

LINKAGES BETWEEN LAND, AGRICULTURAL FINANCE, INPUTS AND MARKETS: A
CONTEXTUAL ANALYSIS OF MALAWI'S AGRICULTURAL SECTOR WITH A FOCUS
ON LILONGWE, MCHINJI AND SALIMA DISTRICTS

STUDY REPORT

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Acronyms

ACE	Agricultural Commodity Exchange
ADD	Agricultural Development Division
ADMARC	Agricultural Development and Marketing Corporation
AEDO	Agricultural Extension Development Officer
AFMIN	African Microfinance Network
AHLCX	Auction Holdings Limited Commodity Exchange
AISP	Agricultural Input Subsidy Programme
AOA	Agreements on Agriculture
CARD	Center for Agricultural Research and Development
CARE	Cooperative for Assistance and Relief Everywhere
CBRLDP	Community Based Rural Land Development Project
CCODE	Centre for Community Organisation and Development
CDP	Cooperative Development Policy
CISANET	Civil Society Agriculture Network
CISP	Comitato Internazionale per lo Sviluppo dei Popoli
COMSIP	Community Savings and Investment Promotion
CUMO	Concern Universal Microfinance Operations
DEMAT	Development of Malawian Enterprises Trust
FAO	Food and Agriculture Organisation
FARA	Forum for Agricultural Research in Africa
FCA	Financial Cooperatives Act
FILP	Farm Inputs Loan Program
FIMA	Financial Inclusion in Malawi
FINCA	Foundation for International Community Assistance
FISP	Farm Input Subsidy Program
FITSE	Malawi Finance Trust for the Self Employed

FSA	Financial Services Act
FSRP	Fertilizer Subsidy Removal Programme
GDP	Gross Domestic Product
GoM	Government of Malawi
IFPRI	International Food Policy Research Institute
IJAS	International Journal of Agricultural Sustainability
ILO	International Labour Organization
IMF	International Monetary Fund
LUANAR	Lilongwe University of Agriculture and Natural Resources
MAMN	Malawi Microfinance Network
MARDEF	Malawi Rural Development Fund
MFA	Microfinance Act
MFI	Microfinance Institutions
MFT	Micro Finance Transparency
MoAFS	Ministry of Agriculture and Food Security
MoIT	Ministry of Industry and Trade
MRFC	Malawi Rural Finance Company Limited
MSE	Malawi Stock Exchange
MTN	Malawi Telekom Network
MUSCCO	Malawi Union of Savings and Credit Co-operatives
NABW	National Association of Business Women
NES	National Export Strategy
NGO	Non-Governmental Organizations
NSO	National Statistical Office
OIBM	Opportunity International Bank of Malawi
OPV	Open Pollinated Variety
PWLHIV	Pregnant Women Living with HIV

PRIDE	Promotion of Rural Initiatives and Development Enterprises
RBM	Reserve Bank of Malawi
ROSCA	Rotating Savings and Credit Associations
RUCF	Ready to Use Complementary Food
RUSF	Ready to Use Supplementary Food
RUTF	Ready to Use Therapeutic Food
SACA	Agricultural Credit Administration
SACCO	Savings and Credit Cooperatives
SAMCAF	Southern Africa Microfinance & Enterprise Capacity Enhancement Facility
SAP	Structural Adjustment Program
SAPs	Structural Adjustment Programs
SEDOM	Small Enterprise Development Organisation of Malawi
SFFRFM	Smallholder Farmers Fertilizer Revolving Fund of Malawi
SOAS	School of Oriental and African Studies
SPS	Sanitary and Phytosanitary
TA	Traditional Authority
TIP	Targeted Input Program
TLF	Touching Lives Fund
UCC	University College Cork
UNCDF	United Nations Capital Development Fund
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VN	Valid Nutrition
VSLA	Village Savings and Loan Associations

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The author takes responsibility for any omissions, misrepresentation of facts or any other errors in the report.

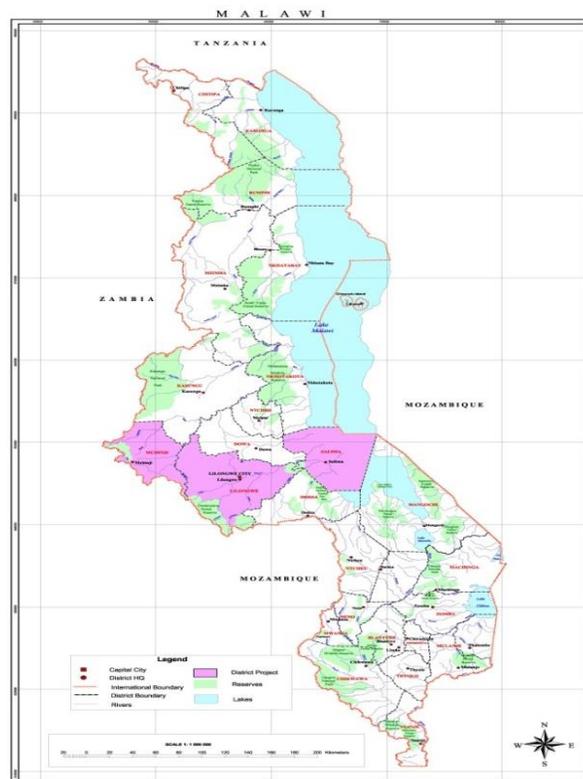
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Introduction and Background

Valid Nutrition (VN) promotes the manufacture in African countries of Ready to Use Foods (RUFs²) to treat and prevent malnutrition. The market for such foods is expanding rapidly and although most of the usage is in Africa most of the production takes place outside Africa. This results in profits accruing outside Africa and potential for agricultural stimulus in Africa being lost.

To counter this trend, VN is working towards ensuring that the majority of this food is grown and processed in Africa thus promoting African agriculture and business, retaining profits in Africa and minimising environmental damage resulting from food miles. As an initial step towards achieving this, VN in collaboration with University College in Cork (UCC) has been conducting a panel survey of farmers in the districts of Lilongwe, Mchinji and Salima within the central region of Malawi, Figure 1. The aim of these panel surveys is to determine the effects on the livelihood and food security of small farmers producing groundnuts for sale to VN's RUTF production unit in Lilongwe district.



Source: Department of Lands and Surveys

² RUTF ready to use therapeutic food; RUSF ready to use supplementary food; and RUCF ready to use complementary food.

In addition to the panel surveys, VN recognises that it is important to understand the major factors in the groundnuts value chain that ultimately determine the usefulness of the chain to small farmers. In this regard, VN/UCC has also been collaborating with the Center for Agricultural Research and Development (CARD) to carry out contextual studies alongside the panel surveys. The aim of the contextual analyses has been to identify key features of the value chains for RUF component crops in Malawi. The contextual analyses has therefore focused on investigating the linkages and interaction among agricultural inputs, land, microfinance and markets as some of the key factors influencing farmers' decision in producing either food or cash crops.

VN intends to use the results from the panel surveys and the contextual analyses to develop agricultural policy papers relevant to the Government of Malawi and to the major multilateral and bilateral donors to persuade them to invest in African agriculture rather than purchasing food processed outside Africa even though it may have been grown in Africa.

This report is organised in five sections with the first four sections looking at each of the key factors namely agricultural inputs, land, microfinance and markets exclusively. The fifth section highlights the linkages amongst these factors in determining farmers' decision making.

SECTION 1: AGRICULTURAL INPUTS

Introduction

Malawian smallholder agriculture is characterised by large numbers of very poor farmers heavily dependent on low input maize production on small nitrogen deficient land holdings. Maize production by these farmers is not normally sufficient to meet annual household consumption needs, and they depend upon casual labouring and other income earning opportunities to finance the purchase of the balance of their needs.

Raising smallholder farmers' productivity is one of the major challenges for most developing countries. One straightforward answer to raising smallholder farmers' productivity as Jerven (2014) observes, has been to subsidize agricultural inputs and thereby increase agricultural yields. Jerven notes that governments of poor as well as rich countries have tended to subsidize agricultural inputs such as seeds and fertilizers. In line with this, Ellis (1992) noted that subsidies play a primary role of promoting the adoption of new technologies thereby increasing agricultural productivity by allowing farmers to access purchased inputs such as seeds and fertilizers at a lower cost, and reduce the disincentives to adoption that result from farmers' cash constraints.

Subsidies were an integral part of the state-led development push in the 1960s and 1970s, but were then scaled down as part of a larger trend of cuts in state spending during the Structural Adjustment Programmes (SAPs) of the 1980s and 1990s. Now, however, subsidies are back on the agenda once again. Baltzer and Hansen (2011) observed that the issue of subsidizing agricultural inputs has been a controversial attracting divergent views with those that believe that agricultural input subsidies offer the hope of inducing farmers to adopt the use of inputs thereby increasing agricultural productivity. On the contrary, criticisms against subsidies include the fact that subsidies distort markets. The other criticism is based on the impact of providing subsidized credit³ on the development of rural financial markets. Mkandawire, (1999) noted that even when it is agreed that market-driven credit rationing is biased against the poor, there is disagreement as to whether the interest charged on such specialized credit should be at "market rates". Some scholars argue that subsidized credit with low recovery rates undermines current efforts to establish market-driven microfinance. In addition to distorting the markets, there are also substantial "leakages" of subsidized credit away from those for whom it is intended towards the estates.

Political pressure to use the subsidised credit for political gains also aggravates the situation. For example, during the run-up to the referendum on one-party rule and election in Malawi, rural credit was used as a campaign tool against the one party regime to the extent that reversals in policy encouraged default amongst the smallholder farmers. Mkandawire (1999) observed that as a consequence of these arguments, subsidies together with other policies seen to cause "market distortions" were targeted for removal under the International Monetary Fund (IMF) and World SAPs. As part of the SAPs, the Malawi government adopted the Fertilizer Subsidy Removal Programme (FSRP) in 1983. This resulted in the aggregate rate of fertilizer subsidization falling from 30.5 per cent in 1983/84 to 19.8 per cent in 1987/88. The FSRP was suspended between 1987 and 1992 to relieve the smallholder farmers from the burden of escalating fertilizer prices due to high transport costs and the devaluation of the Malawian Kwacha. Resumption of the FSRP in 1993 resulted in an 11 per cent subsidy in 1994/95 and a zero per cent subsidy in 1995/96.

³ Credit offered at lower interest rates than the prevailing market rates

Faced with continuous hunger and food insecurity both at national and household level, the Malawi government re-introduced Agricultural Input Subsidy Programme (AISP) in the 2005/06 farming season. The AISP has in later years become to be known as the Farm Input Subsidy Program (FISP). The FISP is a targeted intervention with the overall objective of improving access to improved agricultural inputs by resource-poor smallholder farmers' in order to achieve household and national food self-sufficiency and to raise farmers' incomes through increased food and cash crop production. This has been the core objective of the FISP despite alterations to the design and implementation of the program since the 2005/06 cropping season, Chirwa and Dorward (2013).

The major inputs in the Malawi FISP are maize fertilizers (basal and top dressing) improved maize seeds (hybrids and Open Pollinated Varieties OPVs). In some cases there have been variations in the subsidy package whereby in addition to maize, the program has also included crops such as tobacco, legumes, and cotton alongside chemicals for cotton and maize storage chemicals, Annex 1. The latest the subsidy package for each beneficiary is comprised of one 50kg bag of NPK: 23:21:0 +4S; one 50kg bag of Urea (46%N); 5kg hybrid seed or 7kg composite/OPVseed; and 2kg of legume seed (either groundnut or soya beans).

The reintroduction of subsidies by the Malawi government was in defiance to the IMF and World Bank's SAPs as mentioned previously. Unlike the universal subsidies that were implemented prior to SAP, the current subsidy program targets the poorer and marginalized smallholder farmers.

Prior to the 2005/06 FISP, there had been a series of subsidy interventions but on a smaller scale in terms of the quantities of fertilizer and seeds that were issued to the smallholder farmers. For example, during the 1998/99 and 1999/2000 agricultural seasons, the Malawi government introduced a free input distribution program known as the Starter Pack. The program targeted all smallholder farmers in the country (estimated at 2.86 farm families). The Starter Pack contained 0.1 ha-worth of fertilizer, OPV maize seed and legume seed. Following the starter pack program was the Targeted Input Program (TIP), which was implemented from 2001 to 2004. Both the starter pack and TIP aimed at increased national food production, especially for maize; incremental use of chemical fertilizer by smallholder farmers for improved yield; reduced household food insecurity, particularly for the poorest farm families; and provision of legume seeds to improve soil fertility and diet, Levy and Barahona (2001). The TIP was scaled down in the 2004/5 season which coincided with bad weather that resulted in poor maize harvest, which translated into high prices and acute food shortages, Chibwana *et al.*, (2010). In response, the Malawi government reintroduced the targeted FISP during the 2005/6 agricultural season.

Quantities of the subsidy inputs (seeds, fertilizer and chemicals) and number of beneficiaries have been varying over the years as presented in Annexes 2.1 and 2.2. The variations could be attributed to budgetary constraints and ad hoc political interventions, for example the addition of supplementary quantities that are allocated to some areas after the official budget figures have been approved.

Targeting

Beneficiaries of the FISP are smallholder farmers who are considered poorer and vulnerable. Vulnerable members of the community include guardians looking after physically challenged persons, child-headed, female-headed and orphan-headed households and households infected or affected with HIV and AIDS. In a study on factors influencing access to agricultural input subsidies under the FISP, Chirwa *et.al* (2010) noted that vulnerable households such as the poor and elderly-headed were less likely than other households to receive fertilizer coupons and hence receive less of the subsidized fertilizers. Whilst, households with larger parcels of land and those who sold part of their produce (commercialized) were more likely to receive coupons and acquired more fertilizers, which clearly contradict the official targeting criteria. However, the study also revealed that use of open meetings in the allocation of coupons, which was introduced in 2008/09, tended to favour the poor and they received more fertilizer. A positive relation between participation in other social safety nets and access to subsidized fertilizer coupons was also observed suggesting that households which participated in other social safety net programmes were not excluded from the input subsidy programme by virtue of benefiting from the other social assistance programmes. However, evaluation of the 2008/09 subsidy program revealed that female-headed recipient households got less subsidized fertilizers compared to male-headed recipient households, yet female-headed households have severe affordability problems acquiring only 21 kilograms of commercial fertilizers compared on average, to 64 kilograms acquired by male-headed households, Chirwa *et.al* (2010).

Targeting and beneficiary identification criteria are very crucial to the success of the program because they affect the effectiveness and efficiency with which the program achieves its objectives. Dorward and Chirwa (2013) noted that targeting is important because of the way it impacts on displacement⁴, productivity of input use, the direct benefits to beneficiaries, and wider economic, social and environmental benefits. Targeting of beneficiaries also helps to determine whether the intended beneficiaries are actually included in the program and whether they get the right types and quantities of the subsidised inputs. It is noted that rarely are targeted subsidy programs free of controversies and rivalry amongst community members due to the fact that not all legible members of society benefit due to limited resources on the part of the implementing agencies. A number of difficulties highlighted by Chirwa and Dorward (2013) are associated with applying the beneficiary targeting criteria, such difficulties include: ambiguities, tensions and contradictions among different targeting criteria; difficulties in clearly establishing measures for applying these criteria due to large numbers of deserving households relative to the number of coupons available; and that village leaders and agricultural extension staff involved in beneficiary targeting may not consistently apply the set criteria, Dorward and Chirwa, *ibid*.

Amongst the implementation strategies of the FISP was the development of criteria for beneficiary identification to ensure that only deserving smallholder farmers benefit from the program. Through evaluations of a series of the Malawi subsidy programmes implemented so far, Dorward and Chirwa (2013) established that targeting occurs at two levels - area level and beneficiary level. The area level targets the subsidies to different zones or districts while the beneficiary level targets beneficiaries within already targeted areas. Dorward and Chirwa (2013) further observed that over the years, implementation modalities of the FISP have varied with respect to criteria of targeting

⁴ The extent to which purchases of subsidised inputs replace purchases of unsubsidised inputs that farmers would have bought anyway without the subsidy.

beneficiaries, coupon allocation, distribution and redemption, as shown in Table 1.1 Despite a set of targeting criteria, variations occur between communities in the use of the targeting guidelines due to the fact that the number of needy households tends to be much larger than the available number of fertilizer coupons.

A study by the Kalondolondo Program (2013) revealed that community members from the different study sites were satisfied with the selection process of the FISP beneficiaries. This is evident from the increase in community members who regarded the selection process as totally fair from 16 percent in 2012 to 40 percent in 2013. Similar results were reported by Makoka (2013).

Gender Perspective of the FISP

Various studies have shown that women in African agriculture are marginalized in many respects including access to extension services; access to productive resources such as land, and microfinance; access to markets; and decision making at household level.

Improving women's access to agricultural services and productive resources has, in some cases resulted in positive impacts on women's welfare and livelihoods. For example, Dorward *et.al* (2008) highlights a number of positive impacts from the gender perspective. One of these impacts was how women are able to afford education costs in the years when they have benefitted from the subsidy program. In cases where agricultural extension officers encouraged formation of fertilizer savings groups that included women, cooperation between group members was noted to have positively affected social cohesion in villages and fostered innovation and the uptake of technology by women. It is also noted that the subsidy program has resulted in change in attitudes of people towards their land and own capacity to support themselves whereby household members have increased confidence and enthusiasm regarding their earning potential in agriculture and their capacity to feed their families. Reduced disputes over resources within households; some women wanting to engage in market-oriented agricultural activity rather than focusing solely on the domestic provision of food as evident from high demand for fertilizer among women, despite the significant demands on women's time (and safety) that procuring fertilizer under FISP requires. Women have also used the profits or benefits from the subsidy to make further investments in productive assets such as livestock.

Table 1.1: Changes in Targeting Process of the Malawi FISP 2005/06-2009/10

	2005/6	2006/7	2007/8	2008/9	2009/10
Area targeting criteria	District allocation nominally by EPA maize & tobacco areas, but highly variable between districts. Ad hoc district allocation of supplementary coupons.	District & EPA allocation by maize & tobacco areas, but highly variable between districts. Ad hoc district allocation of supplementary coupons.	District & EPA initial allocation by farm hh & maize & tobacco areas, highly variable between districts. Ad hoc allocation of supplementary coupons. Overall criteria opaque but (with exceptions) more in line with farm hh / district.	District & EPA initial allocation by farm hh & maize & tobacco areas, but highly variable between districts. Ad hoc district allocation of supplementary coupons. Overall criteria opaque but (with exceptions) more in line with farm hh / district.	District & EPA allocation criteria not clear, variable between districts. Overall criteria opaque but more in line with farm hh / district.
Beneficiary targeting Criteria	Beneficiary selection criteria unclear.	Full time smallholder farmers unable to afford purchase of 1 or 2 unsubsidized fertilizer bag.	n.a	Resource poor local resident with land; guardians looking after physically challenged. Vulnerable hhs (child or female headed, Pregnant Women Living with HIV {PWLHIV}).	Resource poor local resident with land; guardians looking after physically challenged. Vulnerable hh (elderly, child or female headed, PWLHIV).
District/ TA/ Village coupon allocations	District allocation by MoAFS HQ, Village allocation by TAs.	District allocation by MoAFS HQ. Village allocation by DDC, ADCs, & TAs.	District allocation by MoAFS HQ. Village allocation by DDC, ADCs, & TAs.	District allocation by MoAFS HQ. EPA/village allocation by MoAFS staff, DDC, ADCs, & TAs.	District allocation by MoAFS HQ. EPA / village allocation by MoAFS district staff, DDC, ADCs, TAs.
Beneficiary identification / coupon allocation	Largely by TAs & VDCs	Systems highly variable between areas - by 'local leaders' TAs, VDCs, MoAFS staff. Reallocation by VH common.	Systems highly variable between areas - by 'local leaders' TAs, VDCs, MoAFS staff. Reallocation by VH common.	Use of farm hhold register, open meetings for allocation led by MoAFS (participation unclear). Reallocation by VH common.	Farm household register, allocation in MoAFS led open meetings (unclear participation). Voter reg. nos & ID required. Reallocation by VH common.
Coupon distribution System	See above: allocation and distribution simultaneous.	See above: allocation and distribution simultaneous.	Distribution varied, more by MoAFS and VDCs. Open disbursement led by MoAFS. Redistribution by VH common.	Open meetings for disbursement led by MoAFS (degree of participation unclear). Redistribution by VH common.	Open meetings led by MoAFS (unclear participation). Voter reg. numbers & ID required for receipt & redemption. Redistribution by VH common.
Coupon redemption Systems	Only through SFFRFM & ADMARC.	Fertilizers also through major retailers; flexible maize seed coupons through wide range of seed retailers.	Fertilizers also through major retailers; flexible seed coupons through range of seed retailers; cotton inputs through ADDs.	Fertilizers also through major retailers; flexible seed coupons through range of seed retailers; cotton inputs through ADDs.	Fertilizers only through ADMARC & SFFRFM; separate maize & legume seed coupons through retailers, variable 'top up' for maize seed max MK100

Source: Dorward and Chirwa (2013)

Constraints

Implementation of the subsidy program has had numerous constraints over the years. Some of the constraints identified in evaluation studies of the program have included; markets opening late in the season for farmers to access the inputs on time; some markets running out of stocks before beneficiaries redeem their coupons; long queues resulting in beneficiaries spending much of their time at the market (Dorward *et.al*, 2013, Dorward and Chirwa, 2011, Chirwa and Slater, 2010). Some of these problems lead to delays in planting and/or fertilizer applications which have a negative effect on yield.

Exclusion errors⁵ are also reported whereby some community members feel that deserving beneficiaries (poorest and/or most deserving households) are left out of the program (Chirwa, *et.al* 2010, Chirwa and Dorward, 2013, Dorward and Chirwa, 2013). Errors of inclusion⁶ were also reported in some of the studied communities in Makoka, (2013). Finally but not least, incidents of leakage of coupons from intended beneficiaries to unintended beneficiaries are reported in a number of studies (Makoka, 2013, Holden and Lunduka, 2010) whereby traditional leaders (village heads) and officials from Ministry of Agriculture and Food Security (MoAFS) are among some of the individuals that sell coupons. Makoka (2013) indicates that MoAFS officials would deliberately over-estimate the number of potential beneficiaries so that they sale the excess coupons. Likewise, the 2013 Kalondolondo report identified a number of ‘ghost’ villages whose coupons would then be sold by MoAFS officials.

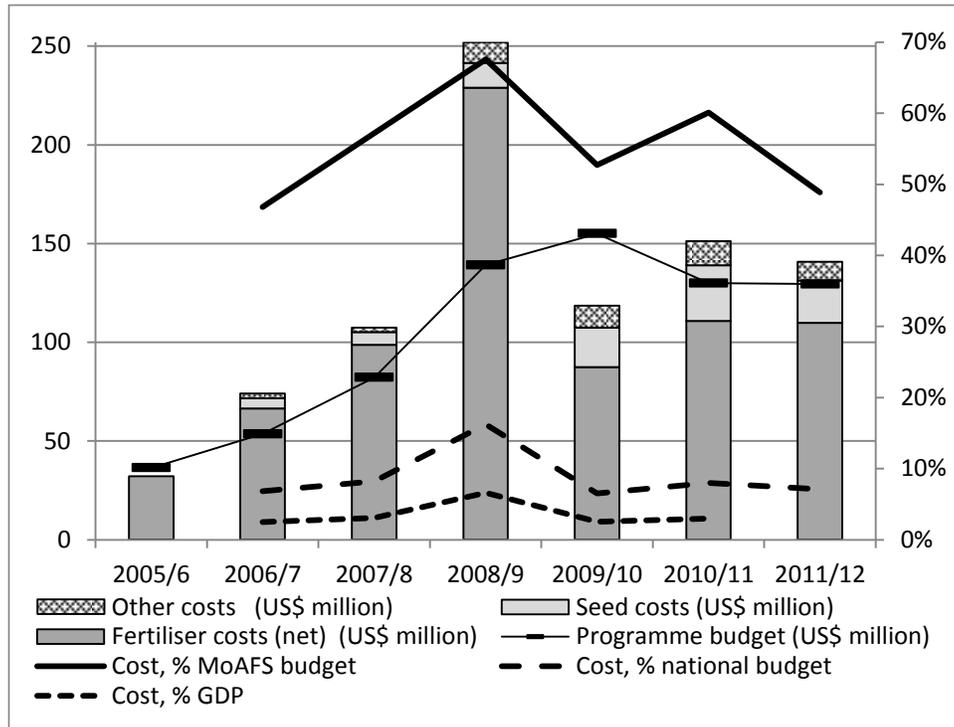
Budget and cost of the FISP

The budget and cost of the FISP has been increasing over the years since inception of the program. Actual expenditure on the program has been exceeding what is budgeted for in the national budget for each of the years the program has been implemented. Since 2006/07 agricultural season, the cost of the FISP has exceeded 50% of the total budget allocation to the Ministry of Agriculture and Food Security, see Figure 1, Doward and Chirwa (2013).

⁵ Situation where a member who did not qualify for FISP, was admitted to the programme.

⁶ Situation where a member who did not qualify for FISP, was admitted to the programme.

Figure 1: FISP Budgeted and Actual Programme Costs (US\$ Million)

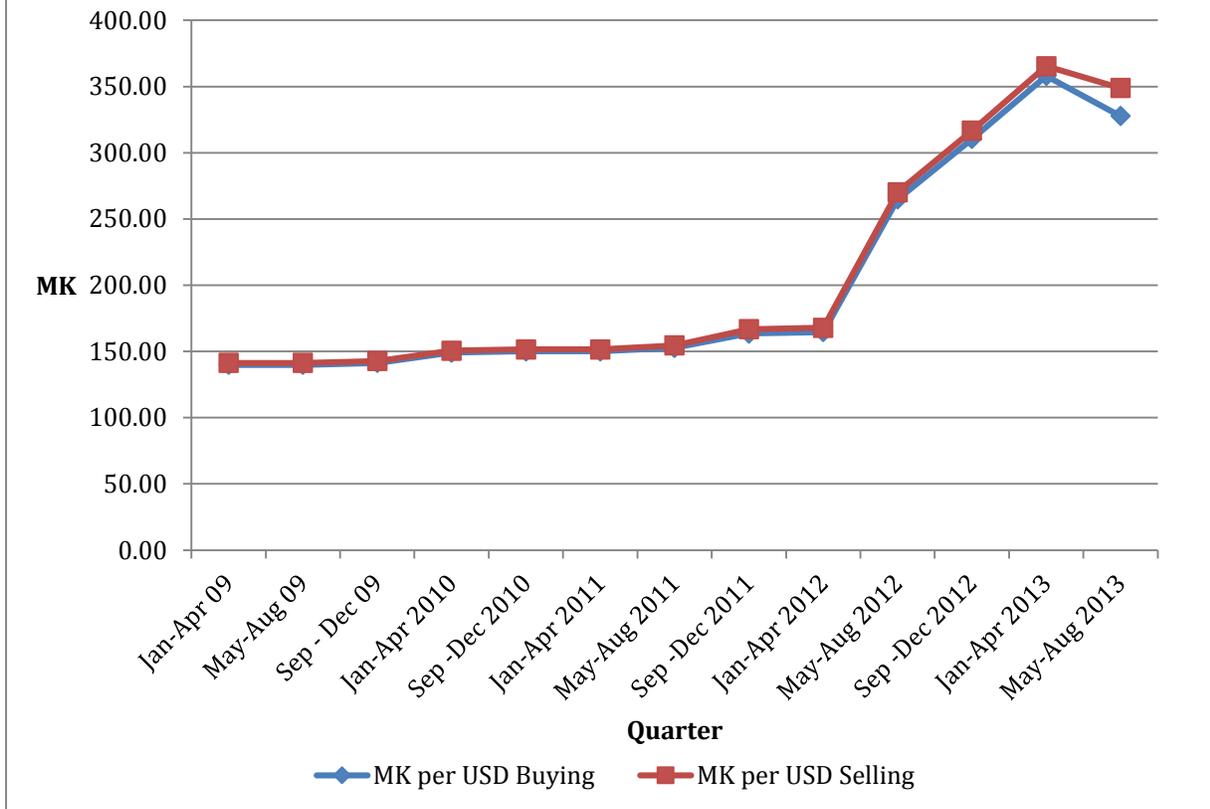


Source: Chirwa and Dorward, 2013

Effect of currency devaluation

Simwaka and Mkandawire (2012 and 2011) observe that since the policy on currency floatation was implemented by the Malawi government in 1994, the Malawi Kwacha has not been stable often depreciating against the United States dollar and other major currencies, Figure 2. The declining trend in the value of the Malawi currency also translated into high inflation and interest rates which in turn erodes the purchasing power and escalates the cost of borrowing. The depreciation of the local currency has also had negative implications on the country's import cover and hence its ability to import commodities such as fertilizer. With regard to agricultural fertilizers, it is important to note that Malawi does not produce chemical fertilizer necessitating the importation of all the fertilizer requirements from the international market. Malawi's dependence on international markets for her fertilizer requirements renders the country susceptible to currency and commodity price fluctuations. Fertilizers prices have been increasing over the years rendering the country to be at the mercy of a few multinational corporations that dominate the global fertilizer industry. Policy reversals on the country's currency over the years (Table 1.2) have caused confusion among economic agents.

Figure 2: Quarterly Exchange Rate



Source: Reserve Bank of Malawi (Available at: www.rbm.mw)

Table 1.2: Policy Decisions on Malawi's Currency

Year	Policy action on the currency
Feb 94-Nov 94	Floating
Dec 94-June 97	Fixed
July 97-July 2003	Flexible
Aug03-Feb05	Fixed
Mar05-Jun05	Flexible
July05-Dec05	Fixed
Jan06-Nov07	Flexible
Dec07-April12	Fixed with occasional devaluation
May 2012	Devaluation and floating

Source: Ngwira (2012)

Apart from the negative effects at country level, depreciation of the local currency also erodes smallholder farmers' purchasing power because the farmers do not get better revenues from their produce sales to enable them purchase inputs in absence of the subsidy. On the part of the government, its ability to continue with the subsidy programme at the same level is also jeopardized by the currency depreciation.

While it may be necessary for the government to provide direct support to small farmers, more dollars spent on fertilizer imports implies less money for other public expenditure. Continuing high fertilizer prices on the international market is likely to exert more pressure on the national budget of which 40 per cent is donor funded.

Policy Options/Alternatives

A number of policy options are provided in studies on Malawi's FISP, (Doward and Chirwa, 2013, 2011, 2008, Holden and Lunduka, 2010, Chibwana *et. al.*, 2010). Among the various alternatives to achieving an effective farm input subsidy are the following suggestions: The government should consider introducing the component of graduation⁷ to free up some resources that can be invested in other productive sectors, even within the agricultural sector. The governments should also withdraw from direct involvement in the importation and distribution of fertilizers. Instead, the government should put in place a regulatory framework on the implementation of the subsidy program and its monitoring process while the private sector assumes an active role in the importation and distribution of the farm inputs.

Furthermore, the government should facilitate easy access to financial services and other loan facilities for the smallholder farmers. The subsidy program should include complementary services to make subsidized fertilizer accessible and its use more effective. The complementary services include extension services, improved seed, credit access, and support for irrigation and pesticides. The subsidy program should also be designed in a way that allows for the involvement of farmers, importers and agro-dealers in the design and implementation of the subsidy program.

Efforts must also be made to strengthen the capacity of the existing private fertilizer market. This can be achieved through provision of support through some of the following measures: i) acting

⁷ Movement of people from state of dependence to self-reliance

as credit guarantee or issuance of letters of credit for importation of fertilizers; ii) building up the private import and distribution network by supporting and investing in training, exposure and credit facilities; iii) training local importers and linking them with international networks of traders and financial institutions.

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SECTION 2: AGRICULTURAL LAND

Introduction

Malawi's surface area is estimated at 118,000 km² and with a population of about 15 million people, the country is considered as one of the most densely populated countries in Sub-Saharan Africa. The land resource is spatially distributed and in differing quantities across different locations throughout Malawi. Such distribution of land is not static as people have the ability to alter the mix and hence change its availability value and productivity. Through their various actions, people can conserve or deplete the existing resources. In addition to this, people can also invest time and effort to improve the stock of certain land resources thereby improving accessibility and usage. Policies on land in terms of legal framework, access to land, title to land, land use and land market therefore have a greater impact on people's attitude and action towards land.

Because of the relevance of policies on land, the Malawi government, through the Ministry of Lands and Housing formulated the Malawi National Land Policy in 2002. One of the major reasons behind the Malawi land policy was to bring parity between land tenure categories and to check the willy-nilly conversion of land under customary tenure into other tenure categories. The land policy therefore embodies the country's vision from the political context as well as economic and social significance. The land policy empowers the Malawian citizen and communities to take active interest in their affairs towards land. The policy serves as a powerful symbol and focus for local development effort, provides a mechanism for reconciling widely differing attitudes towards Malawi's developmental challenges and it sets forth as a national guideline for action, the incorporation of desirable principles of land use and management, effective civic education and broad public appreciation of the constraints and trade-offs that need to be made, (Government of The Republic of Malawi, 2002). The policy provides a sound institutional framework for democratizing the management of land and introduces much needed procedures for protecting land tenure rights, land based investments and management of development at all levels. Furthermore, the land policy aims at ensuring equal opportunities for the acquisition, use and enjoyment of land for all citizens.

In respect of vulnerable groups, the government recognizes that more often than not, the rights of women, children and the disabled are denied on the basis of customs and traditions that are no longer relevant, or they are totally disregarded due to prejudice and lack of effective representation. In view of this, coupled with the effects of increasing land pressure due to population growth as well as the devastating effects of HIV and AIDS pandemic, the government attests to the need for a clear policy on gender access and the rights of children and the disabled.

Land Tenure System

One of the major provisions in the Malawi land policy is the land tenure system which distinguishes the different land categories including that between Government and Public Land. The land policy also makes a clarification with respect to customary land and land under leasehold. The policy further clarifies on land access and tenure reforms; land access for non-citizens; land

use planning and registration; land administration and dispute settlement; as well as crosscutting and inter-sectoral issues.

Categories of Land Tenure

The Malawi land policy affirms that “*the radical title to all land in Malawi, irrespective of land tenure regime, will continue to be vested in the state, traditional authorities and in some cases individuals and families*”. This is based on the premise that the welfare and development objectives of the nation can best be achieved within a system of private ownership of interest and participatory governance. The policy also ascertains that every person has a natural dependence on land and it is therefore the responsibility of the government to assure the private rights of citizens by making provisions for secure and equitable access to land as a multi-purpose resource and an economic asset. In terms of property ownership, land inclusive, the Constitution of the Republic of Malawi stipulates that every person shall be able to acquire property alone or in association with others and that no person shall be arbitrarily deprived of property⁸. In this regard, the land policy makes a distinction among the following land categories; government land; public land; customary land; leasehold land; and freehold land.

Government Land: the policy defines this category of land as land exclusively acquired and privately owned by the government to be used for dedicated purposes such as government buildings, schools, hospitals, public infrastructure or made available for private use by individuals and organizations.

Public land: defined as land held in trust and managed by the Government or Traditional Authorities (TA) and openly used or accessible to the public at large. This category of land includes land gazetted for use as national parks, recreation areas, forest reserves, conservation areas, historic and cultural sites, etc. The public land designation also applies to all land vested in the Government as a result of uncertain ownership, abandonment and land that is unusable for one reason or another. Within the traditional set up, i.e. under the Traditional Authority, the community’s public land includes all land within the boundaries of the TA not allocated exclusively to any group, individual or family⁹. Such common access or unallocated customary land reserved for the community are regarded as public only to members of a particular community.

Prior to the 2002 National Land Policy, lack of distinction between Government Land and Public Land caused a lot of mistrust and confusion among citizens and land administrators. The public land designation was used to effectively expropriate customary land without compensation which was the root cause of most land problems in Malawi. The distinction between Government and Public Land in the current land policy makes the Government’s acquisition plans more transparent. The distinction is also necessary for separating land held in trust by the Government from land acquired by the Government for which ownership is actually transferred to the Government.

Customary land: With regard to customary land, the policy refers to land managed by TAs, common access land reserved as dambos¹⁰, community woodlots, etc. Such land is classified as

⁸ Section 28 of the Constitution of the Republic of Malawi

⁹ This applies to areas such as dambos, dry season communal grazing areas, etc.

¹⁰ Refers to permanent wetlands

public land exclusive to members of the TA. The government recognizes that failure to reform and secure the tenure rights of smallholders has been the primary cause of under investment, reliance on primitive technology and a fundamental reason for low wages in most rural areas. In view of this, and with respect to customary land, the policy stipulates that government will allow all customary land to be registered and protected by law against arbitrary conversion to public land. The traditional supervisory role of chiefs, clan leaders, headpersons and family heads in land matters will be formalized and streamlined to allow uniform administrative procedures and transparency in all customary land transactions. Furthermore, the policy states that all customary landholders¹¹ will be encouraged to register their holdings as private customary estates with land tenure rights that preserve the advantages of customary ownership but also ensures security of tenure.

Private land: defined as all land that is exclusively owned, held or occupied under (a) freehold tenure, and (b) customary land allocated exclusively to a clearly defined community, corporation, institution, clan, family or individual. For Private Leasehold Tenure, the policy states that estates shall be created as subsidiary interests out of any private land, including registered customary estates without relinquishing the ownership of the customary landholder. This provision allows traditional leaders, family heads and individual holders of registered customary land to grant leases.

Leasehold estate: created out of government land or any private land including customary estates. The leasehold which is recognized as a legitimate source of land title is a private contractual right subject to the enforcement of development conditions imposed by the owner. The lease grants exclusive use rights and hence a leasehold estate is also regarded as private land held by the leaseholder.

Freehold: this tenure category has some unique features that provide security of tenure and exclusive user rights. These features include; (a) how a freeholder has exclusive possession of the land in perpetuity, there are no term limits placed on the title of the owner; (b) subject to land use planning, the owner has the right to subdivide or lease the land, etc., without seeking the government's approval; (c) no development conditions are imposed on the owner if the land in question lies outside the boundary of a planning area; and (d) the government has no legal right to interfere with the occupational right to land.

Based on these unique features, freehold tenure is often misconstrued to be above the law. However, that is not the case because based on Section 207 of the Constitution of the Republic of Malawi, all land in Malawi including the freehold is vested in the Republic of Malawi.

Land tenure can change from one form to another, however, most Malawians access land through inheritance (52%) and marriage (18%), USAID, (undated). Rights to land through marriage and

¹¹ Defined to include entire communities, families or individuals

inheritance are governed by either matrilineal¹² or patrilineal customary system. Under customary land tenure, land is allocated from traditional leaders to his/her subordinates. Customary land can be converted to leasehold tenure upon consent from the local leaders whereby the new owner is offered title deed by the government. Thus in such cases, jurisdiction over land changes from local leaders to government. Government resettlement programs, and land purchase are additional routes through which individuals access land. USAID, (undated) also noted that an estimated 20% of landholders obtain land from traditional authorities; roughly 1% of landholders obtain land through purchase. Leases, government land programs, and other means account for the remaining percentage (9%). In urban areas, Local Assemblies and agencies such as the Malawi Housing Corporation allocate plots in the areas within their jurisdiction (Kambewa 2005; Matchaya 2009; Chirwa 2008; GOM 2002), as cited by USAID (*ibid*).

Land Availability at national Level and Study Districts

Land is one of the basic and key resources in agricultural production. The land resource is quite valuable to people depending on the classification of the resource. For example the land can be classified into arable land which is of much interest for agricultural purposes. The land can further be classified into other valuable categories such as forest, pasture, wildlife habitat and marine ecosystems. Attempts were made to collect data on agricultural land from the agricultural district offices in the three study districts as presented in Table 2.1.

Various sources of information on land including district socio-economic profiles (SEP) for the three districts¹³, and personal interviews with officials from the district agriculture offices and Department of Land resources. According to the Mchinji district socio-economic profile, smallholder agriculture production accounted for 167,731 ha of land with land holding size of about 2.0 ha and over 141,347 farm families within the smallholder subsector. Mchinji district has over 2,000 estates all of which account for 91,329 ha of land.

Lilongwe district has about 429,435 hectares of arable land for smallholder agriculture with an average landholding size of 1.30ha per farmer and 11,525 ha are under estate farming. As of 2010, the district had a total of 339,841 farm families.

Salima district has a total land area of 2,196 Km. Sq (219,600 Ha.) with a total of 99,729 farm families. cultivating a total of 107,377 hectares, which is mostly arable land. The district has 78% of its land under the customary tenure system mainly used for subsistence farming, 18% under private land tenure and 4% under public land tenure system.

¹² Under matrilineal system, powers and rights over land are vested along maternal lineage and vice versa for patrilineal system.

¹³ At the time of the study, Salima and Lilongwe districts had the most recent versions of the district socio-economic profiles spanning from 2011 to 2016 while that of Mchinji was outdated (2008-2012)

The challenge in collecting statistics on land from the three districts and other sources was lack of such data from the different sources including government departments.

Table 2.1: Statistics on Land

	Lilongwe	Mchinji	Salima
Land use classification			
Total ha	525,300	335,600	
Customary land	127,650	156,459	175,987.50
Public land	70,250	20,135	40,612.50
Lease land	327,400	55,102.20	9,025
Total arable land	429,435	222,445	
High agriculture potential		11,600	
Medium agriculture potential		157,100	
Low agriculture potential		39,800	
Unsuitable for agricultural production		127,700	
Land currently cultivated		208,500	
Grass land	100,100		
Plantation forests	17,500		
National Forests and woodlands	248,000		333,221
open water	300		
Built up area	9,700		

It was noted in course of compiling this data that there are variations in the databases at district level in terms of categories of land captured, and other details such as average land holding sizes for the different types of households. Some districts like the case of Lilongwe have somewhat detailed data compared to the other districts. This is one of the areas that government can emphasize on to have detailed and recent district level data for different variables to help in planning, budgeting and forecasting.

The Malawi government with assistance from the Food and Agriculture Organisation (FAO) in collaboration with other partners undertook the assessment of land resource using FAO methodology and tools, FAO (2013). The main objective of the land cover change mapping component was the preparation of an accurate, up-to-date and reliable land cover change database of Malawi in order to improve effective and focused decision making on landscape dynamics and climate change related issues. Results of the land cover at national level including the study districts are presented in Annex 3. This land cover and land classification forms the basis on which the government can institute a nationwide land redistribution program to alleviate land constraints among smallholder farmers and also to enhance productivity. The following section discusses potential for land redistribution and associated barriers.

Opportunities and Barriers to Land Redistribution to Smallholder Farmers

Opportunities

Malawi being an agricultural based economy with more than 80 per cent of its rural population engaged in agriculture, access to land has direct impact on livelihoods and quality of life for the rural people. Problems of access to land are particularly pronounced in Southern region where population densities in some districts are highest in Africa (Machira, 2009). 1994 estimates on land indicate that 2.6 million hectares of suitable land were uncultivated in rural Malawi. This represented 28 per cent of total national land area lying idle with the northern and central regions having much of the idle land compared to the southern region due to skewed population distribution across the country and because of colonial and post-colonial policies on land allocation. During both colonial and post-colonial periods, the state favored concentration of most fertile and well watered land within the hands of relatively few people through leases of large estates to European settlers and after independence to the then Malawi Young pioneers. According to World Bank (2004) an estimated 1.1 million ha of land was held by about 30,000 estates with land holding sizes ranging from 10 to 500 ha. A large number of such estates are currently underutilized while majority of smallholder farmers have landholdings of less than 0.4 ha.

With rapidly growing population estimated at 2.8 per cent growth rate, (NSO, 2012, smallholder land holdings are gradually declining and the frontiers of land available for allocation from the traditional chiefs have declined and most land is inherited from parents, Chirwa (2004). The 2008 Malawi Population Census estimated the country's population at 13,077,160 with an average annual/inter-censal growth rate of 2.8. The National Statistical Office (NSO) indicates that Malawi's population is growing rapidly increasing from 4 million people in 1966 to 13.1 million in 2008 in just over 40 years and it is expected that the population will continue to increase

steadily growing to 26 million in 2030, NSO (2012). Chirwa (2004) further noted that there is evidence in Malawi that adoption of agricultural productivity-enhancing technologies is positively associated with the size of cultivatable land and that farmers with small land holdings are technically inefficient yet no efforts are made to redistribute the land to the landless on a wider scale. Liberalisation of tobacco production rendered most estates unprofitable which resulted in most landowners willing to sell their land while others left their estates underutilized. This created a favourable situation for land redistribution based on voluntary or negotiated land transfers.

The MPRSP (2002) identified two ways in which the problem of small land holdings among smallholder farmers can be addressed and these are: 1) ensuring security of tenure which would help in developing the land market in Malawi; and 2) distributing land to the landless. Security of tenure helps in developing the land market, which has implications on poverty reduction such as facilitating access to financial or physical capital and rent or sales. The 2002 Malawi land policy categorised and clarified the different land categories and tenure systems with the aim of minimising disputes over land and to enhance security of rights over land for improved land management and productivity.

Under the World Bank funded project on Community Based Rural Land Development Project (CBRLDP), land redistribution has been piloted in the districts of Machinga, Mulanje, Mangochi and Thyolo in the southern region of Malawi. This project set a better foundation for scaling the program to other parts of the country. Thus through the CBRLDP, the Malawi Government bought some of the estates in the piloted districts for redistribution to land constraint citizens. The pilot districts are among those with high population densities in the country with a total population estimated at 2.4 million people representing 18 per cent of the country's total population, (Government of Malawi, 2008 Population Census).

In view of the fact that the study districts of Lilongwe, Mchinji and Salima are in the region of high agricultural productivity in especially Lilongwe and Mchinji districts, and the fact that there are still some estates lying idle in these districts, the land redistribution program can be extended to these districts. Discussions with the Crops Officer for Salima district revealed that there is potential for land redistribution in the country based on the fact that some of the TAs in the district have more underutilized land than others.

Barriers to Land Redistribution

There are a number of barriers that the CBRLDP and other land redistribution policies face in the course of implementation. For CBRLDP in particular, lack of transparency and understanding between parties including insufficient planning was one of the challenges encountered. Additionally, the selection criteria for beneficiaries was not clearly laid out and explained to communities. Promises to provide social amenities such as clean water, school, hospitals and markets were not fulfilled. Also, a number of undeserving beneficiaries were given plots while deserving beneficiaries were unable to maintain their plots because they did not have resources to develop their plots. As a result, some of the beneficiaries sold their plots and returned to their places of origin, Machira (2009). In addition to these problems there was low capacity of land agencies to establish authenticities of the titleholders check their indebtedness and approve new deed plans. Scatteredness of the estates and outdated records further exacerbates the problem on

land redistribution. Integrating the beneficiary groups and the surrounding communities also poses a problem due to differences in social-cultural beliefs. Such challenges could likely be encountered in similar land redistribution programs for other parts of the country such as the study districts of Lilongwe, Mchinji and Salima.

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SECTION 3: MICROFINANCE

Introduction

Access to financial services is an important component for enterprise productivity the world over. In Sub-Saharan Africa, where most people live in rural areas and agriculture is the main activity of the rural economy, access to financial services of all kinds remains to be poor. Under the influence and sponsorship of the IMF and the World Bank, the financial sector in Malawi was liberalized in the 1980s as part of the SAPs. Before the SAP, government had greater control of the banking sector through regulation of credit and interest rates. Prior to the liberalization of Malawi's financial sector, most of the financial institutions operated in urban areas with the exception of commercial banks and credit unions. The commercial banks concentrated on offering working capital, mainly to large-scale business enterprises and the development banks relied more on foreign resources than on domestic resource mobilization to finance their operations. By 1994, the financial sector was completely liberalized, (Micro Finance Transparency –MFT 2011). MFT observes that the financial sector's access to credit has historically been restricted by both the limited availability of loanable funds and lack of resources to administer an extensive credit network. Furthermore, credit providers have also suffered from controls, inflexibility, and high administrative costs.

Although the microfinance subsector has often focused on serving trade and industry in urban, peri-urban and densely populated rural areas, microfinance services are also critical to businesses and households in the agricultural sector most of which are also rural based. Burritt (2005) noted that millions of poor, vulnerable non-poor, and unbanked households want financial services yet financial intermediaries like commercial banks generally do not serve these households. The commercial banks do not serve the poor for a variety of reasons including unsuitable models, collateral requirements which the poor often cannot afford and the unjustly belief by most conventional banks that the unbanked are unwilling and unable to repay loans and save money.

A variety of institutional models have emerged globally to serve microfinance markets including specialized microfinance banks, nongovernmental organizations (NGOs), credit unions, credit cooperatives, non-banking financial institutions, and commercial banks that develop new lines of business or specialized subsidiaries that focus on microfinance market segments. Burritt (*ibid*) observed that the spectrum of potential microfinance clients is broad. In Malawi this includes women in the informal sector working at home to produce prepared foods to sell outside the home; vendors selling vegetables or fish in an open-air market and a farming household that seeks access to credit to buy farm inputs or a farming family that establishes a contract with a buyer before the harvest and hence seeks financial assistance to enable the family to produce in compliance to the contractual agreements.

Given the predominance of smallholder farmers in the agricultural sector, financial services in the rural areas are therefore critical to support the productive activities thereby contributing to economic growth and poverty reduction. Despite the crucial role that financial services play in rural farming, institutions supplying rural and agricultural financial services to rural communities are faced with special challenges. These challenges include greater exposure to systemic risks such as droughts and floods, higher transactions costs, weak physical infrastructure, seasonality in production, and greater price volatility.

Historical Financing Arrangements for Small Farmers

Limited purchasing power by smallholder farmers is one of the most binding constraints on the use of fertilizer and improved seeds by the smallholders. Another major constraint on smallholder farmers' inability to increase productivity is the lack of access to credit or the prohibitive cost of borrowing in the form of high interest rates in both formal and informal financial markets. Dating from the colonial days to post independence period, smallholder farmers hardly had any formal access to financial credit. The one party regime in the post independent period deliberately supported the estate sub-sector with access to cheap financial credit from commercial banks while smallholder farmers were restricted to subsidized fertilizers sold through the Agricultural Development and Marketing Corporation (ADMARC). During this period, the government simply commanded the banks to allocate a considerable amount of credit to estates and in addition, ADMARC funds were recycled so as to benefit estate agriculture¹⁴.

Financial Regulatory Environment and Current Micro-financing Institutions

Regulatory Environment

The Government of Malawi (GoM) recognizes that a more inclusive financial system is critical to the development of the country's economy. The government believes that inclusive finance is an essential instrument for increasing agricultural productivity and production, expanding micro and small enterprises, creating employment, increasing household income and smoothening consumption, UNCDF/GoM, (2007). In this context, Malawi has, in recent years undertaken some reforms in the financial sector. For example, in 2007, the government, in partnership with United Nations Development Program (UNDP) and the United Nations Capital Development Fund (UNCDF) launched a project called Financial Inclusion in Malawi (FIMA). FIMA aims at increasing sustainable access to financial services to Malawi's low income population, thereby contributing to the achievement of both the MGDS and the Millennium Development Goals. The project has adopted a sectoral approach positioning the development of microfinance in the overall financial sector including banking and capital markets. In addition to this, a four-year National Strategy for Financial Inclusion was launched in October 2010 with the aim of improving delivery of quality and diverse financial services to the excluded population from 2010 to 2014.

In 2010, Malawi developed the Financial Services Act (FSA) to facilitate regulating the entire financial sector. The FSA provides the Registrar with power to issue directives relating to the conduct of financial institutions and supervise compliance. Until the 2010 financial sector reforms, only banks were subject to supervision and regulation by the Reserve Bank of Malawi (RBM). Through the Microfinance Act (MFA) of 2010 and the Financial Cooperatives Act (FCA) of 2011 Microfinance Institutions (MFIs) and Savings and Credit Cooperatives (SACCOs) are now governed by the two Acts bringing the MFIs and SACCOs under the supervision of the RBM.

Through the Trustees Incorporation Act, the RBM regulates services and operations of the informal finance providers such as NGOs and some government-sponsored projects. This is a

¹⁴ Since attainment of independence in Malawi in the year 1964 and prior to the introduction of the SAPs, the estate sub-sector was the major economic sub-sector within the agricultural sector as it produced the major export crops of Tobacco, tea and sugar while the smallholder sub-sector mainly focused on food crops. Smallholder farmers grew tobacco as tenants on the tobacco estates. The bias towards estate agriculture resulted in increased number of estates predominantly owned by top government officials including cabinet ministers.

positive development for the informal sector since most of the informal groups prevalent in rural areas are initiated and supported by various NGOs. In addition to the MFA and the FCA, enactment of the Securities Act in 2010 gives room for the establishment and operation of collective investment schemes which also allows for the formation of unit trusts and other collective mechanisms for investment.

The MFIs in Malawi operate under an umbrella body known as Malawi Microfinance Network (MAMN) which was established in 2000. MAMN aims at developing, promoting and regulating microfinance activities to ensure good governance. MAMN further aims at facilitating the exchange of experiences, ideas and innovations, in order to strengthen microfinance operations and build capacity within the sector. Through its operations MAMN has developed partnerships and strategic alliances with key organizations in the microfinance industry including the African Microfinance Network (AFMIN), Hivos¹⁵, the United States Agency for International Development (USAID), UNDP, UNCDF, and Southern Africa Microfinance & Enterprise Capacity Enhancement Facility (SAMCAF) and AFMIN. Through such partnerships, MAMN is able to implement activities including information dissemination, capacity building, performance monitoring, advocacy and lobbying and resource mobilization.

Existing Micro-financing Institutions

Agar *et.al.*, (2012) groups the financial sector into four categories the first being those with banking licenses as services providers. Under this category are commercial banks including discount houses and leasing companies all regulated by the 1989 Banking Act. The second category is that of non-bank formal service providers, including insurers, pension companies and the Malawi Stock Exchange (MSE). Micro-finance providers constitute the third category under which are SACCOs and MFIs. Some of the MFIs have a specific rural focus, while others focus more on cities and larger towns. For example, SACCOs are less influential in rural areas since they tend to cater more for formal salaried individuals. The fourth and last category is that of informal financial/money providers. Lending by these financial service providers can be on an individual basis as well as group-based. The group based financial service providers take various forms including Rotating Savings and Credit Associations (ROSCAs), Village Savings and Loan Associations (VSLAs). The VSLA model whose methodology is quite ideal for rural areas was pioneered and promoted by CARE. Agar, *et.Al*, (2012) noted that the number of VSLA groups increased from 174 in 2006 to 4,478 in June 2011, with an average membership of 19 per group. CARE is targeting to reach 400,000 individuals by the year 2017. According to FinScope 2008 and FinScope MSME (2012), these informal financial service providers are the most important forms of finance in rural areas.

The MFIs provide various forms of credit mostly targeting people not generally served by the banking sector. Due to the regulatory environment provided by the different Acts, there has been an emergence of various rural microfinance institutions in Malawi some of which are listed in Table 3.1.

Table 3.1: Existing MFIs in Malawi

1	Centre for Community Organisation and Development (CCODE)
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¹⁵ <http://www.hivos.nl/eng/community/partner/10002876>

2	Comitato Internazionale per lo Sviluppo dei Popoli (CISP)
3	Community Savings and Investment Promotion (COMSIP)
4	CUMO Microfinance Ltd (CUMO)
5	Cooperative for Assistance and Relief Everywhere (CARE)
6	Development of Malawian Enterprises Trust (DEMAT)
7	Foundation for International Community Assistance (FINCA)
8	Malawi Finance Trust for the Self Employed (FITSE)
9	Malawi Rural Development Fund (MARDEF)
10	Malawi Rural Finance Company Limited (MRFC)
11	Malawi Union of Savings and Credit Co-operatives (MUSCCO)
12	Microloan Foundation (MLF)
13	National Association of Business Women (NABW)
14	Opportunity Bank of Malawi (OBM)
15	Promotion of Rural Initiatives and Development Enterprises (PRIDE) Malawi
16	Small Enterprise Development Organisation of Malawi (SEDOM)
17	The Hunger Project
18	Touching Lives Fund (TLF)

Source: Agar *et. al.*, 2012

Loan Portfolio

According to 2011 statistics compiled by MF Transparency on loan portfolio and active borrowers, the Opportunity International Bank of Malawi (OIBM), dominates the market in terms of gross loan portfolio while the MRFC has the largest number of active borrowers, Table 3.2.

Table 3.2: Overview of MFIs in Malawi

Institution	Gross Loan Portfolio (USD)	Number of Active Borrowers	Average loan per borrower
Malawi Rural Finance Company Limited	1,606,853,200	132,000	12,173
Opportunity International Bank of Malawi	4,500,000,000	48,000	93,750
CUMO Microfinance Ltd	185,000,000	40,000	4,625
Finance Cooperative Limited	615,884,079	33,228	18,535
Microloan Foundation	260,000,000	22,690	11,459
FINCA Malawi Ltd	494,319,449	17,413	28,388
Malawi Rural Development Fund	1,020,000,000	11,815	86,331
Pride Malawi	272,000,000	8,528	31,895
Finance Trust For The Self Employed	65,000,000	4,200	15,476
Centre for Community Organization & Development	110,429,000	2,422	45,594

Source: MF Transparency, 2011

Concern Universal Microfinance Operations (CUMO)

CUMO Microfinance Limited is a non-profit making rural microfinance company providing an integrated set of financial services which include savings, credit and micro-insurance and market information. Its services are exclusively provided to rural clients located in remote and difficult-

to-reach areas. CUMO was established in 2000 as a project of Concern Universal (CU) and was incorporated as a standalone company in May 2007 following a decision by Concern Universal, a UK-based charity organization to separate its microfinance operations from the rest of its charity projects in Malawi, Planet Rating (2008). Currently CUMO operates in the central and southern regions of Malawi and covers a total of 14 districts¹⁶ in these two regions with its headquarters based in Dedza district¹⁷.

CUMO's Clients

CUMO targets poor people, primarily women¹⁸. It does so through its Masika loans, which are designed to attract only the poor. The low loan size is sufficient only for very tiny businesses, which are typical of those run by small entrepreneurs in rural areas. Self selection takes place during the group formation process. CUMO specifically mentions that rich or salaried persons should not be included in groups, so also prominent members of the community. Others excluded are defaulters on loans to other MFIs, and the very sick or very old. However, CUMO does not apply a formal screening criterion (such as poverty profiling or cash flow analysis) to all clients, Micro-Credit Ratings (2009).

CUMO's Products

CUMO's loan products are specifically intended for use in productive enterprises. CUMO's loan products are categorized into four groups namely; Masika; Fumba; Kasupe, and Mtenthandevu. Services offered by CUMO include agriculture loans, small enterprise loans, micro-insurance, enterprise training and market linkage services, Planet Rating (2008). CUMO uses the group model for financial intermediation, to encourage collective decision-making, as well as to facilitate joint liability and preliminary risk assessment. Potential clients are encouraged to form solidarity groups of 10-20 members, which save and lend internally. After establishing a history of internal lending, the group can approach CUMO for its first external loan. Group meetings take place fortnightly using existing physical infrastructure (e.g. churches and schools) in the villages, and are attended by the CUMO's Financial Service Officers. The meeting is a forum for collection of savings, internal lending and repayment of loans. CUMO's procedures ensure that group members collectively pass each other's loan applications, impose fines on members making late payments, and take turns for depositing collections. The group's secretary is responsible for cash counting, book-keeping, and recording minutes. Training in CUMO's policies is provided to the group members over six weeks by CUMO staff. CUMO also facilitates the opening of a group savings bank account.

Masika loans: The Masika loan offers clients lower interest rates on subsequent loan cycles: 6% p.m. till second cycle, 5% from third to fifth cycle, and 4.5% p.m. till the tenth cycle. Groups with members average loans of MWK 7,500 can shift to monthly repayments from their second cycle, while those taking an average of MWK 17,500 can extend their loan term to six months. Clients are incentivised to borrow higher amounts, while staying with CUMO's programme for several cycles. Loan size starts at MWK 3,000 (\$20) up to a maximum of MWK 5,000 for a first loan.

¹⁶ Dedza, Dowa, Lilongwe, Ntcheu, Salima in the Central Region and Balaka, Chiradzulu, Machinga, Mangochi, Mulanje, Neno, Phalombe, Thyolo, Zomba in the Southern region

¹⁷ Interview with CUMO Regional Manager

¹⁸ The organisations emphasizes on the ratio of 4: 1 (i.e Female: Male ratio) within each of groups.

Fumba loans: The Fumba is an agricultural loan product meant to be disbursed at the onset of the rainy season to enable the clients to cultivate crops such as maize, tobacco, or other crops and repay at the end of the season. Fumba loans can only be accessed by clients who have successfully completed one cycle of Masika. Clients can access a Fumba loan while they have an outstanding amount on their Masika loan. Although the Fumba loan is designed to have a balloon repayment, the staff encourage clients to pay some amount on a monthly basis, to reduce the risk in case there is a crop failure. The Fumba loan when first introduced used to be in kind, generally in the form of an agricultural input such as seed or fertilizer. However, CUMO had a bad experience when the government introduced a fertilizer subsidy, while CUMO had huge stocks of fertilizer bought at original prices in its warehouse, Micro-Credit Ratings (2009).

Kasupe loans: This is a solidarity-group based loan product for graduated clients of Masika loans. For this product, groups of 5-7 are formed, with clients co-guaranteeing each other. This product is open to graduating clients of Masika who have completed ten cycles of Masika loans. New clients can only access up to MWK 30,000 in their first Kasupe cycle. CUMO also targets new clients in peri-urban areas with the Kasupe loans. The maximum loan that can be extended under Kasupe is MWK 200,000 (in the sixth cycle). Repayments are monthly and there is no grace period in this product. CUMO intends to increase the portfolio under Kasupe to at least 20% of its entire portfolio so as to cross subsidise its other products.

Mtenthandevu loans: Mtenthandevu is a small-holder tea growers' loan, extended in solidarity groups of 5-7, ranging from MWK 10,000- 50,000, with monthly repayments over 4-6 months. This loan product is specifically extended to tea-growers with small farm holdings.

Non-financial Products

Non-financial products offered by CUMO include business training, HIV and AIDS interventions for staff, and market information on agricultural prices. Business training programs provide entrepreneurship training to its clients and the training sessions are provided through mobile services. Through this program, relevant, doorstep business training sessions are delivered in the local language. Trainings are intended to be held in clusters of 3 groups, for 2 hours per session. The training sessions are also meant to increase clients' access to formal and more profitable markets, train clients to think about more profitable and environmentally friendly businesses, gradually influence/shift their focus away from charcoal burning and reduce the number of CUMO's clients currently engaged in charcoal burning. Furthermore, the training sessions provide HIV and AIDS sensitization/counseling to the CUMO clients with the aim of gradually reducing clients' mortality rate.

CUMO has also partnered with NICO LIFE, a leading insurance provider in Malawi, to provide funeral benefit insurance to its clients. Each client contributes 2% of their loan amount (collected for every loan cycle) and in the event of death, the outstanding loan amount is covered. In addition the client's family receives MWK 5,000 to cover the funeral costs. CUMO plans to introduce hospitalisation insurance, based on client feedback. CUMO earns a small commission on a profit-sharing basis with NICO LIFE.

Linkage: CUMO is in partnership with the Malawi Agricultural Commodity Exchange (MACE) for dissemination of price-related information to its clients since a large proportion of them are small farmers. This initiative is called Agriculture Marketing Information Services aiming at shortening the supply chain and linking CUMO clients with higher and more profitable market.

Among other technologies, the program uses mobile phones for information updates, through collaboration with Malawi Telekom Network (MTN).

Participation of Women in the Financial Markets

In Malawi, women are very active in the informal economy, although the CUMO's services also aim at reducing the gender divide by encouraging more women participation in the various interventions discussed. Due to the fact that women are often confined to petty trading and manufacturing of home-based products and the high percentage of women headed households in the rural areas, CUMO took a stand to have more women in the all the groups. In addition to the high female ratio, CUMO also ensures that the groups democratically elect their leaders, and that adequate representation is given to women. Through this approach, women and men in the group co-guarantee each other nullifying the need for the women to get permission/guarantees from their spouses, this is a positive step towards women's independence, Microcredit Rating (2009).

Challenges to Micro-Finance Institutions in Malawi

Meagher (2010) observed that access to financial services is quite limited in Malawi; in particular, informal firms reported access to finance as a major constraint at nearly double the rate that formal firms did, see Table 3.3. MFT (2011) also noted that demand for loans in Malawi is highly seasonal peak lending season being between October and January, planting time, with loans becoming due between April and September, harvest and sales time.

Table 3.3: Enterprises' Constraints in Accessing Finance

Formal- Sector Firms	<ul style="list-style-type: none"> • 43 per cent reported access to finance to be a serious obstacle to operations and growth • 71 per cent reported cost of finance to be a serious obstacle to operations and growth • The cost of credit is so high for formal-sector firms that it affects productivity.
Informal-Sector Firms	<ul style="list-style-type: none"> • 84 per cent reported access to finance to be a serious obstacle to operations and growth • 51 per cent reported cost of finance to be a serious obstacle to operations and growth
Small Firms in General	<ul style="list-style-type: none"> • There is no significant relationship between the transparency, performance, or ownership (foreign or domestic) of a small firm and its access to finance. • This appears to be due to deficiencies in the business environment such as lack of credit registry, weak collateral laws, and law of electronic collateral registry

Source: Meagher (2010)

Agar *et. al.* (2012) also highlights a number of challenges confronting the microfinance sector in Malawi amongst which are:

Economic instability such as currency devaluation, high interest and inflation rates which have negative effects on rural finance development. Such economic instability significantly disrupts the rural economy and deters investment by financial service providers.

Price and production Volatility: : Since most of the MFI target agricultural enterprises and the fact that rural incomes are heavily dependent on agriculture, volatility in agricultural production and prices significantly affect operations of the MFIs. Occurrence of systematic risks such as drought, floods pest infestations, etc. often contribute to low production which influences widespread defaults on loans thereby resulting in major credit portfolio losses by the MFIs. Such production risks are worsened by volatility in agricultural produce prices and unpredictable international price volatility for export commodities such groundnuts and soya beans. Such volatilities create problems for producing households and the MFIs which provide financial services to the farming households.

Underdeveloped rural infrastructure makes it difficult to access some of the remote areas. This is particularly hard during the rainy season resulting in access to such areas to be more costly and time consuming. In addition to poor road infrastructure, inefficient energy infrastructure is a serious disabling factor for operations of the MFIs especially in rural areas.

Absence of national identity cards makes it extremely difficult to track down individuals who either default on loans or deliberately change their names to secure fresh loans. Though voter registration cards have been used in some cases, it is still a challenge to follow up on individual defaulters.

Weak property rights is another challenge negatively impacting upon operations of MFIs in both rural and urban areas. Within the smallholder sub-sector, land ownership is predominantly customary and based on traditional rules of allocation and inheritance. Lack of formal/official land titles implies that land cannot be used as collateral for the different categories of loans. This reduces the incentive to invest in land as the property is regarded not secure.

Involvement of government as a financial service provider tends to disrupt operations of the private oriented MFIs since most of the government interventions are subsidized rendering the private MFIs uncompetitive. For example, the government of Malawi has a number of credit programs such as the MARDEF, the Farm Inputs Loan Program (FILP) introduced in the 2013/14 as a parallel program to the FISP within the MoAFS. The FILP target the rural masses who are also the clientele for the private MFIs. Such government programs have posed stiff competition to the MFIs because of easy credit terms and weak repayment discipline on the part of the government programs. The poor repayment culture in government programs may spill over into other MFIs clientele thereby weakening operations of the MFIs.

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SECTION 4: ACCESS TO AGRICULTURAL MARKETS

Introduction

The agricultural input and output marketing system in Malawi is fully liberalized following the Structural Adjustment Program implemented in the late 80s and early 90s. Prior to liberalization, agricultural marketing system, particularly for the smallholder sub-sector was regulated by the state through state institutions ADMARC¹⁹ and the Smallholder Farmers Fertilizer Revolving Fund of Malawi (SFFRFM). Liberalisation of the marketing system was meant to remove state control and allow active participation of the private sector for increased efficiency in the marketing system and also to enhance smallholder farmer's access to both input and output markets.

Despite the liberalization, a number of studies (Minot, N., 2010; Kherallah et. al, 2001; Green, 2000; UNDP/UNCTAD, 1999; Devereux, S., 1997; Kherallah and Govindan,K,1997) indicate that access to markets by smallholder farmers remains a challenge due to a number of reasons including poor macroeconomic performance of the economy which hampers private sector involvement in the markets; poor sequencing of agricultural policy reforms; price interventions by the state; inefficient production systems among smallholder farmers, etc.

Studies on market access (AGRA ,2012; Bouchitté and Dardel 2012; Livingston,G. 2010; Schonberger and Delaney 2011; Lemessa,G., 2010;Svensson and Drott 2010; Rios et.al 2008; Butt and Bandara 2008; Chamberlin et.al 2007; Hammouda et.al 2006; Kamara 2004) have shown that improvement in market access increases agricultural productivity, firstly by facilitating specialisation and exchange transactions in rural areas, and secondly through intensification of input use. This implies that improved market access increases agricultural productivity resulting in increased farm income, which facilitates the purchase of more farm inputs to intensify production and improve farmers' welfare.

Government Policy and Strategies

Having recognized the importance of improved market access on smallholders' welfare and economic development of the country, the Malawi government, has put in place strategies and initiatives to enhance farmers access to markets. Such strategies and initiatives are spelt out in documents such as the Malawi Growth and Development Strategy II 2011-2016 (MGDS II) and the Agriculture Sector Wide Approach (ASWAp) 2011. The MGDS II recognizes that lack of markets and market information, inadequate access to agricultural credit, inefficient input and output market are among the critical constraints in the agricultural sector. Sustainable economic growth is one of the thematic areas in the MGDS II and there are 8 sub-themes under the sustainable economic growth of which agriculture is priority number one.

Within the context of the MGDS II, key strategies towards promoting access to markets for smallholder farmers include; Strengthening linkages of farmers to input and output markets; promoting contract farming arrangements; promoting irrigation farming; improving agricultural production and diversification; promoting agricultural production for exports; and strengthening and scaling up market-based risk management initiatives.

¹⁹ ADMARC was responsible for produce buying and selling within the smallholder sector. It also dealt in fertilizer and seeds. While the SFFRFM was wholly responsible for fertilizer imports and sales. Some of SFFRFM's fertilizer was also sold through ADMARC.

The ASWAp is a priority investment program in the agricultural sector aimed at increasing agricultural productivity to make Malawi a hunger free nation; enable people access nutritious foods and increase the contribution of agro-processing to economic growth. The ASWAp targets three focus areas, two key support services and two cross-cutting issues. The focus areas are i) food Security and risk management; ii) commercial agriculture, agro-processing and market development; and iii) sustainable agricultural land and water management. Technology generation and dissemination; and institutional strengthening and capacity building constitute the two key support services while HIV prevention and AIDS impact mitigation; and gender equity and empowerment fall under cross-cutting issues. Overall, the ASWAp emphasizes promotion of agro-processing for value addition and import substitution; developing the domestic market for import substitution; and expanding the export market to increase foreign currency earning potential of the country.

In addition to the MGDS II and the ASWAp is the five year (2013-2018) National Export Strategy (NES) developed by the Ministry of Industry and Trade. The NES is aimed at providing a clearly prioritized roadmap for building Malawi's productive base to generate sufficient exports to match the ever-increasing demand for imports. Four priority areas – of the NES are; export clusters; conducive environment; supportive economic institutions to build the productive base of the economy, and; competencies, skills and knowledge. The NES includes market access as one of the 'enablers' necessary to develop the export-oriented clusters/niche. The NES highlights the need for improving the coordination efforts to connect smallholder farmers to processors and to markets. It also promotes access to affordable finance to smallholder farmers, including women in order to improve access to technology.

Other strategies that the Malawi government has put in place to promote smallholder farmers' access to markets are:

Contract Farming Strategy: The government, through the Ministry of Agriculture and Food Security is in the process of finalising the contract farming strategy. Once finalised and implemented, it is expected that the contract farming strategy will enhance farmers' access to inputs as well as an assured market for the different commodities to be grown under contractual agreements. It is also expected that through the contract arrangements, farmers will be in a position to bargain for better prices while also conforming on the agreed upon grades and standards for presentation of the commodities. Default on the loans is also expected to be minimised through the legal framework within which the contract strategy will be framed, thus the contract farming strategy is expected to have mutual benefits and security checks for both the farmer/s and the contracting agent.

Farmer Organisations: For the government to effectively implement its various strategies and initiatives towards enhanced farmers' access to agricultural markets, the government promotes the formation of farmer groups at various stages. The basic farmer group is the farmers club, which, with appropriate empowerment including gender balance, stands a chance to graduate into an association and a cooperative. To facilitate the progression of farmer organisations, the government of Malawi through the Ministry of Industry and Trade, has the Cooperative Development Policy (CDP) in place. The CDP aims at enabling cooperatives to become efficient business institutions for mobilising human, financial and material resources.

Market Information System: Through the agro-economic survey of the Ministry of Agriculture and Food Security, the government collects various market related information which include production and price levels for different commodities and in different geographic locations across the country. The information from the various geographic locations is consolidated at the headquarters of the Agro-economic survey and is available for public consumption. The consolidated information is also supposed to be disseminated through the Agricultural Development Division (ADD) structure, which goes down to the village level through sections manned by the Agricultural Extension Development Officer (AEDO).

In addition to the government initiative in promoting market access, the private sector also makes efforts to enhance market access to farmers. The various agricultural commodity exchange platforms are prime examples of this.

Currently there are two major commodity exchange facilities dealing in agricultural commodities and these are the Agricultural Commodity Exchange (ACE) established in 2005 and the Auction Holdings Limited Commodity Exchange (AHLGX) established in 2012. The two commodity exchange facilities have some common strategies in terms of facilitating farmers' access to markets even though they may differ in the details of operations.

The basic concept of the commodity exchange is to provide a platform where farmers/suppliers of different commodities interact and make transactions to the mutual benefit of both parties. Various modes of interaction or access to information are used, including the use of mobile phones, use of print media and the warehousing system. For the mobile and print media, commodity suppliers and prospective buyers exchange information on the commodities available, the quantities, quality, geographic location, price and mode of transaction.

Through the warehouse receipt system, the farmer/commodity supplier deposits the commodity in the warehouse until such a time that the supplier feels it is profitable to sell. Meanwhile the commodity supplier opts to receive a warehouse receipt. Several advantages are associated with the warehouse receipt system for both the commodity suppliers and buyers. On the part of the farmer/commodity suppliers, they are able to obtain immediate finance from a bank using the warehouse receipt and there are no defaults in terms of payment which comes through the bank almost immediately after a transaction is made. The system also allows the supplier to obtain better prices, access bridging finance, minimise post-harvest losses. For the buyers, they are able to get the quantities they want in good quality and also minimise chances of default.

Constraints to Smallholder Farmers' Access to Markets

There are a number of factors within the agriculture sector that impede upon farmers access to markets. These constraints include:

Low volumes and seasonality in production by smallholder farmers: Volumes produced by smallholder farmers are usually too small to attract meaningful demand. The low production is associated with other challenges such as over reliance on rain-fed agriculture which confines farmers to seasonal production resulting in fluctuations in supply making it impossible for farmers to sustain supply as demanded by most buyers. Other challenges include; small landholding sizes; and limited access to financial markets or agricultural loans.

Noncompliance to Grades and standards: Farmers often do not comply with grades and standards as required by the markets. The non-compliance to grades and standards results in low prices offered to farmers. Poor grades and standards also make it difficult for the farmers to penetrate regional and global markets.

Poor transport and storage infrastructure: Poor road condition and network makes it difficult for farmers to transport their produce from the farm to the market. The poor road condition and network also makes it expensive for the farmer to pay transporters thereby confining the farmers to markets within the production zones and limiting access to other markets that would otherwise pay higher prices. Poor storage infrastructure contributes to quality deterioration and increased post-harvest losses. The poor quality produce and low volumes due to post harvest losses also inhibits farmers' access to better markets.

Poor market information system: The smallholder farmers are operating in an environment where availability and flow of market information is very poor and greatly contributes to poor access to markets by the farmers. Access to market information is quite critical for planning purposes on the part of both farmers and buyers. Farmers would want to know what commodities are on demand, where and when the commodities are demanded, quantities demanded, grades and standards required, prices offered, terms of delivery and payment. Such type of information is necessary for the farmers to make decisions on whether to produce and supply the commodities as demanded. Unfortunately, this type of information is scanty and difficult for the farmers to access and make use of.

Low literacy level and poor business skills: Low level of literacy among farmers is one of the factors contributing to farmers' limited access to markets. Due to the low level of literacy, most smallholder farmers are not able to understand the dynamics of agricultural marketing hence their limited access to better markets. Coupled with low literacy levels is limited and in most cases lack of business skills to undertake basic business practices such as recording keeping and gross margin analysis which would help them to set appropriate prices for their commodities. As a result, most smallholder farmers are price takers with the buyers dictating the price.

Scattered and unorganised production and marketing arrangements: With scattered and small landholding sizes, production among smallholder farmers tend to be unorganised and hence contributing to unorganised marketing arrangements resulting in poor access to markets. Some of the existing farmer organisations do not have strong bargaining power because of weak structures within the organisations but also worsened by low literacy levels.

Poor access to extension services:

The public extension services on agriculture have been blamed for a number of reasons including fewer number of extension agents compared to the number of farmers in need of extension services. The LUANAR and CISANET 2013 report observes that for effective and efficient extension service delivery, recommended extension worker/farmer ratio should range from 1:750 to 1:850. However, due to various attrition factors such as normal retirement, resignation in search for green pastures and deaths which increased due to HIV and AIDS, the extension staff/farmer ratios have dwindled to levels ranging from 1:1500 to as low as 1:3900. LUANAR and CISANET note that the few remaining extension workers are overburdened with multiple tasks from both government and non-governmental organisations including activities that are not directly related

to extension delivery such as the safety net programmes. Furthermore, distances to cover by bicycle to reach out to farmers are too vast hence few and ineffective visits to farming communities. In addition to fewer numbers, the public extension service is blamed for not covering market related topics to detail.

Unregulated contract farming:

Contract farming system if well regulated can enhance farmers' access to markets and also minimise negative effects of price volatility. However, some of the contracts that smallholder farmers have been subjected to seem not to have mutual benefits to both parties with the smallholder farmers often falling victims by being offered lower prices and sometimes the buying partner absconding on the whole contract.

On the other hand, buying partners in the contract have expressed concerns against the behaviour of the smallholder farmers who sometimes do not deliver the quantities as agreed because of side selling which is influenced by better prices outside the contract but also farmers need for an early cash income. Complaints have also been levelled against the smallholder farmers in failing to comply on agreed upon grades, standards and volumes.

Policy incoherence

Stakeholders note that there is some policy incoherence within and across related sectors. Particular examples are drawn from the Ministry of Agriculture and the Ministry of Industry and Trade on export licenses for agricultural exports. Issuing of export license is a responsibility of both the Ministry of Agriculture and Ministry of Industry and Trade (MoIT). The MoAFS first scrutinizes every application for export license on a case-by-case basis. After scrutiny by the MoAFS, the MoIT issues the export license upon approval by the Minister of Industry and Trade. Stakeholders noted that there is an element of lack of transparency in the process with possible delays as the documents change hands between the two ministries. Stakeholders feel that if indeed it is necessary for the export license to be processed between the two ministries, then government should consider having a desk officer from the Ministry of Industry in the Ministry of Agriculture to look into all agricultural trade related issues or vice versa.

Another policy issue that impedes access to markets is ad hoc bans by government on exports of some commodities without consulting the private sector. Often the government imposes such bans upon some looming shortages of the commodity in the country. It has however occurred in some instances that the government's projections or estimates of production upon which the bans are based do not reflect reality due to under or over estimations thereby causing disequilibrium in demand and supply and hence distorting the markets. Because of such distortions, the private sector greatly feels that there is need for thorough consultations between the government and the private sector before any ban on exports or imports is imposed. It is also noted that even in cases where justifiable bans or regulations are imposed, the government lacks an effective and efficient enforcement mechanism due to limited human and financial resources thereby rendering the bans ineffective.

Furthermore, there are suggestions that the methodology on national agricultural production estimates should be reviewed and improved to provide realistic estimates. Advocates for such a

review propose the use of satellite images for the production estimates as well as the use of Geographic Positioning System (GPS) in assessing hectarage of farmers' fields/gardens.

Gender imbalance in decision making

Several studies on Malawian agriculture have shown that women contribute significantly to agricultural labour but that they are often sidelined when it comes to decisions on what to produce and sell, how much to sale, and how to use the proceeds from the sales. This implies that despite their great involvement in production women tend to have limited access to agricultural markets and less influence in decision making.

There are also a number of constraints that affect women farmers' access to both input and output markets. On the input side, women are constrained to buy farm inputs such as fertilizer and improved seeds due to lack of financial resources. Even within the FISP, women farmers find it more difficult to access the subsidy inputs from the outlets points such as ADMARC. One of the challenges on the FISP inputs for the women is that the women are subjected to long queues to the extent that some take more 2 days before they can buy their fertilizers. In some cases incidents have been reported where officials manning the inputs at the outlet points demand sexual favours from women if they are to buy the fertilizer quickly.

On marketing agricultural produce, women become victims of intermediate traders (vendors), who use unreliable weighing scales. Cases have been reported in some instances whereby buyers tend to have two different weighing scales, one that is accurate and the other one that is deliberately tampered with to cheat the seller. For such traders, when a woman farmer comes alone to sell her produce, the trader uses the dubious scale taking advantage that often the women do not confront the buyers and the opposite is true for male farmers.

Discussions with some farmers also revealed that women farmers tend to have less bargaining power and vendors usually take advantage of the women by offering low prices. It was also noted that women end up selling to vendors who come to their doorsteps because the women have difficulties in transporting their produce to better markets. In many cases, better prices are offered at district centres, which are often far away and women do not have the time or resources to transport their produce to the district centres. In some cases, incidents of transporters demanding sex from women to have their produce transported to the market are also common. Such type of gender disparities in the conduct of trade affect women farmers' access to markets.

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SECTION 5: LINKAGES BETWEEN LAND, AGRICULTURAL FINANCE, INPUTS AND MARKETS

The four aspects considered in this study namely, land, finance, inputs and markets are complementary with respect to agricultural productivity and production. However, land plays a central role compared with the other three elements because any agricultural production system cannot exist in absence of land. Thus, no land implies zero production while absence of the other factors production can still take place on a piece of land. The issue becomes that of productivity and level of production - one would say “*no miracles without land*”. The quantities of other inputs, seed, fertilizer and finances would be determined by the amount and quality of land that a farmer has access to. In view of this, policies to do with land acquisition are paramount to promotion of agricultural production.

Even among the groundnut farmers countrywide and within the study districts of Lilongwe, Mchinji and Salima, dynamics on land are crucial for the promotion of groundnut production. Issues of property rights over land have a significant bearing on access to financial loans from formal lending institutions including microfinance institutions that often attach greater value on land as collateral for one to access loan. In this context, the direction that the Malawi government took in coming up with a land policy that confers greater security to customary landholders within which majority of smallholder farmers fall is a positive development towards facilitating smallholder farmers’ access to financial loans. In addition to accessing financial loans as a result of secure tenure on customary land, smallholder farmers are also likely to be encouraged to invest in the land by way of maintaining its quality because they are assured of their surety of tenure over the land.

Likewise for the micro-financing institutions, because of secure land tenure, over the different categories of land, the MFIs are bound to develop different loan products hinging upon land as collateral. The financial sectors regulatory framework developed by the government also offers an enabling environment for the MFIs to operate across sectors including agriculture which would be to the advantage of smallholder groundnut farmers. Thus increased access of smallholder farmers to financial loans is bound to encourage the use of improved inputs amongst the farmers. This will contribute towards increased productivity and production of commodities such as groundnuts. Furthermore increased MFIs operations would also have a multiplier effect on other subsectors such as increased volumes of input sales on the part of input dealers but also increased volumes of raw materials on the part of processors.

However, despite the conducive regulatory environment for the MFIs, continued government’s involvement as a financial service provider is bound to disrupt operations of the private MFIs since most of the government interventions are subsidized rendering the private MFIs uncompetitive.

Due to much interest and emphasis on national and household food security on the part of the government, focus of the FISP has been on maize production ignoring other equally important crops like groundnuts that have the potential to make a greater impact on the social economic welfare of the smallholder farmers. As groundnut production does not require heavy dosages of fertilizer, the government may wish to consider including improved groundnut seed and pesticides in order to promote groundnut production among smallholder farmers countrywide but also in the study districts. Such an action will enhance economic empowerment of the smallholder farmers

through improved incomes realized from the groundnut sales. This might gradually result in some farmers graduating from the FISP thereby relieving the pressure on the national budget.

With efficient operations in the land, inputs and MFI sub-sectors, improved access to commodity markets would have a positive impact on aggregate agricultural production. As Kamara, (2004) noted, the impact of market access on aggregate agricultural productivity can be looked at from two levels, which are direct and indirect. The direct level comes into effect through market-induced allocation of land to high value crops and specialized production while an indirect effect would be through the intensification of input use to raise productivity.

Although it might seem like an egg and chick situation when some of these factors, land, inputs, microfinance and markets are considered, realizing the effects that access to markets has on the other elements, it may be a plausible conclusion as Kamara (2004) noted that prioritising the improvement of market access is an important approach to rural development, as it gives farmers the opportunity to specialise and optimise their portfolios with respect to available resources and subsequently exploit economies of scale.

Annex 1: Distribution of Maize and Hybrid Legume Seeds Over the Years (Source: Logistics Unit: 2006/07 – 2012/13)

	2006/07			
DISTRICT	AVAILABLE VOUCHERS	HYBRID SUPPLIED	OPV SUPPLIED	UNREDEEM VOUCHERS
Chitipa	51,108	37,093	3,467	10,548
Karonga	11,231	8,318	1,962	951
Mzimba	146,923	96,474	35,569	14,880
Nkhata Bay	10,640	5,810	3,139	1,691
Rumphu	30,861	23,710	5,220	1,931
Northern Region Totals	250,763	171,405	49,357	30,001
Dedza	76,646	53,932	13,163	9,551
Dowa	114,985	78,407	29,549	7,029
Kasungu	116,923	85,613	29,753	1,557
Lilongwe	265,939	210,284	42,305	13,350
Mchinji	118,554	85,805	22,598	10,151
Ntcheu	95,169	52,924	24,927	17,318
Ntchisi	56,831	41,827	7,737	7,267
Salima	42,215	28,177	11,356	2,682
Nkhotakota	20,450	10,297	6,116	4,037
Central Region Totals	907,712	647,266	187,504	72,942
Phalombe	66,739	42,755	16,505	7,479
Mulanje	83,323	62,884	13,387	7,052
Mangochi	95,078	51,704	36,434	6,940
Mwanza	20,154	10,284	5,004	4,866
Neno	25,846	20,508	5,822	484
Thyolo	95,108	67,173	19,124	8,811
Machinga	99,261	72,449	20,989	5,823
Blantyre	131,046	94,507	26,300	10,239
Zomba	114,615	67,282	35,578	11,755
Chiradzulu	51,878	32,733	17,782	1,363
Balaka	41,539	29,034	6,886	5,619
Nsanje	6,554	5,811	349	394
Chikwawa	10,369	7,528	1,178	1,663
Southern Region Totals	841,510	564,652	205,382	71,476
National Total	1,999,985	1,383,323	442,243	174,419

2007/08²⁰

Southern Region	Available Vouchers	Opv Supplied	Hybrid Supplied	Unredeemed Vouchers
Phalombe	49,345	9,101	26,023	14,221
Mulanje	76,054	2,359	51,973	21,722
Mangochi	94,976	21,337	51,303	22,336
Mwanza	19,385	898	10,930	7,557
Neno	21,593	412	11,348	9,833
Thyolo	93,932	4,342	53,030	36,560
Machinga	81,783	22,443	37,426	21,914
Blantyre	82,140	1,542	37,247	43,351
Zomba	91,685	1,257	27,306	63,122
Chiradzulu	61,782	1,067	26,693	34,022
Balaka	49,187	223	30,348	18,616
Nsanje	12,153	1,770	5,972	4,411
Chikwawa	18,532	2,252	11,173	5,107
Southern Region Totals	752,547	69,003	380,772	302,772
CENTRAL REGION				
Dedza	99,635	44,277	51,982	3,377
Dowa	93,030	44,357	45,268	3,406
Kasungu	104,580	40,518	60,333	3,730
Lilongwe	260,492	115,566	141,468	3,459
Mchinji	121,948	43,065	75,291	3,593
Ntcheu	95,564	27,429	64,658	3,478
Ntchisi	50,609	15,951	31,279	3,380
Salima	39,129	9,563	25,990	3,577
Nkhotakota	35,968	10,257	22,078	3,634
Central Region Totals	900,955	350,980	518,344	31,631
NORTHERN REGION				
Chitipa	38,141	7,442	30,351	348
Karonga	24,005	5,384	18,049	572
Mzimba	164,573	25,714	138,287	572
Rumphi	34,785	5,564	29,015	206
Nkhatabay	24,078	6,188	17,555	335
Likoma	709	219	435	55

²⁰ 130,276 vouchers were redeemed for cotton seed through the scheme. The cotton pack was 3kgs.

- 11,890 flexible vouchers were redeemed for soya. The soya pack was 2kgs
- In December/January 200,000 vouchers for cotton chemicals were authorised to be issued through the ADDs. These had a redemption value of MK 250.
- The chemical packs on offer were for 25 ml and 200 ml requiring a “top up” by the farmer of MK 50 and MK 200 respectively.
- 131,850 vouchers in number were subsequently redeemed for cotton chemicals.

Northern Region Total	286,291	50,511	233,692	2,088
National Total	1,939,793.00	470.494	1,132,808	336,491

2008/09²¹

DISTRICT	NPK;UREA;Maize	Tobacco	Flexible	Additional NPK/Urea only
Chitipa	25259	8541	14238	
Karonga	21831	3207	16988	
Rumphi	26400	12180	14790	
Likoma	640	0	595	
Nkhatabay	21895	200	15786	
Mzimba	93500	19080	72877	
Kasungu	79618	25470	55074	
Mchinji	62500	17560	41732	
Ntchisi	30000	14080	25138	
Dowa	68700	24500	40411	
Nkhotakota	24784	715	20602	3000
Salima	34500	1102	25675	
Lilongwe	118789	20818	113542	
Dedza	65050	5039	51573	
Ntcheu	67500	5175	39739	
Balaka	40841	2820	27446	
Mangochi	71088	4920	64896	
Machinga	60207	4657	42351	
Zomba	74387	8510	54066	
Chiradzulu	55359	4596	25482	
Phalombe	71273	5784	22788	
Mulanje	69093	978	54120	
Thyolo	88302	2942	49437	
Blantyre	83661	5565	40370	
Mwanza	21802	875	10211	
Neno	12868	355	8609	
Chikwawa	11074	0	30615	
Nsanje	11060	0	17204	314
Total	1496686	200000	1000000	3314

²¹ 8,536 vouchers were redeemed for cotton seed through the scheme.

Government made available cotton chemical packs (two types) to be issued free to cotton growers through Cargill and Great Lakes

In December/January 200,000 vouchers for each type of cotton chemicals were authorised to be issued through the ADDs. The vouchers had a redemption value of MK 50 each.

2009/10

DISTRICT	MAIZE TARGET	VOUCHERS REDEEMED	%REDEEMED
Nsanje	14,702	12,234	83%
Chikwawa	18,895	20,638	109%
Thyolo	101,685	123,693	122%
Mulanje	76,533	90,282	118%
Phalombe	60,379	57,259	95%
Blantyre	94,233	121,538	129%
Zomba	91,511	86,540	95%
Mwanza	15,600	15,193	97%
Neno	17,573	17,008	97%
Chiradzulu	52,964	52,035	98%
Machinga	64,819	66,733	103%
Mangochi	75,825	73,706	97%
Balaka	53,285	54,274	102%
Total For South	738,004	791,133	107%
Salima	36,800	32,120	87%
Nkhotakota	31,437	29,072	92%
Ntchisi	40,465	39,886	99%
Dedza	67,386	68,358	101%
Lilongwe	161,211	164,365	102%
Mchinji	70,131	69,446	99%
Dowa	72,722	73,784	101%
Kasungu	90,345	86,022	95%
Ntcheu	73,000	67,920	93%
Total for Central	643,497	630,972	98%
Rumphi	29,465	26,460	90%
Karonga	26,285	24,736	94%
Chitipa	30,383	22,802	75%
Nkhatabay	23,956	22,952	96%
Likoma	683	40	6%
Mzimba	107,727	94,976	88%
Total for North	218,499	191,965	88%
National Total	1,600,000	1,614,070	101%
Legume		MTS	
Cow peas		6.44	
Pigeon Peas		1.34	
Beans		341.39	
Groundnuts		556.79	
Soya		644.96	
Total		1,550.92	

2010/11

DISTRICT	ALLOCATION	MAIZE	OVER/UNDER	LEGUME	OVER/UNDER
Blantyre	94,403	100,177	(5,774)	73,285	21,118
Chiradzulu	52,549	53,189	(640)	46,174	6,375
Mwanza	15,455	15,874	(419)	13,547	1,908
Neno	17,326	18,275	(949)	12,612	4,714
Mulanje	76,299	79,079	(2,780)	62,854	13,445
Phalombe	60,145	59,885	260	44,953	15,192
Thyolo	101,746	104,546	(2,803)	86,989	14,757
Chikwawa	19,295	17,688	1,607	8,801	10,494
Nsanje	15,202	14,361	841	7,327	7,875
Balaka	53,664	54,230	(566)	48,538	5,126
Machinga	65,119	64,125	994	51,446	13,673
Mangochi	75,729	73,495	2,234	38,760	36,969
Zomba	91,216	92,648	(1,432)	59,137	32,079
South	738,148	747,575	(9,427)	554,424	183,724
Dedza	67,536	103,077	(35,541)	56,165	11,371
Ntcheu	73,120	88,667	(15,547)	65,046	8,074
Lilongwe	160,572	193,819	(33,247)	155,501	5,071
Kasungu	90,325	130,548	(40,223)	102,550	(12,225)
Dowa	72,782	135,316	(62,534)	73,522	(740)
Mchinji	69,816	112,134	(42,318)	64,771	5,045
Ntchisi	41,357	53,532	(12,175)	39,041	2,316
Nkhotakota	31,557	49,809	(18,252)	24,625	6,932
Salima	36,940	46,302	(9,362)	32,519	4,421
Central	664,005	913,205	(269,200)	613,739	30,266
Mzimba	106,800	172,357	(65,557)	97,672	9,128
Rumphu	29,330	49,075	(19,745)	29,094	236
Nkhatabay	24,056	25,105	(1,049)	18,361	5,695
Likoma	1,183	998	185	18	1,165
Chitipa	30,093	43,878	(13,785)	27,218	2,875
Karonga	26,385	35,825	(9,440)	22,865	3,520
Northen	217,847	327,238	(109,391)	195,227	22,620
National	1,600,000	1,988,066	(388,066)	1,363,390	236,610
Legume	MTS				
Beans	316.49				
Cow peas	1.62				
Groundnuts	2,029.46				
Pigeon Peas	4.16				
Soya	375.04				
Total	2,726.77				

2012/13 Maize Voucher Recovery

	Allocation	Redeemed	%
Blantyre	84300	81848	97
Chiradzulu	46900	46497	99
Mwanza	13900	13797	99
Neno	15500	15380	99
Mulanje	68200	67775	99
Phalombe	54000	53720	99
Thyolo	90600	90107	99
Chikwawa	22900	22726	99
Nsanje	14400	14252	99
Balaka	47800	47596	100
Machinga	67300	67082	100
Mangochi	87500	86752	99
Zomba	95200	94617	99
	708500	702149	99
Dedza	75900	75298	99
Ntcheu	65300	64371	99
Lilongwe	143000	142025	99
Kasungu	98100	97397	99
Dowa	83000	82234	99
Mchinji	63100	62826	100
Ntchisi	44900	44570	99
Nkhotakota	28700	28351	99
Salima	34400	34215	99
	636400	631287	99
Mzimba	99700	97540	98
Rumphu	26300	25890	98
NkhataBay	21700	21340	98
Likoma	1200	1093	91
Chitipa	27000	26453	98
Karonga	23600	23276	99
	199500	195592	98

Legume Distribution by District and Variety during the 2012/13 FISP

District	Beans			Cowpeas		Groundnuts					Pigeon peas			Soya				
	Kalina	Kholopheth	Napilira	Sudan1	ZT82E-16	Chalimbana	CG7	ICEAP 00557	Chitala	Nsinjilo	Maiwathu Alimi	Sauma	Mthawajuni	Solitera	Sopranao	Squire	Makwacha	Nasoko
Blantyre	773	16,981	118	355	0	0	56,308	0	248	0	6	51	0	0	44	2,125	106	1,952
Chiradzulu	612	7,371	8	258	1	0	30,228	4605	0	0	353	44	49	0	207	1,086	27	54
Mwanza	845	2,139	0	102	0	0	9,394	0	0	0	360	0	0	0	399	0	0	0
Neno	862	1,232	0	4	0	0	11,796	0	0	0	81	0	0	0	100	205	0	8
Mulanje	3011	9,433	0	3	0	0	46,931	0	224	0	18	0	0	0	1,260	1,082	115	1,188
Phalombe	2921	9,079	0	123	0	0	28,944	0	0	0	1,097	1	0	0	745	1991	37	1,104
Thyolo	556	14,732	0	1	0	0	61,575	392	86	0	18	0	376	0	1293	3291	0	1710
Chikwawa	1097	10,986	0	2	0	0	8,822	0	0	0	28	0	143	0	205	659	166	0
Nsanje	1452	6,950	0	2	0	0	3,973	0	0	0	0	329	171	0	0	10	19	5
Balaka	619	7,095	132	121	0	0	38,176	0	0	0	172	0	0	0	459	76	43	85
Machinga	300	10,303	75	393	4	0	51,689	0	3	0	10,325	233	0	0	421	1,136	119	527
Mangochi	2020	9,893	44	3,583	2813	0	44,822	0	2,664	0	2,668	175	0	1	16	1,409	10	2,257
Zomba	1330	11,568	0	3,262	19	0	53,076	0	2,560	0	170	3,575	0	0	475	5081	2323	1,928
Dedza	1	16,665	0	594	14	0	43,426	0	0	48	1472	0	0	0	3890	4583	16	1,263
Ntcheu	706	13,296	1	2,433	316	0	39,364	0	0	0	1	31	0	0	0	254	1219	2,488
Lilongwe	7	19,185	263	164	1	278	94,151	0	0	1240	97	0	0	0	1091	19574	218	573
Kasungu	0	30,959	0	330	25	0	53,930	0	0	4,003	232	5	0	0	0	4607	126	574
Dowa	0	11,004	220	1,930	132	83	54,692	0	0	460		0	0	0	338	6258	250	1,124

Mchinji	0	14,886	0	162	0	0	42,076	0	0	8	116	0	0	1	0	2016	58	232
Ntchisi	0	13,121	7	1033	192	481	22,853	0	0	820	0	0	0	0	0	1787	49	445
Nkhotakota	0	7,080	0	1,188	1	0	14,175	0	0	54	290	0	0	0	162	1419	14	365
Salima	0	7,305	1	544	157	0	23,368	0	0	1	0	0	0	0	4	1570	0	544
Mzimba	0	29,793	263	127	0	0	40,688	0	0	236	0	0	0	1	301	7949	476	6,927
Rumphi	0	3417	0	38	0	0	15,925	0	0	0	0	0	0	0	25	1366	2	2,335
NkhataBay	0	5,596	0	0	0	0	8,947	0	0	0	0	0	0	0	0	1780	77	562
Likoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chtipa	0	2,270	0	0	0	0	13,113	0	0	0	0	0	0	0	0	2651	486	1,388
Karonga	0	3,051	0	5	0	0	15,931	0	0	0	0	0	0	0	0	653	333	508
National	17112	29,5390	1,135	16,757	3675	842	92,8373	4997	5,785	6,870	18,602	4,444	739	11	11,435	74,618	6,289	30,146

Annex 2.1 FISP Beneficiaries (Source: Logistics Unit: 2006/07 – 2012/13)

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Chitipa	51,108	38,141	25,259	30,383	30,093	26,340	26,400
Karonga	11,231	24,005	21,832	26,285	26,385	23,082	23,100
Likoma	-	709	640	683	1,183	1,100	1,000
Mzimba	146,923	164,573	70,500	107,727	106,800	93,451	99,700
Nkhata Bay	10,640	24,078	21,896	23,956	24,056	21,100	21,700
Rumphi	30,861	34,785	26,400	29,465	29,330	25,700	19,700
Northern Region Totals	250,763	286,291	166,527	218,499	217,847	190,773	191,600
Dedza	76,646	99,635	65,050	67,386	67,536	59,200	75,900
Dowa	114,985	93,030	68,700	72,722	72,782	63,700	63,100
Kasungu	116,923	104,580	79,618	90,345	90,325	79,090	21,700
Lilongwe	265,939	260,492	118,789	161,211	160,572	140,300	143,000
Mchinji	118,554	121,948	62,500	70,131	69,816	61,099	99,700
Nkhotakota	20,450	35,968	24,784	31,437	31,557	27,697	28,700
Ntcheu	95,169	95,564	67,500	73,000	73,120	64,000	64,000
Ntchisi	56,831	50,609	30,000	40,465	41,357	35,700	98,100
Salima	42,215	39,129	34,500	36,800	36,940	32,383	34,400
Central Region Totals	907,712	900,955	551,441	643,497	644,005	563,169	628,600
Balaka	41,539	49,187	40,841	53,285	53,664	46,800	46,900
Blantyre	131,046	82,140	83,661	94,233	94,403	82,600	81,300
Chikwawa	10,369	18,532	11,074	18,895	19,295	16,890	22,900
Chiradzulu	51,878	61,782	55,359	52,964	52,549	45,990	46,000
Machinga	99,261	81,783	62,315	64,819	65,119	56,900	67,300
Mangochi	95,078	94,976	50,088	75,825	75,729	66,270	87,500
Mulanje	83,323	76,054	69,093	76,533	76,299	66,769	66,800
Mwanza	20,154	19,385	21,802	15,600	15,455	13,530	13,000
Neno	25,846	21,593	12,868	17,573	17,326	15,200	15,200
Nsanje	6,554	12,153	10,970	14,702	15,202	13,310	14,400
Phalombe	66,739	49,345	71,273	60,379	60,145	52,700	43,200
Thyolo	95,108	93,932	88,302	101,685	101,746	88,766	73,600
Zomba	114,615	91,685	74,387	91,511	91,216	79,824	95,200
Southern Region Totals	841,510	752,547	652,033	738,004	738,148	645,549	673,300
National Total	1,999,985	1,939,793	1,370,001	1,600,000	1,600,000	1,399,491	1,493,500

Annex 2.1 FISP Fertilizer Distribution (Source: Logistics Unit: 2006/07 – 2012/13)

2006/07

District	Urea	NPK	23:21:00	D-Compound	Total Fertilizer
Chitipa	1,635.30	1,686.60	459.3	468.9	4,250.10
Karonga	585.55	592.4	0.3		1,178.25
Rumphi	1,588.95	1,635.60	650.4	572	4,446.95
Nkhata Bay	349.45	464.25	23.15	2.65	839.5
Mzimba	9,061.75	8,053.65	1,857.56	1,711.40	20,684.36
Regional Total	13,221.00	12,432.50	2,990.71	2,754.95	31,399.16
Ntchisi	1,869.20	1,818.20	591.25	538.25	4,817
Dowa	3,789.70	3,631.70	1,035.35	1,220.55	9,677.30
Mchinji	4,189.60	4,245.75	828.65	845.75	10,109.75
Kasungu	4,570.40	4,285.25	1,385.90	1,729.25	11,970.80
Salima	1,463.55	1,436.60	58.55	6.3	2,965.00
Nkhotakota	702.95	685	34	29.7	1,451.65
Lilongwe	12,712.30	11,629.10	2,234.95	1,843.85	28,420.20
Dedza	2,706.45	2,567.90	167.45	175.2	5,617.00
Ntcheu	4,390.10	4,244.70	221.1	184.1	9,040.00
Regional Total	36,394.25	34,544.20	6,557.20	6,572.95	84,068.60
Balaka	1,533.40	1,467.14	47.1	39.2	3,086.84
Mangochi	2,947.75	2,966.90	317.05	287	6,518.70
Machinga	4,092.65	3,476.30	218.75	193.15	7,980.85
Zomba	3,679.60	3,810.25	447.75	402.8	8,340.40
Chiradzulu	2,288.05	2,133.30	89.8	81.05	4,592.20
Mwanza	578	577.7	4.95	7.15	1,167.80
Neno	452.8	686.8	4	4	1,147.60
Thyolo	3,467.50	3,568.85	89.55	119.5	7,245.40
Phalombe	2,191.15	2,219.85	130.2	134.2	4,675.40
Mulanje	2,776.05	2,793.95	25.25	32.2	5,627.45
Blantyre	4,078.35	3,828.60	95	53.5	8,055.45
Chikwawa	240.05	278.2			518.25
Nsanje	123.5	140.5			264
Regional Total	28,448.85	27,948.34	1,469.40	1,353.75	59,220.34
National Total	78,064.10	74,925.04	11,017.31	10,681.65	174,688.10

2007/08

DISTRICT	NPK	UREA	D	CAN	TOTAL
Phalombe	2,038	2,673.00	124	136	4,970.50
Mulanje	3,771	4,011.45	27.5	27.5	7,837.60
Mangochi	4,441.05	4,035.05	253.7	258.1	8,987.90
Mwanza	847.05	889.35	2.55	4.85	1,743.80
Neno	837.15	741	4.75	4.45	1,587.35
Thyolo	4,994.35	5,762.10	78.2	97.55	10,932.20
Machinga	3,884.05	3,703.10	270.35	365.85	8,223.35
Blantyre	4,493.50	4,715.40	61.6	72.25	9,342.75
Zomba	4,027.00	4,748.35	403.75	424.25	9,603.35
Chiradzulu	2,197.00	2,687.45	74.75	72.95	5,032.15
Balaka	2,447.65	2,513.90	42.3	89.6	5,093.45
Nsanje	657.55	523.3			1,180.85
Chikwawa	901.95	1,124.50			2,026.45
Regional Total	35,536.95	38,127.95	1,343.45	1,553.35	76,561.70
Dedza	3,126.80	4,239.05	201.5	294.35	7,861.70
Dowa	4,569.10	5,171.55	1,502.00	1,290.25	12,532.90
Kasungu	6,453.00	7,460.05	2,190.15	1,532.65	17,635.85
Lilongwe	12,028.85	15,246.25	2,414.15	1,445.30	31,134.55
Mchinji	4,281.95	5,544.80	1,233.05	1,011.30	12,071
Ntcheu	4,070.30	4,350.95	239.50	198.25	8,859.00
Ntchisi	1,904.00	2,442.20	623.75	479.20	5,449.15
Salima	2,081.75	2,179.40	85.05	67.35	4,413.55
Nkhotakota	1,444.95	1,504.95	33.00	52.30	3,035.20
Regional Totals	39,960.70	48,139.20	8,522.15	6,370.95	102,993.00
Chitipa	1,549.00	1,382.55	401.55	433.20	3,766.30
Karonga	1,554.85	1,600.80	6.15		3,149.50
Mzimba	9,339.35	9,882.40	1,871.90	1,753.10	22,846.75
Rumphi	1,928.10	2,004.80	722.70	607.45	5,263.05
Nkhatabay	1,003.10	965.85	3.80	0.25	1,973
Regional Totals	15,374.40	15,836.40	2,993.80	2,794.00	36,998.60
National Totals	90,872.05	102,103.55	12,859.40	10,718.30	216,553.30

2009/10

DISTRICT	NPK	D COMPO	UREA	CAN
Nsanje	804.95		850	15
Chikwawa	726.65		743	
Thyolo	5,098.40		4,508.50	497
Mulanje	4,142.35		4,345.10	
phalombe	2,940.85		2,934.00	181
Blantyre	4,892.85		3,954.25	538.8
Zomba	4,336.00		4,544.70	329
Mwanza	805.85		876.50	
Neno	728.95		495.00	20
Chiradzulu	2,466.25		2,147.20	254
Machinga	3,593.00		2,892.90	324
Mangochi	3,919.55		3,564.00	462.02
Balak	2,669.70		2,270.00	200
Regional Totals	37,125.35		34,125.20	2,820.85
Salima	1629.85	115	1,473.80	345
Nkhotakota	1,538.50	45	1,547.45	45
Ntchisi	1,750.80	149.95	1,714.05	244.95
Dedza	3,266.70	145	3,018.00	354.95
Lilongwe	6,998.00	751	6,783.35	1,278.80
Mchinji	3,509.65	130	3,515.45	90
Dowa	3,366.30	555.5	3,288.65	639.3
Kasungu	4,092.30	447	4,116.05	423
Ntcheu	3,511.25	175	3,393.75	330
Regional Totals	29,663.35	2,513.45	28,850.55	3,751.00
Rumphi	1,387.60	75.35	1,438.10	26
Karonga	1,338.50		1,381.70	
Chitipa	1,548.85	35	1,555.95	10
Nkhatabay	880.35	20	854.95	10
Likoma	34.15		33.75	
Mzimba	5,287.35	159.5	5,559.95	63.6
Regional Totals	10,476.80	289.85	10,824.40	109.6
Grand Totals	77,265.50	2,803.30	73,800.15	6,681.45

2010/11

DISTRICT	ALLOCATION	NPK	UREA	OVER/UNDER
Blantyre	94,403	94,751	92,997	1,058
Chiradzulu	52,549	51,264	50,770	3,064
Mwanza	15,455	13,687	14,158	3,065
Neno	17,326	18,132	17,671	(1,151)
Mulanje	76,299	75,409	76,333	856
Phalombe	60,145	57,951	60,246	2,093
Thyolo	101,746	99,734	99,438	4,320
Chikwawa	19,295	17,351	13,467	7,772
Nsanje	15,202	13,508	10,788	6,108
Balaka	53,664	54,468	53,200	(340)
Machinga	65,119	67,962	67,464	(5,188)
Mangochi	75,729	78,684	83,348	10,574
Zomba	91,216	84,948	90,713	6,771
South	738,148	727,849	730,593	17,854
Dedza	67,536	69,466	63,766	1,840
Ntcheu	73,120	78,175	77,294	(9,229)
Lilongwe	160,572	160,995	160,952	(803)
Kasungu	90,325	90,498	90,248	(96)
Dowa	72,782	72,613	72,346	605
Mchinji	69,816	68,752	70,401	479
Ntchisi	41,357	40,997	41,276	441
Nkhotakota	31,557	30,246	30,305	2,563
Salima	36,940	35,767	36,769	1,344
Central	664,005	647,509	643,357	(2,856)
Mzimba	106,800	106,746	106,760	94
Rumphi	29,330	28,862	29,351	447
Nkhatabay	24,056	23,845	23,860	407
Likoma	1,183	1,069	1,045	252
Chitipa	30,093	28,948	30,725	513
Karonga	26,385	26,027	26,225	518
Northen	217,847	215,497	217,966	2,231
National	1,600,000	1,590,855	1,591,916	17,229

2011/12

DISTRICT	NPK	UREA	TOTAL
Balaka	2,326.00	2,262.95	4,588.95
Blantyre	4,261	4,264.50	8,525.50
Chikwaw	711,60	642.4	1,354.00
Chiradzulu	2,285.00	2,292.00	4,577.00
Machinga	2,979.45	2,622.90	5,602.35
Mangochi	3,600.00	3,193.50	6,793.50
Mulanje	3,156.00	3,226.85	6,382.85
Mwanza	726.00	736.05	1,462.05
Neno	689.00	669.90	1,358.90
Nsanje	630.00	542.00	1,172.00
Phalombe	2,762.00	2,525.00	5,287.00
Thyolo	4,393.75	4,641.45	9,035.20
Zomba	4,134.00	4,117.50	8,251.50
Southern Region	32,653.80	31,737.00	64,390.80
Dedza	2,733.20	2,761.85	5,495.05
Dowa	3,271.00	2,926	6,196.50
Kasungu	4,063.90	4,110.00	8,173.90
Lilongwe	7,039.30	7,167.10	14,206.40
Mchinji	3,014.95	3,023.05	6,038.00
Nkhotakota	1,352.00	1,440.00	2,792.00
Ntcheu	3,244.20	3,343.75	6,587.95
Ntchisi	1,533.05	1,854.00	3,387.05
Salima	1,471.95	1,558.40	3,030.35
Central Region	27,723.55	28,183.65	55,907.20
Chitipa	1,442.05	1,277.20	2,719.25
Karonga	1,169.50	1,178.00	2,347.50
Likoma	51.25	51,25	102,50
Mzimba	4,820.50	5,041.81	9,862.31
Nkhatabay	919.00	975.00	1,894.00
Rumphu	1,255.10	1,421.65	2,676.75
Northern Region	9,657.40	9,944.91	19,602.31
National Total	70,034.75	69,865.56	139,900.31

2012/13

DISTRICT	NPK	UREA	TOTAL
Balaka	2,406	2,445.15	4,852.10
Blantyre	4,282.40	4,218.70	8,501.10
Chikhwawa	1,011.95	842.00	1,853.95
Chiradzulu	2,382.75	2,298.00	4,680.75
Machinga	3,410.85	3,234.95	6,645.80
Mangochi	4,463.95	4,446.95	8,910.90
Mulanje	3,239.95	3,221.00	6,460.95
Mwanza	739.00	655.95	1,394.95
Neno	739	655.95	1,556.35
Nsanje	829.8	938.05	1,767.85
Phalombe	2,621.85	2,649.00	5,270.85
Thyolo	4,429.75	4,569	8,999.65
Zomba	4,857.90	5,087.00	9,944.90
Southern Region	35,429.25	35,410.85	70,840.10
Dedza	3,800.00	3,637.45	7,437.45
Dowa	4,418.80	4,795.70	9,214.50
Kasungu	4,729.10	4,849.60	9,579
Lilongwe	7,088.80	6,915.95	14,004.75
Mchinji	3,224.65	3,186.65	6,411.00
Nkhotakota	1,396.20	1,451.80	2,848.00
Ntcheu	3,230.90	3,180.10	6,411.00
Ntchisi	2,211.25	2,197.00	4,408.25
Salima	1,772.70	1,674.65	3,447.35
Central Region	31,872.40	31,888.80	63,761.30
Chitipa	1,418.45	1,420.65	2,839.10
Karonga	1,115.20	1,079.95	2,195.15
Likoma	50	50	100
Mzimba	4,972.95	4,935.95	9,908.90
Nkhatabay	1,071.65	1,082.15	2,153.80
Rumphi	1,310.10	1,346.10	2,656.20
Northern Region	9,938.35	9,914.80	19,853.15
National	77,240.00	77,214.55	154,454.55

Annex 3: Country Land Cover²²

District	AG²³	code TP²⁴	TCO²⁵	SCO²⁶	HCO²⁷	BS²⁸	URB²⁹	WAT³⁰
Balaka	175,207.7	0	11,842.6	3,683.0	17,892.3	0	5,925.2	977.0
Blantyre	94,243.4	160.3	36,672.9	604.5	37,222.1	4.3	18,592.7	466.2
Chidzumulu	0	0	6.8	0	324.6	0	0	0
Chikhwawa	196,017.5	153.4	212,264.7	7,179.6	64,218.9	0	18,158.8	3,124.5
Chiradzulu	63,150.5	33.1	3,028.6	0	5,114.4	0	3,433.7	10.4
Chitipa	91,618.2	119.4	241,988.5	0	88,278.1	95.5	965.4	84.6
Dedza	252,168.1	1,921.2	97,746.3	7,266.3	22,501.8	774.7	4,719.8	1,168.6
Dowa	204,345.5	0	28,066.8	0	19,864.7	3,817.4	2,594.0	0
Karonga	74,019.2	0	222,503.2	0	43,330.2	174.1	1,666.8	2,530.4
Kasungu	383,556.7	6,892.1	285,784.8	12,382.2	114,293.1	0	3,388.1	93.2
Likoma	0	0	168.6	0	1,516.4	54.0	0	0
Lilongwe	468,926.4	6,036.5	80,022.9	12,252.7	24,719.5	442.0	23,989.5	344.7
Machinga	194,370.6	211.1	80,893.4	164.2	85,255.7	0	2,381.2	15,980.1
Mangochi	301,137.3	517.6	280,357.7	1,121.6	36,216.0	4,260.8	16,896.8	5,015.6
Mchinji	149,036.4	929.4	13,661.3	42.1	13,838.8	0	1,367.1	26.3
Mulanje	191,389.8	9,896.9	33,666.6	436.8	32,977.2	5,340.9	6,562.7	331.8
Mwanza	49,852.4	0	32,595.3	0	0	0	248.8	179.0
Mzimba	485,749.5	6,802.9	475,788.9	29,318.6	38,613.1	9.6	6,807.2	1,816.8
Neno	88,179.7	0	71,441.5	0	31,463.5	0	408.9	697.7
Nkhata Bay	115,769.5	52,334.2	200,586.0	2.3	67,016.4	368.0	863.7	755.5
Nkhotakota	112,486.8	134.2	293,843.3	1,581.0	18,987.6	341.9	2,362.4	3,631.1
Nsanje	86,496.5	1,130	88,843.2	4,216.3	30,660.8	191.9	10,483.1	2,701.6
Ntcheu	212,995.3	273.0	61,628.2	221.4	27,794.2	1,398.9	16,531.2	235.5
Ntchisi	169,019.6	0	43,060.4	459.4	6,408.2	0	2,937.6	0
Phalombe	99,735.1	14.3	23,386.8	71.7	10,879.6	2,600.7	6,579.3	11,477.4
Rumphi	77,738.7	958.1	178,481.9	45,520.6	153,797.2	0	1,155.2	763.7

²² Study districts shaded in Blue

²³ Agriculture in terrestrial and aquatic/ regularly flooded land

²⁴ Tree Plantation

²⁵ Trees closed to open in terrestrial land

²⁶ Shrubs closed to open in terrestrial land

²⁷ Herbaceous closed to sparse in terrestrial and aquatic/regularly flooded land

²⁸ Bare Rocks and Soil and/or Other Unconsolidated Material(s)

²⁹ Urban and rural areas (including not built up area)

³⁰ Seasonal/perennial, natural/artificial, standing and flowing Water bodies

Salima	124,868.8	0	43,161.9	0	29,750.7	386.8	2,365.0	1,874.8
Thyolo	142,906.6	1,055.6	9,759.0	5,488.5	5,650.5	0	1,671.9	367.5
Zomba	167,082.6	317.1	5,713.2	268.5	28,079.1	419.5	7,908.8	12,787.6
LAKES								
Lake Chilwa (Machinga Dist.)	0	0	0	0	273.6	0	0	6,512.5
Lake Chilwa (Zomba Dist.)	15.8	0	17.3	0	291.5	30	0	56,976.3
Lake Chiuta	0	0	0	0	1,022.9	0	0	5,010.8
Lake Machinga	0	0	0	0	245.6	0	0	1,419.5
Lake Malawi	3,108.5	0	7,316.6	39.2	2,069.2	558.2	460.7	2,200,894.9
Lake Malawi (Chidzumulu Dist.)	0	0	0	0	0.7	0	0	0
Lake Malawi (Likoma Dist.)	0	0	0.1	0	0.8	0	0	0
Lake Malombe	38.8	0	0	0	478.1	0	12.4	30,805.9
TOTAL	4,775,231.2	89,890.4	3,164,299.2	132,320.7	1,061,047.2	21,269.2	171,438.1	2,369,061.4

Category of land	District		
	Lilongwe	Mchinji	Salima
Total Arable Land	626049	335600	300304
Cultivable arable land	574100	?	79624
Land under cultivation	333402	?	?
Land Under Forests	17259	21385	?
Customary	?	244271	168095
Estate (Leasehold)	?	91329	43560
Public	?		9025

Freehold	?	?	?
Salima			
Total Farm families	443670	?	?
Male Headed	308766	?	67562
FromFao 2013 total ag land	468,926.4	149,036.4	124,868.8