundnuts			
4	Tobacco			
5	Soya beans			
6	Common beans			
7	Cassava			
8	Sweet potatoes			
9	Vegetables			
10	Other - specify			

18. Please indicate what inputs you used for each crop.

2009	Cod	Crop	Fertiliser (kgs)	Seed (kgs)	Organic Manure (kgs)
	1	Hybrid Maize			
	2	Local maize			
	3	Gnuts			
	4	Tobacco			

2010	Cod	Crop	Fertiliser (kgs)	Seed (kgs)	Organic Manure (kgs)
	1	Hybrid maize			
	2	Local maize			
	3	Gnuts			
	4	Tobacco			

19. Please indicate the source of your inputs.

2009	Cod	Crop	Fertiliser source	Seed source	Organic Manure source
	1	Hybrid Maize			
	2	Local maize			
	3	Gnuts			
	4	Tobacco			

2010	Cod	Crop	Fertiliser (kgs)	Seed (kgs)	Organic Manure (kgs)
	1	Maize			
	2	Groundnuts			
	3	Soya beans			
	4	Tobacco			

20. Did you receive any subsidised inputs in 2009? 1= Yes 2=No
21. Did you receive any subsidised inputs in 2010? 1=Yes 2=No
22. If yes, please indicate input type and volume received.

2009	Input	Variety	Volume		2010	Input	Volume
	Maize seed					Maize seed	
	Groundnut seed					Groundnut seed	
	Soya beans seed					Soya beans seed	
	Urea fertiliser					Urea fertiliser	
	23:21:0 fertiliser					23:21:0 fertiliser	
	CAN fertilizer					CAN fertilizer	

23. What problems did you face in the procurement of subsidised fertiliser?
 1=No fertiliser in depots 2=Long distances travelled 3=Queues at the depots
 4=fake coupons 5= Corruption at the depots 6=Others
 (specify) _____

24. What is your perception on effect of the subsidy programme on your crop production? _____

25. What changes have you noted in your food security status since participating in the subsidy programme?

Positive changes (Explain) _____

Still the same (Explain) _____

Negative change (Explain) _____

26. Did you have any other sources of your agricultural inputs in 2010? 1=Yes 2=No

27. If yes, please provide details in the table below.

Input	Volume	Source	Distance from the homestead (km)	Price
Urea fertiliser				
CAN fertiliser				
23:21:0 fertiliser				
Maize seed				
Groundnut seed				
Other(specify)				

28. Which months after harvest did your maize run out in 2010? _____

29. If you bought maize, please indicate source and price.

Source	Volume	Price

30. If you have experienced food shortage in previous years, mention the critical months when you normally have maize deficit? _____

31. During periods of food insecurity, how do you cope with shortage of food in your family? Rank the three key coping mechanisms in order of importance as a, b, c

Code	Coping Mechanism	Rank
1	Cash purchase	
2	Supplement with winter cropping maize	
3	Wait for govt/NGO relief maize	
4	Food for labour (ganyu/nsima)/food for work	
5	Labour for cash	
6	Reduce frequency of meals	
7	Migrate to towns for employment	
8	Sell household assets	
9	Sell livestock	
10	Sell firewood/other natural resources	
11	Change type of meals)	
12	Others (specify)_____	

C. CROP MARKETING ISSUES

32. Where did you sell your produce in 2009?

Crop	Vol sold	Price	Min price	Prevailing price in EPA
Hybrid Maize				
Buyer 1=				
Buyer 2=				
Local maize				
Buyer 1=				
Buyer 2=				
Ground nuts				
Buyer 1=				
Buyer 2=				
Tobacco				
Buyer 1=				
Buyer 2=				
Soya beans				
Buyer 1=				
Buyer 2=				

Codes for buyers: 1=Vendors; 2=Formal private traders; 3=ADMARC; 4=Other (specify)

33. Where did you sell your produce in 2010?

Crop	Vol. sold	Price	Min price	Prevailing price in EPA
Hybrid Maize				
Buyer 1=				
Buyer 2=				
Local maize				
Buyer 1=				
Buyer 2=				
Gnuts				
Buyer 1=				
Buyer 2=				
Tobacco				
Buyer 1=				
Buyer 2=				
Soya beans				
Buyer 1=				
Buyer 2=				

Codes for buyers : 1=Vendors (Indeterminate buyers) 2=Formal private traders
3=ADMARC; 4=other (specify) _____

34. Why did you sell your commodities to the buyers mentioned above? i.e. what factors determined your choice of buyer?

Buyer	Reason for selling to buyer mentioned
	Good prices offered
	Adherence to the Government set minimum price
	Starts buying early
	Short distance to the buyer
	Mode of payment
	Lack of strict product quality control
	Provision of cheap transport for commodities
	Provision of other marketing facilitating services
	Buy commodities in bulk
	Other (specify)

38. Marketing system preference and reasons for your preference?

Cod	Reasons for selling to vendors	Reasons for selling to ADMARC	Reasons for selling to formal private traders
1	Adhere to the minimum price	Adhere to the minimum price	Adhere to the minimum price
2	Pay cash	Pay cash	Pay cash
3	Reward good quality with good price	Reward good quality with good price	Reward good quality with good price
4	Not strict on quality	Not strict on quality	Not strict on quality
5	Offered guaranteed market	Offered guaranteed market	Offered guaranteed market
6	Offer price prior to production	Offer price prior to production	Offer price prior to production
7	Offer extension services	Offer extension	Offer extension services
8	Offer inputs on loan	Offer inputs on loan	Offer inputs on loan
9	Others (specify)	Others (specify)	Others (specify)

39. Did you have any produce that you wanted to sell but failed to sell?
1=Yes 2=No

40. If yes, which crops and why?

Codes	Crops	Volume	Reasons for not selling
1	Hybrid Maize		
2	Local Maize		
3	Groundnuts		
4	Soybean		
5	Chillies		
6	Sweet potatoes		
7	Cassava		
8	Tobacco		
9	Cotton		
10	Other (specify)		

Codes for not selling: 1=No market 2=Very low prices 3=Very poor market arrangement
4=Wanted to buy on credit 5= long distance to the buyer 6=Strict on quality
7=lost (stolen, burnt, destroyed by pests etc) 8= Other (Specify)

41. What marketing problems did you face? (Rank them, a-c)

Buyer	Code	Marketing Problem	Rank
	1	Buy on credit	
	2	Delayed payment	
	3	Poor market arrangements	
	4	Low prices	
	5	Long distance travelled to the market	
	6	Weighing scale tampered with	
	7	Buy from Non-members	
	8	Delayed start of buying	

Codes for buyer: 1=Vendors (Intermediate buyers) 2=Formal private traders
3=ADMARC 4=other

42. Are you aware of the minimum price setting policy by the government?

1=Yes 2=No

43. If yes, how did you know about the minimum price setting?

1=Media (Radio, Newspaper, etc) 2= Ulimi ndi Bizinesi Radio Programme
3= Friend/ Relatives/ Business colleagues, 4=Farmer Organisation/NGO Staff
5=Traderr; 6=GOVT staff; 7=Farmer Organisation/NGO Publication (Titukulane)
8= Others (specify) _____

44. What is your perception about the benefits of the minimum price setting to you?

45. Have you realised these benefits? 1=Yes 2= No 3= No idea

46. Are there any problems with the minimum price setting? 1=Yes 2=No

47. If yes, what are they? (Please indicate)

48. Would you prefer Government to subsidise production inputs or to set high minimum prices for products.

Crop	Preferred intervention	Reason
Maize		
Groundnuts		
Tobacco		
Other		

D. AGRICULTURAL SERVICES

49. Did you receive any training on good agricultural production for groundnuts in 2010?

01=Yes 02=No

50. If yes, please indicate how frequently and areas covered.

Training area	Trainer	Frequency
Seed selection		
Plant population		
Fertiliser application		
Weed control		
Pest and disease control		
Post-harvest management		
Other (specify)		

51. Did you receive any other support from government or NGOs for maize production?

Service received	Source	Number of times

52. Did you receive any other support from government or NGOs for groundnuts production?