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**FOREIGN LAND INVESTMENTS AND THE SURVIVAL OF  
SMALL-SCALE FARMERS IN COPPERBELT PROVINCE OF ZAMBIA**

**BY**

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**THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS  
OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN SOCIAL  
SCIENCES (DEVELOPMENT STUDIES)**

**IN THE DEPARTMENT OF DEVELOPMENT STUDIES,  
FACULTY OF MANAGEMENT AND COMMERCE, AT THE  
UNIVERSITY OF FORT HARE**

**SUPERVISOR: PROF. A. RAHIM  
SEPTEMBER 2016**

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## DECLARATION

I, the undersigned **Bigboy Toro**, hereby declare that the thesis is my own original work and that it has not been submitted, and will not be presented, at any other University for a similar or any other degree award. Work from literature was written with citation of the relevant authors.

.....

Signature

.....

Date

## DEDICATION

This work is dedicated to my late father **Mr Aaron Toro** for the role he played in raising me since my formative years, helping me to create a vision for my future, encouraging me to learn and supporting my education. Although he passed away without seeing his fruits grow, this achievement is wholeheartedly dedicated to him. May His soul rest in peace.

## **ACKNOWLEDGEMENTS**

I thank my Creator for his guidance, protection, love and inspiration. With his endless mercy and care I have managed to accomplish this stage. Many people have contributed immensely to the success of my study in various degrees and capacities as indicated hereafter.

My heartfelt gratitude goes to Prof. Aminur Rahim, my supervisor, for being an outstanding and dedicated mentor. I am grateful for his tolerance, attention, leadership, productive comments and useful suggestions and support throughout the phases of writing this thesis.

To my friend Maxwell “Mhofu” Haurovi, every time we shared knowledge and information has always added value in advancing my intellectual capacity.

I would like to acknowledge the support I got from all my respondents in the Copperbelt Province of Zambia. Without the data gathered from the respondents, the mission of the study would have been impossible. I send my heartfelt gratitude for their willingness to sit for hours in answering my questions to the end.

A word of appreciation also goes to my wife Vathiswa and my son Tafari for their financial, social, moral and spiritual support during the course of this study.

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## LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
CUSA	Credit Union Savings Association
ICT	Information and communications technology
FISP	Farmer Input Support Programme
FRA	Food Reserve Agency
FSP	Fertiliser Support Programme
GDP	Gross Domestic Product
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ILO	International Labour Organisation
IMF	International Monetary Fund
LDC	Least Developed Country
MMD	Movement for Multi-party Democracy
MDGs	Millennium Development Goals
NAMBOARD	National Agriculture Marketing Board
NGOs	Non-Governmental Organisations
SPSS	Statistical Package for Social Sciences
SAP	Structural Adjustment Programme
SAPRIN	Structural Adjustment Participatory Review International Network
UNDP	United Nations Development Programme
UNIP	United National Independency Party
WLSA	Women and Law in Southern Africa
ZK	Zambian Kwacha

## **ABSTRACT**

This study was undertaken with the objective of examining the impacts of foreign land investments on the survival of small-scale farmers in Zambia. Nevertheless, the study generates knowledge, provides insights, raises awareness, suggestions and foster constructive dialogue aimed at designing and implementing more effective strategies and policies that would enhance agricultural productivity among small-scale farmers in Zambia. Small-scale farmers can play an important role in Zambia in terms of overcoming poverty, enhancing food security and stimulating growth in other sectors of the economy. Despite their potential, the Zambian government in collaboration with multinationals continue to stifle their latent potential by evicting small-scale farmers who are living on communal lands. Underpinning these foreign land investments is the longstanding failure of the Zambian government to recognise, in law and practice, the communal land rights of small-scale farmers.

Relying on the neo-classical property rights approach, the thesis argues that the creation of more secure property rights, and enforcement of these rights, is essential in motivating small-scale farmers to make the kinds of short and long-term fixed investments in their farms that will increase agricultural productivity and raise rural household incomes. Likewise, transformations which reinforce the property rights of small-scale farmers and ensure that their land cannot be alienated or otherwise used without their consent are necessary. Therefore, obtaining secure property rights is critical to rural development and recognition of small-scale farmers in the country's agricultural framework. Although, the thesis focused only on Zambia as the case study, the findings may provide an example for other Sub-Saharan countries on how to improve the tenure and productivity of small-scale farmers.

# **CHAPTER ONE**

## **INTRODUCTION AND BACKGROUND OF THE STUDY**

### **1.0. INTRODUCTION**

This chapter begins by tracing and describing the historical events or factors that influenced land tenure systems, agricultural development and food security in Zambia. The discussion covers a review of literature phased in three eras, the pre-colonial, the colonial, and the post-independence period. These three distinct political and historical phases in Zambia are associated with land tenure changes and have different implications on agricultural growth and food security of the country. The chapter proceeds to give the statement of the problem of this study. This is followed by research objectives, significance, and an overview of the research methodology which is further detailed in chapter 3. In addition, delimitations and outline of the study are presented. At the end, there is a compilation of the main ideas in the conclusion.

### **1.2. BACKGROUND OF THE STUDY**

Zambia is a land locked country in sub-Sahara Africa, with an estimated population of 15, 721, 343 million people and an annual growth rate of 2.97%” (Government of the Republic of Zambia, 2014). Although, the country has a great potential for agricultural development, food insecurity is increasingly becoming prevalent and a national disaster. The country has agricultural potential, with 43 million hectares (58%) of the entire land area considered as suitable for arable farming; yet only 6 020 000 hectares (14%) of this is at present being used (Government of the Republic of Zambia, 2014:11). Moreover, most provinces receive enough rainfall for the cultivation of various crops, despite recurrence of droughts in recent years

(Burke *et al.*, 2010). Some challenging sector is in the health department. In Zambia, the percentage of HIV/AIDS infections among men aged 15-49 years in rural areas ranges from 8.9 to 11.0 between 2001 and 2007 (National Aids Council, 2012). The HIV/AIDS pandemic is today's threat to agriculture and development in general in Zambia. Apart from reducing the human resource base, the pandemic also puts a strain on resources as government is forced to respond to needs of the infected and affected.

Zambia has a labour force of 3.4 million people on which 85% are employed in farming, 6% in manufacturing and 9% in services (Labour Statistics Branch of Zambia, 2010). Farming serves as the main source of rural income for the rural people especially women, who constitute 65% of the rural inhabitants and agrarian labour force. In Zambia, agricultural sector contributes 18-20% to Gross Domestic Product (GDP) and provides a livelihood to 50% of the population (Labour Statistics Branch of Zambia, 2010). In rural areas, farming employs about 67% of the national labour force. Agriculture remains the key source of revenue and employment for rural women, who set up a higher percentage of the rural populace (Labour Statistics Branch of Zambia, 2010). Therefore, the rise in farming revenue is likely to result in poverty alleviation and food security in the countryside.

With the unemployment rate around 50%, agriculture plays a crucial role as a source of livelihood or income for Zambians. The statistics also show that urban poverty at 34% and rural poverty stands at 80% (National Economic Advisory Council, 2012). Given that the highest levels of poverty are in the rural societies and small-scale farming is a vital basis of source of revenue and livelihood in most rural communities.

Therefore, funding of rural small scale farmers should be recognised as a primacy by the Zambian government in order to alleviate poverty and improve both national and household food security. Small-scale farmers are often regarded as key role players in achieving self-sufficiency in food and increasing economic growth in Zambia.

However, at present, Zambia spends only 5.8% of its national budget on agriculture (Kuteya, 2012), yet its agricultural production is still unstable, and it is characterised by low and stagnant yields. Currently, the government of Zambia is funding the farming sector below 10% of the total national budget which is a minimum requirement set by the African Union through the Maputo Declaration of 2003 (Mittal, 2009). This level and type of public investment in farming will continue to undermine the achievement of sustainable levels of agricultural growth necessary to improve household food security and protect rural families from escalating food prices. Hence, there is no substitute for large increase in agricultural support and investment that is required to facilitate the transformation of small-scale farmers.

Small-scale agriculture plays a central role in Zambian agriculture in relations of its contribution to rural people's livelihoods and to economic growth. While, there are varying characterisations, definitions, identification and measurement of activities of small-scale farmers, for the purpose of the study, small-scale farmers are those cultivating land and keeping livestock with a varied proportions to meet both sustenance and cash needs. In this thesis, the phrase small farmers is used interchangeably with small-scale farmers. Small farmers consist of about 90% of the farming populace in Zambia. They are mainly responsible for 40% and 60% of agricultural output (Bertow, 2007) but because of their dependence on rain-fed

agriculture, poor produce marketing arrangements, reduced access to agriculture inputs and bank loans, their productivity is still poor. These small farmers are frequently among the poorest and most marginalised in development assistance and investment terms. If given adequate financial and non-financial services, small-scale farmers can play a critical role in poverty alleviation and food security. Policies and programmes to realize an agriculture led development should be embraced by giving highest priority to small-scale farmers.

Given the previous emphasis on Millennium Development (MDGs) in the last decade especially the halving of poverty and hunger by 2015, there was need for a massive and direct investments to Zambia's small-scale farmers as an effective and efficient way realizing those goals. Kirsten & Machethe (2005) argue that encouraging small-scale farmers remain an effective approach to alleviate rural poverty and income dissimilarity. In trying to stimulate and funding small-scale farmers, the Zambian government, private sector and non-governmental sector need to unite in the provision of land, water, financial capital, market access, extension services and provision of inputs, for instance fertilisers, hybrid seeds and pesticides.

In addition, transforming small-scale farmers often require thoughtful modifications disturbing the entire political, social and established structure of rural communities. Without such alterations agriculture growth will expand the already substantial gap between the few rich property owners and the multitudes of poor small-scale farmers and landless labourers (Todaro & Smith, 2009:453).The absence of change within these structures and institutions will limit small farmers' ability to turn farming into a viable livelihood and increases their vulnerability to weather and economic shocks and stresses.

The ambivalence towards small farmers' agricultural growth and land tenure system was expressed differently in pre-colonial, colonial and post-colonial societies, depending on the particular local configuration of economic activities and interest. In pre-colonial society, small farmers' right access to land and other natural resources were usually dependent on their attachment in communal groups or their loyalty to traditional leaders (Berry, 1988). When a person is accepted by the community members in the chieftdom, he/she was permitted to clear the land in the preparation for farming and settlement. Such person, however, does not personally own the land, but enjoyed its usufruct.

On the other hand, the traditional leaders did not personally own the land either, but hold it on behalf of the community (Kay, 1964). The land was owned by the communal as a whole. This does not mean that every member of a descent group or community enjoyed access to land on equal terms, or that land use was communally controlled. For groups who held equal entitlements to land in principle, the exercise of those rights in practise often led to negotiation, conflict and intervention of local authorities (Bates, 1976). For outsiders access to land depended on negotiating membership in the group or acknowledging the authority of its leaders. The actual exercise of rights was liable to changes in the political structure of the group or in its relation with outsiders, quite apart from any change in patterns of land use per se.

In the pre-colonial times of Zambia, community members were allowed to develop the land that they have been given by traditional leaders. They were also free to make settlements, graze their animals and gather wild fruits. These undertakings were done by community members in order to encounter the needs of the family.

These activities were necessary for family survival. During those periods, it was expected as Yudelman (1964) contends that everyone one was with his own land for farming and settlement. However, the land did not have an exchange value but rather a usage value. The large quantity of land and a small population guaranteed that the natural and land resources can be accessed by community members devoid of any or much restriction. Individual households were responsible to meet there own necessities of living. Poor households were also helped by the social capital set-up in relation to sharing and redistribution of agricultural inputs, knowledge and food, among kinsfolks (Colson, 1963). It can be contended that even though these precolonial communities were exposed to unpredictable weather conditions, to locust attack and tribal battles, they displayed an impression of flexibility and community members enjoyed relative food security at subsistence level.

In relation to femininity over land, *Women and Law in Southern Africa (WLSA, 2001)* observed that land was distributed to men as they are cultural regarded as the head of the family. Women enjoyed perpetual usufruct rights in their different capabilities as nieces, daughters or wives. In patrilineal societies such as Namwanga and Ngoni of eastern Zambia, traditional chiefs only distribute land to men. In these tribes females were not given land and did not accede to it in their own rights. Specifically, land belongs to men directly. Man has complete rights over property and land, with the spouse having only farming rights and rights to standing crops and harvest if they split up. The traditional leaders may distribute land to a single, divorced and widowed woman especially if they have children, but would not give farming land to a wedded woman in her personal right.

Conversely, in matrilineal societies, women's rights to land are safeguarded. This was the case amongst the Lamba and Bemba who reside in the Copperbelt province which is the study area. In matrilineal societies, women have complete property ownership both in livestock and land. Women in these societies can also own cattle, goats and sheep. However, White (1960) observed that men inherited property and land through both oral and written wills of their fathers instead of the traditional inheritance taking place matrilineally in according to the Lamba and Bemba custom. Under the current Zambian law, partners and their offspring have equal rights in inheriting property and land. In this regard, inheritance for man and woman are the same. Surprisingly, this is not well-known as there is little indication of this development happening in the real world, particularly in the countryside (Kachika, 2011).

It should be recognized that pre-colonial societies change as time passes. Land ownership and communal relationships were not fixed but changing (Mvunga, 1980). Although customary land tenure was undoubtedly the ancient way of persons and societies are connected to property and other natural resources, it experienced continuing adjustments with the ticking of the clock. With population growth, changes in technology, land usage and political relations, societies underwent a gradual modification to meet the new rising needs (Kajoba, 1998). These inside changes interfaced with exterior imposition of foreign and colonial statute, steered to the rise of market driven commercial relations encompassing the freehold land ownership in Zambia (Mvunga, 1980). Regardless of these ongoing transformations which produced complex agrarian social constructions, the usual traditional system did not entirely vanish. The traditional set up was resistant and continued to be the most dominant system of owning and property and other natural resources. This system

ensured sustenance, livelihood household food security, in most precolonial communities.

With the colonisation of Zambia by the British in 1889, the main purpose of colonialism was to get cheap African labour and extract raw materials to feed the growing manufacturing industries in Britain. Africa was taken as market place for the manufactured goods coming from Britain. In precise the central focus was on the extraction of mineral resources such as gold, diamond and platinum. While on the other hand alienating land for commercial farming by settlers (Amin, 1972). Through judicial system, the British colonial administration took full rights and dominion over all natural resources and land. Colonial officials established a land tenure system that essentially provided separate categories of landholding for indigenous Africans and European settlers.

Crown land was reserved for British settlements and commercial developments, whereas Reserves and Trust land were absolutely planned for native African people and interests (Bruce & Dorner, 1982). Consequently, colonial authorities in Zambia left the customary law to be implemented in unoccupied and vacant lands. The customary law endorsed by colonisers, was a law based upon mutual or communal tenure administered by traditional chiefs. The colonial administration operated as guardian of the land. In order to reinforce colonial domination over these spaces, traditional leaders were often made into a colonial puppet and involuntary endorse colonial rules in contrast to their societies' best interests. When brave and powerful traditional leaders refused to join forces, new traditional leaders were selected by the colonial administration irrespective of any genuine rights of the communities they were representing (Chanock, 1991). In reality the colonial administration have

defined and detailed control of the powers and the customs being enforced by the traditional chiefs in communal lands.

In crown land, individual tenure system was applied as prescribed in English law (Okoth-Ogendo, 2002). Economically, this improved the use value and exchange value of the Crown land. From the early days of the British South Africa Company rule in Zambia, officials hoped to attract European settlers, and they went far to evict Africans from large masses of productive land as to make room for them (Vail, 1977). The land earmarked for them had the best soils, improved infrastructure and was close to the regions with high food demand. Unlike in Zimbabwe and South Africa, a settler colony never materialised because those who did take the land were so few to create a local market for African labour and too isolated to produce for distant urban markets (Palmer, 1973). The colonial officials had to ignore the local agriculture to stimulate cheap supply of labour for the mines. Commercialisation of agriculture was not arranged for black farmers as the colonial masters' panic of decreasing the number of people moving from the reserves. The colonial rule produced few large white commercial farms and the bulk of the agriculture resources were spent on them (Wood & Vokes, 1990).

Commercial farming and mining were the first forms of foreign land investments that continued until today. Foreign land investments are based on a lasting interest in taking a large degree of control over land use rights in the form of lease, concessions or purchase. An important stimulus was the support given by the colonial governments in securing land rights (Metcalf, 2006). Settlements took place at the expense of the local people who were removed from their land and resettled in arid lands. Thousands of farmers were dispossessed of their land and

subjected to strict controls of the colonisers (Gondola, 2002). Those people who were forced off their land had no option other than to become labourers in white commercial farms.

To increase revenue and to push black Africans out of subsistence agriculture and into wage labour activities, a hut tax was enforced which was to be paid only in cash. The colonial administration used the hut tax as a way of forcing black Africans to give or submit their labour services to the mines and commercial farms. This contested with black African livelihood of participating in their traditional subsistence farming which is common in most African rural areas (Mainga, 1973). This made it necessary for local farmers, most who were involved in subsistence farming, to find a source of monetary income, either by growing cash crops or becoming wage labourers. Through this enforcement, the colonial regime gained access to a wide pool of cheap labour. This occurred at the cost of indigenous small-scale farmers as white commercial farming brought little to local populations but rather filled the “pockets” of the corporate owners (Dinham & Hines, 1983).

During colonial era, reserves come to be the main source of labour created for white commercial farms and manufacturing industries on the crown land. To guarantee continuous labour supply, the colonial regime did not create favourable policies to promote rural industries or black entrepreneurship (Colson, 1971). These developments have remained and continued in post-independence Zambia. Prospects and opportunities for wage employment continue to be limited in rural communities because of limited financial investments, poor infrastructure, limited services and lack of rural entrepreneurship (White, 1963). Even though, prospects

and opportunities were much higher on the crown land than on communal land, joblessness was also much bigger on the previous because of the widespread of rural to urban migration which has outstripped the capacity of employment creation.

Labour restrictions, policies and strategies used by the colonial administration generated susceptibility of rural communities as food and agricultural production systems were undesirably affected. Rural reserves which were set aside for black small-scale farmers experienced overcrowding and congestion by both livestock and humans (Chileshe, 2005). This congestion led to land degradation which led to successively poor harvests. National and household food security worsened because of the failure of small-scale farmers who continue to use subsistence methods production which were based on the shifting cultivation. As a result, local people had to resist the concept of reserves and this provided motivation for struggle of independence, particularly in predominantly agricultural based rural areas (Berry, 1993).

Tension between European officials and African farmers focused not only on land ownership, but rights to change their place of residence at frequent intervals and to renegotiate their relations with traditional chiefs (Richards, 1983). Both agriculture production and social structures in the country were predicated on frequent changes of residence and village memberships. In most areas actually occupied by Africans, the viability of agriculture depends on farmers' ability to organise their own movements' in order to improve both levels of output and methods of cultivation.

Fearing that a scattered mobile population would be difficult to tax and administer and that dispersal would erode the authority of chiefs on whom they sought to build

their own administration. The colonial officials tried repeatedly to stop dispersal of farmers who practised shifting cultivation (local known as *citemene*) and concentrate the rural population in large reserves (Svads, 1983). The colonial officials argued that *citemene* farming system that has been formerly employed to withstand their production cannot any longer efficiently work owing to population pressure and conservational concerns. Contrary, agronomists discovered that *citemene* fields produced much higher yields than could be obtained under any other available method of cultivation, making it unlikely that farmers would readily abandoned the practise (Svads, 1983).

The colonial government efforts to consolidate and stabilise rural settlements actually disrupted people's access to land and injected 'new uncertainties' into agricultural systems where food security was already tenuous (Amin, 1972). As well, colonial authorities repeated efforts to relocate people tended to interrupt labour supplies and farmers' access to their fields. The combined effect of colonial administration methods and labour migration on the rural areas was not simply to extract surplus, through taxation, underinvestment, and the exploitation of cheap labour but also to increase the unpredictability of access to food supplies and the means of agricultural production (Berry, 1993). It is likely that the disruptive effects of forced settlement and large scale labour migration took their toll on total agriculture production.

Permanent commercial agriculture started to increase while shifting cultivation comes to its extinction. Communities started to make stable or permanent developments on land such as brick houses, cattle kraal, boreholes and fences. Others started purchasing tractors, ploughs, cultivators, scotch carts, hybrid maize,

chemical fertilisers and pesticides introduced by white commercial farmers (Chapoto *et al.*, 2012). Chipungu (1988) argues that the majority small-scale farmers accessed these new technologies by borrowing from wealthy kinsmen neighbours. Therefore, social networks or social capital improved and enhanced agricultural development and transformation. This was stirred by the diffusion of colonial statute and the introduction of modern equipment and better methods of farming. These transformation and developments happened in spite of the negative effects of taxation, labour restrictions and creation of black African reserves.

In the years immediately following independence, the Zambian government set out both to rectify the injustices of colonial policy and to create an institutional apparatus for mobilising the rural population politically and economically. Hence, newly elected government seeks to restore smallholder agriculture which was marginalised during the colonial era (Jayne & Jones, 1997). It was believed that if African black farmers were given access to agricultural inputs and services on the same terms as the colonial government had supplied them to European white farmers, then agricultural output would grow, and rural income distribution would become more egalitarian (Wood & Shula, 1987).

President Kenneth Kaunda with his United National Independence Party (UNIP) adopted economic policies that focused on nationalisation and centralisation of power. During this period development of agriculture was undertaken by state owned and controlled agencies. Zambia basically became socialist motivated and amplified government intervention in the market through subsidisation, supplying key of inputs and the controlling of prices (Howard & Mungoma, 1996). The policy objectives

behind such agricultural development system were to achieve food self-sufficiency, equitable distribution of wealth as well as secure political support from electorates (Wood, 1990). Drastic state intervention inherited by the new elected government was seen as the perfect vehicle to archive the national objective of ensuring food security. The benefits of state intervention for white commercial farmers during the colonial period spawned the belief and confidence that the same approach could also help the wellbeing of millions of small-scale farmers if it was purely intensified.

Credit facilities were made accessible to small-scale by government supported financial organisations like the Credit Union Savings Association (CUSA) and the Lima Bank. The National Agriculture Marketing Board (NAMBOARD) was the one responsible for buying, transporting and storing crops such as maize (Roth, 1995). This marketing structure was characterised by excessive price controls through state fixation of producer and consumer prices and pan-territorial pricing for both agricultural inputs and produce (Mason *et al.*, 2012). Such a policy was aiming to reduce the social economic inequality between urban and rural areas by increasing income in the rural areas while maintaining low food prices for the urban population (Wood, 1990).

The effects of national policies on agricultural production and rural incomes have been uneven. Price policies proved erratic and marketing services were not efficiently run. As the Zambian government's financial and administrative problems mounted, the supply of services to the farmers became increasingly unpredictable, even for the well-endowed and well connected. As well, the distribution of agricultural inputs and marketing done the national boards or parastatals were documented as

being unproductive (Bwalya, 1980). Shortages of key agricultural inputs such as hybrid seeds and failing credit institutions became noticeable obstacles to agricultural production in Zambia.

The national food self-reliance or self-sufficient that had been expected for by the Zambian government did not transpire, regardless of heavy state intervention. Financing the expensive system of subsidisation of the agricultural sector had become more difficult. Policies supporting excessive state control of markets proved to be economically inefficient and unsustainable. In the end, government institution and policy initiatives failed to raise agricultural output or strengthen the rural sector. This was exacerbated by the collapse of the world copper price in 1974 which plunged the Zambian economy into a prolonged recession (Wood & Shula, 1987). The continued declining copper prices upon which the economy was depending and increase in oil prices made it increasingly difficult for the government to sustain the subsidies. The subsequent declines in foreign exchange earnings and government revenue resulted in deterioration of agricultural marketing and input services. Consequently, Zambia once a net exporter of maize was importing half of the nation's domestic consumption (Berry, 1993).

The Zambian government experienced severe economic constraints and endlessly suffered debt as fiscal deficits and balance of payments became enormous. Government boards became operationally inefficient and unprofitable as they only fulfil "social" functions like buying the staple crop (maize) at above economic market prices in rural areas (Gibbon, 1996). Faced by this economic crisis, Zambia required assistance from the International Monetary Fund (IMF). Conditional loans given by

the IMF required the government to cut food subsidies, reduce government spending and devalue the Zambian currency, the kwacha. Despite a short improvement the country continued to see high inflation, a drop in jobs, a lack of foreign exchange, and an increasingly large debt burden. The government risked losing political support especially the urban population as they no longer had funds to subsidise food in order to keep consumer prices low. These policies were abandoned in 1987 due political patronage and riots that erupted in response to food price increase. Widespread protests eventually made the Kaunda government capitulate to political pressure, cooperation with the IMF was terminated and pre-reform policies were re-introduced (Sinkamba, 2005).

In 1991, the Zambian people were dissatisfied with the performance of the reforms thus far, they voted for Fredrick Chiluba under the Movement for Multi-party Democracy (MMD) party. Like many other developing countries, the government of Zambia was pressurised by the International Monetary Fund and World Bank to adopt structural adjustment policies to address the economic crisis. The new government pushed liberal policies, in expectation of a more competent and efficient private sector led economy. The government also allowed the participation of the private sector in the agricultural growth and development of the country (Chabala & Sakufiwa, 1993). The Movement for Multi-party Democracy government targeted at wholly liberalising the agricultural sector involving credit provision, input supply, production, processing, and marketing, and still expected that the new approach could assist in improving agricultural productivity and ensuring household and national food security.

In practice, at a macro level, this approach involves freeing interest rates, trade liberalisation, freeing of exchange rate, removal of subsidies, abolishing government price controls and government agricultural parastatals as well as the marketing boards (Evans, 2001). This also calls for the removal of all autocratic and extreme state participation in the running of the economy. The role for the state under the private sector led agricultural sector is chiefly to structure policy and arrange an investors friendly environment. The invisible market forces were to determine prices of agricultural produces. The agricultural policy during Structural Adjustment Programmes (SAPs) phase aimed at ensuring food security, increased production of agro-based raw materials, increased agricultural exports, generation of income and employment through increase in agricultural production (Saasa, 1996). Increased private and donor leverage also resulted in the state losing control and authority over the country's agrarian policies.

Reforms aimed at market and trade liberalisation affected many rural households, especially those in remote communities. In precise, the unavailability of rural markets for input and credit that trailed liberalisation seriously hurt small-scale farmers. Unavailability of key agricultural inputs and a failing credit institution suppressed the potential of the national agriculture (Sitko & Jayne, 2013). Previously, the agricultural sector enjoyed free or low interest loans from the government. Eliminating controls on government agricultural credit and its pricing has meant that small-scale farmers have to contend for credit with big private investors in the country.

Besides, small-scale farmers suffered from policy shocks as sharp increase of interest rates and key inputs prices made it challenging for them to borrow and pay

back their loans (Schoneveld, 2014). These shifts in policy had negative repercussions on household food security and weakened the flexibility of countryside communities as a whole. Moreover, decline in state funding on communication and transport infrastructure development exacerbated difficulties faced by small farmers in ferrying their harvest to the market. The outcome was that the majority of poor rural farmers were not capable to exploit their farming potential and experience. Inputs also became more expensive and hence the use of fertiliser and hybrid seeds reduced, leading to a decline in production (Deininger & Olinto, 2000). Therefore, these changes had a dramatic negative effect on small-scale farmers as rural poverty continued the upward trend.

To rectify the problem, the government under President Mwanawasa adopted commercialisation and privatisation of the agriculture sector as a strategy of fostering agricultural growth and poverty alleviation. The government embraced the notion of statutory leasehold in order to improve their land tenure policy and agricultural production. The land policy pronouncements are done through the Land Act of 1995, declaration by the president and statutory instruments by the minister of Lands. Under the Land Act of 1995, the law provide conversion of communal ownership into leasehold ownership in the form of 99 year lease (Government of the Republic of Zambia, 2006). Communal land is turned into state land and then sold or leased to foreign land investors.

When allocating land to foreign investors local chiefs need to give their written consent before they surrender their land rights to give his approval to convert this land to state land. It must be taken into consideration that under the current land

ownership, the land taken by the state cannot be changed again to customary land (Kapijimpanga, 2003). Once the land is controlled and owned by the government it is not possible for small farmers to regain control. The state conversion of communal land to individual or leasehold ownership carries magnitude of challenges for ensuring the legal protection and recognition of communal land rights. This situation gives numerous threats to the majority of small-scale farmers who live and rely on communal land.

During the last decade, Zambia attracted a large number of foreign land investors and is planning to attract more in the near future. In 2011 it was projected that the Zambian government could market at least 1.5 million hectares of arable land to foreign investors (Oakland Institute, 2011). This has been facilitated by the Land Act of 1995 which sought to transform communal to lease or individual freehold. Brown (2005) argues that the change of customary land tenure to leasehold tenure has the potential to create insecurity about the future of the commons and customary land in Zambia. The impact on small farmers can be particularly acute as they lose access to common resources to which they hold traditional ownership and which are vital to their livelihoods. Several opinions exist on whether customary land hampers agricultural development or offers a vital safety net for poor families.

The phenomenon of large scale land acquisitions has taken place across the developing world in Latin America, Asia and Africa. In Africa (excluding Zambia) large scale acquisitions have been on increase in Ethiopia and Mozambique. A study done by Riedel & Sommerstein (2011) in Ethiopia, finds that peasant farmers continue to be displaced as the government is implementing policies that encourage

investors to lease land for commercial agricultural purpose. Ethiopia attracts foreign investors with its cheap labour and fertile land. Foreign land investments have both have both positive and negative impacts on peoples' welfare. This is due both to the complexity of measuring welfare and to the intricacy of the investments and their varying effects on different components of the society.

A study by Clements & Fernandes (2012) in Mozambique shows that foreign land investments have led to dispossession and disenfranchisement, and an inequitable and increasingly concentrated system of land ownership. This has threatened the country's food security and thus national sovereignty. The benefits of Mozambique's model of agrarian capitalism have been relatively few, while the impacts on the country's rich biodiversity and forests have been devastating. It is within the scope of this research project to assess whether this transfer of customary land from small farmers to foreign investors is the best way for Zambia to develop the productivity of its agricultural sector and to ensure food security for the country.

### **1.3. PROBLEM STATEMENT**

Agriculture is crucial in overcoming poverty, enhancing food security and stimulating economic growth. But improved agricultural growth requires a rise in productivity increase with more active support to the majority surviving as small-scale farmers. Despite that, most of the Zambian small-scale farmers rely on communal land which lacks clarity, recognition, security and legal protection from the government. As a result, with insecure property rights, small-scale farmers continue to be displaced and dispossessed from their communal land by outsiders. This has made it challenging and hard for small-scale farmers to take part fully in the agriculture

growth framework and ensure national and household food security. This has also been exacerbated by poor marketing arrangements, depleted infrastructure, lack of credit facilities, extension services, irrigation schemes and critical inputs such as fertilisers and hybrid seeds.

Given this scenario, the Zambian government had to pave way to foreign land investors who are held to be more efficient in farm management, access to modern technology and financially stable to intensify agricultural production. Even so, these land investments also involve risks of undesirable socio-economic impacts in Zambia, especially for the mainstream of rural small-scale farmers who live and depend on communal land for their livelihood. While there have been much potential benefits of foreign investors in agricultural, they have resulted in increased competition between privatisation and communalisation of land and natural resources. This is a threat to small-scale farmers, a sector that make up a larger share of the rural poor and vulnerable in Zambia. Given this background, important questions arise: Can foreign land investments provide food security or can small-scale farmers take up the slack? What land tenure policy should government put in place to safeguard the livelihood interests of the small-scale farmers, while at the same time promoting agriculture development? Do foreign investors acquiring land in Zambia lift people out of poverty or do they aggravate livelihood opportunities of the small-scale farmers?

#### **1.4. OBJECTIVES OF THE STUDY**

The aim of this study is to assess the implications of foreign land investments on small-scale farmers in Zambia. To achieve this aim, the study attempt to investigate the following objectives:

- To examine the impacts of foreign land investments on the survival of small-scale farmers in Zambia.
- To identify challenges and prospects of small-scale farmers in Zambia.
- To ascertain the extent to which the Zambian land tenure system provide small-scale farmers security of rights.
- To explore possible policies and procedures that can be used to support small-scale farmers improve their productivity.

### **1.5. HYPOTHESIS**

H<sub>0</sub> Foreign land investment is a threat to the survival of small-scale farmers in Zambia.

H<sub>1</sub> Foreign land investment is not a threat to the survival of small-scale farmers in Zambia.

### **1.6. SIGNIFICANCE OF THE STUDY**

Since independence in 1964, there has been some interest shown in small-scale farmers' and agricultural developments in Zambia. Some of the notable works is by Oxfam (2013), Hiller (2007), Chileshe (2005) and the International Food Policy Research Institute (2004). A report by Oxfam (2013) noted that small farmers have failed to raise agriculture to a commercial level because they are hindered by poor infrastructure and marketing support. Then again, Hiller (2007) argued that reliance on rain fed agriculture have become an impediment to rural small farmers success in agriculture. Hiller (2007) concluded that erratic rains and consequent droughts have lowered the output of most small-scale farmers in Zambia. Whereas, the International Food Policy Research Institute (2004) observed that lack of rural

financial markets, poor infrastructure and irrigation schemes, lack of access to land, famine, and the HIV/AIDS epidemic are major obstacle to the growth of the small-scale farmers. In addition, Chileshe (2005) finds that customary tenure system provide reasonable security of land tenure, social and economic benefits to small farmers and village community.

Despite all their work, a substantial knowledge gap remains as the above studies did not focus specifically on the impacts foreign land investments on small-scale farmers and agricultural growth in Zambia. The study, for that reason, attempts to make contributions or add knowledge and fill in gaps left by other researchers. In light of this, it is increasingly crucial to study further the nature and impacts of foreign land investments on small-scale farmers in Zambia. Regardless of substantial mass media responsiveness, the phenomenon of foreign land investments is so current that detailed records of the nature, extent and its consequences is still evolving. This study contributes to the emerging literature on foreign land investments by highlighting their effects on small scale farmers in Zambia.

Consequently, this study generates knowledge, provides additional insights, raise awareness, understanding, suggestions and foster productive discussion among farmers, farmer organisations, civil societies, local government authorities, policy makers, rural organisations, bilateral and multi-lateral institutions, and international communities concerned with improving agricultural development in Zambia. This may result in the crafting and applying more effective policies and strategies that would enhance agricultural productivity among small-farmers in Zambia. The aim is to produce a conducive investment atmosphere in which small-scale farmers can

conserve their land entitlements and succeed and prosper alongside secure investments and country's socio-economic growth and development.

The study generates information as to whether the current approach of foreign land acquisition is the best approach for the country's agricultural development and food security. The research findings however, justify whether other nations should adopt similar programmes. Other societies elsewhere may have an opportunity of learning or gaining knowledge from the experiences of small-scale farmers in Zambia. Again, it is also hoped that the study lays the foundation for further research in rural development and its contribution to small farmers' sustainability. The study is expected to be an eye opener for future studies in related field.

### **1.7. OVERVIEW OF RESEARCH DESIGN AND METHODOLOGY**

Research methodology is the systematic, theoretic enquiry of the body of approaches and principles linked with a branch of information (Henning, 2004). It usually includes ideas, patterns and theoretical approaches used to explore and understand a certain phenomenon under study. This study has adopted and applied the mixed research methodology to investigate the impacts of foreign land investments on small-scale farmers in Zambia. This was achieved by using both quantitative and qualitative research methodology. Integrating or combining these methods was necessary in order to advance a broader understanding of the problem, to match, validate, or triangulate outcomes and to examine experiences along with results (Clark, 2010).

Conceptually, quantitative research is an approach encompassing the usage and examination of mathematical data using statistical methods (Bryman, 2008). This

methodology is designed to produce statistically trustworthy information that tells us how many individuals do or think something. While, qualitative research is a broad method that pursues to investigate social phenomena to gain a deeper understanding of actions and views of individuals and societies. A salient strength of qualitative research is its ability to gain socially detailed information about the beliefs, ideas, actions, and social settings of specific people. By including a qualitative research in mixed research method, the researcher can study the meaning of human lives, experiences and interactions in specific, everyday settings (Marshall & Rossmans, 1999). Qualitative research gives the personal experience of the respondents, and the meaning the respondents ascribes to the phenomena being studied.

The study also used archival documents as data a data collection tool. The use of archival documents helped the researcher in getting vast amount of literature from accredited sources such as the United Nations, World Bank, documents, books, human development reports, government official documents, previous research reports, and journal contents, publications and statistical reports, as well as non-governmental documents and reports.

In this survey research, the researcher used observations, questionnaires and interviews with small-scale farmers who have been evicted and dispossessed by foreign land investments in the Copperbelt province of Zambia. After the end of each interview, the researcher administered a standardised questionnaire to them. This triangulation was done to increase the validity and reliability of research outcomes. As well made the study use focus groups interviews with selected small farmers to

find out their views on impacts of foreign land investments as well as exploring opportunities and challenges they experience.

Key informants including traditional chiefs and government officials from the department of Lands, Natural Resources and Environmental Protection were also interviewed. The methods of sampling that were used are purposive and snowball sampling. In addition, this study used content analysis to code and interprets respondents' perceptions in a way that reveals meaning and coherence. The crucial duty during data analysis was to classify common themes in individuals' descriptions of their lived experiences so as to finally deliver an overall explanation of the phenomenon as perceived through the eyes individuals with actual experience. A more comprehensive discussion on the research methodology is provided in Chapter three.

## **1.8. DELIMITATIONS**

This study has a number of delimitations, which should be taken into account when ultimately considering its findings. Delimitations are those factors that limit the scope and define boundaries of the study as determined by the cognisant exclusion and inclusion choices made by the researcher (Simon, 2011). While results from this study may be used to reflect on the general outcome of foreign land investment impact on small-scale farmers in Zambia, the conclusions have been limited to the results drawn from a study of farmers in Copperbelt Province. The researcher was drawn back by possible constraints that centre on availability of time and accessing the latest documents on foreign land investments in Zambia. However, despite these limits; the study provides a useful starting point for investigating the impacts of foreign land investment on small farmers in Zambia.

The period of data collection was quite challenging in that small-scale farmers were starting clearing their fields and their work was gradually becoming intensive. From the onset of the first rains in mid-November, farmers became very busy in their fields. Such an environment could have affected the concentration of the informants during interviews as well as made data collection quite difficult. However, the researcher was patient enough to interview participants on days and times when they feel free from their duties or activities. By this arrangement there were few disruptions during face to face or focus groups interviews. Moreover, this enhanced the flow and process of data collection.

### **1.9. ETHICAL CONSIDERATIONS**

The crucial aim of the study is the construction of first-hand information and it is imperative that this procedure is done with honesty and rigor. O'Leary (2004) elaborates that social researchers are in a powerful position of producing new information and this process goes alongside obligations and responsibilities expressed as ethical considerations. Ethics in research simply refer to modes of right conduct of an investigator from study design, data gathering, and analysis of outcomes to publication of study findings and execution of any other responsibilities (Mikkelsen, 2005). Moral concerns are vital in safeguarding the reliability of the information produced and dignity and security of the participants. In this study ethical values were discussed with research assistants before beginning field work and the succeeding ethical issues were considered in data collection.

Ethical aspects of research were considered by informing the selected small-scale farmers, government officials and traditional leaders about the contents and purpose of the research before their participation. Thus, the objective of the study was

achieved through informed consent. Ensuring participants have given informed consent is very significant in social research in order to respect human rights and prevent emotional damage to respondents. Participants were told of the purpose and nature of the study, how the gathered data will be used and types of events that they would be involved as well as rough calculation of time of the study.

Permission was sought from all participants, both verbally and through a written and signed consent form, to take notes and tape record the discussions. Myers (2009) states that informed consent is an important ethical principle in research. The respondents were also repeatedly reminded of their involvement as being voluntary and the right not to answer questions they sensed might be an invasion of their private life. The researcher clearly gives details to the participants, what is the aim of the research and gives them an opportunity to withdraw at any time. Approval to record the discussions and meetings was as well requested. The process of getting approval was done to guarantee that respondents involved are interviewed freely and with sufficient knowledge of what the research entails. The study also used the traditional leaders of the villages to inform people about the research. Such information was provided in the local Bemba language.

The study did not expose participants to any damage, be it mental, emotional or physical. The researcher also ensured that no one was harmed, embarrassed or endangered their family, work or friendship if they revealed such information. The principle of confidentiality was dominant in ethical considerations of the study. This includes shielding the identity of participants who were providing field data to the researcher. Use of pseudo names to avoid the infringement of secrecy, confidentiality and anonymity was conserved at the maximum level possible

throughout the research. The researcher was aware of protecting the respondents' interests, well-being and his or her identity. This was done by ensuring that the researcher and the readers of the completed study cannot recognise a given answer to a particular participant. The researcher does not release information in a way that links it to certain individuals but presented results in an aggregate form such as themes and categories. Assuring anonymity has had the effect of increasing accuracy and quality of the responses. The data to be collected is used purely for academic purposes without defaming any character.

As plagiarism can be a very serious form of ethical misconduct, the researcher acknowledges the source and includes a citation of the information obtained. The study employed the principle of honesty about the data, findings and research methods on the claims of creating original knowledge or discovering important insights. The researcher abides to the universal code of respect and ethical principles of the University of Fort Hare. Respect was also given away to all the respondents, their opinions and genuine gratitude for their time and treasured information. Display of respect contributed a lot to building bond and shared trust between the participants and the researcher.

## **1.10. LAYOUT OF THE THESIS**

The study consists of five chronological chapters. Each chapter contains a synopsis of the main aspects of the discussion in order to maintain the flow of ideas from one chapter to the next as detailed hereafter.

**Chapter One** is the opening chapter that gives the historical background of events or factors that influenced land tenure systems and agricultural development in Zambia. In effect chapter one covers the problem statement, study objectives, the significant

of the study, the study delimitation, ethical considerations and ends with the study lay out.

**Chapter Two** develops the theoretical framework of the study. The chapter helps explicitly show various theoretical frameworks gathered to attain the study objectives, response to the study questions and solve the identified problem in the area of study. Hence, the study uses the Classical Marxist theory on peasantry, Chayanov's theory of peasant economy, Lew's dual economic model theory and the Neo-classical property rights approach. The Neo-classical property rights model was used to guide and examine the impacts of foreign land investments on the small scale farmers in Zambia.

**Chapter three** presents the research design and methodology. The chapter explains the appropriateness of the mixed research methodology adopted for the study. This chapter describes and justifies why mixed research methodology was suitable to collect field data from the participants and why purposive and snowball sampling was the right way to go in terms of selecting participants. Also, the chapter describes how data was analysed in the study. Lastly, particular attention is paid to social structure, location, climate and physical features, demographics, and the economy of Zambia.

**Chapter Four** focuses on the practice and analysis of land investments and agricultural development. This chapter discusses the findings presents in the preceding chapter and draws conclusions from the collected data in the field. The chapter then goes on to focus on the analysis and interpretation of the presented data and information in line with the research objective and questions.

**Chapter Five** details the critical evaluation of the study. The chapter summarise the main outcomes of the research. As the closing chapter, it makes some concluding

remarks of the study as well as making various specific implementable suggestions and recommendations aimed at improving policy to address the conditions of small scale farmers in Zambia. Areas of further research are also presented in this chapter.

### **1.11. CONCLUSION**

The chapter has showed clearly that the main concern in this study is the impacts of foreign land investments and existence of small farmers. It has explored the historical background of Zambian land tenure and agricultural productivity. The history of Zambian agricultural growth has shaped their presents. Agriculture within the country is strongly knotted to its past that was characterised by unequal relationships between the settlers and the local small-scale farmers. Efforts have been made by the post-colonial governments in addressing colonialism legacy injustices, but the battle is not yielding much. This chapter indicates that various issues or factors that have contributed in defining and shaping small farmers' productivity and foreign land investments.

The chapter also elaborated on the moral obligation of the researcher regarding observance of the ethical considerations of the study. Indeed, researchers face an array of ethical requirements which ensures the protection and security of research participants. The researcher accepts the universal code of respect and ethical principles of the University of Fort Hare. To conclude, research methodology was a critical component of the study as it provided the framework for conducting the research. The following chapter develops a theoretical framework which is used as guideline in the gathering of empirical and theoretical data to sufficiently attain the research objectives.

## **CHAPTER TWO**

### **THEORITICAL FRAMEWORK ON PEASANT ECONOMIES**

#### **2.0. INTRODUCTION**

Zambia is regarded as a country with different and unique land ownership regimes as well as structures of societal organization meant for production, which have deep theoretical insinuations and raise interesting questions concerning to agrarian developments in the country. However, small-scale farmers have been marginalised in most agrarian transformation. The chapter examine different theoretical frameworks to give explanation on the operation and the livelihood of small-scale farmers in Zambia. As there is no exclusive theory for a peasant economy or a single theory that gives a complete review of small-scale farmers, the study will use the Classical Marxist theory on peasantry, Chayanov's theory of peasant economy, Lew's dual economic model theory and Neo-classical property rights approach.

#### **2.1. A CRITICAL REVIEW OF THE RURAL ECONOMY**

Most rural areas in Africa are controlled by various property rights or land tenure regimes which administer how community members get access to land and other natural assets. Equally, property rights do have influences with regard to agricultural development, acquisition of inputs, credit facilities and food security (Feder & Feeny, 1991). Property rights are also important in the way households choose their livelihood strategies and activities. Property rights in land tenure systems can be categorised as follows: communal property, private property and state property. Each one of these land tenure systems has its own physiognomies in relation to its exclusivity, transferability, inheritance, and administration mechanisms. These land

tenure systems consist of rights, privileges and accountabilities of resource use and administration by groups or individuals within a community.

Under state property regimes the stewardship of natural resources and land is entrusted in the state. This means the state owns, manages and is entitled to income generated from the resource (Amanor, 1999). In order to overcome colonial land policies, most African countries, which had gained independence, nationalised the land and exercised direct state influence in the administration of land and its resources. Nationalisation of land was often meant to enable governments to implement their programmes related to distribution and social objectives or allocation efficiency and modernisation. However, nationalisation of land is likely to force farmers and the banking sector into a huge crisis as land is being used as security for loans. This will limit farmers' access to credit facilities. As a result, this will hinder production and drive farmers out of the agricultural sector. These arguments are proven by comparing the agricultural successes in South Africa with the agricultural crises in Zimbabwe.

In contrast to state property regimes, resources under private property regimes are owned and managed by private persons and legal persons such as corporations or partnerships (Bruce, 1993). Such owners are entitled to exclusive rights of income generated from the resource. This type of property ownership is more dominant in Western societies. While ownership and management of resources under state property regimes are vested in the state, private property regimes are owned and managed by individual entities. The property owner has the right to use the land and resources on it within the limits of the law and has the right to exclude others from

resulting revenues. In addition, the owner of private property has the right to trade, to bestow, to give away or to rent and to give secondary rights to third parties.

Under communal private rights are given to a well-defined or specified group. Such a group uses the land and other natural resources collectively in accordance to well-known and commonly recognized rules (Feder & Feeny, 1991). In most African countries, traditional leaders act as custodians of communal property. The property-owning group is usually a social unit living in an area with defined boundaries under their own system of authority. Communal property resources are used by groups or individuals but they are individually owned and are used under some prearrangement of group or society administration (Shackleton *et al.*, 1998:7). However, one of the main problems with communal property in Africa is that it lacks legal recognition and security from the national governments.

Farmers cultivating and grazing in communal lands seek to intensify their activities without taking responsibility for the decline of the pasture or degradation of the soils. Communal property in Africa has been undermined by the inability of rural small farmers to coordinate their actions. It is in this desire for self-interest that the tragedy of the commons arise (Hardin, 1986). This links resource degradation to communal system management of land and suggests that sustainable management of the resource base will only come about through the promotion of private property. This will ensure that those who benefit individually have to pay the costs of their actions. In the next section, four theoretical frameworks used in this study will be discussed.

## **2.2. LEWIS TWO SECTOR MODEL OF RURAL DEVELOPMENT**

Lewis two sector model was one of the early approaches to rural development and became the common theory of development process in surplus labour developing countries during the 1960s and 1970s. The Lewis two sector model enlightens the process of economic development which assumes that unlimited labour supply encourages economic growth (Ranis, 1988). Lewis (1954) argues that the economy comprises two sectors a rural, agricultural and subsistence sector and an industrial, urban and capitalist sector.

The rural traditional agrarian sector was anticipated to be of subsistence or just for survival in nature, consisting of low production, low incomes, low savings, low investments and surplus labour (Stiglitz, 1976). In the rural sector, the population density is relative to produces and natural assets that the minimal productivity of labour is low or zero. In most rural areas there is visible underemployment and unemployment, which results in a possible pool of labour supply to the industrial sector. This additional labour can be taken from the rural agricultural sector devoid of any loss in the productivity of this sector, however, it improve the agricultural output per unit of household. Urban centres offers chance for better living conditions for poor people in rural areas. As a consequence of this characteristic, surplus labour from the rural areas is assumed to be available to the urban sector at unlimited quantities with a fixed wage rate.

The capitalist sector was expected to be scientifically progressive with higher levels of investments and savings effective in an urban setting (Leeson, 1979). In this approach, the heart of development effort lies in the regular changing of magnitude of the economy from the rural to urban sector. This shifting is continuous. This kind

of a process can be measured in relation to the migration of people between rural and urban in order to encourage a steady growth of industrial production and employment.

A rudimentary explanation provided by Lewis, (1954) stresses that the rural migrant is motivated to move from the rural to urban area because wage rate in the urban areas exceeds those in the rural agricultural sector with the urban wage having an additional 30% inducement, an inducement that Stolyarov (2007) calls an added premium. At this rate, the urban employer can expect to have an unlimited supply of labour as a result of the fact that wage rate in the rural sector is at equilibrium at a level below that of urban sector. The majority of the rural people migrating to the urban areas are those who are young and energetic, leaving the rural area with women, old people, disabled and children. This has a negative effect to rural development as the active youths are taken from the traditional sector. In contrast, justification subject on upper urban standards of living may not be relevant in other poor developing nations, but hope that urban areas will at least deliver a pool of opportunities may be more comprehensively appropriate.

The surplus labour will migrate from the traditional sector that is highly labour intensive to the industrial sector that is more capital intensive. Lewis (1954, cited in Stolyarov, 2007) points out that the result will be increases in labour in the industrial sector followed by accumulation of capital. Industrial sector employment and rural labour transfer is attained by production in that sector. The rapid economic expansion is determined by capital accumulation and rate of investments in the modern sector (Taylor & Martin, 1999). The capitalist will accumulate wealth by saving and reinvesting the excess profits. Investment and surplus labour supply

assures that both employment and investment growth grow at the highest level (Hirota, 2002). Such savings and investments are made achievable by a surplus of urban sector profits over wages on the belief that capitalists will reinvest all of their returns. This development remains until the supply of extra labour in the agricultural sector is completely exhausted (Vollrath, 2009). As a result rural excess labour will disappear as they are absorbed into the capitalist sector.

These two sectors would expand to a point where the wage incentives, which encouraged labour migrations, no longer existed. Increases in total output and income reaches to a point where marginal produces of the agricultural and industrial sector are equivalent. These two sectors integrate and increase the levels of development for the country as a whole. Ranis (2004:714) comes to the same conclusion about the Lewis model, noting that the model is concerned more with the reallocation of labour up until such a point when organisational duality is transformed into organisational homogeneity. This turn of events would lead to the complete commercialisation of the entire economy, a process known as the *Lewis turning point* (Fei & Ranis, 1964:10). Additional labour migration beyond that point would occur at a cost to food outputs in the rural sector. In any case, once all surplus labour has been absorbed by the urban sector, the country's economy would have been industrialised and would be producing modern goods and services. In a virtuous causal cycle, this would increase productivity, profits, economic growth the savings rate, investment, and ultimately the standard of living.

Some criticisms have been levelled against the Lewis model. Firstly, the assumption that labour transfers and rising employment in the modern sector occur

proportionally to increasing capital investments could never be accurate in cases where producers do not reinvest profits in labour intensive production methods. The fact that it makes sense for capitalists to reinvest their profits in technologically intensive productions where higher profits are likely means that the economy would most probably experience economic growth without increasing employment levels (Rosenzweig, 1988). Profits from the urban sector will be saved and reinvested in more labour saving machineries rather than just replicating the remaining capital as it is assumed in the Lewis two sector model.

The gap is widening between the rich and poor, urban and rural in least developed countries (LDCs). This is at the outset of the economic growth which can be explained by this approach. As the approach illustrates, the investors profits increase at the expense of workers whose wages are kept low and constant despite the privilege of economic growth. The wider the gap between the capitalist and the wage worker, the more capital is accumulated. Profits collected are used to accumulate more capital and are never distributed to the workers.

Reinvestments or redistribution of profits are simply the impediment of the process of economic development. This unequal or uneven circulation of capital is open to more enlightenment of labour exploitation. Regardless of theoretical explanation of the approach, the reality of most developing countries has not followed the central focus of the model. The approach is Eurocentric and was founded on the basis of European historic economic development. Thereby, the actual and critical problems such as agricultural stagnation, poverty, inequality and urban unemployment in developing nations were never raised in the Lewis two-sector model itself.

Then again, profits made by the capitalists are in fact never reinvested in the rural or local economy but are sent overseas as a system of capital flight that is added to the deposits of European banks. So, if capital is not to be reinvested into the local economy, then there would not even be local economic growth to begin with. In addition, to all capital accumulation and production expansion, the benefits are distributed to few capitalists while wages and employment levels for the majority of workers remain mostly unchanged. Even if the total Gross Domestic Product (GDP) would increase, there would be slight or no development in collective social welfare measured in relations to widely distributed improvements in employment and revenue (Lawrence, 2004).

The model was also criticised for being too simplistic in its assumptions and approach. The model ignored important factors in development processes, such as the role of informal and formal institutions in economic transactions for growth and development (Leavy & White, 2003). Lewis two sector model, although it is important in explaining development processes of structural transformation, sectorial relations, necessitates amendments in analysis and expectations to fit the reality of modern day developing countries.

The model's core assumption of unlimited rural labour surplus, which existed alongside full employment in urban areas, also became highly questionable. The approach maintains that the marginal product of labour in rural areas remains low or zero. There are both geographic and seasonal exclusion to this rule. Historical evidence showed that even though there may be high levels of unemployment in traditional sectors, the urban sectors of developing countries were also characterised by high unemployment rates. This has created an urban surplus labour, as the urban

sector fail to give formal employment to the rural people. As a result of unrestricted labour is not general or steady in the agricultural sector and not in great demand at all in the industrial sector because of sophisticated labour saving machines. In the end, the mutual relationship between capital accumulation and labour transfer breaks down.

World Bank (2013) maintains that developing nations must be in a position to accommodate, an additional 2.7 million between now and 2050, as people move in unmatched numbers from the rural sector to follow their expectations in the urban sector. Extreme rural to urban migration has led adverse impacts on developing countries overall development. This has led to the growth of shantytowns and regions with intense pressure or limited access to basic services and urban infrastructure.

According to the estimates of United Nations at least 860 million people are living in shantytowns throughout the developing countries, with number of slum inhabitants rising by six million each year from 2000 to 2010 (UN Habit, 2012). In Sub-Sahara Africa, slum dwellers are projected to be rising at 4.5% per year, projected to double every 15 years (Max *et al.*, 2013). These statistical projections clearly show that the urban sector is incapable to absorb and accommodate the unlimited labour supply from the rural areas. The speed of socio-economic growth in the urban sector has not been corresponding to comparable growth of infrastructure and social service amenities.

Alternatively, with adequate land rights rural people are able to increase investments without waiting for the expansion of the capitalist sector. Rural communal land ownership discourages both short and long term investments that can contribute to sustainable poverty eradication. Therefore, sound property rights, and equitable access to land can also help in raising rural revenues and reduces the national income gap. Farmers who have obtained secure land ownership are likely to capitalise their full energy and effort, to make both short and long term developments devoted to the land, or to interchange it with others who are in a position to make the best use of land. As a result this will increase agricultural productivity and certainly encouraging the creation of a vibrant non-farm economy. The government should play a crucial role in the provisions of fertilizers, hybrid seeds, farm equipment, infrastructure and markets. This can help rural areas to be self-sufficient and not to rely on trickle-down effect promised from the capitalist sector.

### **2.3. CLASSICAL MARXIST THEORY OF RURAL ECONOMY**

Marx (1957) regarded peasantry as disorganised and incapable to increase agricultural production and market additional produces to feed the rising population. The peasant system of production is treated as a temporal form, believed to vanish with, but also creating a challenging obstacle to economic transformation of production in the farming sector. The theory implies the elimination of small-scale farmers both as direct producers and social actors (Byres, 2003). This is as a result of commodity relations and concentration of private property in land, which would end in the growth of capitalist agriculture and separation of the small-scale farmers from their indigenous land (Mann & Dickinson, 1978). The small-scale farmers would be progressively squeezed until they are forced into property-less wage labour,

forming the agricultural reserve army. This will in turn force small-scale farmers to experience a difficult livelihood in urban areas where they create the source of cheap labour.

At the hands of the capitalist farmers, small farmers would give up their farms and in order to survive they will have their labour exploited as wage workers. First, labour is converted into a product and in the final, means of production become capital. This gives rise to an increasing social differentiation which disintegrates into the two social classes of rural wage labour and capitalist farmers (Marx, 1957). This change occurs by dispossessing farmers through outright displacement from the land. Such outright dispossession is possible only if the affected peasant classes lack the necessary legal property rights or the political power to resist. Where this is not the case, market forces provide an alternative mechanism of differentiation.

The advent of marked differences in rural wealth arises from the everyday workings of highly imperfect markets. However, this may force peasants to engage into multiple non-farm economic activities that include craft production, rural tourism; transport and entrepreneurship in order to sustain their livelihood. Individuals follow a variety of livelihoods throughout their working careers and occasionally at the same time, in order to increase their revenue. This also creates better avenues of enlarging household revenue by using labour time which is no longer needed on the farm.

The peasants are considered to be not revolutionary, but conservative. In this way, the great masses of peasants are seen like potatoes in a sack forming up a sack of

potatoes (Marx, 1957). Despite peasants sharing similar conditions of existence, they are isolated from one another rather than forging social relations between them. The individuality of their interests produces no national connection, no community, no political establishment among them, so they form no class (Marx & Engels, 1969: 478). Hence, peasants cannot represent themselves but they must be represented.

Peasants are also spatially dispersed which does not contribute to organised radical action. Consequently, they are an unconscious group that cannot see outside its own individual protection of their meagre farm land. Thereby, they are incapable of representing their own interests; they must rely upon others, who then become their masters (Marx, 1957). The peasants lack class consciousness to take a revolution on which they can forward their class interests. In order for peasants to become a self-conscious identity group, it is necessary for a deliberate process of identity formation to take place.

The divorce between the conditions of labour and the producers make capital to rise with primitive accumulation in the country side. It subsequently appears as a continuous process in the concentration and accumulation of capital of bringing to the centralisation of wealth already present in few people and the decapitalisation of many (Cox, 1986). Through the process of primitive accumulation, a home market for capital is also simultaneously created. The home market is created because the labour power itself becomes a commodity. Production will be done for market and the resources of production of the peasants will be free to be bought and sold. The huge majority of the farming population will no longer appear on the marketplace as suppliers of food products but as suppliers of labour power and consumers of food products.

In a capitalist world, small-scale farmers experience most terribly the paradox of breeding themselves as both capital and labour, and may cut their food intake to extreme levels in order to buy inputs, repay debts and retain possession of a small piece of land (Bernstein, 2009). Thus, even emerging rich peasants establish and reproduce their commodity enterprises at the expense of their neighbours who are poorer farmers. The peasants are unable to meet costs of operating their farms and bear their risk of losing it to those who can. Furthermore, the law of economic development act among different individuals regularly changes peasants, who once have their own means of production into small capitalists who exploit the labour of others.

The agriculture sector will be commonly administered by monopoly capital, regularly multinational and devoted to the distribution, processing, and production of agricultural products for both international and local markets (Araghi, 1995). This will allow the large commercial farmers to enjoy economies of scale at the expense of the peasants who will be losing their means of production and turned into farm labourers. As it was in the industrial revolution in Europe, the use of wage labour in the agricultural sector is significant in raising agricultural productivity (Marx, 1957). Likewise, the small-scale farmers will be squeezed out of vanish and they will be turned to wage workers as the countryside economy became commercialised.

The primary requisite of a capitalist society is that a bigger number of the population must not enjoy self-dependence that would permit economic freedom. People are obliged, to stay alive by selling their labour for a living wage (Harrison, 1979). As a part of this process, agricultural production has been getting reorganised so that it

becomes less like peasant production geared to simple reproduction and subsistence. It increasingly comes to resemble capitalist production in general, oriented to expanded reproduction, with the re-investment of profits into further accumulation (Bryceson, 2000). These activities form the foundation of the economic structure of capitalism, where economic activities are organised around re-investment in order to realise economic profits. Conversely, underdevelopment is created in the rural areas as economic surpluses generated by capitalists will be reinvested elsewhere. This capital flight has reduced financial resources available for productive investments in most rural societies.

Alternatively, Lenin (1967) holds a different view on peasant farming. Lenin (1967) argued that the “bourgeois” farmers continue to react to development of profit-oriented, commercial agriculture and accumulating capital by exploiting wage workers. The poor peasants will not prosper in satisfying family sustenance needs every season, and had to opt to loans refunded in labour for the capitalists’ farmers. Equally, the wealthy peasants who own property such as iron ploughs, draft animals and other means of production in the rural areas; they could be found also purchasing or leasing the land of insolvent poor peasants. This has led to the depeasantization in the countryside. The predicament posed by the peasantry, they are an obstacle to the full development of capitalism.

The rise of new bourgeoisie, the kulaks, provided an incentive to the growth of a capitalist market. The *kulaks* are rich peasants, able to sell produce on the market as well as employ hired labour. The market for the means of production, such as improved agricultural implements, hybrid seeds, fertilizers, credit facilities were

provided by the *kulaks*. These bourgeoisies are to the forefront in raising the growth of commercial agriculture and capital accumulation in the rural areas (Lenin, 1967). The development of commodity relations also mean peasants would soon be out-competed by the bourgeoisies in the commodity markets (Bernstein, 2009). This will bring the separation of capital and labour in the country side.

According to Lenin (1967) there was an opportunity of new customs of agricultural capitalism emerging, which were not solely wage labour type. The capitalist estates would turn their occupants into paid labour and removing occupants who became additional to the requirements. In this transformation, traditional set up of leasing will be eliminated by the property owner as they attempt to protect the management of their farms (Patnaik, 1979). Formerly occupants were given free access to subsistence small farms and to use other resources of the landowner. However, much of this traditional system will be substituted by a tight contract in which everything will be given a current economic value. Estate owners replace tenant labour with paid labour and again with written job contracts. Nevertheless, the landlords continue to give their workforce a small subsistence farm for self-sustenance, if they had surplus land of no economic value.

The landlord will operate with small permanent workers who were supplemented by seasonal labour picked at peak times. Contracts were nevertheless, be given on a yearly basis and the mainstream of share croppers were employed from the position of permanent workers. Moreover, estate owners often continue with structures of rental farming built on share cropping together with any direct farming which was done under the landowner supervision by wage labour (Lenin, 1967). This process

was less liberal than relations grounded on peasant differentiation as the last would give a faster scientific development while the first may continue with ancient structures of labour exploitation as the source for profit throughout a prolonged conversion period.

Departing significantly from classical Marxist notions of agrarian change, Karl Kautsky sees the development of a symbiotic and complementary relationship between family farms and large capitalist holdings with the former providing the latter with a supply of cheap labour which enables the big farms to maximise profit as labour reproduction is borne entirely by the peasant household. Kautsky (1988) argued that small-scale farmers will keep their own land even though they supplement their earnings through seasonal work from larger commercial farmers. Therefore, the rise of big commercial farms and their dominance over small-scale farms does not cause the dissolution of the latter. Lacking enough land to sustain them, peasant households are forced to trade their labour but are not dispossessed of the means of production. Kautsky (1988) also finds that smallholder agriculture is not an obstacle in commercial agricultural development or something meant to vanish but remains as a way for the social reproductive of standby army of wage workers. Small scale farmers and large scale farmers end up being crutches for each other.

Although small-scale farmers have remained a key instrument of poverty alleviation in most developing countries, their productivity has been disappointing. While Africa missed the last Green Revolution, in the 1960s, the potential for improving yields remains low as the bulk of small-scale farmers, who are already poor, depend on

tools and implements of a primitive nature, with little or no access to modern inputs (Sachs *et al.*, 2004). Additionally, small farmers lack access to irrigation, hybrid seeds, fertilisers, market, infrastructure, extension services and credit facilities. This situation has made it difficult for Africa to feed itself, remains a net food importer and continues to rely heavily on food aid (Kariuki, 2011). This position has also thwarted African industrial revolution.

Small farmers, have the potential to develop African economies by providing a pathway to establishing manufacturing industries. The fruits of the African Green Revolution will also incentivise development in interrelated businesses. Therefore, unlocking the potential of small farmers in Africa is a basis for industrialisation, which will need policy interventions to promote the needed investments (Kariuki, 2011). There is need for policy framework that balances agricultural and industrial production, that is sensitive to local food security along with global demands, and that stabilise the competing interest of large commercial farmers and small-scale farmers will be vital.

Today small-scale farmers is a population hustling for existence. They are tight fighting to control and manage the essential means of production in order to meet their survival needs. Small-scale farmers are left from the traditional system that used to give them hope of growth and development. The 1.5 billion people who rely on small farms worldwide need access to secured land rights, credit, markets and agricultural inputs so as to transform from subsistence to commercial farming (World Bank, 2007). Increase in productivity and improvement in production of peasants

would not only increase their revenue and food supply, but also kindle the rest of the economy and contribute more to rural development.

Above all, classical Marxist theory faces critique as there is evidence of non-accumulation of capital in the peasant forms of production. Capital may fail to accumulate in the peasant economy not as a result of lack of stimulation among peasants but because capitalists mode of productions continually compel peasants to social reproduction through the capture of an extra labour created (Hagemann, 2009). This exacerbated by the devaluing of peasant work emerging from the invention that drops the price of agricultural products.

The theory slip up by inserting excessive weight on the inescapability of proletarianisation without giving consideration to the internal forces of peasant household, one of the key elements for understanding the mechanism of transformation (Perelman, 2001). Even though there has been significant progress in capitalist infiltration with commercialisation of agriculture, there is also generous proof of peasantisation. At the same time, there is diligence and reproduction of peasant units of production, which continues to be a key source of subsistence for most communal areas.

Even in situations where the mainstream of rural labour wage earners and landless, many still preserve their value of peasant virtue of their ties with the peasant form of existence of their rural communities (Harris, 1978:9). The maintenance of these ties enables many rural inhabitants to straddle the line between the self-sufficient smallholder and the rural proletariat. This can be interpreted as a form of resistance against capitalist penetration and being totally dependent upon wage earnings for

their subsistence given the precarious conditions of wage labour, job insecurity, low wages, seasonal labour demand and the constant threat of unemployment. In argument and discussion about peasant economy and its production processes, the Chayanov's theory has been put forward as an alternate to classical Marxist approach.

#### **2.4. THE DOMESTIC MODE OF PRODUCTION THEORY**

One of the prominent and comprehensive theoretical explanations of the domestic mode of production is by Russian agricultural economist Alexander Chayanov. The theory presented a logical analysis of the peasant agriculture as regards to its inner structure and its ability to survive in a capitalist system and reproduce itself indefinitely (Sahlins, 1972). The theory put more emphasis on perseverance and solidity of peasant methods of production in a capitalist social development. Even as the expansion of capitalism has eroded and exploited peasant economy, the agricultural sector would not be divided into wage earners and capitalists. The peasant population is able to reproduce the domestic unit, therefore giving a protection against capitalist invasion (Chayanov, 1966). From this view, the peasant economy has successfully resisted the powers of capitalist conversion, upholding a distinct type of peasant culture. The peasants' relations with the means of production create a particular method of production that has specific rules of consumption and production as well as some degree of solidarity (Hammel, 2005).

Peasant economy takes advantage of its internal resources in order to keep up its provisions and social reproduction under the pressure from outside structural changes (Lehmann, 1982). It is also important to understand that although peasant

societies rely on their internal structure for production and reproduction, they are also linked to market exchange in various ways. The existence of market exchange can exist in harmony with subsistence production. This does not entail that production has to be profit oriented like in the modern capitalist sense. Peasant communities are self-reliant in everything they produce and consume, but numerous peasant market exchanges are mostly exchanges of use value. This method of exchange is about satisfying household needs and not making profits as end in itself.

Chayanov (1966) maintains the change of countryside peasant economy does not create a source of social differentiation. The peasant mode of production theory argues that peasantry is not experiencing permanent differentiation but undergoing cycles of mobility. The disparities of farm size and farm income are explained by demographic differentiation (Ellis, 1992). The chief reason for differences in farm size is the demographic modifications in the family growth. Hence, social differentiation does not result in the peasant households to become proletarian on capitalist, as the classical Marxists have asserted.

The size of the farm contracts and expands as the size of the peasant household change with the departure and arrival of family members. As the youngsters starts to grow up and wed, the household will be divided, and the level of economic on the part of parental generation will slacken off, till the original spouse grow old and either die or join another household, typically that of one of their married children. Accordingly, the size of peasant farms move through a cycle of contraction and growth. This process is repeated in a steady fashion from one generation to the other.

However, many children who are below twelve years of age make little contribution to agriculture and non-farm work. Therefore, when a peasant couple start a family, there is a long period through which their consumer-worker ratio depreciates (Bernstein, 2009). There are more family members to feed, and these new members are unproductive till they are old enough to do household chores. In order to ease the consumption needs of the family, the active members must increase their level of self-exploitation or they may rent more land and hire a few extra workers.

At the core of Chayanov's theory lies the idea of peasant family farm as an important unit of economy, a system which is self-perpetuating and self-defining. The rural small farmers are concerned with the subsistence needs of the household and stuck between consumption and labour (Byres, 2009). The principle of consumption-labour balance has also been forwarded in Marshall Sahlins essay "The Domestic Mode of Production" in Stone Age Economics (Sahlins, 1972). In this scenario, the primary means of production is the family labour which determines the farm size and structure of the family. The consumption of peasant household defines the product of family labour and their degree of self-exploitation. Peasants exploit their own labour, thus, cutting back on work is economically more advantageous than receiving benefits from working beyond the minimum required sustaining a traditional level of consumption.

The ultimate level of productivity in a peasant family labour is therefore, defined in relations to use value rather than exchange value. The choices of what type of crop to grow and the amount of produces expected is influenced by their resource benefaction, and comparative prices, as would be the situation in a capitalist unit. It

is also determined by the composition and number by ages and sexes of family members (Marsden, 2003). The peasant families will work hard to obtain their minimum level of subsistence. After obtaining such subsistence, their labour input will decline sharply. Since they operate only with a primitive technology, the work on land is a physically laborious and tiring business. Peasants are reluctant to push its work beyond the point where the possible increase in output is outweighed by the irksomeness of the extra work (Chayanov, 1966). When family requirements continue unsatisfied, then the price of extra harder will be less than the gratification derived from producing a little more, as it takes much toil and sweat.

Even so, people do not simply have to cater for the demands of the bodies but they also have for the demands of their social relations. Marriages, burials and other social ceremonies involve an increase in household production. This social reproduction enables peasant families to reproduce themselves as social units over time by making a little more to fulfil their social responsibilities. The resources which are needed for social expenditures, which are necessary in a peasant society, may be a very significant percentage of society's total production (Mendola, 2007). Despite that, not all peasant household production of surplus is to do with fulfilling household demands in rural social life. Another, social root of surplus production is the point that peasant households are required to pay taxes to the government and lease or other payments to the landowners, churches and other governing institutions (Rosenzweig, 1988). A simple problem facing peasant households is how they can remain making a sustainable livelihood for themselves given all these other challenges upon them to create surpluses for other groups in a bigger community.

The bulk of peasant producers in third world countries are in a situation of lack of credit facilities, market, inputs, irrigation and scarcity of land for both agriculture and settlements. This usually does not allow them to make use agricultural inventions to any considerable extent. Instead of looking to raise production, the peasant households struggle to reduce the economic risks through the use of well-known traditional systems of farming (Marsden, 2003). These traditional systems and methods of farming have in common relatively low capital intensity, low level of technology, and a high level of labour intensity. Peasants usually accommodate this, apart from the point that they normally have no option, specifically because they reduce the economic risks as equated to modern capital intensive methods and high technology levels (Thorner, 1986). These traditional methods signify the best offered alternate, a sensible option built upon their own experience, knowledge and resources.

In many scenarios the peasant family is caught in a dire situation. Peasant families lack access to the means of production, especially land, which stifle their labour power self-exploitation and impedes agricultural development. This generally puts their labour power in other forms of economic activities including; home-based production activities, trade and commerce, services and transportation. In this case, the families throw their unused labour into these non-farm activities in order to complement their agricultural income (Boyce, 2006). The change of economic activities both on farm and off farm has been a common reaction to the fluctuating environment of rural small-scale farmers. Small farmers have to turn into wage workers as to increase their revenue during seasonal peak periods and do part-time jobs in commercial farms during slack seasons. Moreover, activities done during the

lean period provide a significant contribution towards rural employment, income and poverty alleviation.

Additionally, the peasant economy is able to win out capitalist farming in intensive cultivation at a time of falling prices. A fall in economic activities causes an intensification of peasant labour, where a capitalist farm, on the contrary, reduce its production when the market is unfavourable (Johnsen, 2004). Due to the rate of self-exploitation, peasants can survive in time of deteriorating and low agriculture market prices. Peasant households or families have sometimes prospered in driving commercial farmers out of business using their family rather than wage labour. They produce extra and create a downward force on market values, to the levels which are unprofitable for the commercial farmers. The circumstances where the agricultural market price eliminate the earnings or even cause losses, may force the commercial farmers to stop production (Van der Ploeg, 2009). As a result a low market price for these agricultural produces becomes totally controlled by the peasants.

Chayanov theory has some stern shortcomings in explaining peasant economies. Chayanov confines his theory to the labour processes and does not consider the broader social relations of production and social processes of reproduction. The theory argued that production process of the peasant households does not mean exploitation of others, but is built on self-exploitation. However, the idea of self-exploitation masks true relations of exploitation and differences in the distribution of the collective produces within a family (Byres, 2009). The self-exploitation of peasant family labour is also based on the male exploitation of the labour of children, women

and other family members. In most families the husband is considered to be the head of the family, so he is the one who controls and manage family reproduction and production.

In Africa, for instance, there is patriarchal exploitation of the other members of the family at every economic level. Although women form a socially unifying labour, there developmental efforts are taken away by the paternalistic nature of our societies. The children create a stable army reserve of labour, till they reach a stage where they are in position to be given their socio-economic freedom. They can migrate to other countries, urban areas or other rural areas and become wage workers. In addition, family members may not be willing to work in a family business but rather choose to become a wage worker somewhere else. They can choose to work for nearby commercial farmers rather working on a small family farm. Other family members may choose to go to other countries for greener pastures. Hence, the head of the family do not control have control over family labour as Chayanov theory assumed. In these situations, the peasant family farm cannot increase its production without employment of non-family labour, and the Chayanovian theory ceases to be valid.

In some cases peasants cooperate within their societies. Mutual assistance among peasant households is normal in many diverse activities; interchange of labour, joint lending of means of production of different brands, exchange and borrowing of products. Such collaboration can take place informally or be suggested by a mechanical division of labour or by social customs, or the need to gather adequately great quantities of food. Therefore, the picture of peasant family as a self-sufficient

unit of making enough to fulfil the consumption demands of its family members starts to collapse (Hunt, 1991).

Due to the internal arrangement and to the incorporation with the capitalist market, the extra produced within the peasant economy moved to capitalist economy. As a result of the power of the market instruments, indebtedness, rather than capital accumulation, is one of the key features of the peasant economy (Mather & Jayne, 2011). In most developing countries, markets are controlled by government marketing boards, retailers or representative of agro industry. Agriculture state marketing boarding were initially seen as supporting associations, they basically ended up being powerful economic instruments for extracting surplus. However, they have extracted much from small-scale farmers than from big commercial farmers.

Besides, when the land market is inflexible or fixed the theory of demographic differentiation loses its meaning. Differentiation in demographic relations inclines to cover and give too little weight to the group or class differences in the peasantry and between the peasantry and other social groups and class. The peasant mode of production tends to be not self-sufficient, thereby forcing other people to look for alternative livelihoods in towns and cities. When the peasants are unable to be self-reliant they are likely to abandon their undertakings and become a wage-labour in the capitalist sector. This is likely to create a dual economy of the subsistence sector and capitalist sector. Although subsistence sector is dominant in rural areas surplus labour is driven to the capitalist sector because of improved job and income opportunities. However, many people lack training, skills and networks to participate in the job markets.

## **2.5. TOWARDS A THEORY OF SMALLHOLDER PROPERTY RIGHTS**

One of the important breakthrough theories of the 1960s was property rights economics, originally introduced in the work of Coase (1960) on social cost. The rationale behind the neo-classical property rights paradigm is the efficient functioning of markets. It stresses the importance of three principles: solid meaning of property rights, internalising of rewards and costs and freedom to effect property rights contracts (Coase, 1960). The approach advocates for a system of tenure embracing private property rights and a free market in land. The theory rests on a concept of the economy as a system of markets where buyers and sellers are free to buy. The exchange value automatically reacts to supply and demand through market mechanism.

Property rights results from social organisations that describe and define the range of freedoms given to individuals of owning specific resources, such as water, forestry and land. These property rights natures the motivation of individual use of resource. Therefore, they are vital for economic effectiveness and environmental maintenance. Individual rights to these resources may hold a range of property rights. These include the right to dismiss non owners the right to use; the liberty to transfer or trade these rights to others; and the right to take the money from leaseholders (Furubton & Pejovich, 1992). Property rights in a land tenure system must be well defined and must offer certainty of tenancy so as for income and capital maximisation to be attained. This needs the disintegration of rights in communities where these rights have been held communally.

Both neoclassical economic and Marxist theories assert that market development in land is prerequisite to development (Berry, 1988). The neoclassical economic theory

shows that, in a market economy, people who can use land more efficiently will buy land away from those who are failing to make productive use of it. Efficient users will engage in the bidding process and use the land in conjunction with other means of production to create the greatest benefit (Ault & Rutman, 1979). As a result, the creation of transferable and legally protected properties would encourage investments and productive use of resources.

Secure property ownership offer assurance to small-scale farmers that their investments will not be taken, thereby promising them to make both short and long term investments in their farms (Atwood, 1990). Secure property rights provide incentives to the owners and users of the resources to conserve valuable resources since they are guaranteed of the benefits that come from the resources. This allows small-scale farmers to make immovable investments as they are confident to recover the worth of the future revenue that would be produced by the investment. Anderson (2008) stated that property ownership define incentive individuals face for undertaking productive and sustainable strategies. They also control the degree and circulation of socio-economic paybacks from natural resources. Secure property ownership have positive implications in technology adoption, poverty reduction, economic growth, food security and environmental sustainability, hence overall development.

Nonetheless, land investments in Africa had been thwarted by poor soil fertility. In Asia during the Green Revolution, soil fertility was one of the rare factors limiting agriculture development. Asia had huge areas of fertile alluvial soils and inorganic fertilizers were available and also cheap because of agricultural subsidies by the

state. Most of Africa's agricultural soils are coarse and ancient, without adequate clay to hold and absorb moisture. This reduces the capacity of crops to effectively use soil nutrients. More than 75% of the total Southern Africa's arable land has serious soil fertility problems. African farmers are losing 8 million tons of soil nutrients per annum, projected to value \$4 billion (Sanchez & Swaminathan, 2005).

Meanwhile, few small-scale farmers in Africa are using mineral or inorganic fertilizers to repair soil condition because either they cannot afford to purchase or it is unavailable in the market. Sub-Sahara Africa (excluding the Republic of South Africa) uses only one percent of the global fertilizer supply (Henao & Baanante, 2006), while the whole of Africa only uses 8 kilograms for each hectare of cultivated land, much lesser than 143 kilograms per hectare in Asia (World Bank Report, 2008). Hence, it is essential for the government to intervene in providing fertilizers at a cheap and affordable price for the poor rural small-scale farmers. Also the application the application of organic methods such as green manure and cereal rotation with grain legumes are one of the most encouraging strategies.

Compelled to encounter the food demands of rising population, black African small-scale farmers have gradually abandon their traditional methods that reinstate soil fertility, such as leaving land unplanted for a number of years. Boserup (1965) emphasises that land fallowing is a labour saving strategy for reinstating soil fertility. This shifting cultivation improves nutrient-poor soils and allows forest vegetation regrowth. Furthermore, weeds, pests, and crop diseases will decline when this conservative farming is used (Toenniessen *et al.*, 2008). However, shifting cultivators faces huge challenge from outsiders as they lack formal land ownership rights.

Ownership rights are essential, but not alone adequate for enabling shifting cultivators to improve their agriculture productivity. There is need of government backing in providing financial resources, infrastructure development, marketing and other necessary agricultural inputs.

Advocates of the neoclassical property rights paradigm are of the view that the traditional African land tenure systems are ineffective in the distribution of resources because of their unclear property rights. The traditional tenure systems were incapable of providing security for land development since title could not be marketed or otherwise negotiated (Wood, 2003). When land is a communal or social construct, rewards and costs are not internalised because there are no enticements for mediators to properly combine it with other aspects of production to assure that the marginal benefits are being exploited. Norton (1998) maintains that since certain property ownership provisions can reduce transactions costs in production and exchange, they encourage investments to boost overall economic progress. Individuals, who own land attempt to maximise its current value by taking into consideration alternate future time costs and benefits and intent to maximise the current value of his/her privately owned land rights.

This evolutionary understanding of property rights is inevitable and natural response to growing valuation of the resource base. Thus, this school argues that stability and clarity of property rights, including their expression in land titles, are necessary for economic efficiency, both through creating incentives for the landowner to invest and ensuring a long time horizon to allow for long term investments to be carried out (Kisamba-Mugerwa & Barrows, 1989). Also, through the facilitation of land market

transactions that are expected to lead to economically optimal distribution of rights and optimal farm sizes.

The freedom to enter into land contracts is also regarded as an important economic aspect of a property rights regime. It is maintained that if a system of land tenure does not allow land transfers or sales through a market, it has the effect of reducing investment through a demand and supply effect. Through an effective system of land management, this includes; less land remaining idle, growth of land markets, arrangement for land dispute resolution, open buying and selling of land, and reduction of transaction costs (Barrows & Roth, 1990). A farmer who cannot sell his land because of tenure restrictions suffers a decline in the value of his investment because he loses the flexibility changing a fixed asset into another. This approach brings improvement in both the land use value and its exchange value to the benefit of the holder of the property.

Under secure land tenure farmers are more prepared to invest in land developments and sharecrop, lease or rent their land. In line with this thinking, free land market will enable those who can put land to its highest valued use to bid it from the less efficient users (Barrows & Roth, 1990). Land tenure insecurity increases uncertainty by the farmer as to whether benefits will be derived from investments made to improve the farm's productivity. This has the effect of reducing investment incentives, which results in preference for current consumption. A farmer in this case suffers lower capital accumulation and this in turn reduces the demand for variable inputs, which are complementary to capital. In addition, owners with secure property rights has the right to bequeath, to trade, to give away or to rent and to give secondary right to third parties.

Small farmers with secure land rights can land or other property as indemnity for loan needed to finance agricultural investments and other livelihood strategies (Pingali, 2007). The only asset that rural people can provide as collateral is their land but this requires the client to have secure right to land under which foreclosure is possible in the event the loan is not paid back. A land title certificate is normally required for commercial credit facilities. Thus, Meinzen-Dick *et al.*, (2007) assert that a farmer with secure legal land title is better positioned to access cheaper and long-term credit. In contrast farmers without secure land ownership face constraints in accessing credit from formal credit institutions. Still, most formal institutions prefer credit provision to large land holders over small-scale farmers, this have posed difficulties for the majority of poor rural people. There have been difficulties and costs associated with enforcing repayment of loans provided to small-scale farmers and these have resulted in the exclusion of small-scale by credit providers.

The identification of property rights is presented as a key characteristic a land tenure system that works flexibly and permits for sales and credit markets to develop, as well as incentives for investments through increased tenure security. People can sell and rent out the rights to their property when necessary and profitable. Holders of secure rights to land resources sell the rights and obtain windfall gains, especially when the prices of land are high and these people have invested this income in other agricultural activities to increase the productivity and gains (Norton, 1998). People with secure land rights can sell their land and pursue other profitable non-farm activities which include trade and commerce, entrepreneurship, arts and crafts.

Security of land ownership can advance the wellbeing of the rural people, in particular, by improving the asset base of women and small-scale farmers whose

land rights are often ignored. In sub-Saharan Africa, women make up more than 60% of small-scale farmers, and provide 70% of the labour force in the agrarian sector (International Labour Organisation, 1996). The absence of secure land ownership by women shows that they are victims of discrimination since land is regarded as the most crucial resource to women emancipation and their struggle for equality and equity within patriarchal societies. Due to the patriarchal nature of many African societies land under customary tenure is managed and controlled by thereby discriminating against women.

After the death of the husband who is the head of the family, his property including land is inherited by his sons or if they are young his family repossess everything. Traditional norms, cultural practises and customary law are used to validate the disinheritance of women (Rose, 2006). This also overrides the statutory provisions for women that may cover them with lawful right to inherit. The denial of property and inheritance rights to women leads to a million of women and their families in absolute poverty and become one of the chief cause and consequence of violence against women. In most cases, property including land is inherited by adult sons or repossessed by family if children are considered minors. Customary law, traditional norms and cultural practises are used to justify the disinheritance of women and invoked to supersede the statutory provisions for women that may provide them with the legitimate right to inherit. Hence, secure property rights is a critical issue in enhancing women's social status, economic well-being, empowerment, political power and participation in decision-making processes (Nugent & Robinson, 2002).

Land rights recognition alone is not a "silver bullet" (Bruce, 2012) for unleashing the productive potential of land assets. Land tenure rights more securely in the hands of

individual farmers after reforms are implemented. The set of property rights must be enforceable and enforced. In this sense, law and government have much to do in the evolution of defining and protecting property rights in the market (Place & Hazell, 1994). Thus, the proposal to use the market to allocate resources depends heavily on the state institutions and enforcement for the functioning of markets. The duty of the government under the new model, therefore has to be chiefly market friendly and to facilitate the operation of the markets. That is the government is anticipated to ensure competitive markets, bring about a steady macro-framework, invest in human development and organise safety nets for the rural poor and weak (Berry, 1988).

Markets operate within a framework determined by state to ensure equitable and secure property rights. Therefore, the state has to guarantee order within the rule of law, offers efficient regulation, macro-economic steadiness and corrects other market failures (Deininger & Jin, 2005). Land title deeds are likely to have less significance for ownership security where administration is frequently lacking, where there just a common mistrust in the formal rights and enforcement system or where there is a lack of dispute resolution instruments (Pingali, 2007). Then the duty of the government is to offer the frame within which the property rights system and the market works.

Current evidence on the impacts of land property rights mediations is to greater extent dependent upon government intermediation. To unlock the productive potential of Zambia's small-scale farmers, the government should intervene in the providing agricultural support and stimulating investments in the agricultural sector (Lawry *et al.*, 2014). To support the "Zambian Green Revolution," government

support is needed in providing fertilizers, pesticides, irrigation, extension services hybrid seeds, infrastructure, credit and an effective market system to small farmers. With a strong political will, such a strategy would eventually help to transform subsistence farming to mixed and diversified farming, and eventually to a profit investment venture which is closely linked to export oriented industrialisation (United Nations, 2007).

Yet, in some cases state interventions in property rights has only been destructive. The state creates unstable property right which have often been related to predation and plunder. The establishment of property rights by the state may be strongly influenced by interest groups rather than economic viability (Sjaastad & Bromely, 2000). Perpetuation of such tendency leads to state failure to establish secure property rights. This means that, generally, the state should be reluctant to reform the distribution of property rights because state interference would distort any equilibrium in the market, thereby negatively affecting stability and tenure security. The expectations that land market reform rules can be positive to the rural poor people, is by enabling interclass land market transaction. Rural poor people must not suffer a huge competitive advantage in the scope of marketing and production which affect their prospective for partaking in the land market (Feder & Feeny, 1993). If such a huge competitive disadvantage gap occurs, then neither politically realistic advance land taxation, nor placing the poor rural people on an equivalent transaction costs or secure capital basis with the rich, will accomplish the anticipated redistributive outcome. In the end poor people will still be incapable to get enough revenue to justify paying the market price for the land.

Given the points in the preceding section, the individualisation of land ownership is a more effective method of land tenure because it strengthens property ownership, therefore, decreasing costs such as lawsuit over land arguments and thereby permitting for maximisation of the benefits to the owner of the land. Likewise, it is claimed that individualisation of land rights will increase investment opportunities as land markets develop to effectively distribute land for production (Nugent & Robinson, 2002). Individual property rights also get more admiration from would-be investors outside the society. The outside investors are less willing to invest in countries where the tenure system does not provide enough and clear property rights. Secure property right have become a precondition for foreign investors throughout most of the world today.

The neoclassical property rights paradigm faces some criticism. The creation of individual rights has also led to social differentiation in most rural areas. This has led to land concentration and income inequality as wealthier farmers buy out poor farmers that could create a class of landless farmers (Smucker, 2002). Market centred economic reforms and privatisation have driven to a more concentration of foreign and local ownership rather promoting equitable land allocation, which benefits the majority of rural people. Similar to Kenya, individualisation tends to negatively affect the marginalised rural poor people, as rich and well politically connected individuals are in a better position to benefit for individualisation of land tenure system. Rich investors may use their power and financial influence to claim or be allocated productive lands already under cultivation by small-scale farmers.

Laws and institutions may also be influenced by those in authority to further secure their access to productive land, resources and institutional support (Boone, 2009). Oftentimes, when rules are written to safeguard the interest of the rural poor

people, government officials may choose to discourage the application of such rules so as to ensure that they never attain the planned redistribution of resources and power. Such processes have the potential of exacerbating natural resource conflict.

The legal process and administration can be expensive and are often unaffordable to poor small-scale farmers. The accrual of various fees in the judicial process and administration may sum to expensively high costs for the small farmer. Where state administration is done in towns and cities, resources, cost and time constraints may stop rural small-scale farmers from accessing them (Adams *et al.*, 2009). Administrative courts and offices may be located also in towns, far away from where the majority of small farmers live, requiring days of travel to reach them. Small farmers may not be able to stand the costs of travelling to offices and government courts, as they cannot abandon their work or occupation for the amount of time required to administrative procedure or trail a legal case to its end. In administrative circumstances, rules are frequently prescribed complex process with several phases to be assumed at different agencies. This involves the authorisation and signature of various actors in separate areas (Rama, 2013). In addition, creating property rights tend to be costly since it needs people to give time and effort in explaining the scope and extent of the right.

High illiteracy amongst the rural people reduces their capacity to understand administrative processes which are grounded on written papers and completion related forms (Tenaw *et al.*, 2009). Essential forms administrative procedure and legitimate proceeding may be written or shown in a foreign language that the rural small-scale farmers cannot speak, this completely excludes the rural poor from using

them. Essential legal proceedings and written administrative process may be conducted or written in a foreign language that the rural small-scale farmers cannot speak; this effectively precludes the poor from using them. As a result, only the educated and wealthy investors are likely to benefit in this transition from a system of communal ownership to a system of individualised ownership. This further dwindle the small-scale farmers capacity to ensure that their land and property are secured.

The conversion of customary land to individualised rights may be opposed by tribal elders, who see the shift as a damage of social values and as an effort to tap valuable rents away from the rural people. There are noticeable links between controlling resources and controlling people. Traditional chiefs want community member given land under their control as source of military, political and economic power. The change to private property ownership reduces the power of customary chiefs as arbitrators of land issues (Anseeuw *et al.*, 2012). The role of traditional authority is facing a collapse in many parts of Africa, as state and wealthy investors are emerging as major actors in land affairs.

In most rural communities such as pastures, forests and water sources may be shared by community practising varied livelihoods. People deserve to have access to use endowed natural resources set in lands shared by one community or village, and periodic access to common areas for hunter gatherers, pastoralists and sedentary small-scale farmers (Wily, 2012). Their communal rights include annual visits, passages to use land and other natural resources considered to be in the interior limits of another agrarian society. The introduction of private property will limit the access to shared and common pool resources.

Regardless of the various well-founded criticisms of the neo-classical property rights paradigm, it has demonstrated to be a valuable tool in analysing the impacts of foreign land investments and the survival of small scale farmers and in Zambia. Creating more secure property rights, and enforcing these rights, will be an essential component of Zambia's economic growth. Protected property rights may contribute to poverty alleviation and result in the formation of tradable properties that the rural people use to improve welfare. Secure property right decentralise power and help to protect individuals from various predations of elites. Thus, individual empowerment and success hang upon a secure property rights environment.

## **2.6. CONCLUSION**

The chapter has reconnoitred theories that give way for a vibrant understanding of the small-scale farmers and their survival under capitalist land investment. The classical Marxist theory on peasantry, Chayanov's theory of peasant economy, Lew's dual economic model theory and Neo-classical property rights approach have been used to give an overview of peasant societies. Among the classical Marxists, a preoccupying central issue in their debates was more of political than economic. The predicament posed by the peasantry, is that they seem to be in menace of standing in obstruction to the full expansion of capitalism. Peasants are ultimately being a reactionary or counter-revolutionary element in the struggle to triumph over capitalism. For Marx, the ability to awaken the oppressed peasants depends on class consciousness so as to crush the capitalist dominance and result in material transformation among the peasants. However, the potential for revolutionary and radical action among the peasantry is being thwarted by lack of class solidarity. Although, capitalism is an exploitative and inhuman system, Marx (1957) argued that

it also generated the likelihood of a type of community which was greatly wealthier and considerably more humane than its pioneers.

Chayanov (1966) who belonged to the neo-populist tradition emphasised on the viability of the internal structure of peasant agriculture to survive in a capitalist system and replicate itself indefinitely both socially and economically. In the analysis of peasant communities it is essential to define its internal method of operation of the peasant production and community, which is not the same from the capitalist one, while finding whether it establish a self-sufficient unity of analysis. For Chayanov, peasants create a self-determining class with the reasoning of their peasantness unchangeable. However, the reproduction, maintenance and social development of the peasant societies are also understood in relation to other global societies in which they are put in. They are expressed with, and reliant on, a broader, more universal system. Subsequently, Chayanov argues that the commercialisation of peasant farming as lying neither socialist nor capitalist, but as a peasant road of raising agricultural productivity and production, at the same time safeguarding the peasant institutional background of the small-scale farmers.

Lewis argued that rural areas have a surplus of unproductive labour which will be attracted to the growing industrial sector where higher incomes are on offer. The model anticipated that the capitalist will reinvest in the industry in the form of more fixed capital. In a virtuous causal cycle, this would increase productivity, profits, the savings rate, investment in economic growth and ultimately the standard of living of the majority of rural people. The process continues until the economy has moved from agricultural to industrialized one. Although the Lewis theory is simple, its chief

assumptions do not suit the institutional and economic realities of developing countries.

The neo-classical property rights approach will, however, be used as a guideline to this study. A secure and clear definition of rights is important in encouraging small-scale farmers to make both long and short term fixed investments on their land. This will increase agricultural productivity and raise rural household revenues. It is assumed that without proper security of property small-scale farmers do not feel passionate connection to the land they are farming; they will not invest in agricultural development and will not use farming inputs effectively. Secure property rights safeguard community members from forced evictions and removals, or where shift is determined by legitimate procedures as required for the greater public good and guarantee they have access to sufficient compensation. Therefore, neo-classical property rights approach is essential in assessing foreign land investments and survival of small-scale farmers in Zambia. The succeeding chapter presents research methodology and a detailed presentation of the study area.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.0. INTRODUCTION**

Research remains an important tool in exploring, understanding and solving problems that face our society. A research is an organised process of critical investigations resulting to valid suggestions and conclusions that are communicated to those who are concerned (Babbie & Mouton, 2001). It develops out of the human tendency or need to study, to understand and solve problems. Research draws its power from the fact that it seeks to obtain answers to social problems being studied and produce data that is important in the resolution of genuine problems. In addition, research contributes to knowledge and progress on societal growth and development. Such research can generate new knowledge and prepare people to deal with future challenges and opportunities.

The purpose of this study is to search and give vivid analysis of foreign land investments and how they have impacted the livelihoods of small-scale farmers with a view to make recommendations on how they can be upgraded to improve their production. Ultimately, the key to successful research project lies in application of a methodology that is planned to produce knowledge that is reliable and valid. Usually it is the selection of appropriate method that set down the motivation, expectation and intend of the study. A mixed research approach was employed to understand the nature and degree of the effects of the foreign land investments on small-scale farmers in Zambia. The approach used both qualitative and quantitative methodology to get a deeper understanding about the phenomenon under study. This triangulation of research methodologies was prepared to enhance the validity and reliability of the

study findings. This chapter also concentrate on the research strategy adopted for the study, covering inter alia issues of research design, sampling techniques, data collection techniques and procedures, and data analysis techniques. Furthermore, description of Zambia as a study area also forms part of this chapter.

### **3.1. RESEARCH METHODOLOGY**

Research methodology is the systematic, theoretic analysis of the body of approaches and ideologies linked with a division of knowledge (Henning, 2004). It is a blueprint of the gathering, measurement and analysis of data prepared to attain the aims of the study. The aforementioned, typically encompasses concepts, paradigms and theoretical models. Several approaches use different philosophical and analytical repertoires to investigate, explain, theorise or read diversity of individual and local experiences as they occur within wider structures, discourses and power relations. Nevertheless, the study used a mixed research approach which utilises qualitative and quantitative methodologies. Creswell & Clark (2007) argue that one approach to address a problem is deficient; hence, the study employed a mixed research method. The mixed research method fitted well with this study as the main objective of the study is to get a deeper understanding of how foreign land investments have impacted the livelihoods of small-scale farmers in Zambia and it seemed that no one method could provide deeper insights.

Mixed research approach, finds its roots within the post-positivism paradigm. Post-positivism blends the gains of both positivism as well as interpretivism ideas, as a result it was considered to be appropriate to guide the study. This methodological triangulation is defined as a design of action that combines approaches from

different methodologies and paradigms in the enquiry of research question in order to boost confidence in the succeeding findings (De Vos, 2005). Hence, a mixed research approach was preferred in this study as a way of maintaining an interest in some aspects of quantification yet at the same time incorporating interpretive concerns around subjectivity and meaning (Maree, 2007) in order to understand. To understand in greater depth the nature of foreign land investments and the survival of small farmers in Zambia, a concurrent procedure was used to collect both quantitative and qualitative data at the same time. This helped in confirming, cross-validating or corroborating findings from different designs while looking at the same phenomena.

The motive to use a mixed research method lies in the belief that the quality of the research can be enhanced when the biases, weakness and limitations of one method are compensated or counterbalanced by combining with another research (Fidel, 2008:265). The approach ensured that bias that might be in-built in any single approach could defuse or cancel the bias of other approaches. Both text and numeric information were used as the final information denotes both quantitative and qualitative information. Normally, it is acknowledged that a deeper understanding of the research is generally increased by qualitative rather than quantitative research method, whereas, greater generalization and objectivity is obtained through quantitative research. Therefore, quantitative and qualitative methods should be viewed as complementary rather than as rival camps. The quantitative mechanisms can be understood as satellites around the central axis of qualitative research, filling out and proposing ideas and theoretical frameworks as they develop from the

research (Layder, 1993). In this regard quantitative methods of data analysis served as complementary in situations where qualitative approaches are inadequate.

A qualitative research methodology is broader term covering various informative procedures which seek to translate, decode, describe and otherwise come to reality with the meaning of naturally happening phenomena in the social empire (Welman *et al.*, 2005). In this scenario, the study seeks to understand the livelihoods of small-scale farmers within their situational, social, cultural context without imposing established expectations upon the setting. The advantage of qualitative research is its ability to acquire particular data about the opinions, behaviours, values, social contexts, experience, and the meaning the subjects attach to the activity or event being studied (Marshall & Rossmans, 1999). It is this lived experience of small-scale farmers that gives meaning to their perception of the activities and impacts of foreign land investments on their livelihoods. As such, it seeks to comprehend the personal world of human experience and make plans to get inside an individual and to understand from within. Individual subjective experiences are genuine and should be taken into consideration. One can understand other people's experiences by networking with them and listening to what they say.

Qualitative research methodology is also inductive instead of deductive, meaning that qualitative scientists grow their understanding in the progression of the study process; hence, its findings are beyond anticipation of the researcher (Winberg, 1997). Inductive understanding draws conclusion about a particular activity or event balancing on the probability that a proclamation is correct based on what has formerly transpired. This means that the researcher will not build their findings on

preconceived assumptions, but to let the data be provided directly by the respondents. Therefore, the researcher forms an interaction with the respondents, through which a general direction of the information gathered will be pursued and at the same time enabling the respondents to raise certain key issues. In this way, it enables the study to explore in details the impacts of foreign investments and the survival small-scale farmers in Zambia.

Quantitative research is a method that employs statistical analysis to provide an important linking between pragmatic observation and statistical expression of numerical data relationships (Cooper & Schindler, 2006:45). The approach adopts a positivist orientation and a scientific approach by assuming that the world is made up of facts that can be observed objectively and be measured. Besides being objective, the approach permits the research to duplicate in various areas or over time with the construction of comparable outcomes. The methodology define whether the projecting generalisation of a model hold true and pursue predictions and explanations that will generalise to other individuals and areas. Consequently, this reduces personal implication of the researcher into a study to a negligible minimum. This also increases the chances of getting the same findings from other researcher who will conduct the same study.

### **3.2. RESEARCH DESIGN**

Labovitz and Hagedorn (1981) define a research design as a blue print or plan according to which information is collected to examine the study questions or hypothesis in the supreme efficient method. In other words, a research design shows a systematic plan outlining a study's methods of compiling and analysing data that was used to arrive at a conclusion of the research problem. The key drive of the

research design is to permit the investigation to forestall what suitable research judgements should be made as to increase the reliability and validity of the study findings.

In social sciences, case studies and surveys are commonly used as major instruments in collecting primary data. A case study is an in-depth investigation of a person, event, group or community over a period of time (Creswell, 2009). The approach provides an explanatory analysis of a subject examined through one or more cases in a system. This is done through intensive observation within a real life context. Much can be learned from a specific case as the researcher has to stay in a particular social setting over time. However, some debates that a case study is a constricted field, so its findings cannot be generalized to suit the whole population as they only study few cases. So the data collected cannot necessarily be reliable and valid to be generalised to a wider population.

In contrast, a survey is a general view, examination, or description of many diverse people or things, not researched in great depth or during as much time. Survey researches demand various tools to collect the data from samples which include use interviews, questionnaires and observations. This triangulation of tools of collecting data is more likely to increase the significance of research results. In this study, a survey was seen suitable to assess the nature of foreign investments and how it has impacted on the survival of small farmers in Zambia.

The study opted to use surveys as case studies have been faulted for its lack of consistency in the analysis, construction and collection of observed materials that

give rise to this study. This lack of consistency is connected to the problem of prejudice, presented by biasness of the researcher and others involved in the case. The investigator is left to rely on personal instincts and abilities throughout the research. Through surveys personal biasness is always checked to increase the reliability and validity of research outcomes. Therefore, the method was considered as convenient in responding to research objectives and addresses the research questions.

### **3.2.1. Population and Sampling**

In research population is a large group of objects or people who possess the characteristic that is questioned in a study. Objects and individuals in a particular population usually have a mutual, binding, trait or characteristic (De Vos *et al.*, 2005). The study objects may comprise groups, individuals, organisations, events and human products. In this study, small-scale farmers evicted and displaced by foreign land investments in Copperbelt Province of Zambia were used as the target population. Small-scale famers were used as basic units of analysis and sources of information. On the other hand, the Copperbelt Province was purposely selected for research due to its strategic location as a destination for large scale agro-industrial investments. Government efforts to encourage large scale investments in land have been particularly active in the Copperbelt province, due both to its strategic location along the railway and demographic and land use conditions deemed by the government to be suitable to land use and ownership conversion.

The researcher was unable to collect field data from the entire Copperbelt province; this was due to large number of households and wide size of the province. The total

number of households in Copperbelt Province as captured during the 2010 Census of Population and Housing was 1 972 317. The province covers an area of 31 328km<sup>2</sup> (Central Statistical Office of Zambia, 2012). Thus, the study was obliged to draw a sample from within the population. A sample is defined by Strydom (2005) as comprising of features of the population taken for inclusion in the research or a subsection of measurements taken from a population in which the study is concerned. The informants in this study consisted of 100 small-scale farmers who were displaced and dispossessed by foreign land investments in Copperbelt province.

Purposive sampling adopted to select participants for interviews. Personal judgement was used in selecting small-farmers who could provide sufficient information about their experience and activities of foreign land investments in their communities. The canvasser chose small-scale farmers using clear elements in mind, with the commitment of giving a deeper analysis of those elements and how they share to the chosen individuals (De Vos *et al.*, 2002). The purposive sampling proved logical and feasible in terms of time and access to the small farmers in Copperbelt province.

However, limitation of purposive sampling is that, it is the responsibility of the researcher to choose participants, there is a possibility that the researcher can choose wrong or inappropriate participants for the study. The idea that a purposive sample has been created based on the judgement of the researcher is not a good defence when it comes to alleviating possible researcher biases. Therefore, the researcher has to use both purposive and snowball sampling in selecting

participants. The snowball sample was helpful where the respondents' contacts are limited and in exploring potentially unknown small farmers who are of interest to the research.

According to De Vos *et al.*, (2005:85) snowball sampling implicates the approaching of a single event or activity that is involved in the phenomenon to be discovered in order to gain more information on other similar personalities. In this study, small farmers were asked to refer the researcher to the others they know through their social networks. In turn, the other small farmers are respectfully requested to find others who could make up the sample. The researcher will then continue until an adequate number of small-scale farmers to make up the sample is found. Small farmers were asked to provide names and contact information of other farmers who were displaced by foreign land investments. The researcher requested for more than one referral from participants to ensure that that the chain does not get broken.

But then, representativeness of the sample is not guaranteed as the canvasser has little control over the sampling method because respondents are obtained from previous subjects that were observed. Initial subjects tend to nominate people that they know well. Consequently, it is highly possible that the subjects share the same traits and characteristics. One subject can very well nominate an entire family, close friends and other acquaintances. What the sampler may end up with is a small subgroup of the entire population, leading to sampling bias. Regardless of the above criticism snow ball sampling was critical in identifying small-scale farmers who can provide adequate information about the nature and effects of foreign land investments in Zambia.

### **3.3. DATA COLLECTION PROCEDURES AND METHODS**

Data collection refers to a procedure of gathering and arranging data in order to acquire information to save on to make judgements about critical issues. There are many different ways of gathering empirical research data. The methods used to gather information in this research include interviews, questionnaires, observations and archive documents. These apparatus have separate features that have a bearing on the accurate and suitable use of each of the specific data collection purposes. Still, these methods played a vital role in gathering information pertaining foreign land investments and how they have impacted the livelihoods of small-scale farmers in Zambia. This triangulation of different methods of data collection increases the reliability and legitimacy of the research findings.

In this study, three research assistants were employed and trained before data collection. Prior to going to the field, the principal researcher conducted a two day training session, for the three research assistants. Training research assistants was very important in order to introduce and familiarise the assistants with the research ethics and interview techniques. The assistants needed to know the objectives of the research, the problem statement, the research questions, the focus and individually assigned responsibilities. Throughout the data collection period, the principal researcher monitored the progress and provided guidance when it was necessary.

The research assistants were also chosen or employed on the basis that they know how to speak and write the mother language of the selected samples which is Bemba. Knowledge of the language by the researcher and assistants helped the respondents to be free and comfortable to disclose their personal experiences. The

respondents were also given the opportunity to be interviewed in the language they preferred. Other research participants used English mixed with Bemba when explaining a point. The research assistants helped in receiving the first-hand information spoken and non-verbal because they speak the language of the respondents and understand their social values. In order not to lose information in the process of translation, research assistants helped the principal researcher in the interpretation of questions and key terms before starting data collection. Although, research assistance at times lacks the adequate experience of doing field research, the principal researcher occasionally teaches them basic interview techniques.

The respondents were informed about the duration of the interview so that they could make preparations. Before the interview the researcher communicates with the participants by visiting their homes to confirm arrangements in case they made other decisions. The interviews were conducted in their own households, preferably with less disruption. The respondents were free and open in their own households as opposed to a busy public space. By interviewing respondents at their homes and face to face, the researcher was able to elucidate misunderstood questions and observe the level of communication, cooperation and understanding.

Additionally, great caution was taken to ensure that confidentiality was maintained and disturbances minimised. The researcher also took into consideration the exterior variable such as unexpected guest, child care, cell phone ringing. These were minimised when they become a hindrance. During the interview the respondents were requested to put their cell phone on silent. Unexpected guests and child care

were given to other to other members of the household who are not being interviewed. This greatly reduced disturbances during the interviews.

The interviews obviously varied in length. However, Strauss & Corbin, (1990) argue interviews under half an hour is doubtful to be valuable while interviews that goes much over an hour may be making awkward demands on busy interviewees and could have an impact reducing the number of respondents willing to partake. Hence, the researcher decided that forty five minutes should be enough to get the much needed data. After the interview the researcher gave participants a questionnaire to fill in. The respondents fill in the questionnaire immediately after the interview. This was followed by thanking the respondents for their willingness in providing information. Words of gratitude were rendered to the informants. This was important as it showed recognition and respect of respondents' value as source of the much needed information.

### **3.3.1. In-depth interviews**

Babbie and Mouton (2001) maintain that in depth interviews are basic individual interviews regularly used for information gathering in a qualitative research. Whereas, Robson (1993) defines in-depth interviews as focussed discussion started by the interviewer for a particular purpose of finding relevant data to content the set study objectives. One on one interview with the selected small-scale farmers was conducted in Copperbelt Province. In-depth interviews were useful in understanding the livelihood of small-scale farmers and the effects of foreign land investments. The in-depth interviews were conducted using a semi-structured interview guide.

The interviewer introduced the topic and then moved on to guide the discussion with specific set of questions in place. A set of questions are worked out with freedom to change their order based on the view of what seems fitting in the context of the discussion (De Vos *et al.*, 2002). The interviewer creates a general path for the discussion and follows specific topics raised by the respondents. Information collected from the in-depth interviews was in relation to the livelihood of small farmers and effects of foreign land investments in the study area. Information collected through these in-depth interviews was very helpful in the development of the questionnaires used for data collection.

In depth interviews allow the interviewer to change the line of analysis, trail up on remarkable responses and examining underlying reasons in a way that mail and self-managed questionnaires cannot (Robson, 1993). The interview offers opportunity for the researcher to investigate deeply to uncover new evidences, open up new elements of a problem and to secure vibrant and precise inclusive versions that are founded on personal experience (Bryman & Burgess, 1994). Through this way there is a greater possibility of gathering rich and revealing data about foreign land investment and how they affect the livelihood of small scale farmers in Zambia. In depth interviews also helped the researcher to pick out non-verbal clues that may carry messages that assist in understanding the verbal answer. Body language especially, facial expression of small-scale farmers during the interviews showed their dissatisfaction on the way foreign land investments are affecting their livelihood.

Through in-depth interviews the researcher could understand how small-scale farmers build the realty of their experience and situation, created from the complex

individual framework of values and beliefs, which they have developed over their lifetime in order to assist in explaining and predicting events in the lives (Jones, 1985). A further justification for using in-depth interviews lies in the fact that any discussion of land is a subject matter that is highly confidential and sensitive, and these are often matters which small-scale farmers are reluctant to discuss unless such discussions take place in a confidential and on a one-to-one situation. This is what Denscombe (2003) refers to as “privileged information”. The deepness of the information offered by interview in this respect can produce top value if the respondents are ready to and are capable of giving information that other could not, or the researcher could not identify and retrieve without getting associated with them.

Though in-depth interviews are commonly used in social science research as a data collection method they also carry with them disadvantages. Interviews are time consuming as a typical interview session may be lengthy reducing the number of people who are willing to participate. To circumvent the problem above-mentioned, interviews need to be short, precise and timed at less than an hour especially for interviewees with a busy schedule. Apart from the fact that interviews are time consuming there is the danger of bias and exaggeration of facts which can diminish their credibility as a data collection method. Respondents may lie, forget, or may lack the important information required. To avoid these situation respondents were given enough time to answer the questions and also asked to disclose the truth about the topic under study.

### **3.3.2. Focus group interviews**

Focus group interviews were conducted through interaction and discussion with a group of small-scale farmers. Morgan (1988) defines a focus group as small discussion addressing a particular topic, which regularly involves six to twelve participants. When the focus group is too small it can be merely led one or two members or may fall flat if too few participants have anything to contribute. Whereas, a very large group may lack consistency and disintegrate into side discussions, or participants may become discouraged if they have to wait their turn to answer or to get involved. It is often difficult for a moderator to spend time following up on perceptions expressed by one individual when there a dozen or more participants.

Large groups areas well more difficult for moderators to control and stimulate discussion. The discussion may also reach a point where too many participants add nothing new. Therefore, the number of participants selected in this study was adequate enough and expected to generate rich discussion about foreign land investments and the livelihoods of small-scale farmers in Zambia. The respondents provided a wide variety of perspectives and make it difficult for one or two individuals to control the discussion.

The purpose of interviewing focus groups was to produce qualitative data and to provide collective insights into the perception, attitudes, experience and opinion of small farmers. Six focus group discussions were done in the study area. Each group was given 45 to 90 minutes of discussion. The mixture of focus groups was based on the uniformity or sameness of the group member. Getting people with shared interests or experiences together makes it easier to carry on fruitful discussion. A

homogeneous group of strangers reduces inhibitions and maximise disclosure among participants. As a result, care was taken to ensure that participants who know each other are not enrolled into the same sessions. Respondents from different villages were selected to participate in one focus group. The researcher did not select respondents from one village to participate in the same focus group. Participants are generally more open, free and less watched over with people they do not know and do not have to worry about ever seeing again.

Also gender composition of focus groups was taken into consideration. Both men and women were equally represented in order to get a wealth of detailed information and deep insights. In some situations men tend to participate more in focus group discussions. This may be due to the patriarchal nature of many African societies where men dominate in all spheres of production and reproduction. However, other women were able to participate and speak about their opinions and experience in these focus group discussions.

Safe and secure community halls were used for focus group discussions. The focus group comprised of small farmers chosen during individual interviews. The interviewer and three research assistants acted as facilitators in introducing the themes, guiding the discussions and encouraging all members to express their perceptions. These discussions were carried out in a style that accommodated all levels of literacy, with the Bemba language being the dominant tongue utilised throughout the discussions. Focus groups allowed those small farmers who do not read or write to be engaged in a discussion. Moreover, they were allowed to respond in any language of their choice.

One of the key strength of focus group interviews is that they are flexible as compared to experiments (Babbie, 2010). This technique assisted in obtaining insights into a multitude of perceptions and attitudes of small farmers in a dynamic group interaction atmosphere which could have been ignored or skipped in individual interviews. Participant interaction also assisted to pick out false or extreme opinions, therefore giving a quality control mechanism (Krueger & Casey, 2000). The focus groups discussions in this study were accompanied by writing main points and drawing of diagrams for discussion on specific topics. This was essential to produce rich discussion while maintaining a steady focus on the topic, research questions and research objectives.

Focus groups were also valuable both in channelling group interaction and making comparisons across individuals in the group. The exchanges found in focus groups are close to real life experience (Bryman, 2004). Besides, focus groups are also fairly easy to collect, economical and elastic in terms of format, types of questions and anticipated results (Myers, 2009). The researcher also visited some key informant from the focus group discussions. The researcher met them in less public setting to cross check the data acquired from focus group discussion. Key informants from each focus group discussion were recognised and tracked up for personal interviews on particular topics. These key informants were also requested to authenticate data received from group discussions. In the course of the stay in the study area and interaction with the community, informal interviews were also done just to cross check and supplement information collected. These interviews were inevitable since they often arose from individual community members wanting to know more about the research.

The challenge of conducting focus groups interview is that they require good facilitation skills that include ability to handle several characters respondents may display. Some people were shy and quiet while others start gossiping others or form some subgroups. In some circumstance others seem not to be willing to participate whereas other become dominant than the others. The researcher has to encourage them to participate by sharing their own experience and knowledge. In addition, focus groups can also make some respondents not to express their feeling freely because they might be intimidated by the presence of other respondents in the group (Maxwell, 1998). This, nevertheless, with the skills of the researcher in facilitating, focus group members were able to evenly participate in these discussions.

### **3.3.3. Key informants interviews**

Key informants interviews were conducted to obtain vital information about foreign land investments and small-scale farmers in the Copperbelt Province. The information was obtained from people who are in a position to know the particular issue of interest and also thinks about solving the issue. The informants expressed thoughts, feelings, opinions, and their perspective on foreign land investments and the livelihoods of small farmers in Zambia. The researcher visited the Ministry of Lands, Natural Resources and Environmental Protection provincial offices for the reason of gaining more information and disclosure about the nature and activities of foreign investors and the survival of small-scale farmers in Zambia.

Eight officials from this ministry were interviewed to explore foreign land investments and small farmers in sonority. The officials were chosen on the basis of being in an administrative position. Among key informants were camp extension worker, district

agricultural coordinator and district extension officers. They have expert knowledge and a better understanding of people and activities happening within the province. In addition, eight traditional chiefs from the Copperbelt province were also interviewed. The use of traditional chiefs led to the discovery of information that would not have been revealed from the interviews with small-scale farmers.

#### **3.3.3.1. Interview guide**

An interview guide was used in conducting in-depth interviews, focus groups and key informants interviews. Holstein & Gubrium (1995) explain that an interview guide is a questionnaire written to guide interviews, which helps the researcher to think clearly about what they hope the interview might cover. The interview guide is a collection of items or questions that are posed and filled by the interviewer in a face to face with respondents. The interview schedule was written in English and translated to Bemba which is the main language used in Copperbelt Province.

The interviews were then recorded using a tape recorder and a note pad. However, the use of tape recorder maybe sensitive and respondents may decline to be recorded. The researcher only tape recorded with informed consent. Confidentiality and anonymity was assured to those who were willing to be tape recorded. Recorded conversations were disposed soon after data analysis. The use of a tape recorder was intended to avoid any data loss and to provide a more complete and accurate record of data. These recordings were useful in supplementing and checking data records produced through other methods such as the field notes and observations (Patton, 2002). Alternatively, notes were used as a backup in the event the recorder has malfunctioned or erased inadvertently during transcription. The

research assistants mainly concentrated on recording the research discussions by taking field notes.

### **3.3.3.2. Semi-structured questionnaires**

A questionnaire is an instrument of gathering, containing of a standardised series of questions relating to the study topic to be responded in writing by participants (Bless & Higson-Smith, 2000:156). The study used semi-structured questionnaires containing both open and closed questions, to collect data from selected small farmers in Copperbelt province. In the open-ended type of questions there is a space provided for the respondents to answer the questions. Use of open-ended questions permitted small farmers to provide answers which are related to the topic under study. It also permitted the respondents to state their case liberally and gives explanations as well.

With regards to closed-ended type of questionnaires the respondents are given a set of alternative choices from which they can select to answer the questions. They are not expected to think of their own responses and describe in their own words, since responses are provided. The closed-ended type of questions makes data easy to codify, analyse and interpret. They are easy to finish, took little time and kept respondents focused on the topic. In order to get accurate information both closed and open ended questions were understandably, simple, short, realistically worded and user-friendly neutral.

Immediately after interview, a questionnaire was given to respondents to fill in. A good deal of time was further spent in the field and school library checking the

consistency of answers to the questions. The researcher also has to check whether all questions had been answered and also seek clarification on other areas that had not been properly responded to. The need to pair interviews and questionnaires is there to increase the validity and reliability of study findings. In interviews the researcher might influence the responses by showing their own thoughts; this can be avoided by self-completed questionnaires. However, the challenge of using questionnaires is illiteracy in most rural areas. The questionnaires were written in English and required the researcher to translate to the local Bemba language. This was done to eliminate the problem of misinterpretations or misunderstandings of words and questions. Those who could not read and write were assisted by other family members who can read and write. Observations were made to tally with what have been discussed through interviews and what have been written in the questionnaires.

#### **3.3.3.3. Observations**

Observations are a data collection method of watching events, conditions and activities as they occur in natural way, through looking rather than asking (Walliman, 2006:95). The researcher was also looking critically and openly for evidence and information about foreign land investments and small-scale farmers in Zambia. Direct personal observations were made throughout the study period. The chief strength of observation is that real life behaviour can be perceived, studied and verified. General attitude and reaction of the participants during the interview and questionnaire process were observed.

Comparison and verification of information given by participants during the interviews and their actual behaviour during observations were noted. For that reason, observation method provided a useful check on, and supplements, data obtained from other sources. Every recording made were a true reflection of what was observed at the exact moment and not of what was predicted and anticipated. Data about physical environment and human conduct was recorded directly by the researcher without relying on the retrospective or anticipatory accounts of others. Finally, observations allowed the researcher to record information of the environment and behaviour patterns of other members of the society who were not part of the sample.

#### **3.4.1. Archival data collection**

The archival data in the context of this study refer to the research data was previously collected by other researchers but may help resolve existing research problems. The collected data by other researchers addresses more or less similar research problems. Archival documents which include published statistics, non-governmental publications, United Nations records, books, published and unpublished dissertations, government publications, and World Bank publications were used in the study. The use of archival data helped to corroborate and augment information from field sources (Yin, 1994:81). On the other hand, internet sources were of critical use in this research as maintained out by Schutt (1999) that literature review may begin in the library but soon move into virtual library web.

Archival documents were used to neutralise the loophole and bias in the field data collection process, thus playing a complimentary role and driving information towards

reliability and validity (Auricombe, 2007). Analysis of secondary sources of data was also very basic in receiving more data for the research questions that pursued to identify the impacts of foreign land investments on small-scale farmers in Zambia. Archival data is usually collected by experts hence the analysis was based on expert or professional information. Literature review offered an opportunity of gaining knowledge from others and production of new ideas. It shows the procedures, designs and technique that are worth copying. Secondary data allowed the researcher to delve into the issues that were not dealt with by the original researcher and permit the researcher to compare data from different groups and communities.

It is important to point out that the generation of archival data was, indeed, indispensable, vital, fundamental and necessary in the current study. The data was subjected to critical investigation and scrutiny to answer research questions of the study. There was need for credibility, trustworthiness and authenticity when it came to data gathering. Utmost safeguard was taken to ensure that no errors are made in collating and collection of archival data. The task therefore was to determine which data; from a vast potential array can best serve the purpose of the research. The researcher has to assess whether the data fits the specific research problem. This means maximum care is also be needed when using archival data sources. The move was to reduce researcher biasness and thus increasing internal validity and reliability. Secondary data analysis was critical in corroborating and in some cases disconfirming generalisations about the livelihood strategies of small-scale farmers and the effect of foreign land investments in Zambia.

### **3.5. DATA ANALYSIS**

Data analysis is process of evaluating, inspecting, summarizing, comparing, categorising and transforming data with the aim of suggesting conclusions, supporting decision making and highlighting useful information (Herdstrom, 1998). The goal is to comprehend different constitutive elements of information through a valuation of the relationships between constructs, concepts or variable, and to see whether there are trends or patterns that can be isolated, identified, or to establish subjects in the data. According to Patton (2002:432), the procedure of data analysis involves reducing, the amount of raw information, examining significance from miniature, recognising important patterns and constructing a framework for communicating the essence of what the information disclose.

The first stage was to make meaning out of each script by referring to the verbatim comments and notes captured on the tape recorder and transcribed by research assistants during the interviews. This involved playing the tape recorder and analysing the records in their wholeness numerous times and trying to get a sense of the interviews before breaking them into parts. The interviews undertaken in this study were recorded soon after they took place, while it is still fresh in the mind of the researcher (Measor, 1995). Making a transcript from an audio-taped interview was especially vital as interviews are the central source of information for this study.

The analysis of qualitative data for the study was done using content analysis. This approach involves the examination of words within a range of texts and then inferences are made about the underlying philosophical assumptions (Babbie & Mouton, 2001). In a nutshell, what this denotes is that content analysis is a process

of attempting to make meaning through interpretation of volumes of raw data captured from interviews during data collection. The process involves reducing the mass amounts of data, separating trivia from the significance. After data had been reduced, the identification of important categories, patterns and themes took place. The data was analysed in terms of its emerging themes and subthemes. This involves a process called coding which is the categorising of data. Coding data in this sense, involved the breaking down of data into units for analysing and then categorising the units (Babbie, 2007). Under each main theme, several categories were developed. The study organised the data into logical categories that summarises and bring meaning to the text.

Coding involved the use of dummy variables that are punched into the computer for analysis by the Statistical Package for Social Science (SPSS) software. First, coded data was captured in a Microsoft Office Excel spread sheet and later transferred to specialized SPSS to produce frequency distribution. The SPSS was used to analyse quantitative data, which was presented using graphs, tables and pie charts. These graphic presentations make the presentation of data clear and precise making it easier for meaningful interpretation. SPSS is valuable in that it offers excellent graphical display options for data analysis, comprehensive data management tools for data entry for analytical purposes (Simon, 2011). This method was also applauded for being able to score and analyse quantitative data very quickly and in many ways.

### **3.6. DESCRIPTION OF THE STUDY AREA**

The name Zambia come from the Zambezi River, which starts from the north west side of the country and create its southern borderline. Zambia is land locked country,

placed in the sub-Saharan Africa, with an overall area of 752614 km<sup>2</sup> out of which is 740 724 km<sup>2</sup> of land and 11890km<sup>2</sup> of water (Central Statistical Office of Zambia, 2012). This makes the country to be the 39<sup>th</sup> largest country in the world. The country is located between 8 and 18 degrees latitudes south of the equator and longitudes 22 and 34 degrees east.

It sits on a gently undulant plateau which is between 1000 and 1600 meters above sea level. Zambia is divided into 10 provinces and 72 districts with 150 constituencies and 1 800 wards (Central Statistical Office of Zambia, 2012). The capital city of Zambia is Lusaka and other major towns are Kabwe, Ndola, Livingstone, Chingola, Mufulira, Kitwe and Chililabombwe. The bordering countries are Malawi to the East, Democratic Republic of Congo to the north, Zimbabwe, Mozambique, Namibia and Botswana to the south and Angola to the west. Figure 1 shows the map of Zambia and its boundaries.

### **3.6.1. Population structure**

As shown in the background of the study, Zambia has a population of 15, 721, 343 million people with the province of Lusaka having the biggest percent of the population which is 16.7% of the total population. Copperbelt Province is second with 15.1%; while North Western has the least percent share of the total population at 5.4% (Central Statistical Office of Zambia, 2012). Zambia's total population is divided into: 50.7% female and 49.3% males. Male headed households made up 77.5% of all households, while 22.5% are female headed households. Whereas 6% of the population is under the age of 15 years; only 3% is aged 65 or older (Central Statistics Office of Zambia, 2012). The population is predominantly rural as an estimated 65% lives in the country side where poverty is more pervasive, with a



known or are very small. Expatriates, mostly Europeans, as well as some white Zambian citizens, form another ethnic group.

Zambia also has a small but productively important Asian people, most of whom are Chinese and Indians. What's more, Zambia has a number of asylum seekers and refugees coming from Democratic Republic of Congo, Angola, Zimbabwe, Rwanda and other countries (Holmes, 1998). Various nationalities and tribal groups live together in urban areas, influencing each other as well as embracing a lot of Western beliefs and values. The traditional culture and beliefs have largely continued in most rural area. In towns and cities there is an unceasing integration and development of these cultures.

### **3.6.3. Languages**

In Zambia, the official language is English, which is used as a medium of instruction in schools and also in conducting official business. The main local languages are Nyanja, Luvale, Tumbuka, Luanda and Bemba. The total number of languages spoken in Zambia is 73 (Central Statistical Office of Zambia, 2011). Many people speak English in cities and towns while in rural communities' tribal languages are dominant with a few other vernacular languages. Each of the 72 tribes living in the country has its own language and dialects. However, the rural to urban migration has had an intense effect on some local languages, including the absorption of words from other local languages and English.

### **3.6.4. Agro-ecological regions**

Zambia is divided into three major agro-ecological zones with distinct geophysical features, climate, vegetation and land use. The following describes the general

features of these three regions. Figure 2 presents a map showing the agro-ecological regions in Zambia.

#### **3.6.4.1. Region I**

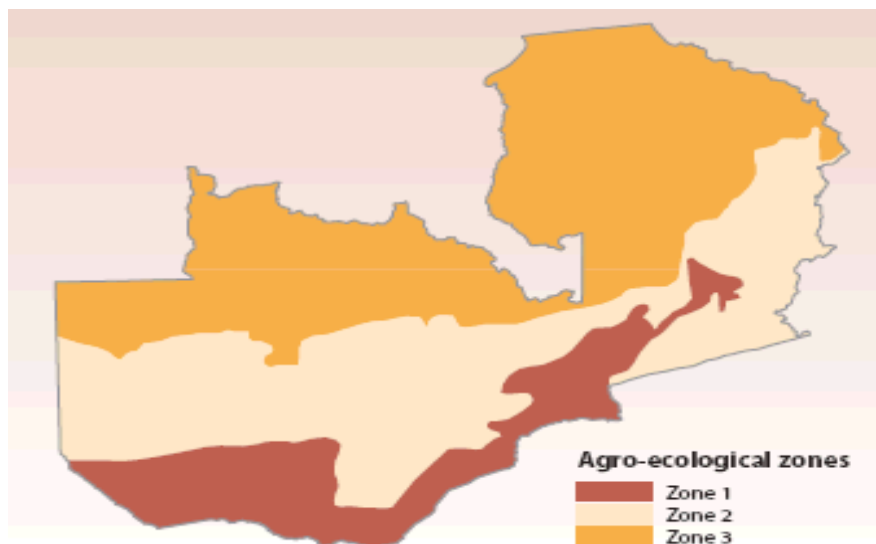
Region 1 is characterised by short growing seasons, low erratic rainfall and high temperature during the farming period and a high risk of drought. This region constitutes about 12% of the country and covers the Central, Southern and Eastern provinces, as well as the grasslands of Western province. Region 1 has 17.3 million hectares of total arable land area. It is also the smallest of the three zones (Saasa, 2003). The amount of arable land is very low. Some of the land has been reserved for game management and national parks. This region used to be considered the bread basket of Zambia but for the last decade it has been experiencing poorly, low and unpredictable rainfall distribution.

The crop-planting season is short normally in the range of 80-120 days. This region has less than 800mm of annual rainfall (Siegel, 2008). The weather is usually incongruous for crop farming and it is disposed to droughts or gushes of rainfall that floods and damage crops. Even though it is humid and hot with poor soils in some locations, it is appropriate for drought resistance crops like millet, sesame, millet, sorghum and cotton. High-value vegetables and fruits are also grown in this region. Maize can be cultivated with irrigation even in the dry season. While, the region is not fit for cattle farming as a result of tsetse flies, goat and fish farming have a high potential (Siegel, 2008).

### 3.6.4.2. Region II

The region is located at the centre of the country, and includes Western Province, Central Province and Eastern Province and a part of Northern Province. Total area amounts to about 27.4 million ha, accounting for 42% of the total national area, ranking as second among the three regions. The region boast of 2.8 million hectares, which is almost 875 of the total land fit for farming (Saasa, 2003).Region II is characterised by low probability of drought, long growing season, high rainfall and cooler temperature during the farming season.

**Figure 2: Agro-ecological regions in Zambia**



**Source: Central Statistical Office of Zambia (2011)**

The annual rainfall is 800-1000 mm which is steadily distributed throughout the crop farming season. The crop planting period is between 100-140 days (Siegel, 2008). The growing and rainfall season in this region is moderate, supporting agricultural products such as tobacco, sunflower, wheat, soya beans, maize, vegetables and the rearing of livestock include sheep, cattle and goats. Livestock has been a chief

source of transport and draught power though this has lately declined of diseases and droughts. Even though, livestock is the major asset for farming activities, the farmers have equally been affected by the pestilence that attacked the animals.

Although the soil structure is good, the long and continuous usage of the same piece of land has led to soil dilapidation. Region II is considered to the top farming production and permanent settled systems of farming are practised. This is the region where commercial farming is dominant because of moderately good environmental conditions and services. However, large areas of this region have been set aside for forests, game management and national parks area, and this significantly reduces the amount of land available for farming (Saasa, 2003).

#### **3.6.4.3. Region III**

Region III is characterised by low probability of drought, long growing seasons, high rainfall and cooler temperature during the farming season. In spite of 1000-1500 mm, the region has extremely leached acidic soils that reduce production of tolerant crops except when liming is used. The crop production period is 120-150 days (Saasa, 2003). The region accounts for 46% of the entire national area, and covers Northern Province, Luapula Province, Copperbelt Province, most of Northwest Province, and part of Central Province. The traditional (*citemene*) shifting cultivation is also practised in this region (Ajayi & Kwesiga, 2003).

Except for the Copperbelt Province, the soil in the region is in an advanced stage of leaching and acidification. Due to soil conditions, only 53% of the land is suitable for cultivation (De Wit & Stankiewicz, 2006). The soil is suitable for the production of cassava, beans, millet and groundnut. Sugar, coffee, pineapple and rice are also

planted. Livestock such as poultry, small ruminants and cattle to a limited extent also kept. Development of freshwater fish and aquaculture are also found in this region. Stream water flows without interruption throughout the year and can be used for small scale irrigation.

### **3.6.5. Water resources**

Zambia has abundant underground and water resources though during the dry season water resources may be limited, especially in the southern part of the country. It has numerous rivers, tributaries, swamps, lakes and dams. Zambia is sapped by two major river basins which is the Congo and Zambezi basin. Also, Zambia has numerous large lakes including: Lake Mweru and Tanganyika in the North, Kariba in the South and Lake Bangweulu in the interior. The country's ground water resources projected to be 160 080 m<sup>3</sup> per year. Irrigable land is projected to be 423 000 million hectares but only around 50 000 is presently irrigated, commonly by commercial farmers (Ministry of Energy and Development, 2004).

The plains which become marshy in the rainy season are predominant in most of the country and water is usually available in them from shallow wells or springs. These plains also release underground water to rivers and streams towards the end of the dry season, keeping them flowing forever. Boreholes and small earth dams are frequently constructed as a source of water. Despite the relative abundance, the uneven distribution of water resources across the country, and degradation of water quality through pollution have posed serious health risks to the population and limiting the availability of water for productive purposes (Kumamaru, 2011).

### **3.6.6. Economic characteristics**

The colonial epoch structured the Zambian economy as a dual economy. There was the modern industrial sector controlled by a small manufacturing sector, copper industry and commercial farms held by a small number of white people. The other part of the economy is dominated by small farmers engaging in traditional method of production (Palmer & Parsons, 1977). After gaining independence in 1964, the new government has made tremendous efforts to correct the inequality through assistance to the revenue of the majority of rural small-scale farmers. The country's heavy reliance on copper industry has rendered the economy to be defenceless to the developments in the international metal markets. This has led the country to take a neoliberal approach which includes privatisation of state owned companies. Regardless of these promising potentials, 45% of the Gross Domestic Product today comes from financial support and foreign aid (Cousins, 1995).

Consequently, Zambia's informal sector remains the most dynamic in terms of addressing unemployment and underemployment as it account for over 70% of the Zambian labour force (Phiri & Nakamba-Kabaso, 2012). There is a recognition that Zambia needs to diversify its economy and not be so reliant on favourable copper prices to sustain growth. As a result, greater economic diversification should be a cornerstone of Zambia's macroeconomic planning. This will include creating an enabling environment that provides the poor with opportunities to earn sustainable incomes that provide for their needs and take them out of poverty.

### 3.6.7. Human development conditions in Zambia

Human condition in every country is assessed by the Human Development Index (HDI). The HDI is a mediocre measure of primary human development accomplishment in the country. It covers the patterns of inequality in the distribution of human development across the population at national level. Between 1980 and 2013, Zambia's HDI value increased from 0.422 to 0.56, placing the country at 141 out of 187 territories and countries (UNDP Human Development Report, 2013). The Table 1 below shows some of the human development indicators of Zambia in 2013.

**Table 1: Human Development Index of Zambia**

HDI value	0.561
GNI per capita	2.898
Life expectancy at birth	58.1
Inequality in education (%)	23.8
Inequality in income (%)	42.6
Below income poverty line	440.0
Maternal mortality ratio	74.5
Female seats in parliament (%)	11.5

Source: UNDP Human Development Report (2013; 3)

Zambia is one the poor countries in sub-Sahara Africa, with about 74.5 of the population living below the poverty datum line. The number of people living in absolute poverty has only declined by a third from 58% in 1991 to 42% at present (UNDP Human Development Report, 2013). Although improvements has been made over the years but there is still a long way to go to satisfy the basic minimum conditions needed for a decent life of the majority of the Zambian people. The

government, NGOs and the private sector need to make every effort to bring about poverty reduction strategies and continuous economic growth that contribute towards improving the lives of the Zambian population.

### **3.6.8. Health**

In Zambia, there are hospitals throughout the country. Still, there are very few hospitals or clinics in remote or rural areas of Zambia, where most citizens rely on government run community medical centres and rural medical posts. Government hospitals and clinics have deteriorated significantly over the past decade. The major challenges include understaffing and rising number of sick patients. Medication especially for malaria and HIV/AIDS are in high demand; national health budget is inadequate, thereby worsening the situation in rural areas. One million Zambians live with HIV/AIDS, approximately 17% of the adult population between 15 and 49 (Ministry of Health Aids Council, 2008).

At the same time, HIV/AIDS continues to have a devastating impact on livelihoods. Coupled with high maternal and infant mortality the life expectancy of ordinary Zambian is further reduced. Other major health problems are malnutrition, tuberculosis and cancer. However, much support from the private sector, NGOs and foreign governments to fight these diseases come in the form of health support such as equipment, personal staff and medicines. To put it all in general, Zambia's lack of advancement in the provision of better medical services means that people will not be in a position to live a longer and healthy life style.

### **3.6.9. Transport and communication**

The main modes of transport in Zambia are road, air, rail and inland waterways. The current rail network comprises of Zambia Railways and Tanzania-Zambia Railways

which is jointly managed by Tanzania and Zambia. The railway serves the mining sector and transportation of agricultural products to the market. The decline of agriculture and mining has reduced the volume of business available to the country's railway lines. This has been exacerbated by lack of maintenance, leading to poor state of the rail network and inefficient services (Munsaka, 2008).

Zambia is connected by both primary and secondary road systems. The primary road system is made up of the main tarred road network which connects major cities and towns. Roads linking major cities and towns are mostly paved and in good condition. The rural and remote areas are connected to the main tarred roads by gravel roads and pathways. The gravel and earth roads add up to 8.478km and 21.967km respectively. Furthermore, there are about 30 000km of community road network including trails, tracks and footpaths (SAPRIN, 2002). Over the past decades, the state and condition of the transport infrastructure in the country has deteriorated as a result of increased pressure on the roads and poor maintenance.

Zambia has 23 airports to serve both local and international customers. The country has four major international airports, namely Livingstone, Mfuwe, Lusaka and Ndola with services all over Africa and direct to India, Europe and Far East. A local airline services support air travel within Zambia. Lastly, inland water transport in Zambia is currently not significant even though it is important to some places in the Luapula, Northern and Western Provinces where it is one of the main modes of transport. The country has many navigable rivers and lakes but the expansion of the sector is mired by lack of mechanical expertise in the management of inland waterways (Munsaka,

2008). There is need to maintain the country's rivers and lakes so as to upsurge alternative means of transport modes and increase trade with bordering countries.

Zambia has connected a capacity of 92000 telephones and 90000 mobile subscribers on the Public Switched Telephone Network. The country's teledensity is only 0.18, showing that there are less than 2 telephones per 100 population. On the other hand, rural access to internet services still remains low with only about 15000 users at the end of 2010 (Structural Adjustment Participatory Review International Network (SAPRIN, 2002). However, the number of mobile phone subscribers is rapidly increasing in Zambia.

Internet usage is still very low, particularly outside of Lusaka and regional urban centres. This limits the spread of information and perspectives. Post office services cover most parts of the country with 134 post offices and 98 sub-postal offices. Furthermore, private couriers services helps in time sensitive mail items (SAPRIN, 2002). The operational efficiency of the postal services needs to be upgraded for it to contribute effectively to economic development and poverty alleviation. Most Zambians get their information from the print media, television, or radio.

#### **3.6.10. The education system**

Since the colonial times the educational system of Zambia continue to be completed three stages namely; basic and primary education, secondary or high school education and tertiary (Ministry of Education, 2003). Early childhood education remains the biggest challenge for rural children, as only few wealthy children are capable of accessing this education. This also connects to low enrolment in pre-

schools throughout the country. The majority of pre-schools that offer quality education are privately owned and managed, with a small portion run by the local government. This quality of private pre-school education comes with a charge which is beyond the reach of the majority. Government pre-schools are usually poorly maintained as it fails to subsidize its education sector (Banda, 2006). Moreover, the foundation of education which is the primary education is the only formal education which the majority of rural Zambians can attain. However, many children entering and enrolling in this level may not proceed to high school education (Banda, 2006). However, enrolment to university or college training gives projections and hops for wage sector work is determined by high school certificate performance.

Only 16.2% of mature females have gone through high school against 44.6% for mature males (UNDP Human Development Report, 2013). Education is one of the one of the most important tool for women emancipation, but gender stereotypes continues to keep them out of the educational system. Too often, they make poorly informed choices about their lives. This state of affairs has hostile effects on the establishment of a trainable and skilful workforce and therefore the development and growth of the nation. For a country like Zambia, the pressure is on the leadership to address multiple issues faced by women.

### **3.7.CONCLUSION**

The intention of this chapter was to give a deeper discussion of the research methodology, design, data collection methods, sampling techniques and analysis procedures. In this study, the researcher made use of mixed research method to get small farmers perception on foreign investments and its impact on their day to day

lives. This gives a deeper understanding of how respondents interpret, think, feel and act. This chapter delineate how the population and sample of the research was obtained and the validation for it. The population of interest was too scattered and too big to physically study it as a whole. The researcher draws a sample and analyse it to make inferences about population characteristics. It is crucial that the samples provide a representative across-section of the population they allegedly represent. The study used in-depth interviews, focus groups, questionnaires and archival data as data collection methods.

In-depth interviews, focus groups and key informants are considered best to obtain information about individual experience, perceptions, and feelings, regarding the topic under study. While documentary analysis provides an essential complement to the primary data. Furthermore, the study gave a description of Zambia as a study area. Although, Zambia have vast amount of unexploited natural assets which can be used to stir economic growth the human development indicators shows that the country is still lagging behind in terms of development. The next chapter will constitute data presentation, analysis and interpretation.

## **CHAPTER FOUR**

### **AN ANALYSIS OF SMALL FARMERS AND LAND INVESTMENT**

#### **4.0. INTRODUCTION**

Large-scale private land investments continue to raise concern in Zambia, especially the acquisitions of agricultural land and their impacts on the survival of small farmers. This is rightly a colossal concern since land is crucial to small farmers' food security, livelihood and identity. This chapter describe the extent, nature and impacts of foreign land investments on small farmers in Zambia. Likewise, this chapter is regarded as the centre of the whole research project as it presents, analyse and discuss the collected data. Data analysis helps to develop, revise and remodel certain information with a vision to reach a convincing conclusion for a particular situation or problem. It is like a sieve when it comes to obtaining meaningful insights out of huge data set. As well data analysis proved to be critical in diagnosing the research problem and in structuring the findings from the field.

A profile of the location, socio-economic settings and agricultural production of Zambia was presented in chapter three. The preceding chapter gave a brief description of Zambia as study area and a rational for selecting the location. In addition, the chapter explained the research methodology and design used in this study. A combination of research instruments including observations, questionnaires, interviews and secondary sources were used to elicit information on the effects of foreign land investments on small-scale farmers in Zambia. This chapter gives a better understanding of the impacts of foreign land investments on land and the indigenous people. The field data obtained was analysed through pulling out themes

or other classifications. Notes from the interviews were coded and themes and sub-themes were created from each schedule. Responses from respondents were used to justify or support the arguments presented in this study. A detailed discussion and summary of the issues raised by the data is provided at the end of each analysis.

## **4.1. HOUSEHOLD DEMOGRAPHIC INFORMATION**

### **4.1.1. Head of household**

The subject of traditional African family is a very wide notion which has puzzling differences across the continent. These differences are produced by variations in ethnic culture or customs according to history; inter migration, religion, geography, economic and political structures. The one commonly known feature that differentiates the European from the African traditional family is the persistence of polygamy. The existence of polygamy is an important factor and pointer of the nature of almost every African social group; whether clan or tribe. In spite of the existence of polygamy, there is proof that it is on decline. The key reason given is that with the increasing cost of living, marrying more than one wife became an economic load. Even so, this polygamous type of family or marriage is rare in Zambia particularly among the matrilineal Bemba people.

Individuals relate to the community through their households and family. Families and households are mainly used as basic units of enquiry in demography. Although household and family are used interchangeably, they are different concepts. A Zambian family, like families elsewhere, consists of members who are related, to a particular, through adoption, blood or marriage while household is made up of all

individuals living together in a housing unit. Nonetheless, the study used the term household to refer to a socio-economic unit, consisting of an individual or individuals who live together.

Kinship can be recognised as either patrilineal or matrilineal. Patrilineal structures are more common in many African societies than matrilineal which is limited mainly to parts of Malawi and Zambia, in Western Africa, and to Ivory Coast and Ghana, in central Africa. In matrilineal societies power and authority to make decisions lies with the women and her clan. Historically, a large population of Zambian communities were matrilineal than patrilineal in structure. The basic kinship unit was a matrilineal extended family which consists of a woman and her husband, their wedded daughters, and the latter's husbands and children. A man has to live permanently or temporarily in his wife's rural community for the first years of his married life. The husband works and lives under his father-in-law's orders. The husband might take his wife and children home if the marriage was believed to be solid especially after the couple has two or more offspring. However, after decades of subsequent social change, the custom is gradually disappearing.

On the other hand, patriarchy is a system in which males have dominant authority and power in all spheres of production and reproduction. Men enjoy political and socio-economic privileges. In most African families' husband or a father figure holds authority over women and children. Still both patrilineal and matrilineal systems discriminate systematically between female and male child. In patrilineal societies land ownership is inherited by a male heir. The transfer of property is from father to

his sons. It is thought that daughters will wed men who inherit land and property. Hence, married women access and control of land is gained through their husbands.

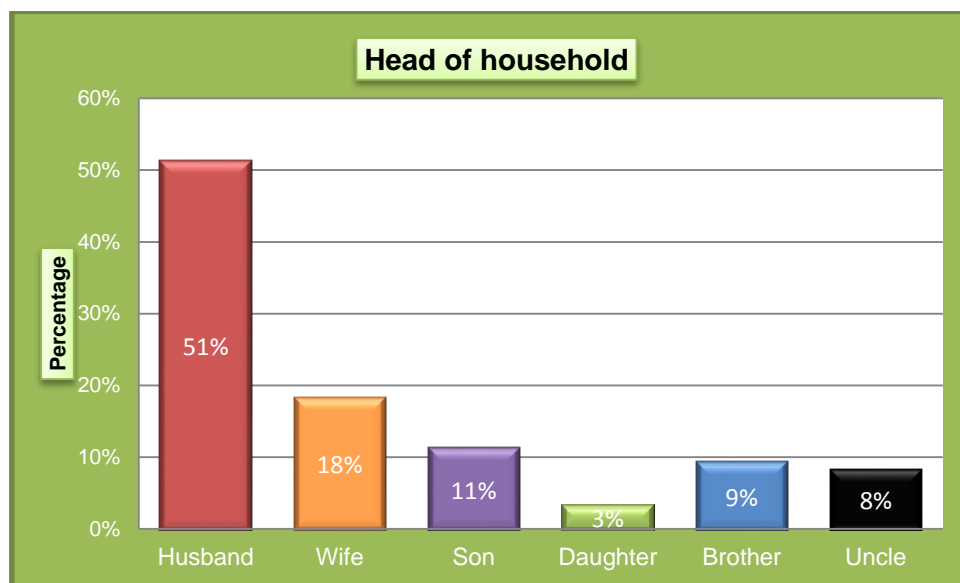
Contrariwise, in matrilineal systems it is precisely the opposite. Daughters have the rights to own, use and inherit property and land. They usually inherit status and property directly from their mothers. Male children do not inherit land, as they will get land from their wives. However, they have the right to borrow and use land but not the right to inherit and own it (Hatcher *et al.*, 2005:51). Men are recognised as borrowers and users of land. The power and authority of women in matrilineal societies is strong. However, irrespective of the means of lineage, power and authority in the family and elsewhere is always informally or formally held by men. Therefore men have domestic authority and power in both matrilineal and patrilineal societies.

While the definition of head of household varies across continents, regions or countries, this study used the term to refer to the breadwinner who is the major decision maker and assigned by others as their head. The respondents were asked about the head of the household. Figure 3 which follow shows the response of the interviewed small-scale farmers. The study revealed that 51% of the households are headed by husbands, 18 % headed by wives, 11% headed by sons, 3% headed by daughters, 8% headed by a brother and 9% by an uncle. From figure 3 households headed by men are 79%, while the remaining 21% are women.

In most cases husband is regarded as both the head of the wife and the household. This mirrors the stereotype of a man in the family as the only person in power,

authority and as a breadwinner. Consequently, in traditional African communities, males are assumed to be heads of household irrespective of the status of their spouses. This subscribes to the patriarchal view that men provide for the family while women are consigned to household chores. Due to this nature, the study shows a considerable number of households headed by brothers, sons and uncles.

**Figure 3: Head of household**



As in many African cultures whether a woman is widowed, separated or deserted by her husband she will not be left completely on her own. A support system is put in place which ensures that on the absence of a husband, a woman can be taken by her adult children, uncle or a brother from her natal home. In many cases women are recognized as potential household heads, but in reality, men are most often assigned the headship position. However, recent decades have seen the emergence of new form of households in which women are the heads. This is as a result of absence of eligible male in the family system which may be attributed to male migration, the death of males, divorce and family disruption. Males usually go to cities and mines in

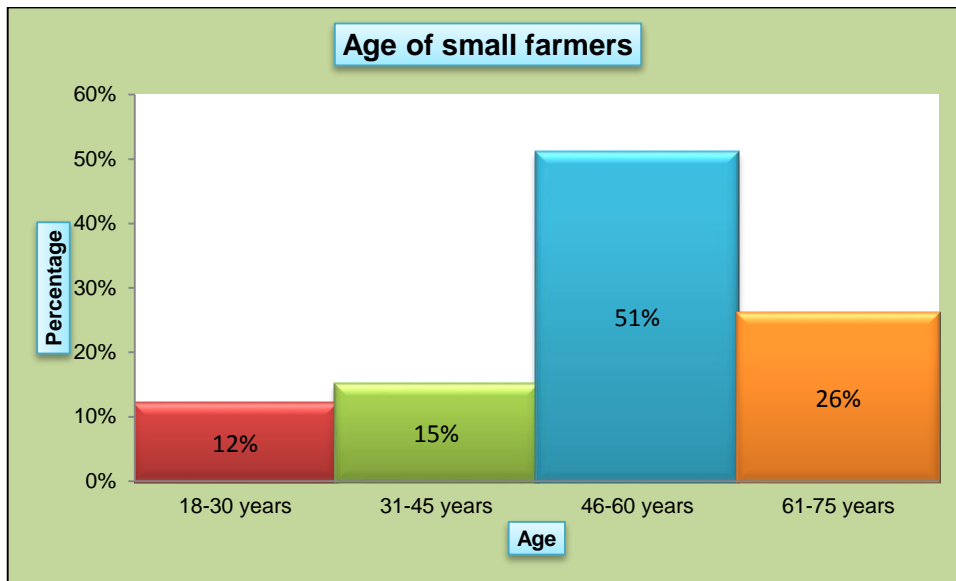
search of opportunities leaving women in rural areas. Also, some other elements underlying women's power in decision making process include control of assets and income, level of education and age at marriage.

#### **4.1.2. Age of the small farmers**

Age is an essential determinant of the individual's personality make up, needs and preferences and decision making ability linked to experience and the stock of available skills and knowledge to address problems. This knowledge is crucial for producing the wealth of the nation and raising the standard of living even of the most poor. Likewise, the age of a household head determines the knowledge of the social and physical environments which plays a vital role in agricultural production and productivity. The interviewed respondents were requested to indicate their ages. For analysis purposes, the household heads ages were categorized into four as follows: 18-30 years, 31-45 years, 46-60 years and 61-75 years. The ages of the respondents ranged from 18 to 75 years.

The Figure 4 shows the age distribution of selected small farmers interviewed in the study. There were 12 (12%) respondents who were between 18 and 30 years, with 15 (15%) in the 31-45 years category. This was followed by those between the ages of 46-60 years with 51%. In the 61-75 age category, there were 26 (26%) respondents. From the results, farming in the study area seems to be performed mostly by relatively older people. According to Mapoma, (2013) Zambian rural population aged 60 plus between 2000 and 2030 will grow from 2.5% per annum to about 5.7% per annum. This reflects an old population characteristic of many rural areas in Zambia.

**Figure 4: Age of small farmers**



Some of the interviewed farmers said that they started farming when they were still in their youth. They have remained in the agricultural sector due to various reasons such as failure to get salaried jobs, lack of skills and education required in other sectors, and the desire to continue with family farming legacies. There have been several debates over the years about the issue of whether farmers become much wiser or more productive with age or not. Without a doubt, the way in which an individual thinks is closely related to the number of years a person has lived and what the individual has experienced and been exposed to.

Older farmers usually have greater experience of farming activities which they acquire over time. This means that as the household head grows older, so does their knowledge and skills levels. Henceforth, agricultural knowledge and skills in production, operation, and management, may increase with age. Their advantage lies in the long-term accumulation of experience in agricultural production and input configuration. Some participants in the focus groups maintain that accumulation of

knowledge and skills help them to maximise the efficient use of agricultural inputs, such as pesticides and fertilizers.

Some respondents' maintained that old age has a negative influence on their farming activities. This is because most of the old people face health challenges and they eventually get less interested in farming due to declining earnings which may be linked to their relatively lower labour input than younger and more energetic farmers. Physical strength is required during the process of agricultural production. The decline in physical strength after middle age may negatively affect the overall agricultural production. Agricultural production requires not only labour input, but also technological development. An aging rural population needs technology to compensate for physical deficiency. This may incline them to invest in the use of machinery instead of labour input.

Some participants in focus group discussions argued that when farmers get older they may be less eager to unwilling to try something new or adopt improved technologies. As the farmer gets old, the likelihood of adopting new technology may decrease. This will in turn reduce agricultural production and productivity. Despite that, the productivity of an ageing population may be influenced by their access to land, credit, market, machinery, extension services and farming inputs such as hybrid seeds, pesticides, fertilizers and herbicides. Therefore, no matter whether a farmer is young or old, having access to key agricultural resources is very essential in increasing agricultural production.

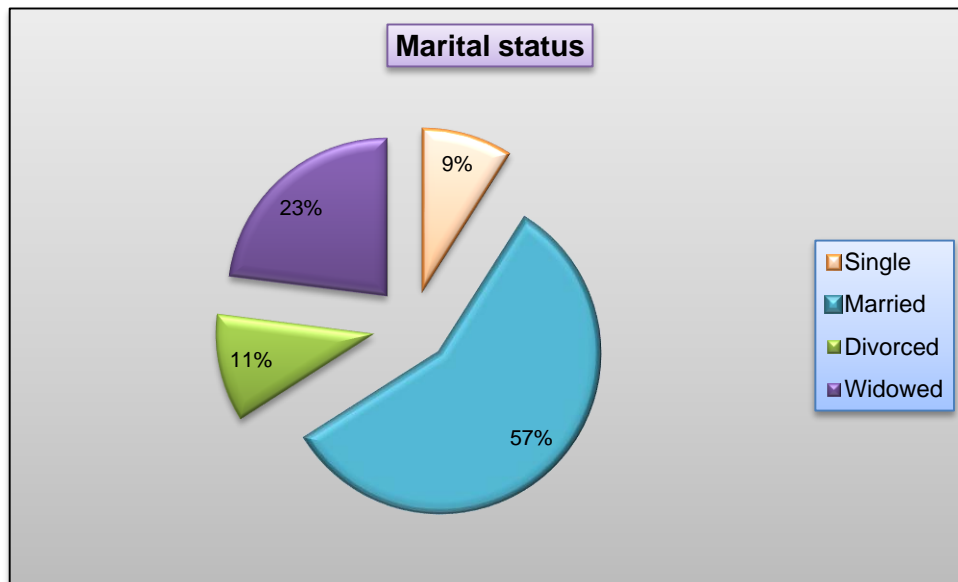
Although young people are more physically strong, educated, adaptable and willing to try out innovations they are more likely to abandon farming and relocate to urban centres to seek other forms of employment, which may offer better income compared to farming. The study findings correlate with Lewis (1954) hypothesis which states that people from rural areas would migrate to urban areas in the expectation of higher earnings. This has been a trend across Africa, especially in Nigeria (Oluwafemi & Ayandibu, 2014). Although agriculture is the mainstay of many rural economies, most people are leaving this sector as they cannot make meaningful economic profit or income. Agriculture in Africa has become unprofitable resulting from traditional mode of cultivation and poor farming practices. This has been exacerbated by absence of tenure security and lack of investment in the agriculture sector, including in research and development (Tenaw *et al.*, 2009). Further research into efficient cultivation methods, improved crop varieties and effective farm inputs is required, while more effort is needed to the diffusion of promising technologies.

Several obstacles have reduced agricultural productivity in rural areas, therefore forcing people to search for greener pastures in urban areas. Participants in focus group discussions maintain that the increasing migration of family members to urban areas leave them with insufficient hands to support or assist them, in case of high labour demands. In return, this will definitely make the farmers reduce their farm sizes to be able to cope with labour demands. The loss of labour through migration may tighten the labour constraint for agricultural production. Contrariwise, the earnings in the form of remittances from migrants may loosen credit constraints and help with investments in agricultural production.

### 4.1.3. Marital status

The marital status of the participants were divided into four main groups namely married, single, divorced and widowed. Figure 5 shows that 57% are married, 9% are single, whereas 23% and 11% are divorced and widowed respectively. There is an insignificant number of people who are single. Those who are still single claimed that they are still waiting for their own personal time to get married. It is very rare to see women and men who opt to continue living as singles. In life every woman and man is expected to wed at a certain stage.

**Figure 5: Marital status**



In some cases other respondents were labelled single while at the same time cohabitating with his or her partner. Most cohabitations survive for a short period, they usually last for about a year or a little more and then are converted into marriages or dissolve. Some individuals prefer cohabitation as way of testing the relation before wedding. Cohabitation may be as a result of some financial reasons. People may fear the pain of paying *lobola* and getting divorced later. Most people

then opt to live together instead of tying the knot at all. To these people cohabitation offers similar benefits to marriage.

In Zambia people frown upon adults over 30 years who are still single, accusing them of prolonging singlehood. This new trend may reflect the decline of marriageable partners. In-depth interviews with small farmers' review that people who are single have find it difficult to get access to the communal land. In most rural parts of Zambia, the land is regarded to belong to a family, not to an individual; therefore, traditional leaders tend to favour married couples in the distribution of land. On the other hand, the widows/widowers also constitute a larger number in the study area. This could have been caused by high death rates given high levels of HIV/AIDS mortality in Zambia which is sometimes exacerbated by lack of antiretroviral treatment in public health facilities. HIV/AIDS and other deadly diseases tend to negatively impact small-scale farmers, through labour capital and food shortages, and loss of knowledge and skills.

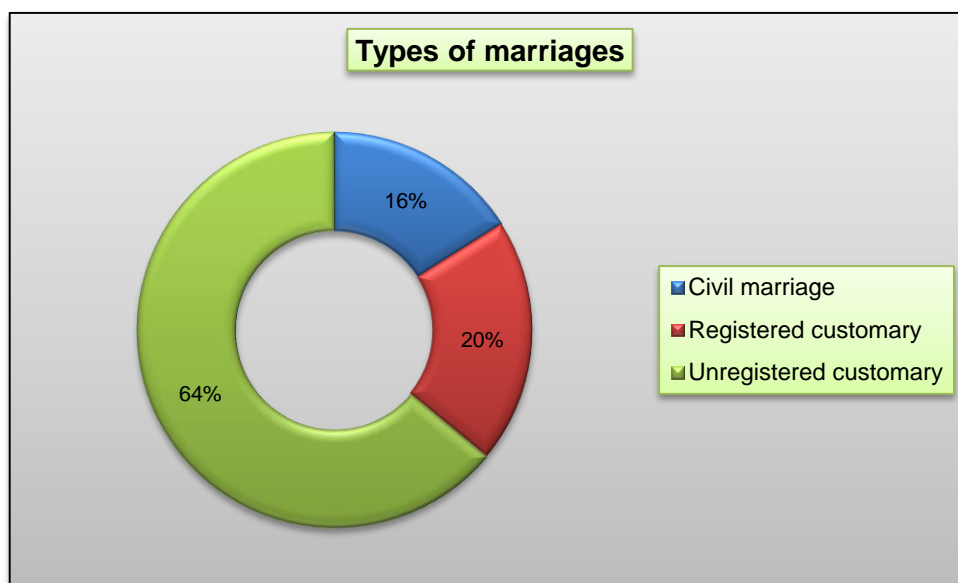
A small proportion of 11% from the respondents is reported as divorced. This low rate of divorce could be as a result of many marriages in rural areas being contracted through strong customary rites. In most Zambian communities or families, the stability and priorities of a household is normally judged based on the marital status. It is normally believed that married couples tend to be more stable in farming activities than those who are single, divorced and widowed respondents. The point that most of the respondents are married could imply that couples are engaged in cooperative effort in farming activities or operation. However, this theory could be disputable as farmers could always get help from other family members, extension officers and fellow farmers regardless of their marital status.

#### 4.1.4. Type of marriages

The form, kind, characteristic and function of marriage differ from tribe to tribe and culture to culture, and can transform over time. Three types of marriage looked at by the study and these are as follows; registered customary, unregistered customary and civil marriage. From the respondents interviewed, 64% were customary married yet unregistered, 20% customary registered and 16% are married through civil marriage. Figure 6 presents the response of interviewed small farmers. The study noticed that the small farmers who were in unregistered customary marriages were the majority among respondents.

Many people in rural areas have no money to travel to the nearest city or church to get a recognised marriage officer. They are comfortable with their union if their friends and families bless or recognise their marriage. At the end they find no reason to travel to get a marriage officer who can legalise their marriage. This rise of unregistered customary unions, may likely fuel a surge in inheritance, maintenance, guardianship, and divorce cases before the courts.

**Figure 6: Types of marriages**



In many cases customary marriages are not valid unless solemnised. The non-recognition of traditional customary weddings sometimes results to numerous hardships in that children are not held as legitimate. Moreover, the spouses married in this system are not given the equal status with spouses from civil marriages in matters of interstate maintenance and succession. It is however one of the most regular marriages and one that has usually led to more misunderstandings than freedom for those who have chosen it. Those who choose to marry under statutory law enjoy the full protection of the law. Civil and registered customary marriages provide evidence of marriage to third as well as to decide the matrimonial property system. The power of these two forms of marriages lies in the fact that they are recognised as lawful unions and registered. The people who wed in these marriages enjoy the legal protection of the law whenever a problem arises.

#### **4.1.5. Level of education**

Literateness has been recognised as one of the factors enabling small-scale farmers to receive and process relevant agricultural information efficiently. Education helps farmers in the process of agricultural information and leads them to discover various pathways of receiving information about farming and modern technology. This study gathered information on the level of education obtained by small farmers. Their level education is critical in making chief decisions for the farm. There were four categories which represent the level of education of the interviewed small farmers namely; no formal education, primary, secondary and tertiary level.

**Figure 7: Educational level**

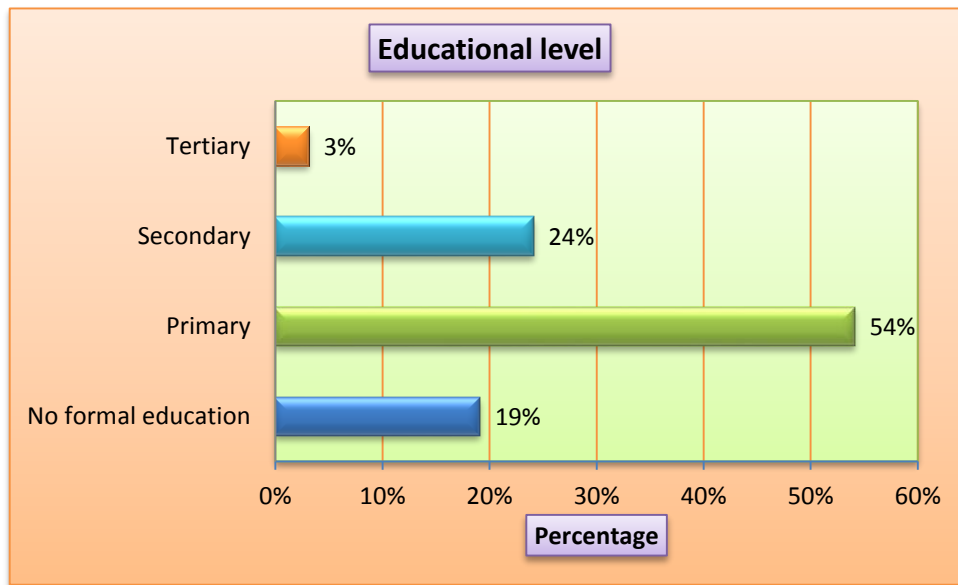


Figure 7 summarises the educational levels of small scale farmers in the Coppebelt province. The illiteracy level is still high in the study area as 19% of the interviewed small farmers do not have formal education. The bulk of the sampled respondents have primary education (54%). The percentage of small farmers who had secondary education was 24%. Only 3% of the respondents have obtained tertiary education. The highest educational levels achieved by a person may determine their agricultural knowledge and ability to understand written information. As well, education maybe a complement or substitute to farm experience in the agriculture sector. Small-scale farmers who have obtained a higher level of education have high opportunities of being informed because they can write or read and more able to interpret agricultural information than those have less or no education at all.

Education generates cognitive skills which are useful in agriculture. Increasing numeracy and literacy may assist small farmers to understand and acquire farming information and to compute correct input quantities (Appleton & Balihuta, 1996).

Education also produces non-cognitive changes in beliefs, attitudes and habits. Improved habits, attitudes and beliefs may lead to greater preparedness to save for investments, adopt innovations, accept risks and generally hold productive farming practises. Hence, if education is found to have a significant impact upon agricultural productivity, there is a need to provide an economic rationale for policy interventions to increase access to schooling in rural areas.

In this study, small farmers claimed that distance and absence of primary, secondary schools and tertiary colleges were also felt to be more serious in rural areas. Rural children suffer from the lack of means of transportation but have to endure the torture of walking to and from school daily. Most rural communities do not have their own local school or college which means children have to walk to another or nearby village to be given education. Rural schools lack facilities and resources such as course materials, textbooks, classrooms and committed teachers. It is definite that without additional government support many rural schools and community colleges will continue to struggle meeting their needs.

Although, some individuals residing in rural areas have realise the significance of education and know that it the best choice to get out of the shackles of poverty. Lack of capital to pay fees parents finds it hard to send their kids to school. This is worsened as education becomes expensive as one progress from one level to another. Besides, if parents or those who are guardians fail to send children to higher education, then all their preceding energies get wasted as finishing just secondary education means a low income job and they will be trapped in the same never ending cycle of poverty. Parental illiteracy may be another cause for lack of

interest to become literates. Many rural children enrolled are the pioneer generation of learners in their families. This generation have to individually cope with school life, grasping language and cognitive skills without family guidance and assistance. Thus, children drop out from school because of lack the motivation to finish school.

#### **4.1.6. Household size**

Household size has important practical implications for labour availability which acts as the basis for a household to decide whether or not to partake in different events or activities. Household size in this study was measured by the number of family members residing in a single homestead, sharing resources and activities for a living. These people may or may not be related by blood but normally live and eat together. An analysis of household size was carried out for the interviewed farmers and the outcomes are shown in Table 2.

The average category of household size for the respondents of small farmers ranges from 7 to 9 members. The minimum size ranges from 1 to 3 while maximum household size was 10 to 12 members respectively. The interviewed small-scale farmers had generally large families where 81% had more than 4 family members. Large household sizes are largely due to extended nature of many African family structures. Still, extended family links are essential as a source of economic and social security in times of need. In this case the large families ensure that households have enough labour to carry out agricultural activities. Other small farmers reported that bigger households have an advantage over smaller ones in terms of knowledge and skills. Bigger households have abundance of extra members who can share their farming experiences, knowledge and labour.

**Table 2: Household size**

<b>Family size</b>	<b>1-3 members</b>	<b>4-6 members</b>	<b>7-9 members</b>	<b>10-12 members</b>
<b>Number of respondents</b>	19	32	45	4
<b>Percentage of respondents</b>	19%	32%	45%	4%

One other point worth noting about the effect of bigger household size is that since food rations increases with the number of individuals in the household and also land and finance to buy key farming inputs are very limited, larger family size has a tendency to exert pressure on consumption than the labour it contributed to production. In fact an increase in the number of members in the households under conditions of land scarcity may also lead to future further subdivision of the already small landholdings with the allocation to members of their allotted shares. Therefore, the increased number of family members may contribute to farm developments in a relatively land abundant situation, but not in a land scarce situation.

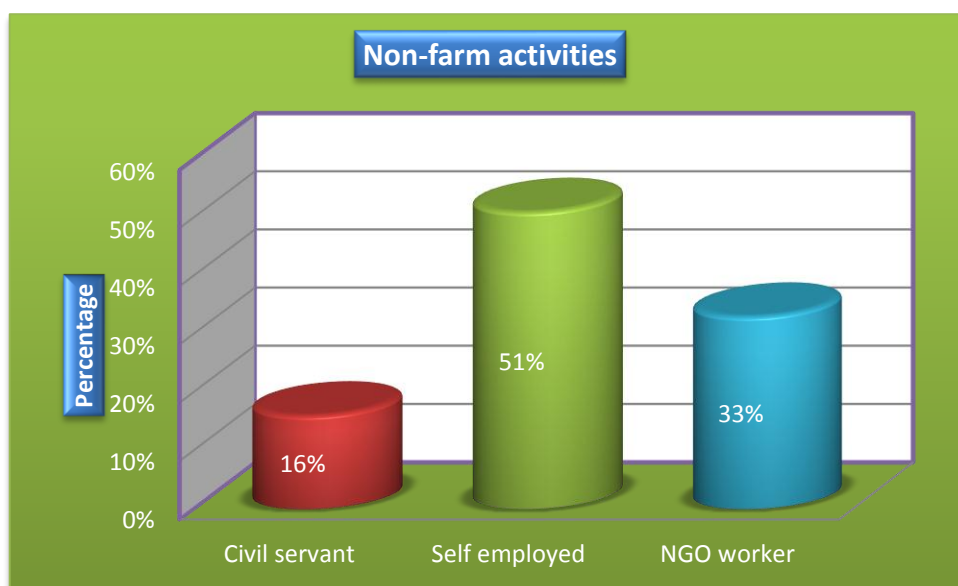
#### **4.1.7. Non-farm activities**

The mainstream of the rural poor in Zambia get their livelihoods from farming and diverse of off-farm income generating activities. Non-farm activities are becoming gradually important for food security, poverty reduction as well as farm productivity in Zambia. The non-farm sector comprises all those activities associated with waged work or self-employment that is not agricultural related (Davis, 2003). Non-farm activities are of great significance to most rural economies, for its employment impacts, productive and the revenue it gives to the rural households signifies a growing and substantial portion of household revenue. Due to various circumstances other families are forced into non-farm sector due to lack of sustainable income and opportunities in the agricultural sector. This clearly shows that agriculture alone

cannot sustain the livelihoods of the poor rural communities in the country. The interviewed small farmers were asked to indicate non-farm activities they are engaged into. Figure 8 shows the responses from the interviewed small farmers. Of the sampled respondents 16% are civil servant, 33% NGO workers and 51% self-employed.

The growth in the NGO sector in rural areas has also resulted in the employment of the local people. They work on part time basis and sometimes on voluntary basis. In most cases they are employed to offload food packages and agricultural inputs brought by NGOs operating in their communities. They are also employed to safeguard these food packages and agricultural inputs before they are distributed to the intended beneficiaries. NGOs normally employ the local people who have grassroots connections in the country side. Although small farmers rely on NGOs work as their alternative livelihood strategy and source of income, they also supplement their income by working as casual workers in the government sector.

**Figure 8: Non-farm activities**



Alternatively, some respondents are engaged in self-employment. They generate income directly from customers, clients or other organisations. Self-employed small farmers indicated that they own small businesses such as taverns, tuck shops, and hair dressing saloons or rendering services on specialised skills, such as, mechanic, electrician, brick laying, carpentry and welding. Self-employment revenues give the dignity of the respondents as it pays his/her energy and assist them to be self-sufficient allowing them to meet household necessities.

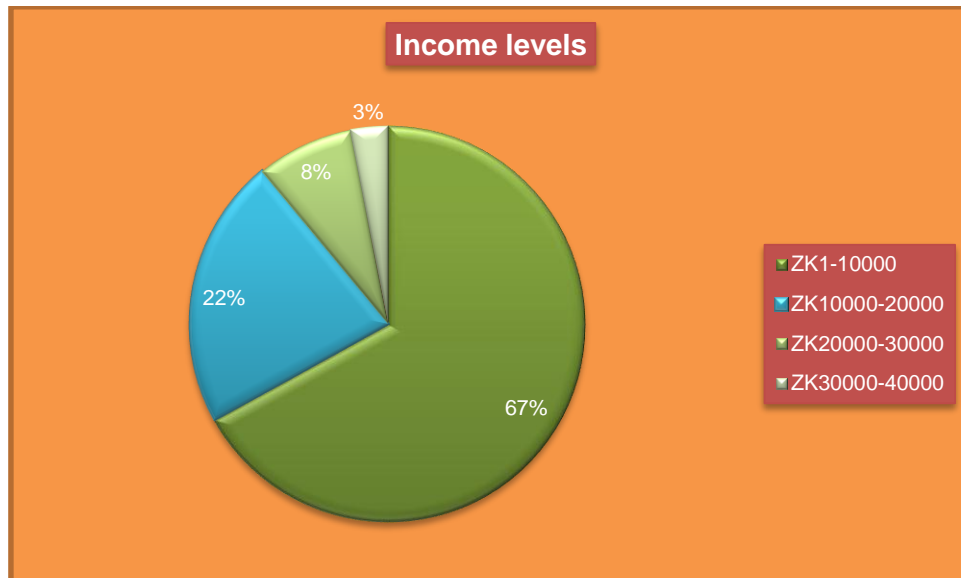
#### **4.1.8. Household income**

The respondents were asked to indicate their annual income ranges. The local Zambian kwacha was used to measure the annual income of small farmers. But, falling prices of the major export product in Zambia which is copper has weakened the country's currency. Figure 9 shows the annual income of the interviewed small farmers. The symbol of the Zambian currency is ZK. Of the interviewed small farmers 67% ranges from ZK1-ZK10000, 22% from ZK10000-ZK20000, 8% from ZK20000-ZK30000 and 3% from ZK30000-ZK40000. The exchange rate of Zambian kwacha to United States dollar updated on 30 November 2015 was US\$1 is equivalent to ZK10.35. The data shows that the majority of the respondents earned much less than ZK10000 or US\$966.14 per year.

Low income levels are an indication of poverty levels in the study area. It is considered that with high poverty levels in most rural areas, people live on very little income or none at all. Most rural areas offer few economic opportunities for the local people. Low earning remains the major problem affecting their production capacity and level. There is proof to suggest that rural low income households may face

higher costs for certain basics such as clothing, transport, food, education and health facilities.

**Figure 9: Household income**



There is also lack of well-paying jobs in rural areas, particularly in the agricultural sector which generally requires less skill and receives lower salaries. In most case rural labour force generally have little or no education and are referred to low paying jobs on mines and commercial farms. Commercial farms usually give only seasonal employment, hence not providing enough income to the family household throughout the year. This has provided the inducement for many who have moved to towns and cities in search of greener pastures.

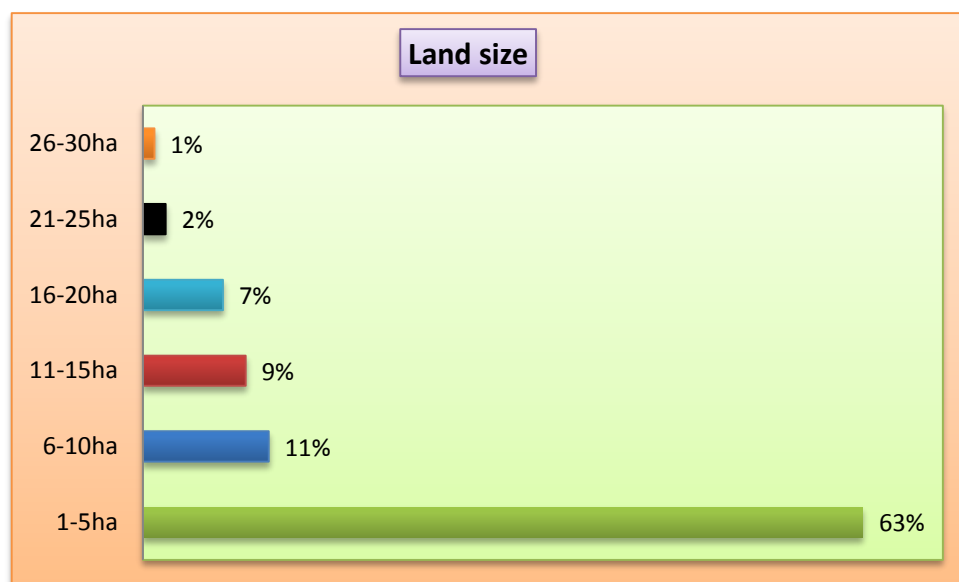
## **4.2. LAND OWNERSHIP AND RIGHTS**

### **4.2.1. Land size**

Land for Africans in general and Zambians in particular remains their single most important asset. Even after many decades of attaining political independence, the majority of Zambian rural households largely rely on farming related activities for

their livelihoods. Land is an important asset to Zambian small farmers and is necessary for food availability and poverty alleviation. The researcher interviewed the respondents about the size and condition of their arable land. Figure 10 shows the response from the interviewed small farmers. From the 100 respondents that were consulted, 63% had 1-5ha, 11% had 6-10ha, 9% had 11-15ha, 7% had 16-20ha, 2% had 21-25ha and 1% had 26-30 ha. There is, however, a significant disparity in farm sizes, with a considerable population of households farming less than 5ha, and a small proportion cultivating farms greater than 25ha.

**Figure 10: Land size**



With the encroachment of foreign investors in the province, the arable land of the small farmers continues to be swallowed by these land acquisitions. While the number of very large farms increases, the small farms are disappearing rapidly. Hence, this suggests the fading away of once was the backbone of rural Africa. Those who have larger pieces of land are local elites who are well connected to the ruling government. The local elites include traditional chiefs, politicians, civil servants, religious leaders and local businessman.

The diminishing land holding size, threatens small-scale farmers food security. Without any alternative access to any other land, small-scale farmers are compelled to use their small plots of land continuously. Thus, farmers are forced to over utilise their land to unproductive levels, in order meet their immediate food security needs with no regard to future gains in resource productivity. Moreover, continuous cultivation of the same lands without addition of organic or inorganic fertilizers results in further degradation of the already infertile land.

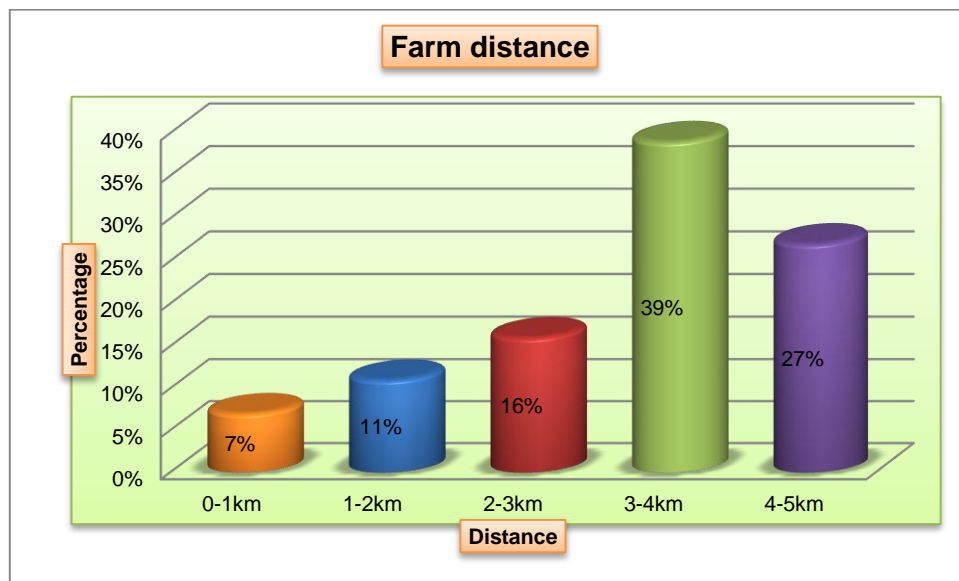
The size of the land in agriculture may influence household food security; the larger the land size the higher the production. However, millions of small farmers of China, Japan and elsewhere in Asia demonstrate that farm size is not the central factor in agricultural production. These small farmers received high levels of productivity per unit area of land which are equivalent or greater than those obtained by large commercial farmers anywhere in the world (Estudillo & Otsuka, 2013). The only key to their achievement is not the size of their farms but their access to market, credit and agricultural inputs. This may involve the application of high-yielding seeds, expansion of irrigation infrastructure, modernisation of management techniques, synthetic fertilisers, and pesticides to small farmers. However, the size may be of concern to those who are rearing livestock as they will be in need of large tracts of land to paddock their animals.

#### **4.2.2. Farm Distance**

Distance is a crucial factor in agriculture production. The distance from the farmer's house to the farm place would have numerous impacts on a farmer as an individual, his health condition, productivity, effectiveness and security. The interviewed small

farmers were asked to give a range of the distance they travel to their farms. Figure 11 shows the response of the small farmers. Of the respondents, 7% travel a distance less than a kilometre, 11% travel a distance between 1-2km, 16% travel between 2-3km, 39% travel between 3-4km and the remaining 27% travel between 4-5km.

**Figure 11: Farm distance**



The survey shows that small scale farmers have to travel long distances from their homes to their farm sites. These routine, daily walks to the farm site, with the effect on farmer's security and healthy, may lead to low agricultural productivity. Various factors could explain the distance between the farm and the residence of the farmer. These may range from the search for fertile soils, land space and demographic pressure. Farmers have to plan strategies on how to reduce the impact of long distance trailing or movement on their efficiency. Some have to make a temporary farm shelter to reside during the farming season.

Farm distance can determine the choice of production system and cropping pattern used by farmers. The degree of business variation and growth would be higher on very close community farms rather distant farms. Short distance to the farm may also increase farm supervision. Long distances to the farm may indicate a decline in the farmer's farming output due to ability to supervise farm activities. Small farmers with farms located away from their places of residence, may suffer from high transport costs compared to those with nearby farms. Therefore, the degree of chemical and fertilizer use would be more concentrated on near farms than distant farms; while intensification would be reduced as farm location from community centres increases.

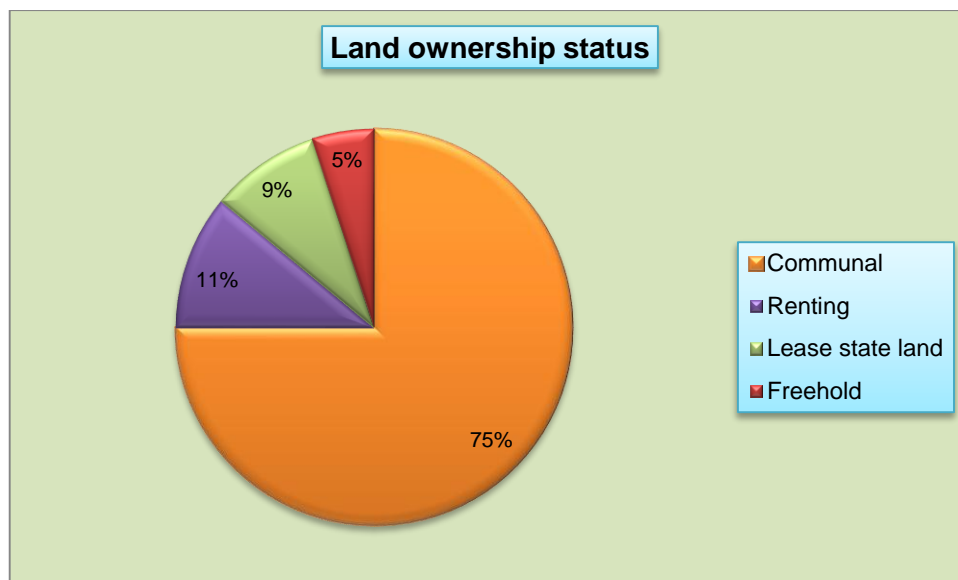
Long farm distances may also reduce the efficiency of labour as farmers spend a large proportion of the available working hours traveling from home to farm, thus wasting time that could have been spend in useful agricultural activities. The time spends or wasted by the farmer travelling daily back and forth as usual routine, adds to difficulties and challenges of farming. This also means an additional cost of production through added transportation on outputs and inputs. Hence, farmers may suffer from high cost of mobility. In general the distance between the place of residence and farm may results in reduced revenue to the farmer.

#### **4.2.3. Land ownership status**

Zambia has different land ownership systems namely; freehold, communal, lease state land and renting. This study examined the structures of land ownership in the smallholder agricultural sector. The interviewed small-scale farmers were requested to show their land ownership status and the results are shown in Figure 12. From the findings, 75% uses communal ownership, 5% uses freehold, 9% uses state lease land and the remaining 11% are renting. The majority of the small-scale farmers hold

their land under communal tenure. Communal land is that land which the community share, giving each community member an individual right to use land autonomously. The rights and privileges to communal land ownership are by verbal evidence, observed by the community, traditional leaders and also outsiders. However, their property rights to the arable land are not legally enforced, protected and recognised by the government. The risk is that when land rights are not formally secured, the communal people have little statutory in a land conflict with foreigners.

**Figure 12: Land ownership status**



From the survey small farmers feel insecure as more wealthy investors are becoming interested in investing and owning land. They live under endless warning of losing their ancestral land because of insufficient rules and laws that safeguard their land. Small-scale farmers who have been farming the land for generations could be dispossessed in the event of foreign investment which the state considers productive. In addition, small scale farmers who are landless or do not hold title deeds for their land may find it difficult to receive credits from commercial banks. This is challenging as communal land ownership cannot be used as collateral or as

shares against investments. This means that these small-scale farmers are sitting on dead capital. This may encumber commercialization and depress rural land markets.

From the findings, 11% of the small-scale farmers are renting land for agriculture. It is possible that the 3% of respondents with farm sizes over 20 hectares (Figure 10) are all within the 5% who had freehold titles (Figure 12). Interviewed small farmers have to pay a fixed rent to the landlord on an annual basis. Most of these absentee landlords live in urban areas. They lease their land to landless farmers in rural areas. The leaseholder will take residency on the property of the landholder and work the land in exchange for giving the landholder a proportion of the profits from the crop harvest. The rent varies from one landlord to the other. However, some respondents indicated that renting was not safe as conditions and terms are easily influenced and the landowner may terminate the agreement before the expiry of the stipulated period of time. Respondents added that commercial banks and other financial institutions also have less respect for land titles under this system because of the challenges of security of ownership.

Some of the interviewed small-scale farmers carry out the agricultural activities on the land leased from the government. Leasehold are given free of charge by the government. This kind of land ownership does not give total ownership which the tenant needs for guarantee of the safety of their long term land investments. The state can lease the land to communities or private entities. The state give long term usage rights for rural small-scale farmers. However, these small farmers lack title deeds as the land is a property of the government.

A small percentage of small farmers have freehold titles to their land. In this tenure, ownership and security are virtually unrestricted. The rights are legally enforced, protected and recognised. Interviewed respondents also indicated that other people did not have any rights to their arable land. They were certain about the future occupation of their arable land and all deemed the security of their rights to this land to be very strong. Individual property rights system was seen as conducive for independent planning and better use and management of arable land. Farmers, also have a sense of security in the freehold land ownership because they benefit from long term ownership rights to without fear of being evicted.

### **4.3. FARM OPERATION AND EQUIPMENTS**

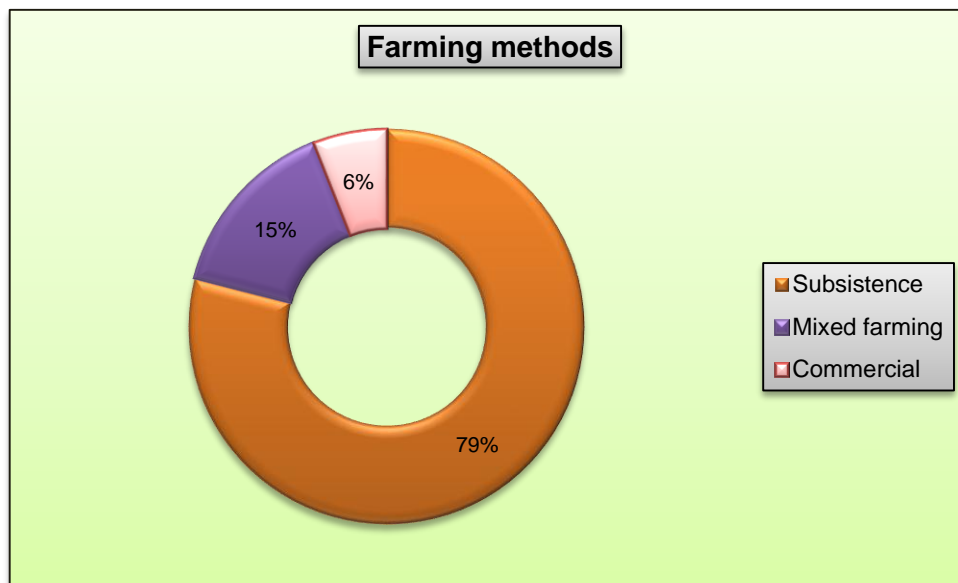
#### **4.3.1. Farming methods**

The farming methods employed differ from province to province and from farmer to farmer. Interviewed small farmer were requested to point out the type of farming methods they were employing. From the field results 79% of the interviewed small farmers practised subsistence farming, 15% on mixed farming while 6% are engaging into commercial farming. It is possible that the 6% commercial farmers include the 5% with freehold tenure. Figure 13 shows the methods of farming practised by small farmers in Copperbelt Province. The majority of small scale farmers carry out farming for family sustenance.

Rural small farmers are usually subsistence producers of staple foods like maize and an infrequent market surplus. The information reveals that few small-scale farmers have transformed from subsistence to commercial agriculture. The majority of small farmers in Zambia prioritise growing maize which the staple crop for the country. Therefore, small-scale farmers can play a crucial role in decreasing the exposure of

food insecurity and help in lessening high food price inflation. Small farmers need to be equipped with necessary agricultural resources as to increase productivity and ensure both long and short term food security. This can also be done by encouraging small-scale farmers to follow sustainable agricultural practises and methods through the use of irrigation, hybrid seeds, fertilisers, pesticides and herbicides.

**Figure 13: Farming methods**



Only 6% of the small farmers are engaged in commercial farming. In most rural areas, this sector is dominated by local elites whose farms are set up for the drive of producing crops and livestock for sale, with the chief intention of making a profit. Although family members can be involved, they often use hired labour due to the level of work required. Some interviewed small farmers are involved in mixed farming. They often grow crops as well as the raise livestock either for sale and consumption. Therefore, they mix arable farming with the raising of livestock simultaneously. Livestock also offers a ready means of getting money and assist the use of inputs in crop farming which in turn generates higher levels of output from both livestock and crop.

### 4.3.2. Farming systems

Small-scale farmers' were requested to describe the type of farming methods they are engaged. Table 3 shows the response from the interviewed small farmers. About 78% of the respondents practise monoculture whilst 22% are engaged into diversified farming. The evidence in Table 3 shows that the majority of small farmers are practising monoculture. They cultivate only one crop without using the land for other agricultural purposes. In Zambia most of the small farmers rely on one annual rain-fed crop, such as maize, which is their staple crop. However, this kind of farming system is vulnerable to wide spread outbreaks of diseases and pests. In opposition, when a farmer grows only one type of crop he/she can concentrate on that crop and buy only the machinery and tools needed to deal with that crop. Likewise, it is helpful as a crop can tailor cultivated for a locality that special challenges like drought, soil salt or a short growing season.

**Table 2: Farming systems**

Responses	Number of respondents	Percentage of respondents
<b>Monoculture</b>	78	78%
<b>Diversified</b>	22	22%

Few of the interviewed small farmers are producing a variety of crops or animals, or both, on one farm. They normally use large land for growing their staple crop (maize) and then use the remaining land for both cash and food crop such as spinach, beans, cabbage, tobacco sugar cane and cotton. This kind of farming enables small farmers to reduce dangers of food insecurity by producing their own food and diversifying their productive activities as much as possible. If one of the crops fails, the other might succeed. Diversification helps to ensure food security by offsetting

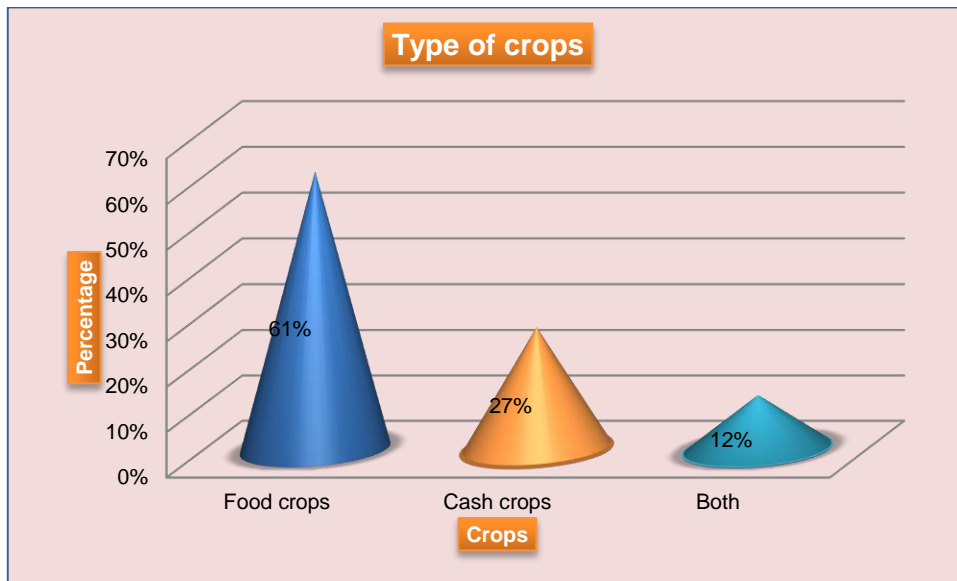
the dangers of relying on one crop. For example, in cases of drought, availability of drought resistant food crops could offset the loss of non-drought resistant ones.

#### **4.3.2. Type of crops**

The interviewed small farmers were asked to show the type of crops they are growing on their farms. They have to choose between food and cash crops. The results show that 61% are engaged in food crops while 27% are majoring in cash crops. The remaining 12% are involved in both food and cash crops. Figure 14 show that most of the small farmers grow their crops largely for family consumption. Although the interviewed small-scale farmers know the importance of money they tend to prioritise feeding their own families first before they think of selling their produce. They can produce sufficient amounts of food crops on their fields for their own consumption. However, the achievement of national self-sufficiency in food requires further commercialization of agricultural production by small-scale farmers.

Some of the interviewed small farmers are engaged in cash crop production. Expanded cash crop production by smallholder farmers can also contribute to household food security through producing revenue for family endurance. Therefore, small scale farmers may just naturally grow cash crops as a livelihood strategy and generate money for the family's needs. Some small-scale farmers are involved in cash crops because they provide higher returns to land and labour than food grains and thus present major opportunities to promote smallholder income growth. Cash crops are an essential part of sustainable intensification as revenue generated with cash crop provides peasant household with to save and invest in more productive agricultural activities.

**Figure 14: Type of crops**



Interviewed small farmers claimed that if they produce enough cash crops they can also have a bumper harvest of food crops since they can use the capital to purchase farming inputs to intensify production of staple crops. However, cash crop farmers complained about low market prices and cheating by buyers. Reliance on cash crops makes small scale farmers exposed to market oscillations. A fall in cash crop prices will reduce income with which to buy food. In this scenario small farmers are left with no choice but to sell their crops to meet the immediate demands of life. This may erode household food security and self-sufficiency.

#### **4.3.3. Factors influencing the choice of crops**

There are many factors to consider in selecting crops, a mandatory that must be undertaken before actually starting a farming project. Right decision in the choice of crop or crops to be grown, will eventually transform into a prosperous farming project. Also, understanding which aspects influence small-scale farmers crop selection, is vital for development agencies as they make decisions on the allocation and design of scarce resources to farming intermediations that are more likely to

have positive effects as they will be in line with inspiration of their targeted beneficiaries, small-scale farmers. The interviewed respondents were asked to specify factors influencing their choice of crops. Data collected on survey respondents on factors influencing the choice of crops revealed that 66 respondents (66%) chose food security, 16 respondents (16%) chose market, 10 respondents (10%) chose easy management and 8% on climatic conditions. Figure 15 shows the percentage of factors influencing the choice of crops.

**Figure 15: Factors influencing the choice of crops**



In this study, the majority of small farmers were influenced by the need to ensure food security and also produce small extras that can be sold in the community to obtain other services and goods essential to sustain the household. Through this choice they are not worried about rising food prices as they had enough for family survival and to also share with needy friends and relatives. Some small-scale farmers prefer crops that are easy to manage. Easy to manage crops require to those which need less labour and cheap inputs. Subsequently, the rural people have

resorted to growing these easy to manage crops despite reaching a lower price at market.

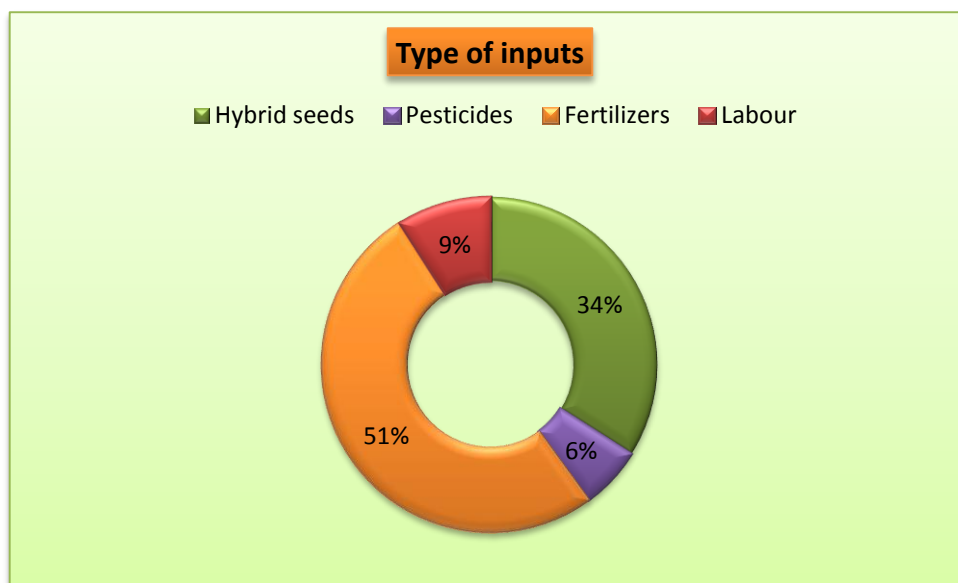
Some small-scale farmers are influenced by climate on determining the type of crop to grow. Climate has critical influences for nearly every phase of life on earth, and impacts are already being felt. Climatic change impends to create variable weather and as a result more variable farm harvests. As the rains are no more reliable, the respondents indicated that, their livelihoods were severely under threat, and see irrigation as the only avenue to successful small-scale farming. Small farmers' choices of crops are also influenced by market availability. There is increasing recognition that the opportunity for rural small farmers to raise their revenue from farming production and this relies on their ability to participate actively in the markets. Market accessibility also allows small farmers to sell their products and purchase inputs on time.

#### **4.3.4. Type of inputs used**

Farm inputs are basic and essential to any farm enterprise and without them, it is impossible to produce output. Consequently, a major effort aimed at improving farm productivity depends on quality of inputs. The small farmers were requested to indicate type of inputs they mainly use in their farms. The study revealed that 34% use hybrid seeds, 6 % use pesticides, 51% use fertilisers and 9% use labour. The collected field data is shown in the Figure 16. The majority of the small scale farmers use fertilisers in their farming activities. They get most of their fertilizers from the Fertilizer Support Programme (FSP), which is government initiative to increase fertiliser access to the poor small farmers. Although fertilisers are the key to

“Zambian Green Revolution”, they must be integrated with other inputs for their economic potential to be realised. Some small farmers were unable to access government subsidized fertiliser and face difficulties in buying at the market where prices are high. Over the past years, market price for fertilisers have become substantially expensive in Zambia and in most rural areas, they are unavailable at all.

**Figure 16: Type of inputs**



Although a significant number of small farmers use hybrid seeds, some are still relying on recycled traditional seeds from the last harvests or traded informally between neighbours. Such seeds generally produce far lower yields than high hybrids seeds. The study found that small farmers who use recycled seeds are very unwilling to adopt improved and new varieties of seeds. Small farmers lack trust in hybrid seeds especially after a failed harvest. In this situation any risk is too big to take. The breakdown of trust in hybrid seeds contributes to less production in the agriculture sector. Zambian small-scale farmers need to be educated more on how new hybrid seeds varieties can increase income and food supply. Hybrid seed companies can also educate small farmers through farmer field days and on-farm

demonstrations. The seed companies can plant additional experimental and demonstration farms, which in many cases allow the seed to sell themselves. The usage of hybrid seeds has lifted millions of Asian and Latin American farmers out of extreme poverty a generation ago.

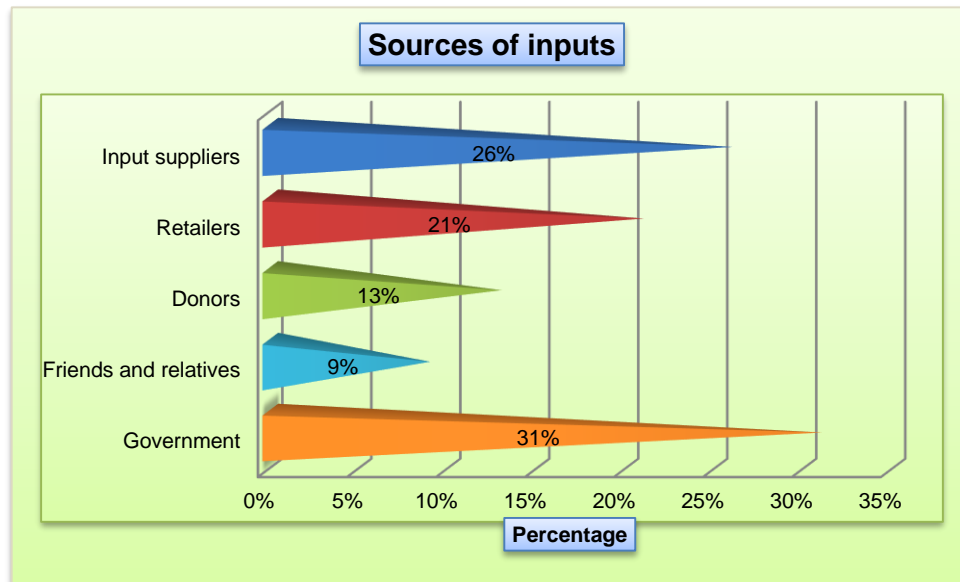
It was also recognised that lack of access to capital is key constraint to small-scale farmers' access to inputs. Small farmers buy their inputs through profits from the previous season's harvest, income such as sales of livestock and wage work. In bad years, this presents a problem for most households to acquire inputs and in many cases they are unable to cultivate. Most rural families or household are not able to engage into intensive farming due to lack of finance to sustain their production. Therefore, access to credit facilities is critical to small farmers and is an important strategy in which they can raise capital to finance their farm operation. Few small scale farmers interviewed testified routine application of herbicides and pesticides. Small farmers use pesticides for vector control and pest management in farming areas, but some are not adequately knowledgeable about the dangers associated with the chemicals. As a result small-scale farmers use pesticides without full understanding of their effects on environment and human health.

#### **4.3.5. Source of inputs**

The respondents were asked to specify their main source of inputs. Data collected from the field shows that 33% rely on the government, 16% on friends and relatives, 21% on donors and 30% on retailers. Figure 17 shows the main sources of inputs. Government support and subsidies to agricultural inputs is delivered through the Farmer Input Support Programme (FISP). The programme is intended to target the

least poor rural households. However, some farmers complained that most of the inputs given under government are captured by larger, better-off farmers. They have criticised the way the programme is run and have been calling for changes.

**Figure 17: Sources of inputs**



Small farmers whined about political interference from traditional leader, local councillors, Members of Parliament (MPs) and Ministers. Politicians were said to be strongly backing certain individuals or farming communities to receive inputs without following the laid down procedures. It is ironical for a government agricultural input support program intended to improve food security situation and poverty reduction, to be seen as a means for mobilising political support. Moreover, local political leadership lobby for inputs for their supporters. In some cases, it was reported that politicians themselves wanted to benefit from the government inputs.

Small farmers also acknowledged that, they are unable to access government farm inputs in time; hence, they are also unable to sell their farm produce on time. The farmers mentioned that any interruption or delay in obtaining farm inputs affect

output negatively and thus causing food shortages, poverty and vulnerability to community households. Late delivery of inputs to small-scale farmers undermines benefits expected from the inputs. Delays in receiving the inputs cause farmers to delay planting and affect the maturity of the crop, since in some cases rains may stop early. As demand for inputs are seasonal, inputs delayed are basically inputs denied.

The urgency of addressing the shortage of farm inputs, NGOs have lately devoted to substantial increases in farming investments directed to small-scale farmers. While NGOs may be effective in distributing farm inputs, they often cannot guarantee sustainability. Most NGOs projects end as soon as the outside supporting agency withdraws assistance. Respondents argued that they have to rely on relatives and friends to give them farm inputs. Relatives, friends give each other farm inputs at negotiated prices depending on social relationships and reputation.

Small farmers also depend on retailers for their agricultural inputs. However, retailers charge high that can discourage small scale farmers from buying inputs. Some agro-retailers avoid rural communities where the majority of small-scale farmers reside. Hence, growth and development of rural agricultural stockists is vital in opening up small-scale farmers' access to key and quality farming inputs in Zambia. Their growth and development significantly decreases search costs faced by small farmers, making much needed farming inputs obtainable in rural areas at the right time and in appropriate sizes, volumes and reasonable prices.

Private input suppliers tend to support a significant number of small farmers through provision of key inputs such as hybrid seeds, fertilizers and pesticides on credit. The input suppliers sometimes give extension advice and services such as spraying and harvesting. The farmers will in turn sell their harvest to the input supplier at an agreed price. The costs of the supplier will be recovered when the agricultural produce is sold. Most of the respondents were happy about the arrangement. However, some criticised that this arrangement make farmers concentrate more on the crop financed by the supplier. This will force small farmers to neglect other crops that are essential for their livelihoods.

#### **4.3.6. Agricultural equipment**

Lack of farm equipment is a big challenge for small-scale farmers in Zambia. Although, in these modern times, powered machinery has replaced many jobs which were previously carried out by manual labour or other peasant farming methods such as such as oxen, horses and mules. There is a serious of farming tools available to rural small farmers. Interviewed small farmers were asked to indicate equipment they use on their farms. Farm implements used by small farmers include hoes, *pangas*, planter, scotch cart, wheel barrow, draught animals, and tractors. Results of the farm implements owned, hired and borrowed by small-scale farmers in Copperbelt province are shown in Table 4.

Table 4 reveals that only a few small scale farmers own draught animals, tractors, and planters. Farmers who own these planting implements stand a better chance of using all of the land available to them and more likely to plant on time. In some cases, this lack of technological resources forces small farmers who have control

and access to farming land not to fully utilise it. Lack of finance to hire animal draught power, ploughs and tractors adversely affects cultivation of crops. Those who own tractors and planters also grumbled about the high costs of servicing and maintaining them. Sometimes small farmers have to wait for several months to get spare parts as the local merchants are not monetary strong enough to stock all essential spare parts. This is also worsened by the rise of fuel price. Soaring fuel prices have a negative impact on small farmers and hampers agricultural development.

**Table 3: Agricultural equipment**

<b>Equipment</b>	<b>Owner</b>	<b>Hired</b>	<b>Borrowed</b>
<b>Tractor</b>	7%	79%	14%
<b>Draught animals</b>	19%	53%	28%
<b>Hand hoes/pangas</b>	88%	2%	10%
<b>Scotch cart</b>	56%	18%	36%
<b>Wheelbarrow</b>	81%	7%	11%
<b>Planter</b>	3%	89%	8%

A proportion of 19% own draught animals, while the remaining 81% either hire or borrow. The results show most households do not own draught animals. Draught animals can increase crop production through improved timeliness of ploughing, seeding and weeding. The use of draught animal also reduces drudgery and may lead to yield increases. More so as a substitute for mineral fertilizers, small-scale

farmers can use animal manure to improve the soil structure and fertility. The small-scale farmers who had who had draught animals like cattle and goats also said that they satisfy some nutritional requirement from meat and milk from their livestock.

Draught animals like cattle can be used for draughts power or as source of transport and can be sold so that they can revenue to cover family basic needs. Cattle can be used in payment of bride price. They are also still a sign of wealthy; hence, some people usually keep excess number of cattle for prestige. Most of the small-scale farmers who own draught animals also possess scotch carts. The use of scotch carts for transport enhances possibilities for collecting and distributing harvests, farm implements and other goods. Scotch carts are used to transport produce from the farm to their homes, thus ensuring that carriage of their produce is easier. Scotch carts are more generally used in the Copperbelt province for goods transit and agriculture.

Hand hoe is the most owned farm equipment with 88% owning it. Many small farmers use hand hoes for undertaking various operations such as land preparations, weeding and even when harvesting. In most rural areas of Zambia, hand hoes are usually produced by local blacksmith. Blacksmiths play a crucial role in repairing and producing bullock drawn implements and hand tools. Hence, they can perform a vital role in agricultural mechanisation by manufacturing farming implements and tools. Their products are considered cheap compared to farm equipment sold by the local retailers. In Africa, the hoe is an extension to the hand of the farmer. Small farmers consider their hoes for their livelihood and survival.

However, hand hoe has also proven time consuming and takes a lot of time for small farmers to complete a piece of land.

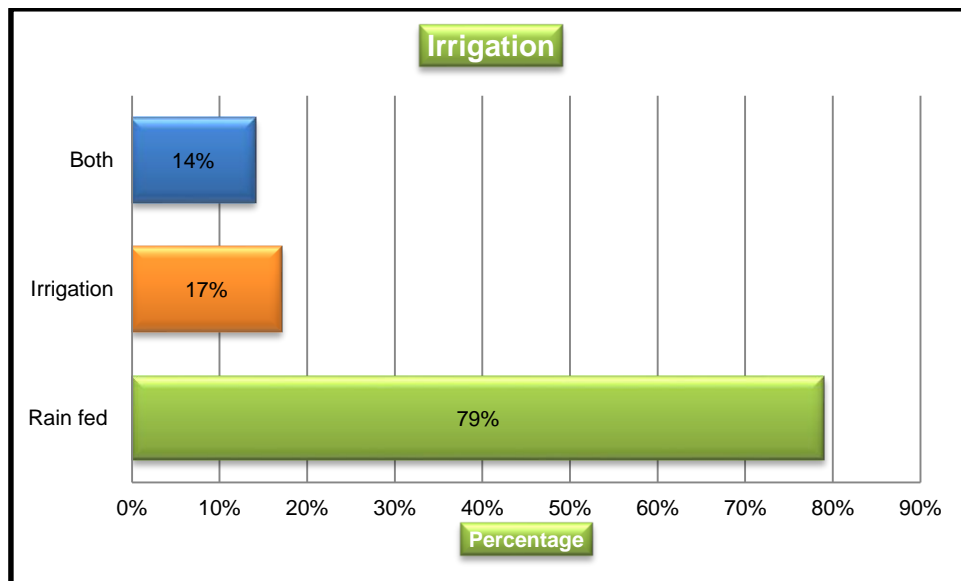
#### **4.3.7. Irrigation**

The respondents were asked to state the sources of water supply which they use in their farms. Figure 18 presents farmers' responses to questions about the sources of water for crop production. The data revealed that 79 (79%) respondents practise rain fed farming whilst 17(17%) practice irrigation farming. The remaining 14 (14%) use both rain fed and irrigation for watering their fields. The majority of the interviewed small farmers in Copperbelt province rely on rain fed agriculture. Small-scale farmers depending on rain water are likely to be the worst hit during a drought. As well, a typical farmer who normally focuses on rain fed agriculture only receives income one time during the year. However, there is need to effectively manage rainwater in rain fed areas. Agricultural harvests can be increased by improving management of rain water in the rain fed areas which presently causes soil erosion and produce excessive runoff. In addition, effective utilisation of water on farms can cut losses from dry hexes.

The interviewed small scale farmers reported that they have challenges in using water from the perennial rivers flowing in their communities for irrigation. Although, Zambia owns large tracts of arable land along with significant surface and groundwater resources, the majority of small farmers still can't afford irrigation equipment hence cannot fully be involved in commercial farming. Therefore, Zambia's water resources remain largely untapped. This lack of irrigation system has been blamed for hampering food security in Zambia. Only 30% of Zambia's irrigable

land is currently productive. However, the total equipped irrigated area has grown to reach an estimated 200 000 hectares. This represents growth of more than 50% since 2008. Until now, Zambia's potential irrigable land adds up to more than 500 000 hectares (Mendes *et al.*, 2014).

**Figure 18: Irrigation**



Another area for development could be attained by encouraging the use motorised and solar pumps for small-scale farmers who are currently using buckets. Access to irrigation enables small farmers to regulate the available water throughout the farming season. This can boost production and serve where there is water shortages or seasonal droughts. Irrigation cannot be treated in isolation and must be considered alongside other elements of agricultural development, including improved markets, clarity of land rights, efficient use of inputs, extension services for farmers, research and development and environmental management.

A more guaranteed harvest gives small farmers the protection they need to risk investing in modern technologies, fertilizers and hybrid seeds. Irrigation can play a very crucial role in decreasing risks associated with crop failures and in enhancing

productivity. In many cases where rainfall is unreliable, inadequate or incorrectly timed, it negatively affects agriculture production and productivity. Decreasing farmer's reliance on suitable weather patterns is essential for the best production. However, lack of irrigation tools and long continuous drought mean that small-scale farmers have to struggle to grow enough crops for family needs and be able to make a profit. Also the fragmented nature of the farmers would make it difficult for them to make use of a centralised irrigation pump.

#### **4.3.8. Source of irrigation water**

Irrigation water supplies can be obtained from many sources and through different means. Small farmers who indicated that they are using irrigation were asked about their water sources. Table 5 shows the response of the interviewed small farmers. Of the sampled respondents 13% get their irrigation water from dams, 29% from the river, 9% from tap water and 49% from borehole water. Although tap water is critical for crop and animal production, small-scale farmers complained that taps are few and located far away from their farms and homesteads. Access to tap water is still very low in the province. Since small scale farmers stay far away from the tap water they resort to use nearby rivers and dam water.

The majority of the small scale farms use the nearby local dams and rivers. Water is fetched from rivers and dams using scotch carts and wheelbarrows to water some small portions of their cultivated lands. The water is usually carried in 20 litre water containers therefore; a significant amount of labour is needed to get water from the river to irrigate the whole field. Sometimes the whole family have to go and fetch water to irrigate the plot. Irrigation technologies used by small farmers are of low-technology; hence irrigate a small proportion of the whole farm.

**Table 4: Sources of irrigation water**

Responses	Percentage
Dam	13%
River	29%
Tap water	9%
Borehole water	49%

In this survey, 10% of the interviewed small-scale farmers use rainwater tank for irrigation purposes. Small-scale farmers tend to save more water in rain water tanks especially during rainy season. Respondents who had rainwater tanks indicated its unreliability as water runs out during dry seasons and in times of drought. Some small-scale farmers have abandoned the use rain water tanks since the introduction of boreholes in most rural areas. Boreholes are the main source of ground water, and a further 42 percent of the interviewed small farmers rely on them. However, small farmers indicated that they experience problems in raising finance to hire skilled personnel to service and maintain their boreholes. This means they sometimes go for a long period without water, therefore negatively affecting agricultural productivity.

#### **4.3.9. Fertiliser usage**

Exhaustion of soil fertility is a major biophysical reason of low agricultural growth and development in Africa in general and in Zambia, in particular. Even though, Zambia's agricultural sector has an enormous unexploited prospective, it is characterised by poor soil fertility and this diminishes the potential of the sector. Zambia is divided into three agro-ecological regions which are based on rainfall amount and soils

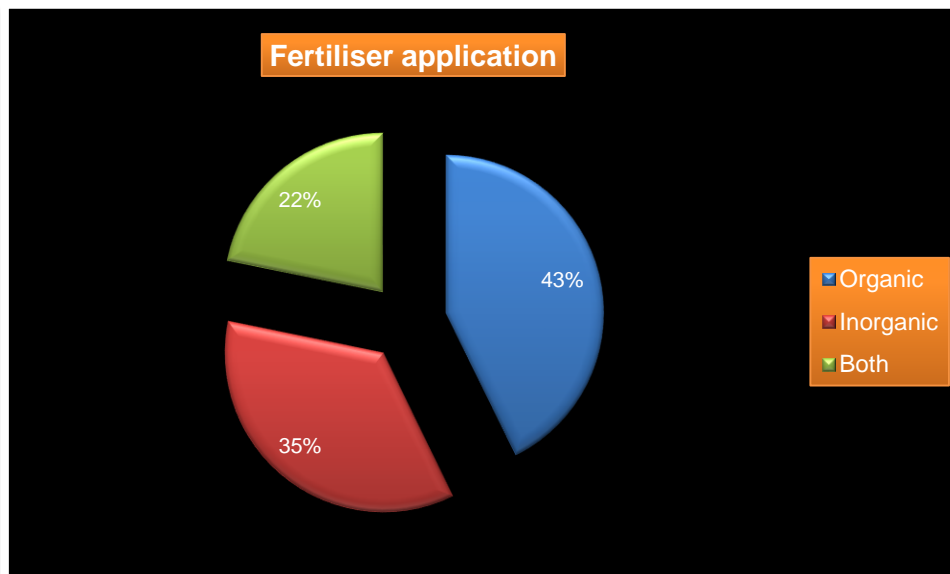
characteristics. This spatial heterogeneity clearly indicates that there is need for different agricultural strategy that appropriate for each zone. The study area (Copperbelt province) falls in zone 3. Soils in zone 3 are sandy, leached and highly weathered, and characterised by extreme acidity. Consequently, these soils have low nutrient reserves available for plant growth.

Intensive farming usually cannot be sustained except when soil nutrients are applied to replace those removed through crop cultivation. When the soil nutrient is not refilled, small-scale risk using their soil resources base beyond a point of no return. Nutrients can be added in the form of organic or inorganic fertilisers. Frequently used organic fertilisers include household wastes, animal manure, plant materials or compost hips made up of these sources. On the other hand, inorganic fertilisers include straight fertilisers containing a single nutrient and compound or mixed fertilisers. The interviewed small farmers were asked to indicate the type of fertilisers they are applying in their farms. Figure 19 depicts fertiliser usage by interviewed small farmers in Copperbelt province. The study revealed that 43% use organic fertilisers, 35% use inorganic fertilisers while the remaining 22% use both.

From the focus group discussion, it was revealed that low usage of inorganic fertilisers may be due to lack of information and awareness about the significance of fertiliser. Also fertiliser unavailability in most of the parts of the province and the failure of many small-scale farmers to raise money to buy fertiliser are major threats the small farmers. Even though, small farmers believe that fertiliser usage is rewarding, prices of fertilisers are at times beyond the reach of many small farmers and this is exacerbated by lack of cash and credit constraints. The farmers also

highlighted that it is costly to buy individual bags of fertiliser than to buy a larger quantity. Most of the farmers do not have money to buy fertilisers in bulk. Hence, they do not enjoy the economies of scale when buying key agricultural inputs.

**Figure 19: Fertiliser application**



In Zambia, use of fertiliser is discouraged limited availability and high retail prices. For farmers the comparative price of fertilizers to crop price is a crucial issue that determines buying decisions as it affects profits. When fertilizer prices are high, there is less incentive for farmers to buy more fertilisers. Then again, when fertilizers are cheap on the market; farmers may be encouraged to buy more fertilizers, which would be helpful for fertiliser users. Moreover, small farmers could not also afford inorganic fertiliser due to the costs associated with transportation to their homes. Distance to agro-based retailers is one of the major restricting element for fertiliser buying as it enforces a high transaction cost to small farmers. The fertilizer use intensity is reduced with an increase in the distance to agro-based retailers.

Small farmers who had no access to inorganic fertilisers highlighted that they dependent more on crop residues for manure than any other organic materials. Crop residues were from maize stocks left on the farms after harvesting. These crop residues are ploughed back on the field to make the soils fertile for the next crops. Use of organic manure improves the soil fertility and allows it to remain more natural for a longer period of time. However, the problem with organic manure is that of low content of plant nutrients and cannot be relied upon exclusively to raise agricultural yields substantively. Therefore, sustaining soil fertility and increasing productivity using organic resources alone is a losing battle.

Failures of farmers to use sufficient amount fertilisers have resulted in Zambia's breadbasket to remain untapped. In response to this, the government of Zambia initiated the Fertiliser Support Program (FISP), which is aimed at improving small-scale farmers' access to fertilisers through approved cooperatives or groups. However, this only reached few small farmers as the majority are fragmented and lacks attachment to any approved cooperative or group. Low fertiliser usage is one of the reasons enlightening the backwardness of agriculture development in Zambia.

In short, Zambia has not yet experienced its "Green Revolution". Several researches have argued that fertiliser was just as crucial as hybrid seeds in fuelling the Green Revolution in Asia. Hence, no country in the world will achieve substantive agricultural growth without the use of fertilisers. However, fertiliser use rates in Africa are low. Findings from World Bank, (2007), show that only 1.4 million metric tons of mineral fertilizers are used in Africa, signifying less than 1% of global mineral

fertiliser usage. Low fertiliser usage does not go well with continental objective of securing food security and reversing soil nutrients.

#### 4.3.10. Training on fertiliser usage

The interviewed small farmers were asked whether they have received any form of training on fertilizer usage. Table 6 shows the response on fertiliser training from small farmers in Copperbelt province. The research shows that 23% received training while the remaining 77% did not. These results suggest that the majority of interviewed small farmers lack knowledge about the proper usage of fertilizer. They rely on their local knowledge which is passed from one generation to the other. The study also observed that some farmers are still hanging on to unfounded cultural and traditional beliefs that fertilisers burn crops. Farmer knowledge on how to use the fertiliser is therefore a vital ingredient in shaping fertiliser use.

**Table 5: Training on fertiliser usage**

Responses	Number of respondents	Percentage of respondents
Yes	23	23%
No	77	77%

Farmer’s perceptions about the potential impact of fertiliser on yields affect their demand. Their understanding is influenced by the quantity and quality of information on fertiliser such as application rates, price, availability and effects on plant growth. There is need to disseminate and determine fertiliser use recommendations that are fit for different regions as opposed to the one size fits all recommendation for the

whole country. Application of fertilisers at the appropriate time using correct quantities can ensure reasonable growth benefit to plants. Training to improve farmer knowledge on fertiliser use should be emphasised and strengthened. Capacity building is crucial to upgrade the skills and knowledge of small farmers and commercial fertilisers' agencies. If the goal is to rapidly expand fertiliser use; all potential users need to understand the importance of using fertilisers in combination with key complementary inputs to ensure profitable results.

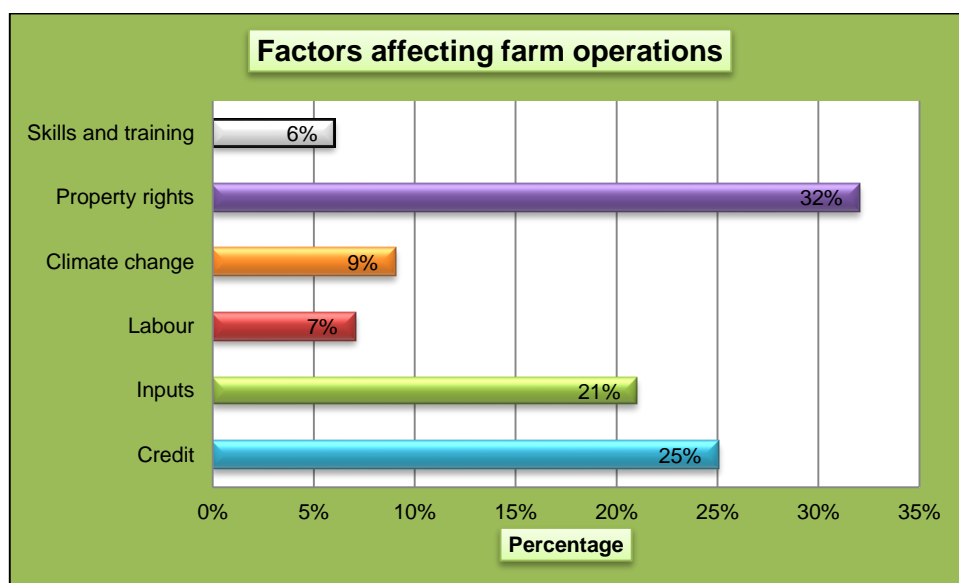
#### **4.3.11. Factors affecting farming operation**

The interviewed small farmers were requested to indicate the factors that they felt were affecting their farm operations. The results in Figure 20 shows that, property rights (32%) was regarded as most crucial, followed by access to credit (25%), agricultural inputs (21%), climatic change (9%), labour (7%) and skills and training (6%). Small farmers revealed that the major constraint is insecure property rights. Communal land rights are gradually increasing the growth of land concentration and the development of individual property, which both serve to deepen extroverted capitalist relations of agrarian production.

The interviewed small farmers were afraid of being dispossessed and displaced as the government convert their communal land into private lands. Communal lands have weak protection from the Zambian legislation. Small-scale farmers form a large share of people who live and rely on communal land. Hence, the privatisation of communal lands leads to the dispossession and displacement of the already marginalised rural small farmers. Rural small farmers do not have any title to prove their land claim. When local small-scale farmers are being evicted when from their

ancestral their land what usually follows if promises have been made, is a trail of broken treaties around such issues as resettlement in improved conditions, payment for damages and compensation. From the in-depth interviews and focus groups, small farmers argued that foreign land investments have restricted them from accessing other services and natural resources such as water, forestry and grazing land.

**Figure 20: Factors affecting farm operation**



As observed earlier, small farmers in Copperbelt province rely greatly on rain fed farming, creating their sources of revenue and food supply highly susceptible to drought. Like other countries in Africa, Zambia is a drought prone country. The weather conditions are now unpredictable or unreliable, also characterised by too much or too little rainfall and sometimes drought. Due to changes in the rainfall pattern, small farmers may suffer from a series of droughts. This may end in crops withering before harvest time and grazing pastures and vegetation becoming depleted. As a result there is considerable annual variation of farm production. The study also noticed that hostile weather was often a challenge because the interviewed small farmers lacked information that could improve their disaster

preparedness. Labour was also seen as affecting farm operations since most economically active rural people are migrating to towns and cities in search of high paying occupations. Farming have proved to be incapable of providing and sustaining the lives of the rural poor farmers.

The respondents also indicated skills and training as an obstacle to farm production. This can be linked to lack of knowledge that can help to access and adapt to improved farming methods. Since most rural small farmers do not have access to education this may be crucial factor, although few acknowledge it as affecting their farm operations. Also a significant number of interviewed small-scale farmers are affected by lack of access to agricultural credit facilities. This also affects their agricultural inputs and outputs since they have to buy using the credit facilities available. Credit and loan facilities enable farmers to sustain, initiate, or expand farming production and increase productivity. As land is the asset used as collateral to receive credit small farmers have restricted access to these credit facilities because they lack title deeds over the land they are using.

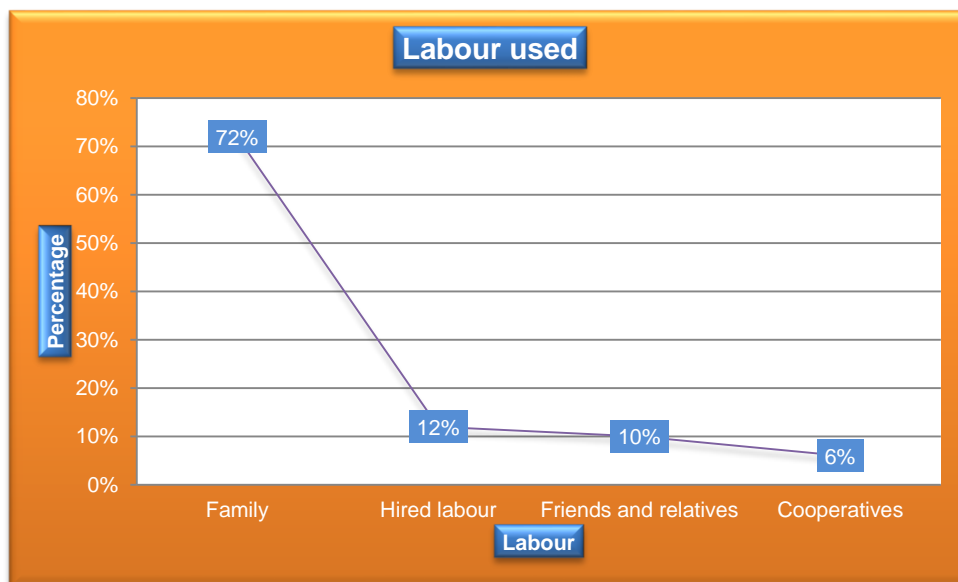
#### **4.3.12. Farm labour**

The interviewed small farmers were requested to indicate the type of labour used in their agricultural activities. The labour used by the sampled small farmers is obtained from four major sources namely: hired labour, family, cooperatives, friends and relatives. Figure 21 shows information regarding types of labour used by small scale farmers in Copperbelt province. The majority (72%) employ their own family labour, while 38% of labour is met through cooperatives, hired labour, friends and relatives.

With the rural households in developing countries like Zambia known to be poor, family labour is the most preferred option for small-scale farmers.

Small farmers normally operate using unpaid family labour. These findings can also be linked to Chayanov (1966) who argued that small farmers self-exploit themselves in order to meet present and future family consumption needs. The recruitment of family labour by small-scale farmers is probably connected to the scale of production, missing rural labour markets and elementary technology of production. The availability of mature children's labour is also crucial for small farmers and may possibly increase the area under cultivation. However, men usually exploit labour of women and children within the family. In most cases it is women and children who devote most of their time working on the farm.

**Figure 21: Labour used**



The need to cut down on cost of production and increase profit may be the reason why many small farmers rely much on their family labour while in some cases they use hired labour when they have no option. Respondents indicated that they hire both permanent and casual labour for harder tasks such as a land preparation and

cattle herding. Most of the small farmers are only able to pay cheaper rates to labourers who cannot find employment in non-farm sector. The employment of hired labour consequently increases their cost of production and this may be transferred to the consumer through increase in prices.

Friends and visiting relatives constitute a fraction of about (10%) which is an indication that they could be having surplus labour to spare. After harvesting the farmers can give a small portion of their produces to friends and relatives who helped during the farming season. This is considered as a token of appreciation. Cooperative set up the lowest fraction (6%) of the sources of labour. In most rural areas small farmers will come together with their families and start land preparation from one farmer to another. Most of the respondents highlighted that this was the fastest way to finish farm work.

#### **4.3.13. Government support**

The interviewed small farmers were asked to show the extent to which the government has provided them with support to improve their farm production. Even though all respondents belong to the same province, they appeared to have different views about the assistance they had received from the government. Table 7 indicates that 23% of the respondents reported that the government always provide them with inputs such as seeds and fertilizers, 12% with credit, 41% with market and 24% with extension services.

**Table 6: Government support**

Type of support	Always	Sometimes	Rarely	Never
Training	24%	46%	19%	11%
Credit	12%	18%	32%	38%
Market	41%	13%	19%	27%
Inputs	23%	27%	39%	11%

The government budget has not adequately financed or improved small-scale farmers' access to credit while commercial banks have been unwilling to loan small-scale farmers. This is as a result of lack of coherent agricultural policy. Few small farmers have benefited from the credit assistance made by the government. Farmers further explained that the manner of repayment has also been changing since onset of liberal policies. A new system of down payments was introduced in which farmers were required to pay a given amount in order to be eligible to getting credit. The informants explained that the share required to be paid in advance has been gradually increasing and conditions becoming very difficult to meet.

Small-scale farmers are unable to access loans from banks and other organizations because they do not have collateral security. Lack of access to loan at low interest rate, rural small farmers are normally unable to invest in future and current food production, develop their farming activities or take a risk and diversify into new crops. Small-scale farmers' present lack of access to credit facilities is the main obstacle to the growth and development of farming in Zambia. Still, failing to support adequately on small-scale farmers is essentially a question of political will. The Zambian government have made great efforts in increasing small farmers' accessibility to agricultural inputs through the Farmer Input Support Programme. The inputs are

transported to the satellite depots, and then distributed to beneficiaries. Most notably, the input pack size is 100 kg of fertiliser and 10kg of hybrid maize seed. The programme target small-scale farmers who cannot have enough money to purchase inputs at commercial prices.

The majority of small farmers indicated that the government also assist in marketing their produces especially maize. The government provides a ready market done by the Food Reserve Agency (FRA). The agency determines the price of agricultural products. Small farmers were generally not pleased with the operations of FRA because of late payments of their produces. They also highlighted that price given by the government was unattractive and they sometimes fail to break-even. Furthermore, small farmers complained about limited access to government agricultural extension services. Agricultural extension services are vital in giving training and advice to small scale farmers to increase household income and food security. Up till now, agricultural extension services have made little progress in expanding, diversifying or responding to the challenges of the smallholder sector.

#### **4.3.13. Infrastructure and rural development**

The interviewed small-scale farmers were asked to indicate the condition and access to infrastructure in their communities. Table 8 shows the response of the interviewed small farmers. It shows that the majority of smallholder farmers were constrained in terms of access to infrastructure. The respondents complained about the poor transport networks in their province. The quality and condition of rural roads is very bad; this is as a result of many years of neglect of rehabilitation and maintenance. The majority of roads are made of gravel.

**Table 7: Infrastructure and rural development**

<b>Infrastructure</b>	<b>Fine</b>	<b>Good</b>	<b>Bad</b>	<b>No access</b>
Communication	33%	25%	28%	14%
Electricity	7%	9%	32%	52%
Transport	17%	22%	42%	19%
Health centres	12%	19%	36%	33%

The study area has few tarmac roads and these reach few districts. This creates difficulties in supplying inputs to places that are off the main road. The situation is worse especially during the rainy season. Many rural areas have become inaccessible to motor vehicles and productive activities are negatively affected during the rainy season. This can isolate of farmers from markets and other services. Private traders also shun rural areas as they are not able to reach many parts of the rural communities to collect farm products due to lack of appropriate means of rural transport and poor conditions of the rural road network.

An ineffective rural transport system can constrain agriculture by raising the costs and efficacy of inputs into the production process; thus delaying the sale of harvested produces. It is also widely known that rural transport constraints cannot be explained by roads alone. Transport problems in rural communities are simply a result of poor road condition, but are a culmination of inadequate infrastructure; excessive charges by private hauliers whose services are irregular, poor public transport provision further hinder the ability of rural people to generate a sustainable livelihood. Small farmers' activities are as well marred by lack of communication services. This is intensified by lack of mobile signal, electricity and internet

connectivity. Although there have been an increase in the number of mobile phone users, they are more widespread in urban areas. Outside the towns, phones are still rare. In many rural areas, phone services are expensive and quality is bad. Even postal services are unavailable or unreliable in many places.

Zambia has great potential to supply electricity in the sub-Saharan region. The country has abundance of water which is a major component of any hydroelectricity generation project. However, this country has not exploited the full potential of its body of waters, to be self-sufficient in electricity supply. Despite such potential, power black outs have become the rule rather than the exception in Zambia. Zambia like many other countries in the Southern Africa is experiencing a serious deficit in power generation as result of growing demand. Even though the cost of building big electric power station and power lines is expensive, the projects can be very gainful over many years. Producing electricity is then good for all sectors of the economy and can help in poverty alleviation in the countryside. At present, very few rural small farmers have access to electricity, which decreases the possibilities of using modern agricultural technologies. The deficiency in energy generation largely hampers the transformation of smallholder agriculture sector in terms of irrigation and as well as value additions to agricultural produces. Investment in electricity generation is important to encourage the rural non-farm economy and vitalise rural communities, as well as to simplify the incorporation of less favoured rural areas into both national and international economies.

Other respondent complained about the lack of adequate infrastructure especially the distance of medical care facilities. They pointed out that the usually walk long

distances to access primary medical care facilities. They have to travel up to 20km to reach the nearby hospital or clinic. Rural sick persons have to be transported in a wheel barrow or scotch cart. They sometimes, lack access to information on health issues and services. This high level of discontent is of concern given the priority and weight community members attach to the provision of health care services in rural areas. Reduction in access to proper medical care makes even curable diseases such as malaria continue being a menace among small farmers. Poor rural households lack sufficient money for prevention and good immediate medication. Poor access to health facilities tends to undermine the potential of small farmers. A healthy workforce is a vital ingredient to increase agricultural productivity and production. Therefore, there is need for relevant stakeholders to help in ensuring that the medical funds and staff are fairly allocated around the country, so that remote areas and vulnerable groups are well served.

#### **4.4. CREDIT FACILITIES**

##### **4.4.1. Access to credit**

Modernising the farming sector need credit to finance the use of purchased inputs and machinery that are not always available to small farmers from their own physical, financial and labour resources. Accessibility of credit as well as the sources of credit were examined in this study. In this honour, the study examined whether or not small farmers have access to credit facilities. As shown in Table 9: 67% of the survey small farmers had no access to credit even though they needed it. This is different from 33% of the survey small farmers who had access to credit.

**Table 8: Access to credit**

Response	Number of respondents	Percentage of respondents
Yes	67	67%
No	33	33%

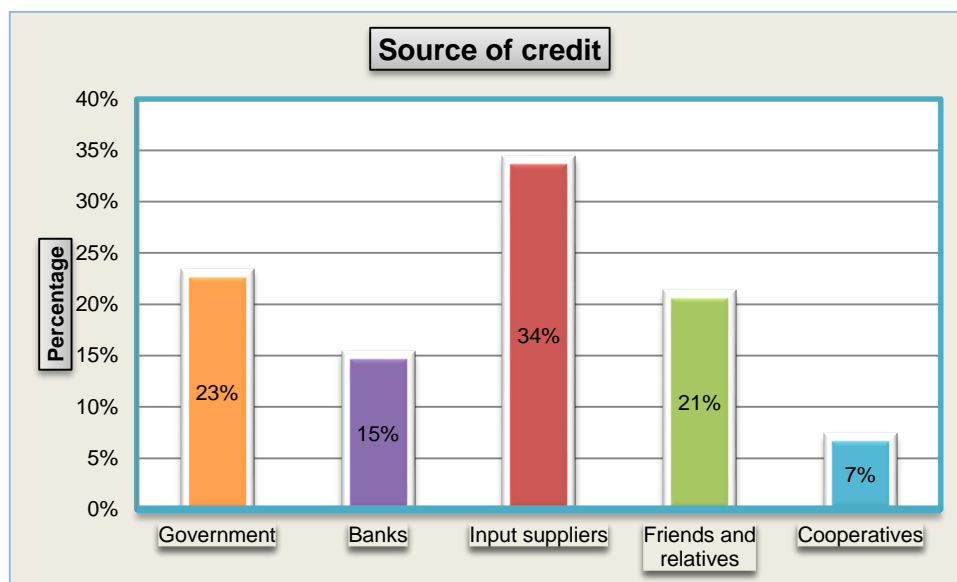
Regardless of the existence of agricultural credit institutions in Zambia the majority of small-scale farmers have limited access to credit facilities. Many respondents attributed this to lack of bank accounts, lack of means of repayment, high interest rates and knowledge regarding the process of accessing loan. As a result most small farmers do not realise their potential productivity. In many cases, small-scale farmers are still required by the funders to provide collateral in the form of an estate or enough funds to prove that they will be able to pay back the loans that they may need from the creditors. But because of their inability to use their communal land as collateral, small-scale farmers are barred from accessing to credit facilities from financial institutions. In turn commercial institutions are worried about high costs of paper work for small loans and non-payment by small scale farmers. Small farmers are regarded as risky as a result of poor loan recover rates and lack of collateral security. Accordingly, banks are not willing to give the majority small farmers credit as they did not have any means with which to pay them back. In focus groups it was also noticed that small-scale farmers were afraid of the consequences of borrowing such auctioning or confiscation of property when the default.

#### **4.4.2. Sources of credit**

The credit for farming was received from various sources. Although small farmers may use more than one source of credit, the study requested them to identify their

main source of credit. The majority of small farmers get credit from private input suppliers (34%), closely followed by government-supported agencies (23%). Also, 21% obtain credit from friends and relatives, 15% from private banks, while the remaining 7% was from cooperatives. Information on the various sources of credit available to the survey small farmers was shown in Figure 22. Farmers cited that private input suppliers are the major source from which they obtain credit. This is largely a mirror image of the unwillingness of the government to invest in rural financial markets and agricultural production. Small farmers use input suppliers loan to help secure agricultural products of sufficient quantity and quality.

**Figure 22: Source of credit**



Input suppliers' visit small farmers during the farming season on the basis of revenue from future harvests, with a fixed buying price. Payment of early input credit is subtracted when the small farmer sells the harvest. A key to the success of input credit is how well the credit supplier can ensure the settlement of the loan. Often through arranged purchase of the harvest. Instead of paying interest rate, small farmers may instead be required to agree a deduction on the price paid for the harvest. Giving credit as part of trading relationships will assist to build client

reliability and mutual need. Also, the presence of many input credit suppliers mean that small-scale farmers may have alternate sources of credit for the coming season, thus making default on credit provisions less time consuming for farmers.

Small-scale farmers also use friends and relatives as source of credit. Relatives and friends are sometimes the first sources when seeking credit. Loans from friends and relatives are usually small and repayment is expected within short periods, mostly not more than two months. Interest rates are recorded low and in many cases are free. The terms of repayment are easy to be rescheduled in the case needed. These informal credit sources are satisfying the gap in the banking sector as they serve predominantly poor and low income earners, who are seen the commercial banks as unbankable due to their failure to abide with straight credit collateral requests.

Some of the respondents claimed that they get capital to invest in farming from government. Most of the respondents indicated that they were expected to exchange three stacks maize grain as an exchange of fertilizers given to them. Respondents felt that the relationship is biased and the interest payments in this exchange rate is abnormal and beyond the reach of many. Another serious stumbling block is that farmers lack information pertaining to the existence and operation of government institutions. In other words, institutions might be available and offering affordable services which the farmers were not aware of. What is worrying is the gradual reduction of government credit funding as part of agricultural market liberalisation. Like most African countries, Zambia is failing to fund or give adequate financial resources to its struggling small farmers. Though, private banks are working to fill the

gap, the outcomes are nowhere near enough. This results in an immense gap in finance for farming and this traps masses of small farmers in absolute poverty.

A number of small farmers receive loans from commercial banks in Zambia. Most small scale farmers do not apply for loan from commercial banks because they lack collateral security required by banks in recovering their loaned capital. This worsened by lack of legal and protected property rights of the majority of small farmers using communal tenure. The existing customary land cannot be used as indemnity to receive credit from financial institutions. There is need to reform the communal land tenure systems, so that it can be used for collateral purposes. Besides, the strict requirements by some commercial banks, the interest rates are still high in Zambia and are not positive to small-scale farmers' growth and development.

In some cases loan application processes are complicated and need writing and reading skills so that a folder on the debtor may be created. Processing of loan application is normally complex, leading to long delays before final authorisation or rejection. The loan application process may take up to three to five months. This is more complex to people living in rural areas where most financial institutions are located in urban areas. Established commercial banks are in most cases located in towns and cities and are therefore not accessible to the majority of small farmers who live in rural areas. Even when authorised, loan delivery is slow. Complex administrative processes are beyond the understanding of the rural people and make little effort to find ways of reaching them. Confronted with these obstacles posed by

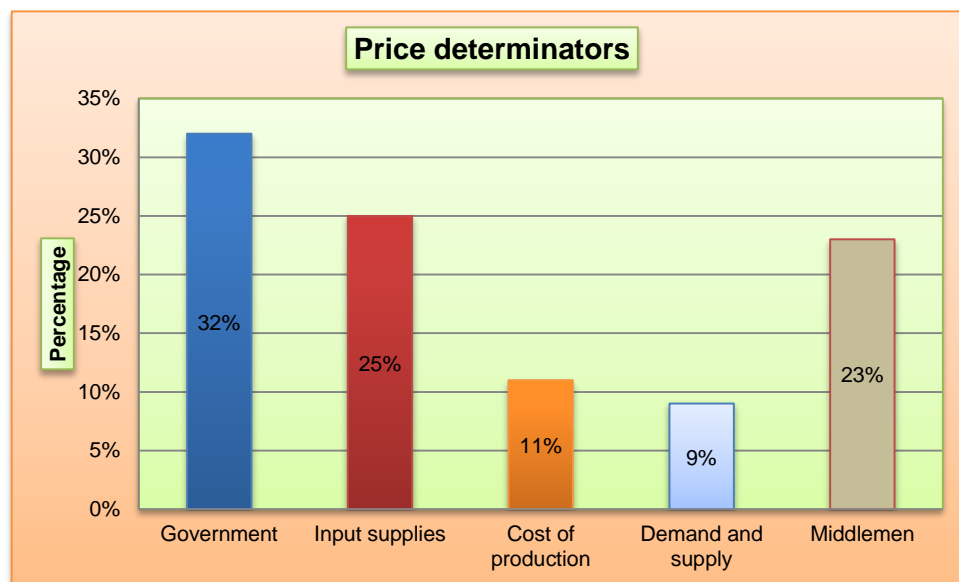
different sources of creditors, small scale farmers face a big accessing agricultural credit facility. This incapacitates them to grow, expand, and maintain their farms.

## 4.5. MARKETING

### 4.5.1. Price determinations

The respondents were asked to indicate what actually determine their agricultural market prices. Figure 23 shows the response of the sampled small farmers. Of the sampled small scale farmers 32% depend on government, 25% on private input suppliers, 11% on cost of production, 23% on middlemen, 9% on demand and supply. Input suppliers are becoming important actors in ensuring ready markets for small scale farmers in Zambia. 25% of the interviewed small farmers rely on private input suppliers so that they could be easily assisted with inputs.

**Figure 23: Price determination**



Input suppliers reduce the small-scale farmers' risk of incurring financial losses as farmers get payment according to the predetermined terms of the contract despite fluctuations in the market. Input suppliers pre-finance the cultivation of a specific

crop by giving small farmers key farming inputs. The small-scale farmers' are then required to sell their harvests to the supplier. The major task remains on the pricing as small farmers are tied to a pre-arranged price which many small farmers are forced to sell at a set price to repay the loan. Input suppliers oversee production resulting in a loss of independence for partaking small-scale farmers.

Noticeably cost of production also influence the market prices tagged by small farmers. In-depth interviews with respondents show that small farmers first calculate their cost of production and then add a certain percentage as profit. If they thought the prevailing prices were too low, small farmers respond by withdrawing their participation in the market until they were favourable enough to cover cost of production. Small farmers felt that their products were not fetching high prices that allow them to break-even. Others said they often first tried to negotiate for higher prices before withdrawing from the market, possibly because they had immediate bills to meet. Such small farmers stressed that despite their prices at times being different from those offered in other markets, they were always open to negotiations, depending on the quantity wanted, the payment method and period and a number of other factors.

In most cases, marketing prices of small farmers are determined by government agencies. In Zambia, the Food Reserve Agency (FRA) has been legally granted control over the purchase or sale of agricultural commodities. The FRA holds the dominion power to regulate supply, channels and condition or terms of sale. Small-scale farmers sell their agricultural products to the government because of its possibilities and reliability of access to credit when needed. Even though FRA

provides a ready market, small farmers are generally not pleased with the operation of FRA because of later payments of harvests already delivered. In addition to this, the prices at which the FRA buys and sells crops are unpredictable and some farmers find their prices unattractive. This hinders effective planning of small scale farmers for the subsequent seasons. Some farmers who use the state organizations for accessing the markets claimed that they are poorly organized as compared to other markets. Farmers explained that it is sometimes difficult to sell to FRA and only those who have connections to political leadership have easy access to sell their crops. The FRA had become little more than an instrument of the government for the purpose of mobilising political support for the incumbent government.

The respondents also market their products to middlemen. Small-scale farmers sell their products to middlemen, mainly around the community, farm gate and at the road side in most districts. The meaning of middlemen as used in the study refers to individuals who are found in the market and purchase farmers' products in large quantities and resale them to hawkers, retailers, vendors or final consumers. This is the type of middlemen that small farmers always do most of their business with and always not pleased with. Small farmers are forced to sell their produces at the harvest period when the prices are low leading to a very small return for their products. This is revealed to by one respondent who says:

*“.....After harvesting my maize I needed people who can buy them. Unfortunately I did not have money to transport my maize to the nearby town where most of small farmers sell their maize. They were few people in rural areas who were prepared to buy the maize. One thing which was stressing me was school fees of my children which have to be paid immediately. One*

*day a middleman come to buy maize from our village. The price they were offering was far below the current market price. However, I did not have any option but to sell my maize in order to pay off my debts. (Interview with a small-scale farmer in Copperbelt province, 27 November 2014).*

Rural small-scale farmers usually sell their farm produces immediately after harvest in order to satisfy family needs and pay back debts. The urgency of these monetary needs particularly after a long farming season when revenue sources are limited, compel small farmers to sell their products to the middlemen. Small-scale farmers sell their produce to middlemen who commands low marketing prices and make huge profits at their expense. When small-scale farmers sell the produces individually, they are easily manipulated by middlemen who give them low market prices for their products, on which they can barely provide for their families regardless of their hard work on the farms. Small-scale farmers also accuse the middlemen of tampering with weighing scales. As a result, small farmers get even less money for their harvest. The removal of the middlemen in the market has been suggested as the solution to reduce the challenges that are faced by small farmers when marketing their produces.

Small-scale farmers also rely on the demand and supply when pricing their produces. However, small-scale farmers producing staple and basic agricultural products had to sell their produce on the markets when supply is plentiful and prices very low. Small farmers have no means to preserve or store their produces until prices increase. They are not only vulnerable to seasonal fluctuations; they are not able to check the daily prices on the markets before they transport their produces for

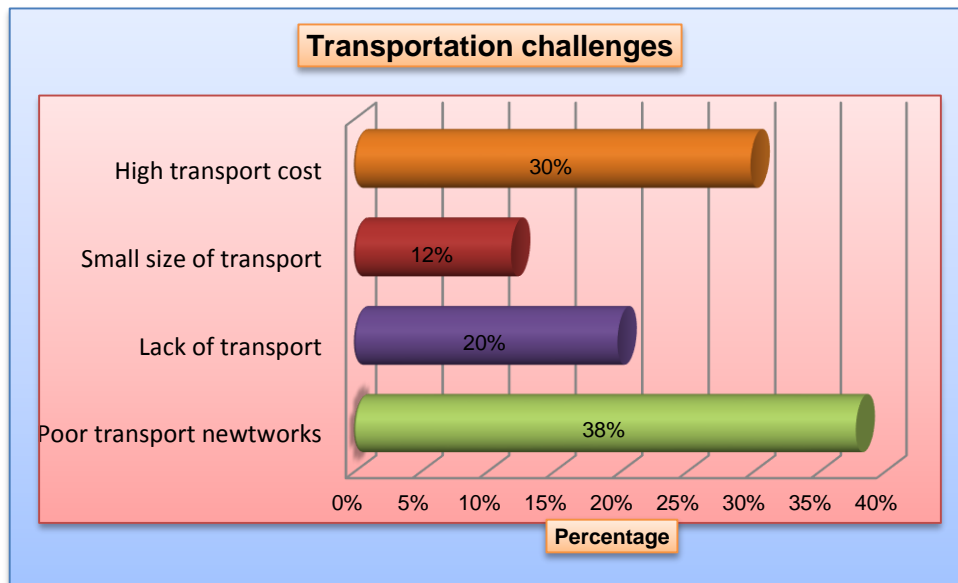
sell. They have no option but sell their produces at whatever price is offered, or even leaving them on the market due to the cost of transporting them back home.

#### **4.5.2. Transport infrastructure**

In order for the market to be accessible there must be physical assets that are in a good condition, such as roads and vehicles. The interviewed small farmers were asked to indicate challenges they face when transporting their produce to the market. Although small-scale farmers face a lot of challenges in transporting their agricultural products, the respondents were requested to indicate their main challenge. Figure 24 shows the responses of the interviewed small farmers. Of the sampled small farmers 38% complained of poor transport networks, 20% lack transport, 12% on size of the transport and the remaining 30% on high transport costs. Transport costs have been recognised as a strategic factor in agriculture. Despite being poor, small-scale farmers are also profit-minded; hence they try by all means to choose the market that seemed most likely to bring them the highest returns whilst costing them the least to deliver their produces to the market.

High transport cost is one of the main factors restraining the growth and development of small-scale farmers. This is also largely contributed to poor infrastructure and communication services in rural areas. Small-scale farmers, who make use of formal markets in distant towns, need transport to deliver their agricultural produces but transport costs are usually prohibitive for individual farmers to bear. High transport costs precludes small farmers from transporting their products to market at a reasonable price and on time and that is why they have to rely on middlemen more often.

**Figure 24: Transportation challenges**



In most instances, small farmers usually lack access to reliable transport. They do not have their own distribution vehicles and have to rely on public transport, scotch cart, wheelbarrows and hired tractors to carry their produces to the market. This restricts the amount of produce that the farmers can take to the market. In most rural areas in Copperbelt province, it is common to see community members leasing out their scotch cart for a reasonable charge, this enable rural people to make considerable time savings by transporting their agricultural products to the market, rather than waiting for a lift or public transport that is usually not available.

Small-scale farmers also face challenges in accessing markets due to poor road networks. Rural areas often have gravel roads which are winding and long, most of them are poorly maintained and unreachable. Dilapidated and inadequate state of the rural road network hinders the transportation of goods and services, and thereby the incorporation of rural markets. Reasons for the poor state of roads range from lack of financial resources to fund road maintenance and severe neglect. Many

gravel rural roads are inaccessible, except by tractors during the rainy season. As a result small-scale farmers fail to deliver their farm produces to the market on time. Also, given the perishability of their farm produces small farmers face the risk of running a loss. A further complicating factor for the development of the access road network in most rural areas is the undulating terrain with excessive steep slopes, at some locations. Therefore, most of the farm produce just go wasted and sometimes the products will be no more in good conditions when they arrive on the market.

#### **4.5.3. Storage facilities**

Small-scale farmers were asked whether they have access to storage facilities. Table 10 below shows the response of the interviewed small farmers. Of the sampled small farmers 68% do not access to storage facilities. The remaining 32% have access to storage facilities. Most of small farmers lack storage warehouses where harvest and input can be stored. A lack of storage facilities of all types places a severe constraint on marketing of agricultural produce and this will result in having massive food produce losses, and discouragement of farmers to increase production of perishables products. The interviewed small-scale farmers were concerned about lack of technology to surplus produce so that they can be used during the time of scarcity. Succeeding months after harvest, the produce are scarce and the prices are high but farmers have nothing to sell. In the same months the village experience household food insecurity.

**Table 9: Storage facilities**

<b>Response</b>	<b>Yes</b>	<b>No</b>
Number of respondents	32	68
Percentage of respondents	32%	68%

This lack of adequate farm storage facilities prevents farmers from holding their produces to benefit from price hikes after the main harvest season is over. Due to fear of losses small-scale farmers are forced to sell their produces at the initial market opportunity. The lack of proper farm storage facilities clouds small-scale farmers' decision making. Along with pressure to meet family needs and other social responsibility, the risk that produce will spoil often force small farmers to sell right after the harvest when market prices are lowest.

The prices are also generally the low during the harvesting season and become high before the harvesting period. Agricultural supply often surpasses demand right after harvest because farmers tend to cultivate same kind of crops in their provinces, given by similar geographical and climatic conditions. This put them at a disadvantage in market negotiations with the middlemen who end up giving them prices which does not allow them to break even. Hence, middlemen give very low market prices being conscious that small farmers have no way out.

In the absence of adequate storage facilities, both in terms of safety and security, they have to dispose part of the produce immediately after the harvest and purchase later from the market. The risk of rotting or decaying affects small farmers' ability to store adequate produce to last through the lean or hunger period that lasts from the

time the food from the preceding harvest runs out to the time new crops begin to come in. However, proper storage facilities can assist balance actual demand and supply and ensure higher revenue for small farmers who want to their products later for better prices when the after harvest over supply vanishes. The absence of storage facilities also discourages traders from holding grain over time. Findings reveal that the storage facilities being used by small farmers are not well developed, leading to harvest losses. However, crop storage plays an important role in guaranteeing domestic and international food supply.

Small farmers engaging in livestock farming lack cold storage facilities, making it hard and challenging for them to unceasingly produce beef and goat meat. Cold storage facilities need electricity, which in most rural areas of Zambia it is unavailable and often expensive. This also constraints the marketing of perishable products, including certain dairy products and vegetables. The storage problem is likewise worsened by selling raw and unprocessed agricultural products in the markets. The majority of farmers in Zambia lack the appropriate processing and value-added technologies which will help to ease post-harvest problems. If small farmers were able to process their agricultural products they would also get larger profits and financial means for better livelihood.

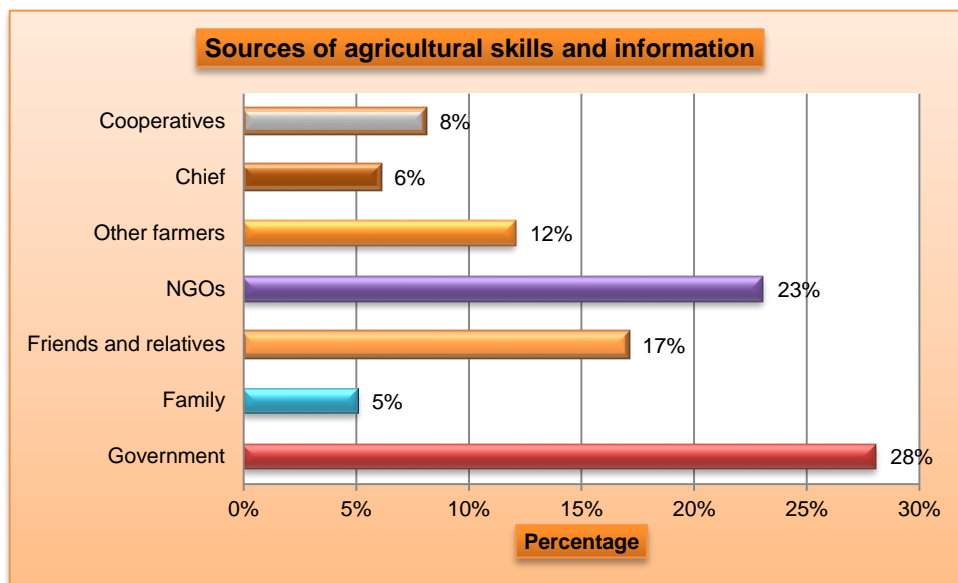
## **4.6. AGRICULTURAL EXTENSION SERVICES AND INFORMATION**

### **4.6.1. Sources of agricultural information**

Knowledge and information is one of the most treasured resources that can help small farmers to make informed decision about methods of farming, processing and marketing of their agricultural produces. Therefore, the interviewed small-scale

farmers were requested to indicate their sources of agricultural information. Figure 25 shows sources used by small farmers to obtain agricultural information. 28% of the sample access agricultural information through government, 5% from family, 8% from cooperatives, 6% from chiefs, 17% from friends and relatives, 23% from NGOs and the remaining 12% from other farmers.

**Figure 25: Sources of agricultural skills and information**



Results on access to agricultural information indicate that most of the small-scale farmers received support from the government through extension officers. Extension officers from the government hold workshops with small farmers on how to keep records, farm equipment, labour markets, credits and inputs used on their farms. Some respondents said that they were unaware of availability of such workshops while others did not get an opportunity due to family chores which limited available time for obtaining farming lessons. Lack of awareness of agricultural extension works shows a picture of poor information networks in Zambia.

Even though a reasonable percentage of farmers know about the training services, not all of them attend. Though a reasonable percentage of small-scale farmers know about the training services of extension officers, not all of them attend. Some small farmers complained that they cannot attend training by extension workers as they are done far from their place of residence. Focus group discussions reveal that, they have to walk for an average distances of 20km-30km in order to reach extension officers. The results show that distance has an impact in accessing and delivering of extension services. Therefore, it is vital to find strategic gathering points to hold training in order to accommodate all small-scale farmers.

There are, also, small farmers who point out that they do not attend training workshops by extension workers because they are old, and have enough knowledge on agriculture and they are not eager to learn new things. Lack of interest in obtaining new farming skills was observed among the elderly small scale farmers who thought their farming experience was good and adequate. Additionally, farmers highlighted that they hardly see extension officers on their farms or homesteads. The study found that on average, extension workers only visited rural small farmers two times per annum. This limits small farmers' access to vital agricultural information and negatively affects farm operation.

Interview with key informants from the government officials in the ministry of lands, natural resources and environment protection shows that there are inadequate number of extension officers. The capability of Zambia's extension services has deteriorated in recent years, a situation which has intensified due to insufficient government funding of extension services and poor road conditions. The government

officials indicated that there is a shortage of extension officers and could not meet the rising demand to give extension services on a frequent basis.

The Zambian government is failing to supply adequate resources in extension services especially in rural areas; as a result the country only allocated 5% of its agricultural budget to this sector (Curtis, 2013). Therefore, agricultural extension services in the country are poor and are contributing to the failure of small-scale farmers to diversify or increase agricultural production. This contributes to low levels of technological adoption by small farmers in Zambia. In order for small farmers to be more productive, they should acquire information on production that involves fertilising, weeding, cultivating, harvesting and pest control.

Focus group discussion shows that some of the agricultural training done by extension officers did not help the majority of small-scale farmers as they appear not applicable and require some levels of education. According to Figure 7 on page 121 the number of people with no or primary education are many (54%). The society however is textually interconnected and an individual to know how to read and write. Literacy is a crucial skill in accessing knowledge and information to agricultural science and to production inputs to an effective use. This locks small farmers out of the education system, accessing to current information. They need to go for agricultural training in order to improve their farming operation. Literacy performs as a funnel for agricultural training; those who are literate may easily understand training materials. Low levels of literacy made it impossible to implement new ideas or methods as a result small farmers are not keen on new knowledge but rather chose their traditional methods.

It is also important to note that small farmers received agricultural information and training from cooperatives. Agricultural cooperatives are another way business and agricultural skills can be transferred to small-scale farmers, along with other methods of assistance. Agriculture cooperatives bring accrued knowledge to individual small farmers through solid social networks. They can provide practical training in specific farming subsectors, even in isolated rural areas, drawing on small farmers' own up to date information and knowledge. Enhanced connection among members, through agricultural cooperatives, small-scale farmers can share technical know-how, market information and continue to be informed about agricultural activities.

Chiefs are also important in conveying agricultural information to small farmers in most rural areas. Most of the traditional chiefs rely on indigenous knowledge oriented techniques of production, merely because they are commonly uneducated. Indigenous knowledge means the knowledge that has been developed over time in a society mainly through accumulation of knowledge and close understanding of the surrounding in a specific tribe or culture. Other small farmers receive agricultural information from either small or big local commercial farmers. Farmers interact with one another to share some experiences and achieve a common goal. Experienced farmers thus become the best discussion partners for other farmers. Small farmers are sometimes attached to local commercial farms where they would learn various skills by watching commercial farm labourers use particular skills daily in executing their duties. The skills are acquired through "look and learn" approach. This helps them to learn better farming methods from other farmers in their communities.

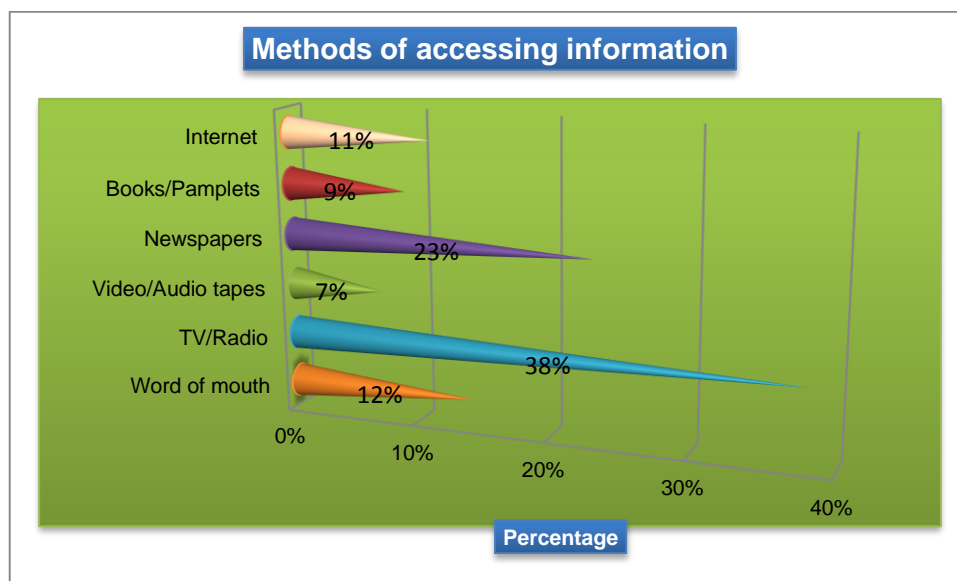
Some respondents highlighted that they get agricultural information from other family members. Many participating small farmers reported acquiring knowledge and skills from their elderly family members and apply these techniques in their farming activities. The respondents' depend on their partners, relatives and their children for agricultural information clarifications. Family members who possessed some form of farming knowledge and skills could use it for the benefit of their respective family farming businesses. Moreover, those who have received training in agriculture also pass their knowledge to others within the family.

Sharing of information among friends and relative was an important method to disseminate information to small farmers in the study area. Small farmers increase social capital by communicating with their relatives and friends across the world. Friends and relative who obtained training wanted to share the content of the training workshop effectively to those who did not get training. However, in some cases, friends and relatives who obtained training did not share the skills and information had learned in sufficient detail, and occasionally withheld information. On the other hand, NGOs in Copperbelt are also being used as a source of agricultural information by small farmers. One of the NGOs is using mobile phones to train small farmers with limited schooling in how to maximise their agricultural production. Participants receive voice messages on their phones everyday regarding farm operations. This equips small farmers with up to date information regarding farm activities.

#### 4.6.2. Methods of accessing agricultural information

The interviewed small farmers were requested to indicate the information sources they normally use when faced with the need for agricultural information. The methods of presenting agricultural information include radio/television, internet, video/audio tapes, word of mouth, books/pamphlets and newspapers. Although small farmers use a variety of methods to access information, the respondents were asked to indicate their main method of accessing agricultural information. Figure 26 shows how small farmers access their agricultural information in Copperbelt Province. About 38% depend on radio or TV, 23% rely on newspapers, 9% on books or pamphlets, 7% on audio or video tapes, 11% on internet and 12% on word of mouth.

**Figure 26: Methods of accessing information**



From the findings, radio and television have been used for the purpose of reaching and facilitating the interaction of the (38%) majority of small farmers in the country. Agricultural information that is important for the agricultural sector is broadcasted via radio and television. The radio is cheap and reaches the large farming population that the extension workers simply do not have the manpower and sometimes means of transportation to reach remote rural areas. Some small farmers complained that

most broadcasting programmes are aired during the day when small-scale farmers are busy with other farming activities. This makes it impossible to sit down and to listen to a farming radio programme.

Some small farmers take their small radios to the farm. They listen to radios while working in their fields. However, small farmers especially those in most remote areas do not even have access to radio signals. Moreover, lack of electricity limit information dissemination through radios and television. Therefore, small farmers have to depend on solar or battery energy to watch or listen to their programmes of interest. There are also some community radio stations like Radio Chikuni, which has been frequently featuring farmers sharing their farming experiences and lessons on both crops and livestock in local language. The radio station accepts requests for information from community members and searches the internet for answers, which it then broadcast on air. In some programmes farmers are allowed to phone in and pose questions on various topics concerning agriculture. The questions would be discussed and the farmer can get relevant information through the radio. Sometimes farmers come at a convenient place to listen to agricultural radio programmes. Farmers then discuss the agricultural issues raised in the program. As a result the people can be equipped with relevant information.

Nearly 12% depend on words of the mouth as they had no education (19%) or (54%) had only received primary school education. In reality informal contacts such as colleagues, friends, relatives, are preferred irrespective of one's level of education. Verbal communication is mostly preferred by rural communities in Africa because of long oral custom and low level of literacy. Personal sources were favoured as it is

inexpensive since there are no costs involved and word of mouth quickly go viral. The study noticed that information about markets, inputs and credit was exchanged church gathering, chats, at village shops and water points. Challenges intrinsic in use of oral communication are that individuals may not remember exactly what was said in a given situation and the meaning of such oral exchange is limited to those who are present. There are high possibilities of distortion once information becomes second hand.

A significant number of small farmers (23%) have access to newspapers. But due to many economic, geographical, and infrastructural barriers small-scale farmers have limited access to newspapers, yet it presents additional chance for the people's access to important information. The study noted from focus group discussion that sometimes small farmers make financial contribution to purchase a newspaper in the rural areas. The newspaper will then rotate from one farmer to another. Some farmers rely on audio and video tapes. One effective way to encourage productive learning and practical use of new skills is to show using video and audio media. The use of video and audio, and the interactivity of the multimedia approach, small farmers said they were more interesting and capture learners' imagination. However, audio and video often lack feedback if farmers have questions.

Some of the interviewed respondents depend on books and pamphlets. Individual and focus group interviews showed that education level affect the respondents' relation with written materials. Educated small farmers favoured books with sufficient information on different topics, rather than leaflets or pamphlets that they thought could be easily misplaced. The respondents also reported that explanations various

explanations on different topics were better covered in books. When asked how they cope with books and pamphlets some illiterate respondents said they ask other farmers or relatives to help with interpreting of the contents. The argument was that much of the available books and pamphlets are printed in English, a language they are not at good with. It is therefore understand that they would prefer to read books in their local language.

Small farmers also access agricultural information via the internet. Just as roads are necessary for rural development, internet connectivity is becoming necessary for small farmers, researchers, and e-learning. Access facilities include internet cafes, mobile phones, computers and connectivity in rural areas. Small farmers use mobile phone with higher specification phones such as smartphones to make use of mobile internet access. Smartphones have more advanced computing capability and more connectivity than single-purpose cellular phones. Small farmers are rapidly using smartphones in order to check market information, credit facilities, available inputs and search for farming equipment. Smartphones brings the world to the farm and also but enables small farmers to keep the business running while venturing out into the world.

The researcher also observed that small farmers are using communication platforms such as WhatsApp, Mxit, Facebook, 2Go, Nimbuzz to share agricultural information. The social media, which was formerly used only for chatting, has higher potential to be used for information sharing and networking even in in agricultures. Apart from easily accessing market information using mobile phones, they can also get information about prices of inputs and equipment. This has reduced costs since they

do not need to always travel to the market. Still, the cost of laptops and iPads are still beyond the reach of many small-scale farmers. The internet is often expensive to be reachable to rural people who in most cases live below the poverty datum line. It is often available only in towns and cities, where most internet service providers have their bigger market. Hence, resource poor rural small-scale farmers rarely have access to laptops or computer; this is as a result of inadequate communication infrastructure and low levels of computer literacy.

## **4.7. LAND DISPOSSESSION AND COMPENSATION**

### **4.7.1. Notice to evict small farmers**

The participants were requested to indicate whether they were given any notice before being removed from their ancestral land. The notice should be formally written to, showing the time when the land has to be evacuated and the sum of the compensation to be paid. Therefore, in practise, notice must contain information about, the time framework within which the new landholder is expected to move in, the amount of land to be taken, and the amount of compensation the new landholder is estimated to pay. Table 11 shows the responses given by small farmers. The majority of the interviewed small farmers (78%) were evicted without notice. The remaining 22% were given notices before being evicted from their homelands.

Regardless of the legitimate need for a written notice to be received in person to the affected people; in in practise authority members do not follow it. The bulk of the small farmers interviewed were not informed about the investors until exploration or construction begins. The police without any notice or planning took large vehicles into villages and continued to destroy crops, trees and house. They bulldoze or set

fire on their houses so to avoid people from continuing stay on their ancestral land.

This is alluded to by one respondent who says:

*“..... we were in the middle of the farming season when we heard that police are evicting people in the nearby village. We thought we were not going to be affected. But the following morning the police were everywhere in our village. They started evicting us from our ancestral land. Since I did not have anywhere to go I resisted the eviction. The police became violent and started burning my house and standing crops. I ran to my burning house to collect the few family belongings that were not yet on fire. I was also injured in the process of retrieving my family belongings. After I did not know where to go with my family, livestock and few household items left (Interview with a small scale farmer in Copperbelt province, 24 November 2014).*

Focus group discussion reveal that small-scale farmers have to move from their farms as the conditions of living have become intolerable, especially through intimidation and violent threats. Through in depth interviews small farmers claimed that they were not given the chance to take their personal belongings, building materials and avoid injury to individuals. Besides, the respondents were not be given suitable alternatives before and after eviction. Most of the small farmers were evicted without being provided with somewhere else to go and they were stranded. No arrangements were made for those who have been and will be evicted.

Some small farmers found themselves in secluding situations without adequate basic resources to live. These evictions deny small farmers access to essential needs as education, health, shelter and food. The displaced small farmers were left lacking

assistance that could support them to reclaim their previous livelihood. The trauma of an eviction has the potential of affecting the displaced families for the rest of their lives. It could affect these families either physically or mentally and perhaps develop in them a sense of grudge and hatred against those who evicted them. From the focus group discussion, small farmers claimed that their displacement have exposed them to absolute poverty and hunger. They maintained that access to basic needs and services were beyond the reach of the evicted small farmers. It is recommendable for the government to make a comprehensive and vibrant rehabilitation and resettlement legislation.

**Table 10: Notice of eviction**

Response	Yes	No
<b>Number of respondents</b>	22	78
<b>Percentage of respondents</b>	22%	78%

From in-depth interviews, few people were given access to land by village heads in new areas. Despite being allocated new land, many families do not have the means to grow as much food as they used to and thus suffer from increased hunger. Displaced small farmers were compelled to find another land for settlement and farming elsewhere, this increase the tension and competition with other small-scale farmers over the right to land and other natural resources. In some instances small farmers who have decided to stay in the village in the hope of securing further employment have to make an informal settlement. In-depth interviews shows that evicted small farmers have to use corrugated sheet material, plastic sheeting and debris from destroyed houses, to build temporary shelter in which to live. Whether the small-scale farmers are consulted about land purchase, focus group discussion reveal that it merely relies on the choice of the traditional leaders and government.

As long as the investors have agreed with the government and the chief, they can do whatever they want. The culture of privacy or secrecy that boarder farming land acquisitions raise worries about the government conduct in relation to public interest. The lack of transparency dents government obligation, and increases the opportunity for corruption and other dishonest acts.

On the other hand, the role of traditional chiefs in land administration is still prominent, as the most of the Zambian land is officially classified as customary. Traditional leaders have become very powerful actors in rural land administration as they are the custodian of communal land. The distribution and use of lands are managed by the local traditional leaders on behalf of the community. Thus in the performance of their responsibility as custodians of the land, traditional chiefs must guarantee that the welfares of their community members are secured.

Traditional chiefs, who were typically as poor as other community members, the huge upsurge in the value of land property have changed their place in these land acquisition. Communal land cannot be given away without traditional leaders' permission; the traditional leaders' role is also susceptible to corruption and fraud. Investors may propose significant financial payments and valuable property to these traditional leaders. They use traditional chiefs as fronts in order to get land ownership deeds. Traditional leader can personally benefit or create security of certain groups when dealing with land investors. This results in families being evicted from their ancestral land.

From the focus group discussion, participants argued that some of the local chiefs have supported the evictions and considered giving alternative land to those who were humble before them. In addition, few traditional chiefs may have the technical knowledge to administer the complexities involved in dealing with large scale land acquisition for commercial activities. This led to land deals that bring nothing or little benefits to the indigenous people, neither in long nor in short term. As custodians of communal lands, chiefs decide which portions of the land are given out for investment, in some cases, without a full understanding of the type of investment and its implications.

Then again, those who were given notice complained about the period of eviction. The police orally gave the small farmers notice to leave. They were given short notice to gather possessions and food. Such a short notice limited their opportunity to make representations to the government authorities, seek legal action and was inadequate for consultations on the evictions, compensation and resettlement. Small farmers with crops close to harvest have to plead, but to no avail with new owners and state authorities to spare the crops. They begged for more time to gather crops they could, but were not allowed. The land they inhabit and crops or trees that have been grown on it represents their most vital resource and is literally their only protection against destitution and poverty.

The consequences of eviction are severe, and potentially catastrophic. Eviction breaks the existing social fabric of rural societies by dividing traditional social structure and interfering with family and informal networks that acts as a protection to other vulnerabilities. The productive systems and social networks of evicted small

farmers were dismantled by these foreign land investments. Besides, people face destitution when their productive property or means of production are lost. The eviction of small-scale farmers is thus connected to extreme hardships loss of livelihood and loss of community. Loss of land greatly threatens food supply thereby increasing risks of malnutrition and poverty.

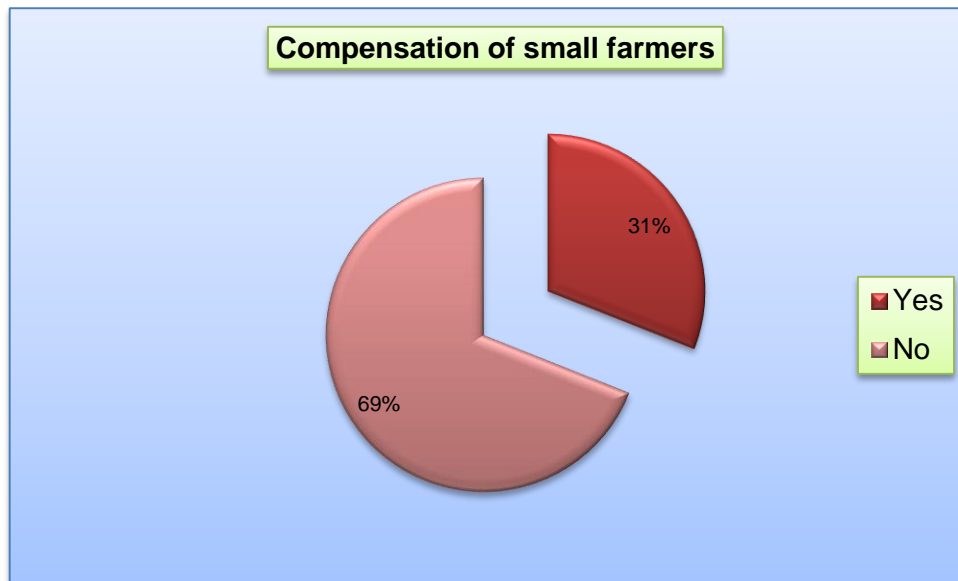
#### **4.7.2. Compensation of small farmers**

Compensation costs may be paid by the investor or government, yet in practise it is the investor who negotiate or pays compensation process directly to the affected land users and owners. Compensation maybe full remuneration or indemnity for the damage or loss sustained by the owner of the property taken or injured for the individual use. Likewise, compensation is a way to keep the balance of social fairness. The common compensation practise is to pay the monetary equivalence of the lost property and livelihood. Interviewed small farmers were asked to indicate whether they were compensated or not. Figure 27 shows small farmers who receive and those who did not receive compensation. Of the sampled respondents 69% were not compensated while the remaining 31% were compensated.

The results show that the majority of the small-scale farmers were not compensated for their loss of physical or material upgrades on their land. Although some small farmers were promised to be compensated by the investors, the promises never materialise and remain unfulfilled. The outcomes were exactly the opposite of what was promised. Moreover, the law does not provide any compensation to farmers from whom the right to use communal land is taken away and given to private investors. Therefore, their attempts to obtain compensation for loss of their assets

made little headway. A lot of evicted small-scale farmers rioted over lack of compensation by the foreign investors. These riots lasted for several days and left many people injured and others dead. Armed police have to fire tear gas canisters at displaced people who were demonstrating against forced eviction by the police.

**Figure 27: Compensation of small farmers**



In some cases small farmers negotiate directly and freely with the new land owners in order to reach agreement on the amount of compensation to be paid for the use of their land and for damage to their property. Given that the land acquired was previously owned by various families or households, it was challenging to reach an agreement with the investors under the same conditions and terms. In this scenario the investors gave the displaced small scale farmers a fixed amount of money. A substantial number of small farmers carped that the money they have received was not equivalent to the worth or value of property and livelihood that has been lost. This was shown by one of the interviewed farmer. This farmer in X1 village has more than 15 hectares of land for growing maize and paprika. He had been on this land for over 18 years. When the foreign investor took over his land he was only paid

ZK37000 as compensation and provided a 3 bedroom house. The farmers complained that this was little comparing to what he have invested on his land.

Some farmers were forced into signing for the money. As a result, small farmers have to collect whatever they are given, as they consider investors as being rich and unstoppable. Felling they had no choice, small farmers accepted the small amount of money proposed to them. In the negotiation process, the affected small farmers were weak in position as they not have the equal abilities and resources as their counterpart investors to bargain fair terms. Those who have been paid and provided with building complain about getting cheap housing materials. They argued that they should get at least improved or equivalent houses.

Although some small scale farmers received compensation, it was only for loss of the land itself. In most cases small farmers' compensation could not cover incidental loss. Incidental loss denotes to a loss that is sustained as a result of an unintended action of the acquisition of the land. Such losses include loss of revenue or income as result of business interruption and expenses suffered in moving to a new area. The affected small farmers needed food, shelter, transportation and social services during their relocation. Those who have no money have to borrow from their relatives and friends to move their property from acquired land to another village. To make matters worse, most small farmers were not compensated for any perennial crops planted, or cops grown or any upgrades on land. The challenge linked with this is whether the displaced farmer could claim compensation for lost of revenue or extra costs they are exposed to.

Another issue, which surfaces during the study survey was the delay in compensation payments and destructions caused as a result. Most foreign investors pay compensation after some years. Deferrals in compensation payments for small farmers, which are wide spread in many rural societies, must be rectified by the government. As a result of bureaucratic procedure, evicted small-scale farmers have to wait for a longer period of up to two years to get their compensation. The challenge is that the agreed money after two years will lose worth for inflation. Inflation on properties and food staff do usually record double digit growth. A deferral in compensation results in decrease in the value of compensation. Therefore, as statutory reform the study recommend that an additional compensation be calculated. Displacement compensation should be calculated based on the current commercial value of land and then add the possible rise in inflation.

A group of interviewed small-scale farmers believed that the compensation will never be enough and cannot substitute for other historical and sociological deprivations suffered. They argued that graves of their ancestors and tombstones are uncompensatable losses, as they provide a basis for social identity. Loss of land may force farmers to break the long-term social and historical attachments they have with the land. In this situation, purely economic calculations are doubtful to do fairness to native opinion about acquisitions. Small farmers' whinged that the resettlement area is not comparable in fertility, size and access to major tarred roads and distances to facilities like schools and hospitals. This demonstrate that evicted small farmers could not get equivalent productive land and other socio-economic benefits.

### **4.7.3. Legal intervention**

The respondents were asked if they sought legal intervention against land dispossession and displacement by investors. Table 12 shows the response of the interviewed small farmers. Only 11% got legal intervention while 89% did not. The findings of the study indicate that eviction proceedings continued without legal representation of small-scale farmers. The majority of rural small farmers have poor understanding of the legal concepts and have difficulties in grasping the technicalities of land rights. Moreover, the court process is unfriendly to small farmers as it is often arbitrated through reliant and translation on legal terminology and court protocol likely to be unfamiliar to most small farmers.

Given the challenges faced by small farmers, there are compelling reasons to believe that the court procedure is not perfect and that conflict resolutions in other settings might fare better in giving small farmers a fair hearing. Furthermore, the foreign investors are rich and have information and financial resources at their disposal. As a result of their wealth they are able to get quality legal expertise. Most of the foreign investors belong to powerful and influential organisations that protect their property and keep them abreast of developments on land related issues.

Rights and education to small farmers become a mammoth task. Focus group discussion shows small scale farmers are not completely conscious of their rights. Even when they do; they are incapable to effectively defend them. Also the physical isolation of people living on rural areas is a barrier to people becoming aware of their rights. Although, some small-scale farmers joined efforts and pool resources to hire a lawyer, the sum was not sufficient enough to hire a good and experienced lawyer.

Due to weak legal representation and a lack of title deeds, the families lost the court case and with that, their land. This made others to have no trust and faith in the country's judiciary system. In the same vein, the government should protect the rights of the small farmers living in communal lands. This would enable the small farmers to stand up for their rights and jealously guard them against all odds.

**Table 11: Legal intervention**

<b>Response</b>	<b>Yes</b>	<b>No</b>
<b>Number of respondents</b>	11	89
<b>Percentage of respondents</b>	11%	89%

Some government officials regarded small farmers as squatters, occupying land illegally without valid documentation. The government continue to ignore land rights of those living in communal lands. Lack of reverence for the community land ownership, subsidises to rural land tenure uncertainty, which in turn can hinder rural and agricultural development, locks people into poverty and destabilise food supply. The government officials confirmed that rural people living in communal land have no lawful defense and their compensation is mostly on charitable grounds.

The fundamental belief is that an individual with title deed is the owner of land and the developments on that land. Therefore, evidence on compensation for losses is scarce. The role of civil courts must be enhanced if a statutory reform has to be prepared on the current foreign land investments. The courts must listen to complaints linked to the defilement of the phases in land acquisition procedures, such as absence of notice, consultation and compensation. The civil courts must listen to the complaints linked to the defilement of the stages in the land acquisitions

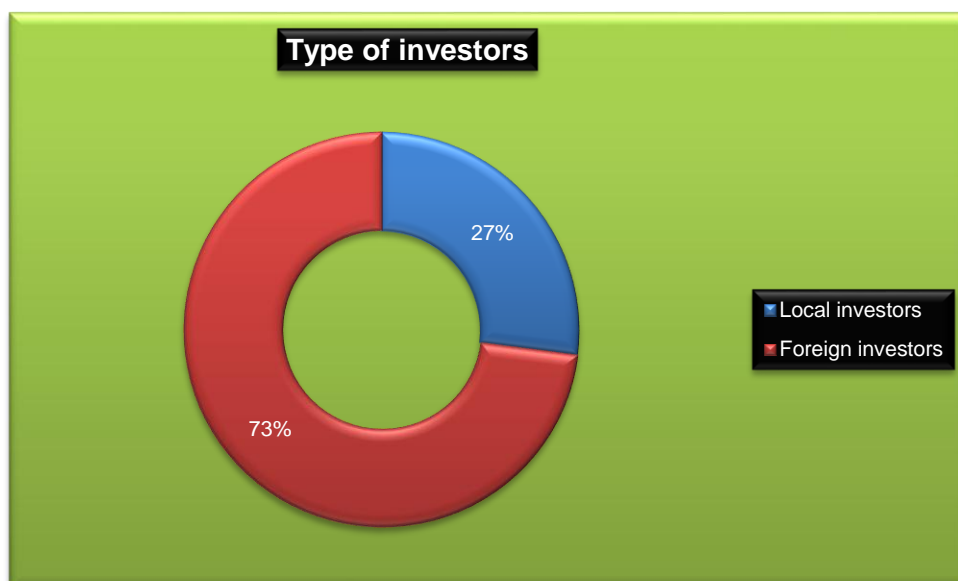
process, such as absence of notification, consultation and compensation. Clarity on land laws is needed to avoid any fear or misunderstanding on parts of the judicial officer; as courts in today's Zambia are not at liberty from political influence.

## 4.8. FOREIGN INVESTORS ACTIVITIES

### 4.8.1. Type of investors

The interviewed small farmers were asked to specify whether the investors acquiring land are locals or foreigners. Figure 28 shows the type of investors. 73% are foreigners while 27% pointed to local investors. Land deals in Zambia have benefited both foreign investors and domestic private capitalists. The local ruling elites and middle classes are taking part in the conversion of communal land into freehold ownership. However, there is nothing astonishing about the point that local financiers taking over communal land. Zambia has an increasing population, which can result in steady rising petition for land for accommodation, which inevitably encroaches upon communal agrarian land. The rise of middle class in Zambia advanced the increases the petition in land investments.

**Figure 28: Type of investors**



As communal land is generally leased or purchased very cheaply, this put the indigenous elites to be monetarily on a same level with foreign investors. The major challenge of converting communal land is consequently knowledge and locations of vacant land and connections which are required to get land. For this the local are well positioned. For this the local elites are well placed. They can also have the power and influence to manipulate the local land tenure system. It is mostly the local elites rather than outsiders who usually convert tenure. The indigenous elites have more advantages in accessing markets that arise in provinces to be given land to private investors.

Table 13 shows private investors engaging in land acquisition in Zambia from 2000-2009. Foreign investor came from Zimbabwe, Great Britain, South Africa, China, India and the USA. British, Zimbabwe, Zambia and South African investors lead the group of investors. There are a significant number of foreign investors coming from Zimbabwe. Although white commercial farmers were evicted driven away in Zimbabwe, the Zambian government welcomed them. Zambia has created an attractive investment climate to these exiled white commercial farmers. During the Zimbabwean fast-track land reform programme that began in 2000, a lot white of commercial were forced off their farms. They have to look at other countries to continue farming. Hence, most of the affected white commercial farmers have to flock to Zambia. Zambia offers an attractive business environment and enjoys a stable political climate as opposed to neighbouring Zimbabwe.

**Table 12: Pledged investments in agriculture 2000-2009 in Zambia**

<b>Investors origin</b>	<b>Joined investments</b>	<b>Investments in total</b>
<b>Zimbabwe</b>	14	73
<b>Great Britain</b>	18	48
<b>South Africa</b>	9	34
<b>Zambia</b>	13	28
<b>China</b>	0	14
<b>India</b>	0	9
<b>USA</b>	2	7

Source: Zambia Development Agency (2011).

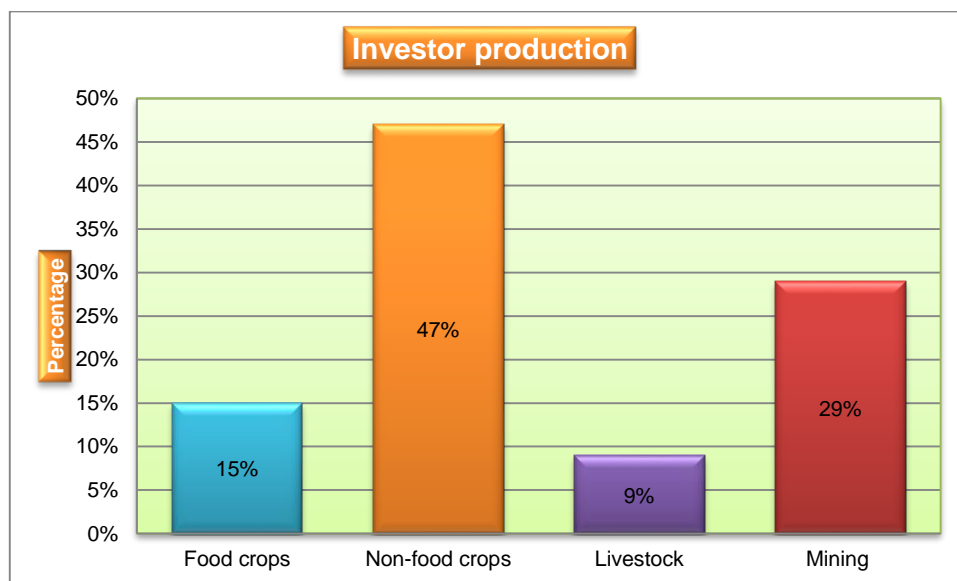
The Zambian government welcomed the dispossessed farmers by giving them land and providing them with an enabling and secure environment for their investments. This movement was as a result of Zimbabwe's deteriorating business climate and Zambia's attractiveness as an investments destination. Table 13 also consist of Asian nations such as India and China, where both economic growth and population are reducing land available for farming. In the near future these countries are also likely to rely on food imports due to expected reduction in fertile lands and an upsurge in global food demand. Therefore, these countries have to rush and invest in areas with abundant land for agricultural investments.

#### **4.8.2. Investor production**

The respondents were asked to indicate the activities done by investors in their province. Although investors engage in different land investments, the study focused on food crops, cash crops, livestock and mining. Figure 29 shows the different

activities done by private investors. 15% major on food crops, 47% on non-food crops, 9% on livestock and 29% on mining. Non-food crop may refer to those crops used other than direct human or animal consumption for food. Some non-food crops include tobacco, cotton and sunflowers. A surging demand for agro fuels is also driving investors to grow non-food crops such as sugar cane and *jatropha*. The upsurge in demand of agro fuels has increased quickly over the past years as oil-importing countries establish targets for agro fuel production and for including biodiesel and bioethanol with traditional transport fuels. As a land-locked country without its own oil supply, biofuel production can reduce greatly the reliance of Zambia on imported petroleum, and correspondingly reduce the burden on foreign exchange expenditure.

**Figure 29: Investor production**



Nonetheless, there is competition between fuel and food, and an increase in food prices as a result. There been much argument over the ethics of using land to produce non-food crops when food insecurity continues to be a threat in Zambia. In fact, the cultivation of non-food crops has a several effect on local food availability as

it changes labour and food producing resources to non-food production. As a result, communities are compelled to rely on the market and commercialisation networks from outside their local communities for their primary provisions which put them at the mercy of unstable food prices.

The shortage of food on the local market may also reduce food variety and quality of the diet of communities and change their food customs. This creates yet another threat to their satisfaction of the right to food. The right to food denotes that food must be sufficient enough and cultural suitable. In this scenario, it is the hard to visualize a win-win situation when investors and government do not prioritise local production or domestic food supply over foreign investments and non-food crop production for the international market. Henceforth, Zambia must ensure that a reasonable percentage of the production of crops is devoted to supplying food for their economy. The country's agricultural policy should encourage the promotion of food crops. One way to do this would be export controls, whereby a certain amount of food grown by investors should remain in the host states.

Some investors are mainly growing food crops. This can contribute to domestic food supply, producing a surplus of staple food crops for the increasing urban population which cannot be supplied by low productivity smallholder farmers. Not only will this increase domestic food supply, it can also lower staple food prices, leaving consumers with a higher real wage. Notably, some investors may export these food crops to their mother countries in order to boost their food supply at home. Investment-thirsty countries like Zambia ensure a steady supply of food to these foreign countries. Many foreign investors are focusing on stabilising suppliers by purchasing foreign lands for food production in the expectation of preventing

domestic riots over food supply and rise. Although foreign investors are taking agricultural land to be in control of their own food security, smallholders also have the same need to control their food security and not dependent on a market that may not supply enough familiar affordable food. Hence, there is no substitute for one's food sovereignty.

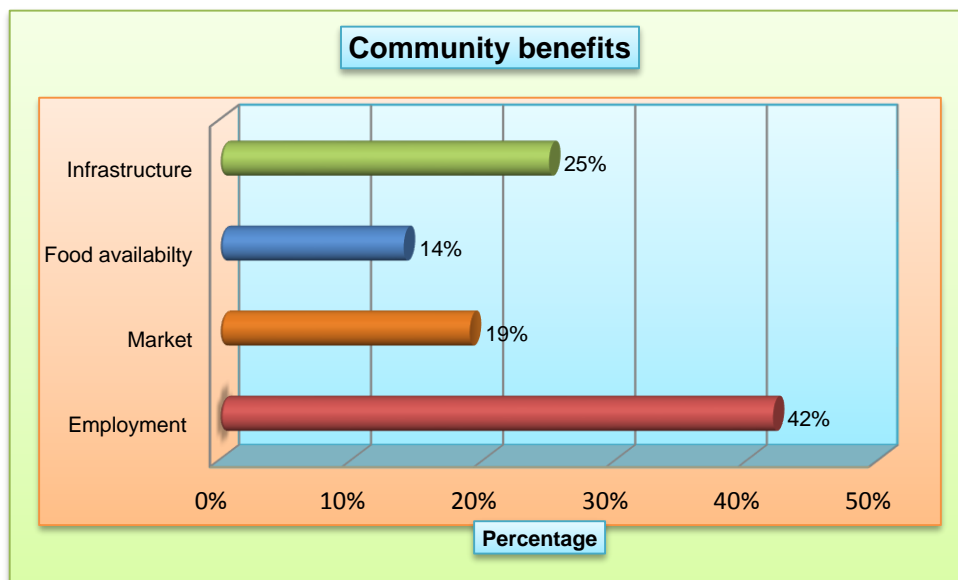
Some investors are engaged in the mining sector. Many small-scale farmers have also been displaced by mines that have been opened on their ancestral lands through the investments of multinational corporations. This is not a surprise since Copperbelt province is the harbour of major mining activities in Zambia. However, large scale mining seems to be dominated by foreign rather than local investors. There are very few locals with enough wealth to run or hold shares in the mining sector. Promoting foreign investment will effectively create a class of mine owners with economic power and resultant political influence.

Mining is the mainstay of the Zambian economy, so the economic strength is in the hands of foreign investors. As the mining is in the hands of foreign investors this makes it likely that profits from mining sector leave the country without any constructive effect on the Zambian economy. Profits instead of being reinvested in building the national economy, they are placed in international banks and companies outside the country. On the other hand, some investors are majoring in livestock production. They are keeping cattle, chicken, goats, sheep and pigs. However, proper management is required when dealing with livestock production. Evidence suggests it is one of the major causes of the world's environmental problems, including land degradation, biodiversity, global warming, water and air pollution.

### 4.8.3. Community benefit

The respondents were asked about how they are benefiting from foreign land investments in their respective communities. Figure 30 shows the response from interviewed small farmers. Although small farmers benefit from foreign land investments the study looked on infrastructural development, food availability, market access and employment. 25% benefits from infrastructure development, 14% from food availability, 19% from market access, and 42% from employment. Most land acquisition considers the local rural population only to the degree that the commercial land investments will create employment for small-scale farmers and rural land residents. Many are often paid lower than subsistence wages and left without legal or social protection. Most of them do not receive a legal labour contract. Focus group discussion reveal that investors capitalize on workers' lack of knowledge and/or illiteracy.

**Figure 30: Community benefits**



By the same token, most jobs created are seasonal, and only offer people an income for a short period in a year. Respondents who are seasonal wage workers

complained that they are qualified social welfare benefits such as maternity leave and compassionate leave, education support, free water, housing, electricity and access to subsidised health care. Small farmers argued that the working environment was also seen as hostile due to investors' failure to comply with labour laws. In addition, national and local governments have given a blind eye to these unfair labour practices.

The respondents whine that the wages they are getting are too low to meet household basic needs. This is in line with Lenin (1967), who argued that the rise of agrarian capitalism and growth of large farms will crush small farmers out of existence and turn them into wage workers. These workers are only expected to maintain living conditions sufficient enough to be able to continue work. Few investors capitalise off the blood, sweat, and tears of wage workers. The capitalists perceive their workers as sources of labour power to be exploited in the search of profit. Some of the interviewed respondents reported that they ended up taking farm work because there were no other alternatives to supplement their income. Poor working conditions and farm incomes were generally too low to cover household basic needs.

A small number of workers have been able to use their income to develop their peasant farms or set up their own business enterprises. In other circumstances workers are not able to acquire sufficient savings and skills to get off the plantation. Some investors come with their own labour force from their mother countries. These foreign immigrants are usually given top paying jobs while locals get low paying

occupations. In some instances commercial farmers favour illegal immigrants over local workers, as they are less demanding of better wages and working conditions.

However, through job creation, several spin-off businesses have emerged. In general, small shops selling groceries, clothes, electrical appliances, have become established around the private land investments. In some cases investors give market space and shop facilities that are rented out to local small entrepreneurs. According to one interviewed small farmers the biggest contribution made by foreign investors to the area was bringing money into the community. Whereas previously locals bartered whatever they had available, they now can go to the new shops that have opened and pay with the money they have earned on the plantation.

For poor countries with relatively profuse land like Zambia, incoming investors may increase market access to the local small farmers. The investors act as a market for the local small farmers. Small scale farmers are being helped with inputs such as hybrid seeds, chemical fertilizers in return the farmers sell his farm produce at an agreed-on price to the investor. However, if their bargaining position is weak, the terms under which they operate can be highly exploitative. They can become trapped in a vicious circle in which they have to keep growing for the company in order to pay off their debts for inputs received.

Some small farmers feared that if business turns out to be unprofitable, investors might pull out leaving them without a market for their product. Respondents also criticize commercial farmers who flood markets, therefore reducing the price of agricultural produces. Commercial farmers enjoy economies of scale so they are able to lower market price while small farmers always purchase inputs at a very high

price. Hence, they need to raise price in order to cover costs of production. Small farmers will find it difficult to sell their produces as they are always expensive compared to those of commercial farmers.

Also 25% of small scale farmers benefit from infrastructure development made by the investors. The infrastructure, and general appearance, of some communities has been improved as new buildings have been constructed. In order to operate efficiently, private investors have to construct tarred roads, clinics, electricity, guesthouses, schools and irrigation facilities which the national government lacks the required funds. Irrigation infrastructure constructed by investors has stabilised water provision in some areas. Other respondents complained that investors are the only stakeholders taking advantage of subsidised water by the government. The local population has to pay the normal fee for water, which reduces the incentive for small-scale farmers to irrigate their farms. As well, some schools built by the investors are too expensive for most local people. Moreover, local communities do not have access to electricity. Only the investor and his business are connected to electricity.

Many foreign investments have failed to meet up to the community hopes and instead of creating a sustainable livelihood, resulted to property loss and left community members worse than they would have been before investors. In fact, even though an effort was made to cover a broader range of situations, the study confirms that in many cases benefits were lower than expected or did not materialise at all. The Zambian government so far have not been able to regulate foreign investors sufficiently to ensure the country as a whole gains maximum benefits and certainly has not given the interests of the local population priority.

#### **4.8.4. Environmental impacts**

The impact of foreign land investments on the environment was assessed through observation and interviews with small farmers. Investors tend to employ industrial large-scale agriculture, which is one of the major causes of environmental damage. There are numerous environmental impacts from large-scale agricultural activities in Copperbelt including increased deforestation, loss of productive land, air pollution, soil erosion and damage to wildlife and fish. There were also visual impacts of ground and surface water pollution, soil contamination, siltation, contamination of fauna and aquatic sediments. Unfortunately, there is no process to ensure that foreign land investments are done in appropriate areas to strike a balance of land uses across the landscape. Instead, it is mainly at the choice of investors to determine if farming is the best for the acquired land.

### **4.9. GENERAL INFORMATION**

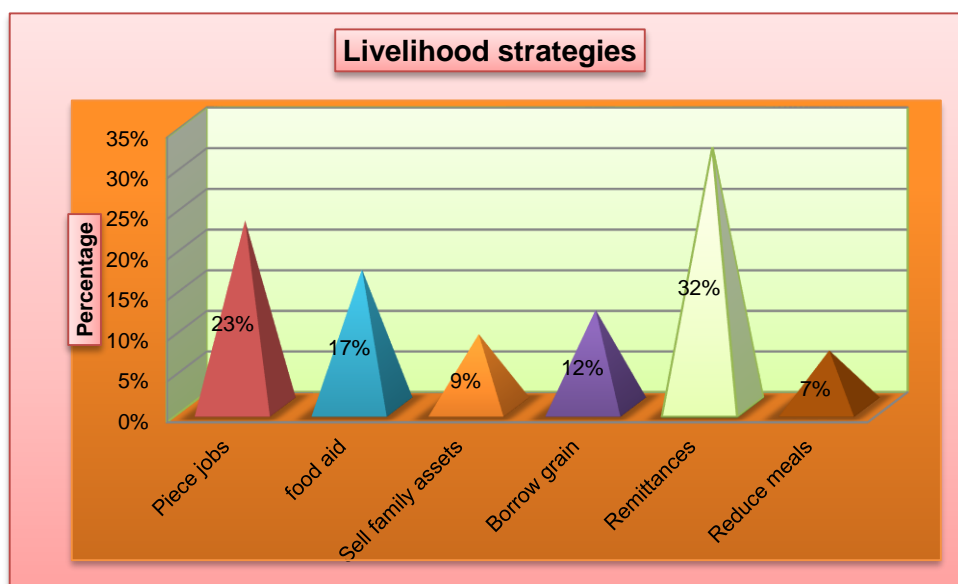
#### **4.9.1. Livelihood strategies**

In an attempt to make decent living, rural people use a variety of means and resources to generate income. In rural areas people are involved in various living strategies. These are ways of merging and using local resources that are accessible to people in quest favourable livelihood outcomes that meet their own livelihood objectives. Chambers (1995) refers livelihood strategies as a combination of activities and resources used in order to survive. Zambian rural people embrace different strategies of making a living, while managing risks and coping with shocks. On the basis of their individual goals, their resource base and understanding of the choices available, different groups of household develop and track different

livelihood strategies. Such strategies enable a household to remain afloat and help them to become more resilient and less vulnerable.

The respondents were asked about how they cope with food shortages during the hunger season. In this study, hunger season refers to that period of time when all food from the preceding harvest has been consumed, and the next harvest is still some time away. Normally the hunger season coincide with the start of planting new crops or shortly thereafter. Even in normal times, many households face a yearly decrease in the amount of food available. Figure 31 shows the response of the interviewed small farmers. Of the sampled respondents, 23% depend on piece jobs, 17% on food aid, 32% on remittances, 9% sell family assets, 12% borrow grain and 7% reduce meals.

**Figure 31: Livelihood strategies**



While agriculture continues to be vital for rural households, people in rural areas are looking for diverse opportunities to stabilise and increase their incomes. Thus, rural livelihoods are based not solely on agriculture but on a diverse range of enterprises and activities. For farmers who deplete their food stocks, food intake had to be

reduced as a means of coping with household food insecurity during this period. Focus group discussion shows that on average, a family had to eat at least one meal which is mostly dinner. This indicates that the respondents produce no surplus or little and not adequate for households necessities. The obvious result is that household become dependent on other survival means such as NGOs relief food relief programmes, a condition that shows food insecurity in rural households.

Some farmers have to participate in piece jobs in order to cope with household food scarcity. Sometimes they have to hire out their labour in exchange for food and some send household members to stay with other relatives. Piece jobs are used to cushion financial constraints facing households. However, some respondents were less likely to accept piece jobs in the agricultural wage sector, since earnings in the non-farm sector were much higher than the agricultural wage. Apart from being engaged in piece jobs, small farmers rely on remittances from their children and other family members or relatives working and living in urban centres or in other countries. They receive money or goods in order to satisfy their day to day needs. The justification for relying on this source of livelihood is that the rural dwellers invested in the education or other training of urban based family members who are now obliged to reciprocate the prior support by providing financial support to the rural dweller who may now be incapacitated by age or illness.

Interviewed small farmer highlighted that they also rely on food aid from NGOs to make up to three meals per day. They receive their food hampers from NGOs operating in their communities. Respondents also reported borrowing grains to sustain them to the next crop harvest, highlighting the insufficiency of production.

They would borrow from friends, neighbours and community leaders. Focus groups dialogs exposed that some small farmers exchanged maize grain for other essential goods like kitchen utensils and clothes. Some respondents indicated that they have to sell their family assets in order to protect the household against risks and shocks. The effects of the hunger period were worsened by the displacement of small farmers which later led to the disruption of the planting and/ or harvesting season. This further undermines the ability to tend fields and leads to further food insecurity.

#### **4.10. CONCLUSION**

Based on evidence from the field work and attempting to achieve the objective of this study on characterization of production systems, challenges and valuation of the performance of the small-scale farmers, it can be concluded that the small-scale farmers in Copperbelt are confronted with challenges pertaining infrastructure development, property ownership, access to credit, extension services, inputs, market and information. As a result of limited economic and social resources, small-scale are no longer seen as the sole engine of rural transformation. Their performance is still limited in terms of the resources that are available to them and the support they receive from different stakeholders.

The visible manifestation of foreign land investors in Zambia, reflect heightened level of food security, poverty, displacement, dispossession, landlessness and environmental degradation. Experience with small farmers so far has shown that in numerous cases they lose access to land, often without consultation, compensation and legal assistance. Consequently, small farmers require clear and secure land and

other property ownership rights in order to protect them from outsiders and allow them to engage in long-term land related investment.

Although, small farmers anticipated positive benefits from these land acquisitions, it is clear that the paybacks have not materialised. With the promise of job opportunities, infrastructure, technology and food security, small farmers lose their land to investors. There was little gain from these investments for the local small farmers. Moreover, small farmers who were once owners of production were turned into wage workers. In the process they lose self-esteem as they lose one's self-employment. This situation poses a severe threat to small-scale farmers as they can earn more working their own land than as wage labourer. Their wages are kept low and no opportunity to save income. In addition, the case of non-food crops rather than food crops will threaten the country's food security position.

In a nutshell small farmers are not benefiting from large-scale foreign land investment. There are certain positive and negative considerations and care that need to be taken for future investments. The Zambia government have made tremendous efforts on improving the operation and activities of small farmers through the Farmer Input Support Program. Contrary to initial plans for Farmer Input Support Program to be a temporary program, it has been continued up to today and some operations have been expanded. Farmer Input Support Program has had a positive impact on maize production and has contributed to improvements in small-scale farmers' food security. However, in terms of community benefits from foreign land investments, the necessary conditions for positive spill over are often not present. There is need for policy interventions to create them. Beyond formulating policies,

governments need to ensure that foreign investors contribute to the national economy and integrate with the local community rather than operating as a standalone unit without links to the environment in which it operates.

## **CHAPTER FIVE**

### **CRITICAL EVALUTION**

#### **5.0. INTRODUCTION**

Small-scale farmers can be a driving force for socio-economic growth and development in Zambia, but in reality they have remained a sleeping giant. The potential for small farmers is phenomenal although they have not yet fulfilled that potential. On the other hand, foreign land investments in Zambia have posed to be a major threat on the survival of small farmers. With a government whose mandate is to attract foreign land investments, small farmers are doomed to disappear. This chapter presents an in-depth reflection of study findings backed by literature review and secondary data.

The following sub-section summarises the research findings that were investigated in the Copperbelt Province of Zambia. This section highlights the main issues covered and how they link to the overall theme of the study. The chapter will also provide tentative recommendations which are believed to be of benefit to government policy makers, NGOs, small farmers, private sector and other relevant agricultural organisations. Recommendations were informed by the results finding of the study and can be used as a referral point to improve small-scale farmers in Zambia. Finally, the chapter looks at areas for further research.

#### **5.1. A GRADUAL EROSION OF TRADITIONAL LAND RIGHTS**

Land was a central issue during the struggle of independence in Zambia, and continues to be an important domestic issue. It was one of the key issues that drove the fight for independence from the British colonial powers. The fight for ownership of

land was necessary as it is a vital instrument of the economic development of a country, and the way it is used influence how the country develops. It has also been recognised as crucial political, social, economic and cultural asset where prestige, identity and status of the people are determined. Those in political class and in business regard land as a source of personal wealth and power. For small farmers, land is not only for agriculture but it is their sole livelihood source. Land also secures food supply for the local people not directly involved in farming, and is needed for countless other purposes, such as human settlements, infrastructure and other non-agriculture businesses. Land is a crucial element and a key factor to Zambia's economic transformation. The successful economic transformation of Zambia lies in its land management and administration. For that reason, the way land is used and managed is therefore extremely critical to Zambia's peace, prosperity and posterity.

Legislative and institutional reforms that have been put in place tend to erode the traditional land rights enjoyed by Zambia's small farmers. In Zambia, most small-scale farmers cultivate communal land held from generation to generation by individuals, families, clans, or communities. Typically, a member of the community receives a portion of land only by virtue of his connection in the clan or lineage. Even so, the lack of clarity, recognition, security and legal protection of communal land rights has left many Zambian small farmers displaced and dispossessed from their ancestral land by foreign investors.

Small-scale farmers who use communal land has no formal legal land title deeds or documents of their claims. As a result, small farmers continue to be evicted from

land they long regarded as their own. Connections to the land built up over generations are lost. This is alluded to by one respondent who says:

*“.....my family have been using this land even before Zambia was born. However, with the coming of investors we have been evicted from our ancestral land. The most painful thing is that police came with guns and threatened to shoot anyone who resisted moving out. They burnt all my household properties without any notice. They burnt my food barns, clothes, blankets, bedding, television set and they even burnt my fields. They said we are squatters and we are intruders on that land. Now I am stranded. They didn't give me any compensation or alternative land”*  
(Interview with a small scale farmer in Copperbelt province, 24 November 2014).

The Lands Act of 1995 was designed to steadily reduce the amount of land held under customary tenure while increasing the amount of land held under foreign ownership (Wily, 2001). The Act of 1995 convert communal land to state land and then sold or leased to foreign investors. Once land is converted to privately owned land, customary rights are extinguished, and the power of the traditional leaders over that parcel of land is eliminated. Although, Zambia passed statute planned to promote customary land recognition and develop the agricultural sector through privatisation of communal land. The conversion of communal land has rendered the whole community landless, erodes rights to common pool resources. Hence, the Zambian law should give reasonable protection, recognition and security to small farmers who rely on communal lands for their livelihoods. When the law fail to protect

communal property, small-scale farmers might not be prepared to take risks invest on their land as the developments may be reaped by outsiders.

Consequently, the land acquisition deals are negotiated in non-transparent and secretive way. As a result, the majority of small farmers were evicted without being given other alternatives. In the bargaining process, the affected small farmers were not informed and compensated. Unequal power relations leave small-scale farmers at the danger of exploitation, displacement and removal from their ancestral land without consultation and compensation. Communal land rights are not fully recognised and respected by the law. Small-scale farmer is a vulnerable group as they are the least economic and political voice, usually the least organised group and lack bargaining power.

Although some small farmers received compensation, the amount offered had been inadequate and little. In most cases, the compensation did not match value of small farmers' crop and land. Furthermore, there is little evidence that small farmers or local communities are benefiting from the operations of foreign investors. This is alluded to by one respondent who says:

*".... Corporations promised us employment, tarred road and electricity. These had not been done to our expectations, regardless of investors saying they need to work in full capacity and obtain profits from their businesses before they could create jobs for the locals as they have promised. A lot of people remain unemployed. This have made our life difficulty. Before foreign investors local people usually eat three meals per day. After the investments, people began to eat two meals a day, even at harvest, formerly considered a*

*time of abundant food. This drop to one meal a day during the lean season”*  
(Interview with a small-scale farmer in Copperbelt province, 26 November 2014).

Benefits were projected to arise from technology transfer resulting to productivity and innovation, capital inflows, infrastructure development, upgrading domestic production, employment and perhaps an increase in food suppliers for both local and international market. The expected benefits fail to spill over into the domestic sector. A code of conduct for foreign investors and the host governments could assist in ensuring that land acquisitions are a win-win arrangement for local communities and investors alike.

## **5.2. MARKET-LED AGRICULTURAL DEVELOPMENT MODEL**

Since independence, Zambia’s agricultural policies have changed from a state dominated environment passing to market liberalization. The general policy objective that runs through all the policy phases is the need to improve agricultural production in order to achieve self-sufficient food supply (Wood, 1990). Under state controlled agricultural model, agricultural development was realized through parastatal institutions and state controlled market system. The argument behind this model was that agricultural productivity would increase from the government’s provision of support services to the farmers and through its regulation of the agricultural market (Stiglitz, 2002).

The Zambian government played an active role in price fixation and subsidies. Public agencies and institutions assisted in the provision of market, credit, inputs and extension services to the farmers. The thinking behind this model was that stable

prices and subsidized goods and services would be an incentive enough for farmers even in remote area to increase their production. The increase in agricultural production was anticipated to promote employment creation, increase farmers' income and improve household food security (Kydd & Dorward, 2001). However, the inefficiency of state parastatals, drop in copper prices and increase in oil prices made it difficult for the Zambian government to sustain the subsidies in the early 1980s and late 1990s.

After the disappointment of the state led agricultural development model, Zambia implemented a market-led agricultural development model. This model is based on a set of liberal economic policies essential for development. These policies advocate for agricultural development strategies based on privatisation of parastatal institutions, market liberalisation, minimisation of the role of the government and promotion of private sector in agriculture (Williamson, 2000). The rationale behind privatization of Zambia agricultural sector is to reduce public expenditure and enhance economic efficiency through proficient allocation of resources by the private sector. As well, it is argued that market liberalization increases competition, corrects price distortion of both agricultural inputs and produce and bring efficiency in the market (Kydd & Dorward, 2001). However, in order for the small-scale farmers to reap the benefits of a market-led agricultural system it is imperative for them to intensify and diversify their farm production in favour of commodities demanded on the market.

Despite claims by proponents of liberal agricultural policies that the reforms would improve the lives of people in rural areas and reduce poverty, Zambians have

experienced the opposite. In Zambia, the market led approach had placed severe hardships on the small farmers including dispossessing and displacing them from their customary land. This has been aggravated by small-scale farmers' lack of access to credit, market, farm equipment, extension services and key inputs such as fertilisers, hybrid seeds, pesticides and herbicides. As a result, the market led approach has failed to address poverty and food security in Zambia.

In order for agricultural policies to be relevant for increasing food security and rural poverty reduction without sacrificing economic efficiency, there is need for a greater government involvement in building and creating a conducive institutional environment. This calls for a redefinition of government's roles in tenure security, agricultural credit, input supply, and extension services if small scale farmers are to be part of the winners in an era of liberalization. Getting the prices right through market forces is not a solution for Zambia's agricultural development and neither is excessive state involvement a promising solution.

There is need to get good elements of liberal policies as well as good elements of statist policies in policy formulation. Therefore, what is important is to get a good balance that will minimize both market failure and state institutional failure if agricultural policies in Zambia are to be relevant to the small-scale farmers. In this way, it is of maximum benefits to Zambia to integrate both private land investors and local small-scale farmers in increasing agriculture productivity and production. State mediation is also useful in creating a favourable environment for a balanced agricultural growth in Zambia.

### **5.3. DRIVERS OF LAND INVESTMENTS IN ZAMBIA**

Foreign land investments are seen as crucial contributors to filling investments gaps in the country. In reality, how far these investments are able to lift the majority of the people out of poverty is uncertain. There are a number of factors that make Zambia particularly attractive for foreign land investments. The current land deals are all linked to oil crisis and by the aspiration to secure ownership to land and other natural resources for energy needs of the investor and domestic food (World Bank, 2010). The motive behind the host nation is in improving food security at household and national level, technological transfer, employment creation and increase exports earnings. However, these assurances never materialise or trickle down to the majority of small farmers in rural areas.

First, Zambia has been identified as one of the countries with the highest gross land balances, land with crop potential that is not currently used for agriculture. Many foreign land investments are targeted at Zambia due to the view that the country contains abundant land which is lying idle and unoccupied (Cotula *et al.*, 2009). But in a country with the majority of indigenous people who live in rural areas, this formal classification is open to interrogation. While much land in Zambia may be presently not developed to its full potential, actually remaining land overall does not mean land is unoccupied and unused (Spieldoch & Murphy, 2009). Even land that is not cultivated, such land might be used for animal grazing, fire wood or as source of medicinal plants, fruits, wild foods, water collection and for future generations. Also, the land might be lying fallow in order to restore the nutrients in the soil. The government might not perceive this as being productive, but it plays an essential role

to the livelihood of the local population. Therefore, discourses about 'idle land' are deeply and seriously misleading.

Another reason for why Zambia is such an eye-catching target for foreign investors is cheap land. The land is undervalued and therefore an excellent investment for foreign investors (Sipangule & Lay, 2015). The business value of the land is still low in Zambia. This increases an anticipation of promising enormous profits for investors in the future when the anticipated battle for land properties may rise their value. The low land tax rates and fees, if permitted to last, will thus threaten the ability of the government to generate revenue from the exploitation of natural resources. Besides, reasonable land taxes help to ensure that only profitable investments, with capital standing to develop land appropriately. This will contribute to the general socio-economic development of Zambia.

Thirdly, for biofuel investors, Zambia offers an attractive market. Currently, Zambia depends on semi-refined oil imports from the Middle East; even though they have the locally state owned Indeni Oil Refinery. Earlier, political instability in oil producing nations resulted in an increase on the world oil price. This had a de-stabilising effect on world oil supply and prices. Zambia as an oil importing country is also subject to this high volatility and increasing price of petroleum, and with it the trickle-down effects it has on its economy. Oil plays a crucial role in the agricultural sector, where it is used in tillage, irrigation, harvesting, and the manufacturing of nitrogen based transport and fertilisers (Cotula *et al.*, 2009:53).

Without its own resources, Zambia imports all of its fuel. Being a land-locked country, the costs of these imports are significant and a heavy burden on foreign exchange reserves. High transportation costs and poor transit neighbours' infrastructure typically place a landlocked country at a distinct disadvantage relative to its coastal neighbours. Alternatively, biofuel production to substitute for imported fossil fuel could help Zambia particularly with rising oil prices. High oil prices will carry on keeping food prices high, except when alternate fuels are found. Fluctuating and rising oils prices produced an encouragement for broadening of the energy department for energy security reasons (Daniel & Mittal, 2009). In response to rising oil prices and a mounting sense of oil insecurity, energy programmes boosting the production and use of biofuels are also driving land acquisitions. Hence, biofuel programmes and high oil prices make fuel from energy crops a sustainable alternate to fossil fuels. More foreign investors turn an eye on Zambia for it has abundant land and affordable labour to produce biofuels. This situation, in turn, increase the request for biofuels and with it the demand for land. This created powerful incentives for growth of *jatropha*, oil palm trees, maize, soya and sugarcane.

Findings from the field data also show that several investors are engaging into non-food crops including some of the mentioned above. However, this can be a major threat to national food security and livelihoods of the Zambians. The farming of biofuels crops become a direct contestant to food production on existing crop lands. The other concern relate to the possible loss of land access for the rural small farmers. Biofuel crop production may also breach communities' land use rights for cattle grazing, firewood collection and fishing. Customary land provides an important

resource for millions of Zambians and individual use of it is destined to result to land rights disputes.

The intense increase in land investments across Zambia and some other developing countries originate from global food crisis of 2007 and 2008 (Cotula *et al.*, 2009). The global food crisis raised the prices of food so high that it caused instabilities across the globe. This global food crunch leapt an additional hundred million people worldwide into starvation, from which the majority have not improved. This condition has put back countless years of development determinations towards the achievement of the Millennium Development Goal 1: to eradicate extreme poverty and hunger. Nonetheless, the instability of global food prices, particularly when intensified by export restrictions taken by major grain exporters resulted to food unavailability on world food markets and higher food prices. This logically triggered worries about the availability and cost of food in countries mainly relying upon imports for their national food security (Görge *et al.*, 2009). Countries which depend on foods imports realise that their expenditure on food exponentially amplified. The increase in food global prices in itself reinforced the attraction of land investments, and therefore formed a positive response mechanism that further intensified the concentration in land investments.

This global food crunch put significant challenge mostly on food importing countries, particularly the Gulf State countries. The climatic, biophysical and demographic conditions of the Gulf State have made these countries to largely rely upon food imports, which is the reason why the global food crunch hit these countries hard (United Nations, 2010). In general, these countries depend on food imports to feed

their population since they are located in regions which are arid and have limited water resources to produce sufficient food. Hence, land investments in food production are one of the strategic responses to the food security glitches of countries with limited water and land resources. As a result, they choose to regulate the food supply chain by producing food in overseas countries and transporting the produces back home. These countries are looking for vertical incorporation in order to secure consistent food supplies in the incident of repeated price increases or export limitations from the traditional agrarian producers (Görger *et al.*, 2009). These investments are supported by ample financial means from oil income or trade balance surpluses.

Crops grown by foreign investors are frequently exported instead of feeding local people. There is no guarantee that the crops are cultivated for the local market. One consequence is that the host country can no longer grow sufficient food domestically and becomes reliant on the world market for the import of basic food crops. Such investments have the potential to hurt domestic efforts to ensure food security as land and water are reserved for the growth of export crops. Export orientated agricultural policies model increases rather than decreases hunger amongst the local population. Even so, mechanisms are hardly ever in place to control the export of the agricultural products and in most cases exports are even encouraged. There is often no rules and laws established to stop land investors from exporting the crops produced in the acquired land. As an alternative, government must resort to agricultural export limitations especially in times of crisis and shocks.

#### **5.4. LESSONS FROM THE ASIAN GREEN REVOLUTION**

The Asian Green Revolution entails a long term evolutionary process straddling more than five decades since the 1960s. The Green Revolution was driven by simple technology and research and development into new high yielding varieties of main staple crops including wheat and rice. The growth and development of high yielding crops was essential for the Asia's agricultural development. In combination with subsidized fertilisers and pesticides and a reliable source of water, these new varieties led to considerable improvement in food grain production. This was further supported by extension services to train farmers to obtain maximum benefits from inputs (Estudillo & Otsuka, 2013). As well, the expansion of better soil management techniques fostered the advance of the Green Revolution.

First, the state's mediating role was crucial for the attainment of the Green Revolution. The active involvement by the states in creating a conducive environment for the operation of farmers was instrumental to the triumph of Green Revolution. The various central and state level policies played an important role in influencing the farmers to adopt this cropping pattern. The governments also invested heavily in irrigation projects and infrastructure. The expansion and availability of infrastructure facilities including communication facilities, irrigation schemes, farm equipment, storage and warehousing facilities further supported the Green Revolution (Africa Research Institute, 2009). Infrastructure development enabled the efficient distribution of seeds and fertiliser to a wide network of farmers. Secondly, Asian governments helped small farmers through input and output price support. The governments fix remunerative prices for agricultural crops and also subsidize the purchase of various agricultural inputs used by the farmers (Estudillo &

Otsuka, 2013). The incentive price policy of the governments induced farmers to increase production.

Governments also introduced cheap and easy credit access to stimulate small-scale farmers to switch to new high yielding varieties. Both short and long term credit facilities were given by agricultural development banks and cooperative banks. As a result, with the availability of cheap credit, farmers were in position to use improved seeds, fertilizers and machines. This was achieved together with land reform programmes directed at giving small-scale farmers security of tenure, therefore allowing them to have access credit facilities (Block, 2013). Henceforth, agricultural credit and land reforms were crucial factors that improved agricultural productivity. Land reforms complemented by the rise of rural financial institutions allowed the embracing of farming technology and the use of key inputs such as fertilizers and hybrid seeds.

Most of the Asian land reforms accentuated the need to improve the peasants' status and social conditions, to reduce poverty, and redistribute wealth and income in their favour. Thus, land reform become synonymous with a rapid improvement of the agricultural sector, which comprises the land ownership system, the pattern of farming and farm organisation and the institutions of rural credit and marketing. In addition, the work of the governments was facilitated by generous financial assistance from Official Development Aid and technical knowledge from institutes such as the Rockefeller Foundation (Sachs, 2005).

The Asian experience reinforces the argument for strong connections of the agrarian sector with the rest of the economy. Rapid growth path outside the agricultural sector is viable after producing sufficient food. The kind of Green Revolution that swiftly spread across Asia increased and improved production and it was the foundation for wider economic development (Sachs, 2005). Asian countries doubled their food security as a result of political will of the leaders. The Green Revolution fruitfully touched the poor and remote population on the Asian continent.

In the case of Zambia, it is critically important to recognize the importance of small farmers as the engine of the country's Green Revolution. However, the Zambian small holder sector is bordered by many obstacles that limit them to realise their full potential. Most of the small-scale farmers experience significant challenges when it comes to accessing agricultural key inputs such as fertilizers, hybrid seeds, pesticides and herbicides. Some of the small-scale farmers have to use recycled seeds and this greatly reduces the yields and income that the farmers get. Lack of access to quality agricultural inputs hampers the ability of many small-scale farmers in Zambia to reach their productive potential.

Key inputs are often unavailable or too expensive for smallholder farmers to purchase. However, as part of the strategy to improve smallholder farmer's access to inputs, the Zambian government have to implement the Farmer Input Support Program (FISP). It was found that small farmers who get inputs through the Farmer Input Support Program were unable to access them on a timely basis. Small farmers complained that they receive their inputs very late and sometimes in short supply. In order to ensure the obtainability of key inputs of various crops there is need to

promote government partnership with farmers' organizations, NGOs, and private input suppliers. This also calls for mechanisms that ensure that inputs are affordable and delivered at the right time. Inputs of various crops should be made available to small-scale farmers in a convenient and efficient manner to increase small farmers' productivity.

Fertiliser usage is still low in Zambia. Underdeveloped rural markets, high transport costs have limited the availability of fertilizers. Government involvement is therefore needed to ensure the supply of the right type of fertilisers, at the right price and at the right time. On the other hand, the country's soils are antique, obtained from granite weathered over a long period of time. The soils are rocky and infertile. Hence, without replacing lost nutrients, Zambia has severe soil fertility challenges and farmers continue to lose millions of tons of soil per annum. It is possible to improve soil and restore fertility by using a combination of inorganic fertiliser and other available organic material such as cover crops, green manures and compost residues. Cereal rotations with grain legumes and leaving part of their farms to fallow for a number of years are one of the most promising methods. Soil testing is another step to extend the benefits of future Zambia's Green Revolution. In relation to ecological factors, Zambia's soils vary by region and are in general very different from and less fertile than the Asian productive, fertile sedimentary valleys and volcanic soils under the easy command of large rivers. Therefore, the purpose of these tests is to know what type of fertilisers and seeds will be more fruitful in different regions.

A common narrative on the underlying causes for the failure of the Green Revolution in Zambia is the lack of irrigation facilities and rainfall which is very unreliable. Also, there is lack of mediating role of the state in capacity building, financial support and management of irrigation systems. There is a need to determine the appropriate mix and role of government and NGOs agencies, the private sector, communities and individuals in the effort to promote optimal joint investment in irrigation development and maintenance. A comprehensive irrigation development strategy should take into account the technical requirements, policy and institutional issues. In Asia, government expenditure on infrastructure and irrigation were crucial to the successes obtained during the Green Revolution.

In Zambia few small have access to irrigation facilities and this is a limiting factor in the agricultural sector. The country's low capital investments in the agricultural sector have led to overdependence on rain fed farming with little irrigation facilities. Away from this, weather or climatic changes are increasingly unpredictable and Zambia is seriously affected in this regard. Conversely, Zambia has significant groundwater resources that continue to be largely unused and several river channels that are not fully exploited. This shows a huge potential for irrigation in Zambia. A wider menu of irrigation technologies needs to be available for farmers to choose from, so that farmers would respond more flexibly to irrigation development opportunities.

Even so, small farmers have to use drums, buckets and watering cans to draw water from rivers and dams to their fields as they do not have proper or adequate irrigation infrastructure. This has limited the amount of land small farmers can put under cultivation. The introduction of irrigation technology is one of the recommended

interventions to enhance the production of small farmers in Zambia. Irrigation pumps and pipes need to be installed. Continued investment in communal irrigation should be central to the future of small scale production. This would make it possible for small farmers to grow crops in and out of season. Likewise, this will enable small farmers to switch from one crop farming season to multiple season cropping. Small farmers may use multiple cropping which favours the practise of cultivating two or more crops in the same piece of land during a single growing season, this is also known as polyculture.

The Green Revolution in most Asian countries illustrate the pivotal role of modernisation of inputs and technological development geared towards improving food production (World Bank, 2007). Contrariwise, few Zambia small farmers own tractors and modern farm implements or machines. From the field data, the majority of small farmers indicated that they did not have access to these farm implements as they are priced far beyond their reach. The profits from their farming activities are not enough for them to buy farming equipment. This is alluded to by one respondent who says:

*“...It’s hard to have modern farm equipment like combine harvesters, tractors and planters because we don’t have the money to pay for them. Sometimes when my children send me money I hire a tractor from other community members. I often rely on my draught animals and hand hoe in doing my farm work. We have our local blacksmiths who sell to us at a cheaper price”*  
(Interview with a small-scale farmer in Copperbelt province, 24 November 2014).

As small farmers cannot afford to buy large equipment such as planters and tractors individually as they incur more transactional costs, there is need to collectively buy farm equipment to incur low costs. The role of machinery in accelerating the growth of Green Revolution is, indeed, great. Rural entrepreneurs who do not necessarily own farms, but who owns equipment such as scotch cart and tractors, should come to services poor small-scale within their community and the surrounding villages. This could be an advantage for less resourced farmers who don't have any capital to invest in farm equipment. Custom hiring of farm machinery usually take place in rural areas using both formal and informal networks. These custom-hiring businesses can play a vital role in establishment of better agricultural machinery and the benefit may over-spill to the small-scale farmers in the community.

Alternatively, there is need to enhance the capabilities of rural blacksmiths through financial assistance, manufacturing facilities, skills and training. Local blacksmiths help in supplying agricultural implements and providing repair and maintenance facilities in the neighbourhood. There is also need to set up a network of farming machinery related organisations and individuals such as traders, importers, financial and university institutions. This network will share their experience and open platform for joint actions for the promotion of suitable agricultural mechanisation in Zambia. This set up can also force government and policy makers to develop constructive policy appropriate for agricultural mechanisation. On the other hand, there need for multilateral, bilateral and agricultural research institutes to share knowledge, experience and technologies in their respective countries. This will also assist exchange specialists across the country.

The findings also revealed that small farmers in Zambia face difficulties in accessing markets that allow them to break-even. According to small farmers, the prices that they are getting for their produce, be it from government, input suppliers and middleman are low. Small farmers are often not being paid a fair price for what they produce, driving many of them out of business. Getting fair price is an issue close to the heart of the small farmers. Government need to address the taboo of fair prices to save small farmers. Small farmers need a guaranteed single fixed market price that is set annually by the government and does not change throughout the year. The aim is to give Zambia's huge farming population a consistent and fair price for their produce.

Small farmers also rely on the middleman to market their agricultural outputs. In Zambia, with poor transport system, small-scale farmers find it difficult to take their perishable produces to the market on time. In such a scenario small-scale farmers have to sell their commodities to the middlemen at a reduced price to that price dominant at time of sale. Middlemen regulate the price of agricultural products themselves and small farmers have nothing to say in the establishment of the market prices. Farmers have little option but to sell their produce to middlemen as they lack proper storage facilities to reduce the rate of deterioration of their produce.

The middlemen make large profits at the expense of the small farmers as they resell the produce at a high price to other retailers and traders in urban areas. The real profit goes to the middlemen who purchase the farm products at give-away price and sell at higher prices to the consumers. Most of the small scale farmers in Zambia have small holdings which make it difficult to dictate the price of their products.

Hence, the role of the middlemen is unfair and unfavourable to the concerns of small-scale farmers. This method has left many small farmers trapped in a poverty cycle. Below are the sentiments that were echoed by one respondent:

*“...I grow perishable crops which need an immediate market. I don't have storage and money to transport my harvest to the market. Even if I manage to transport my harvest, the market can be very slow such that I can fail to sell half of my produce at the time I expect to have finished selling all the produce. I need money to pay for household groceries and school fees. As a result, I have to sell my produce at a low price to the middlemen who come to our rural areas. I sell my harvest to middlemen and have no option but to take whatever the agents give me”* (Interview with a small-scale farmer in the Copperbelt province, 24 November 2014).

In many cases, the money small farmers earn after marketing their products is not enough to bring families out of poverty at the end of the harvest. Although, small farmers felt that their produce would fetch high market value, prices available to them do not allow them to make meaningful profits. At times, small farmers have to depend on the state agent, which is the Food Reserve Agency (FRA). Although the FRA provides a ready market, small-scale are generally not pleased with their operations of delays in payment. This hinders their effective planning for the following seasons. Payments to small-scale farmers should be made in time to allow them to plan for input purchases. Private input suppliers are also playing a vital role in buying and selling produces from the small farmers. Under this arrangement

small-scale are given key inputs at a credit, normally considered during the setting of the market price. However, the major challenge remains on the pricing as small-scale farmers are tied to a pre-arranged price which many farmers end up complaining about.

Another limiting factor is access to market information. Small-scale farmers lack information about product prices at the local level, the best times and places to sell their products, quality requirements and the potential buyers. This in turn decreases their ability to trade their efficiently, and to get the full benefit from the marketable part of their production. Furthermore, small scale farmers lack access to tarred and good roads and this reduces the ability of small-scale farmers to transport outputs to the market. Most of the roads are characterized by dangerous gullies, slippery surface and a very low and narrow bridge which make markets inaccessible during the rainy season.

Small-scale farmers find it costly to hire transport, particularly after harvesting, and consequently they often carry the produce on their heads or in their carts or wheelbarrows. This restricts the amount of produce that the farmers can take to the market. When the problem of poor road network is combined with deficient or inefficient transportation services, farm produce are delayed in getting to the market. This challenge lead to loss of quality which in turn result to lower prices. An improvement in the transport sector is likely to make it easier for small farmers to deliver key inputs to the farm and harvest to the markets on time.

Findings also reveal that small farmers lack access to storage facilities. To those who have, the facilities are not well developed, resulting to post harvest losses. They lack access to cold rooms and store rooms to keep their products in good condition after harvest. At the same time, electricity in rural areas is often unavailable and normally expensive, which reduce investment in cold storage facilities. This strains selling of perishable products such as fish, vegetables and dairy products. Small farmers are left without an option but to cultivate crops for their own sustenance and few of perishable products, resulting in lower productivity.

In the livestock, small-scale farmers face challenges due to the non-existent cold storage facilities making it hard for farmers to continuously produce beef and goat meat. Working to set up storage and processing facilities so that farm produces will last long enough to get to markets is another crucial piece of the puzzle that must be attended to. The use of high quality storage systems not only decreases post-harvest losses but they also enable small-scale farmers to have more choices on when to sell their produce in order to earn higher market prices than those offered immediately after harvest period. The government through their extension officers should develop strategies to educate small farmers on the importance of constructing farm storage facilities.

Access to telecommunications and health facilities also remain limited in Zambia. The small-scale farmers, who still provide a significant partition of the world's food, need information to develop their work as much as industrial scale producers. Small-scale remain dependent primarily on previous experience, word of mouth and local leadership. However, small farmers can use ICTs to look for information on markets,

prices, services, varieties, storage, production or processing. This information will also strengthen their decision-making capacity. Personal ICT information and communication devices such as mobile phones or tablet PCs are becoming more widely used in conveying useful information to small farmers.

Smartphones, such as iPhones and Blackberries which include 3G mobile services with internet connection, intensify small-scale farmers' access to information in Zambia. Even so, innovation has steadily reduced the purchase of laptops, phones, scientific instruments and specialised software. However, the impact of increased information flow depends equally on the effective translation of material into various native languages and appropriates formats for the intended users and their local cultural context. Realising the profound potential of communication and information technologies in the country's agriculture, the government should embark in an effort to capture and explore the expanding knowledge and use of ICT instruments in agrarian livelihoods.

Since infrastructural service play a crucial role in agricultural production, the challenge is to attain high accessibility rates for infrastructural services among the rural people. To mobilise adequate resources to address the huge infrastructures backlog, Zambian government need to work with the private sector and other development allies. The government must take the lead in investing in rural infrastructure. To archive this, the government should increase their official development allocation for rural infrastructure. Investment in physical infrastructure has significant influence on the effective use of technology and more widespread use of hybrid and fertilizer at the farm level.

Small-scale farmers rely on private input suppliers, government, banks, relatives and friends, as their primary sources of credit. In Zambia, small scale farmers access to credit is still limited as can rarely meet the conditions set by commercial banks, which see them as a risk because of lack of their ability to repay loans and poor guarantees. Most farmers are bypassed because of the lack of collateral security. They are regarded as high risk given the constraints of agricultural planting seasons, unpredictable weather conditions, low production rates, and limited technical or management skills. Lack of capital is a severe issue for many small-scale farmers in Zambia. With limited income, no funds are available to acquire inputs such as hybrid seeds and fertiliser, irrigation and storage facilities. This results in low productivity and thus little or no harvest that can be sold at the market place to obtain income to purchase inputs for the next cycle. This is a vicious poverty cycle from which many farmers find it hard to come out of.

Another area of concern was access to agricultural information and skills. Most of the small farmers lack access to extension services either from government officials, private sector or NGOs. The findings indicate that distance has an effect in delivery and access of extension services from government officials. Most of the small-scale revealed that they were not receiving visits from extension workers, and when they did it took long periods of time for them to come to their farms and monitor farm operation. In many cases, small-scale farmers indicated that the extension workers visits were routine in nature and lacked direction and specificity.

## **5.5. WAY FORWARD**

### **5.5.1. Reforming the communal land tenure system**

Small farmers who live under traditional and collective forms of land tenure must have their land and resources rights protected by the full weight of the law. The Zambian government should take measures to give legitimate protection of ownership upon individuals, households and societies presently requiring such protection. Communal land registration and provision of title deeds to communities, kinship group and clans may provide strengthen legal recognition of their land tenure or ownership. Lawful acknowledgement of communal land ownership may also help to brace ownership security wherever such communal rights are endangered for different reasons. This may also protect them from being indiscriminately evicted from their land by private investors.

The government should provide security by confirming the rights that rural people hold as well as through specific policies which provide protection against investors. Emphasis is on consolidating the security of communal land ownership system whilst concurrently taking a wide spread awareness series to enlighten the community about their civil liberties. Promoting customary tenure with greater access and security is a must for the development of small farmers. Customary land laws should be safeguarded and written down at community level. This will ensure transparency, justice and allow it to be held responsible to standards of equity, sustainability and protection of the rights of rural people.

### **5.5.2. Consultation and fair compensation**

The principle of fair compensation, free, and informed consent should be a basis of state policy, and must be incorporated in national legislature. Before, the government signs the contract with the private investor; they should cooperate and consult in good faith with the local people. Smallholder farmers should be properly consulted and well informed about the potential, implications, benefit and risks. The consultation should be done in an environment of trust that favours constructive discussion, in relation to well recognised principles. The dialogue should also include independent observers.

Large scale land acquisitions and the frameworks leading them must be subjected to public debate and consultation, with all agreement open to community enquiry. This may increase the legality and safeguard long-term sustainability of land acquisitions. The civil and media society can play an important role in making information available to the public. There is need to ensure that information is available to the rural people in understandable form. This may include an explanation of impacts, full prior development plan, alternatives and choices, written record of any pledges and agreement from both sides.

The consultation should be documented and written records of results kept. The discussions resulting in land investments contracts should be done in an apparent system. There must be full participation of the community members whose land has been taken away as a result of the investments. This means that preference made must be based on rational thinking rather than fortune hunting agreements. Provision of legal support and aid is important in helping rural people make the most of these arrangements in practice. Furthermore, there is need for adequate compensation in

kind, land and cash in cases where small-scale farmers relocated away from their ancestral land as a result of foreign land investments. Through consultation small-scale farmers can be adequately compensated and given alternate resettlements and access to arable farming land. Small-scale who lose their land should be rehabilitated and compensated to an identical or better livelihood. A fair compensation strategy for resettled small farmers should be planned based on realistic economic analysis.

### **5.5.3. Advocating for individual ownership**

In addition of securing communal land rights, the government should assist small farmer in getting individual title of the communal land they use, in order to ensure their human rights will enjoy full legitimate protection. This is a property pattern in which full and private rights to land are given to a group of persons or single person. The owner who possess individual rights have exclusive right to use, receive income from it, possess it, or sell it or use it as collateral security. Some economists argue that people are not accountable to common property, since the costs of taking accountability than the benefits are gained. Therefore, individual title enables people to endure the costs and profits of their own activities.

A simplified and application procedures and registry system should be established and managed locally. The uses of ICTs can also facilitating the process of land registration. Moreover, land distribution boards must be created at the district and provincial levels. This is done to increase small farmers' accessibility to individual land tenure. To avoid undesirable impacts, the programme should be followed by public campaigns to ensure extensive information of the procedures and rules.

Education awareness should be increased to notify rural people about the changes and in what way they may lose and benefit. The conversion to individual freehold tenure is projected to support revenue growth and property status for the rural poor and ensure livelihoods flexibility whilst affirming the ability to access credit. Freehold titles can be used as collateral that could help farmers gain the financing they need for farm improvements and to purchase productive inputs. Finally, provision of individual land rights in communities administered by communal land tenure should be limited to indigenous Zambians.

#### **5.5.4. Improving access to credit**

Governments can collaborate with donors, the NGOs, private sector and communities to create an environment for formal and informal financial institutions. Government has to provide incentives for financial institutions in form of subsidies, tax breaks or grants to at least cover the initial costs of the financial institutions to enter into the rural finance market. Banks and other financial institutions should be widely spread, so that small-scale farmers will only travel for a short distance to access financial services. This will go a long way in encouraging the utilization of institutional credit by small farmers.

In addition, the government of Zambia must subsidise the interest which small farmers pay on borrowed funds. The subsidy on the interest will be aimed at attracting and engaging small farmers into full commercial production, and this will be crucial for the country's economic development. This can help substantial proportions of the rural population who are presently denied access to credit. Strict application conditions and bureaucratic process involved in processing application

form should be rectified in order to encourage and attract small-scale farmers to seek bank loans. Also, loans should be disbursed to small-scale farmers with minimum delay, to enable them to meet their farm needs in the right season and increase their productivity. With access to credit, small holder farmers can increase their production, so that they graduate to commercial production.

#### **5.5.5. Collateral free loans**

The government should introduce a collateral-free lending programme which is designed to help small farmers' access bank credit easily. Although, government owned banks should take a leading role in the opening up credit facilities for the poor small-scale farmers, the existing financial institutions need also to be promoted to lend small-scale farmers. However, there is need to undertake on-site visits to verify the farming activities of the small scale farmers and assess their individual cash flow prospects. Those who receive collateral-free loans should be trained in aspects of saving mobilisation, financial management, credit management, basic accounting and cash flow management. Loan recipients also need to be well informed on their obligations, especially loan repayment. There should be an effort to keep rural people informed on the availability of these credit facilities through social gathering, village meetings or through mass media such as the television and radio. Furthermore, the government in partnership with different development agencies should consider the possibility of establishing a specialised rural credit institution to cater for specific saving and credit needs of the small-scale farmers.

### **5.5.6. Encouraging small-scale cooperatives and associations**

Another strategy is to set up cooperatives and associations. Smallholder farmers who have similar problems and needs must be encouraged to form cooperatives and associations. The formation of cooperatives and associations can be a critical strategy in mobilising agricultural resources. By pooling resources small farmers can become more active participants in the Zambian agricultural sector. The formation of cooperatives and associations, small-scale farmers can also improve market position. Participation in farmers' organisation is indeed important increasing the bargaining power of farmers, compared to a situation where each would sell individually. Small farmers are left in the hands of middlemen who can simply exploit them by buying below the market price. Small-scale associations and cooperatives can be useful instrument not only for accessing new markets but also in the mobilisation of investments for farmers. Small-scale farmer organisation largely upholds and recognises their obligation to influence national policies in favour of the small-scale producers especially to develop the sector and allow broader participation.

### **5.3.7. Scaling up extension services**

There is an immediate need for reforming and revitalising the existing agricultural extension system in the country. This will also include a robust agricultural policy like the Asian one. The move will involve significant growth in the funding and recruitment of agriculture extension officers. There is need to increase funding within national budgets and develop and implement private, donor and public funding mechanism to ensure high-quality extension services. Moreover, the partnership of the agriculture department research institutions, NGO's and private sector, plays a

crucial role in improving small farmers' knowledge base. The coalition partners should promote and facilitate a continuous process of capacity building and learning. The study also favours the need to establish an Extension Research Centre which must be work in collaboration with current education institutes. In order to make extension services and technologies more relevant to the farmers, demand driven extension approaches have to be promoted. Demand driven extension approach help small farmers in receiving extension provision that are problem solving oriented based on what farmers demand.

## **5.6. CONCLUDING REMARKS**

From the above discussion, it is apparent that foreign land investments negatively affect small scale farmers' way of life. Underpinning these land acquisitions is the longstanding failure of the Zambia government to recognise, in law and practice, the customary land rights of small farmers. Small-scale farmers are dispossessed and displaced without proper consultation and compensation. When small farmers lose their land, they lose their dignity, their self-reliance, and the core of their empowerment. The eviction and displacement of small farmers are initiated by the passage of weak land laws in Zambia. This has created a large population who are landless and without access to basic services. Often the recognised result is that small-scale farmers will become wage workers on their ancestral land. They are invariably worse off as commercial farm labourers than as self-employed small-scale farmers. In this way, there is need to invest in small farmers rather than give away their land.

Although the government anticipate that foreign land investments will create employment, improve technology, develop infrastructure and secure national food security, these benefits rarely materialise. These positive flows are not automatic. Additional care must be taken in the planning of land investments agreements and creation and selection of suitable business environment and models. Appropriate policy framework and legislative need to be in position to guarantee that economic growth benefits are gained and risks minimised.

As well, small farmers' position is influenced by the lack of credit support, irrigation equipment, infrastructure, farm implements, extension services, markets and key inputs such as hybrid seeds, fertilisers and pesticides. There is need to lift these barriers which have seen them locked out of the developments in agriculture. Then again, the challenge remains to develop concrete alternative development programmes that allow investment in the operation of both commercial farmers and small farmers. Zambia needs to maximise the potential of both to meet the needs of its citizens.

## **5.7. FURTHER RESEARCH**

This study was only a first step towards better understanding impacts of foreign land investments on the existence of small-scale farmers in Zambia. Much additional research is needed to specifically examine the impacts of foreign land investment on women. No study appears to have specifically paid attention to addressed to the consequences of commercial or liberalisation in the farming sector with the concern to their effects upon women's food security and food production. Secondary and primary data on the impacts of land acquisitions in Zambia on women is rare and

usually of limited reliability. The possible development opportunities given by the investors are far from obvious; they request further study, particularly with regards to women.

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## Appendix 1: Informed consent form



### FACULTY OF MANAGEMENT AND COMMERCE

### DEPARTMENT OF DEVELOPMENT STUDIES

#### Consent form

Thank you for agreeing to take part in this study. Before we start, I would like to emphasize that:

- Your participation is entirely voluntary;
- Some questions may be emotionally trying;
- You are free not to answer any question;
- You are free to withdraw if need arises and

Consistent with the requirements of research, the information given will be kept confidential since no personal details, contact and physical addresses will be required.

As a requirement from the University Research Committee and to show that I have read the contents to you and you have understood, may you sign this consent form.

\_\_\_\_\_ (Signature)

\_\_\_\_\_ (Date)

## Appendix 2: Ethical clearance letter



**University of Fort Hare**  
*Together in Excellence*

### **ETHICAL CLEARANCE CERTIFICATE REC-270710-028-RA Level 01**

Certificate Reference Number: RAH131STOR01

Project title: **Foreign land investments and the survival of small farmers in Zambia.**

Nature of Project: PhD

Principal Researcher: Bigboy Toro

Supervisor: Prof A Rahim  
Co-supervisor:

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

**Special conditions:** Research that includes children as per the official regulations of the act must take the following into account:

Note: The UREC is aware of the provisions of s71 of the National Health Act 61 of 2003 and that matters pertaining to obtaining the Minister's consent are under discussion and remain unresolved. Nonetheless, as was decided at a meeting between the National Health Research Ethics Committee and stakeholders on 6 June 2013, university ethics committees may continue to grant ethical clearance for research involving children without the Minister's consent, provided that the prescripts of the previous rules have been met. This certificate is granted in terms of this agreement.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
  - Any unethical principal or practices are revealed or suspected
  - Relevant information has been withheld or misrepresented
  - Regulatory changes of whatsoever nature so require
  - The conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.
- In addition to the need to comply with the highest level of ethical conduct principle investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to the Dean of Research's office

The Ethics Committee wished you well in your research.

Yours sincerely

  
**Professor Gideon de Wet**  
**Dean of Research**

21 November 2014

## Appendix 3: Interview Guide for small scale farmers



### A. HOUSEHOLD DEMOGRAPHIC INFORMATION

1. What is your age range?

18-30 years	31-45years	46-60 years	61-75years	+75years
-------------	------------	-------------	------------	----------

2. What is your marital status?

Married	Single	Divorced	Widowed
---------	--------	----------	---------

3. What type of marriage do you have?

Civil marriage	Registered customary marriage	Unregistered customary marriage
----------------	-------------------------------	---------------------------------

4. Who is the head of this household?

Husband	Wife	Son	Daughter	Brother	Uncle	Others
---------	------	-----	----------	---------	-------	--------

5. What is your level of education?

No formal education	Primary	Secondary	Tertiary	Other
---------------------	---------	-----------	----------	-------

6. What is the size of your household?

.....

7. What is your main source of income?

.....

8. What other non-farm work do you do?

.....

9. What is your annual income?

.....

### B. LAND OWNERSHIP AND RIGHTS

1. How much land do you own (ha)?

.....

2. Do you cultivate the entire farm by yourself?

Yes	No
-----	----

3. How much land is arable (ha)?

.....

4. How much arable land did you use last season (ha)?

.....

5. How do you describe the condition of your arable lands?

.....

6. Do you think there is a possibility of increasing the productivity with the soil you are using?

.....

7. How far is your field from your homestead?

.....

8. Do you need more land for farming?

Yes	No
-----	----

9. If yes or no explain

.....

10. What type of land ownership do you have?

.....

11. Do you really feel secure with land that you have in terms of ownership?

Yes	No/ not sure
-----	--------------

12. Explain your answer

.....

16. What is your opinion on government privatisation of the communal land?

.....

17. Do your current land rights affecting your production in agriculture?

Yes	No
-----	----

18. Explain your answer

.....

### **C. FARM OPERATION AND EQUIPMENT**

1. Which type of crops do you mainly grow?

.....

3. Which of type of farming do you use?

.....

4. Why did you engage in this type of farming?

.....

5. What factors influence your choice of crops in any growing season?

.....

6. What types of inputs do you mostly use?

.....

7. What are the sources of your inputs?

.....

8. What agricultural equipment do you own?

.....  
9. What do you rely on to water your crops?  
.....

10. If you use irrigation, which type of irrigation water do you have access to in close proximity to the cultivated area?  
.....

11. Is irrigation water helping to improve agricultural productivity?  
.....

12. If NO, why?  
.....

13. What do you use to improve your soil?  
.....

14. If you use fertilizers, have you received any training on how and when to apply fertilizers?  
.....

Yes	No
-----	----

15. Is there anybody in your household who has received training on how to apply fertilizers?  
.....

Yes	No
-----	----

16. Which factors would you consider as affecting your farming?  
.....

17. What kind of labour do you use?  
.....

18. What kind of assistance do you receive from the government?  
.....

20. What is the type of infrastructure that you have access and the condition?  
.....

#### **D. CREDIT FACILITIES**

1. Do you have access to credit?  
.....

Yes	No
-----	----

2. If no, what are the reasons?  
.....

3. If yes, what is the source of credit?  
.....

4. What kind of collateral security was requested?  
.....

5. What interest did they charge you?

.....

6. What is the repayment period? (Months)

.....

7. Why did you borrow the money for?

.....

8. Has there been any significant change with the credit facility you acquired?

### E. MARKETING

1. Who determines the price of your produce?

.....

2. Does income from your produce cover for the costs of production?

Yes	No	Do not know
-----	----	-------------

3. Which markets do you usually use for selling your produce?

.....

4. Where do you sell most of your produce to?

.....

5. Do you have access to market information?

Yes	No
-----	----

5. How difficult is it to look for buyers?

.....

6. What general problem do you experience in transporting your produce?

.....

7. What do you use to transport your produce to the market?

.....

8. Do you have access to storage facilities for your produce?

Yes	No
-----	----

7. If NO, what happens to the unsold produce?

.....

9. Are you processing any of your produce?

.....

10. What can be done to improve the way you market your agricultural products

.....

**F. AGRICULTURAL EXTENSION WORKS AND INFORMATION**

1. Who provide you with agricultural skills and information in your community?

.....

2. How is agricultural information and training presented to you?

.....

4. Are you comfortable with the language of presentation?

Yes	No
-----	----

5. Explain your answer?

.....

6. What skills do you credit yourself with that you find useful in operating the farm?

.....

10. What other methods do you think may be used to give rural farmers adequate skills and training increase agricultural productivity?

.....

**G. LAND DISPOSSESSION AND COMPENSATION**

1. Were you given any alternatives before eviction?

Yes	No
-----	----

2. How were you removed from your former ancestral land?

.....

3. Were you given notice to vacate the farm?

Yes	No
-----	----

4. If yes, were you given enough time to vacate from your ancestral land?

.....

5. Where you compensated after your removal?

Yes	No
-----	----

6. If yes, who compensated you?

Government	Investor	Both	Others
------------	----------	------	--------

7. Was the compensation enough for you to start a new life?

Yes	No	I don't know
-----	----	--------------

8. If you had a right to keep your land by all means, would you accept compensation for your land?

Yes	No
-----	----

9. If yes what amount would you accept as compensation?

.....

10. Do you think that actions to evict you from your ancestral land constitute a violation of human right?

Yes	No	I don't know
-----	----	--------------

11. If yes, did you seek any legal intervention to challenge the eviction?  
.....

12. Do you still want to repossess the land that was taken from you?

Yes	No	I don't know
-----	----	--------------

13. Explain your answer  
.....

14. Do you think you can be evicted from your present land again?  
.....

15. Who chose the present site for the relocation of displaced families?  
.....

16. What do you think this site was chosen to relocate displaced families?  
.....

17. Who provided the amenities (road, electricity, water and clinic) in your relocated area?  
.....

20. Are you satisfied about the land that you are now using?  
.....

**F. PRIVATE INVESTORS ACTIVITIES**

1. What kind of investors acquired land in your community?

Foreign investors	Domestic investors	I don't know
-------------------	--------------------	--------------

2. Do you think your community was well informed in regards to leasing out land to private investors?

Yes	No
-----	----

3. Explain your answer  
.....

4. What kind of farm activities or production done by foreign investors?  
.....

5. How do your community benefit from the operation of these private investors?  
.....

6. Can you comment on how the presence of private investors has impacted on the environment?  
.....

7. How many (ha) of land acquired by the foreign investors? Give estimation.

.....

8. Do the activities of private investors have affected the community access to other natural resources such as water?

.....

9. How has the foreign land investments impinged your everyday life?

.....

10. What do you think about the future of small farmers with the coming of foreign land investments in your country?

.....

11. Do you have other issues you think could assist in understanding the situation on the ground in terms foreign land investments and how you survive as small farmers?

.....

**G. GENERAL INFORMATION**

3. Over the past five years do you produce enough to feed yourself and family up to the next harvesting season?

Yes	No
-----	----

4. If NO give reasons

.....

5. If yes, in which season did you run out of food?

.....

7. How long do you think that the food you have will last? (Months)

.....

9. How does the household cope with food shortages?

.....

10. What future development/improvement do you like to see on your land?

.....

11. In general what other challenges do you face in everyday life?

.....

12. How do you cope in light of these challenges?

.....

13. Other comments

.....

**We have come to the end of our interview. Thank you very much for having time to participate in this study.**

## Appendix 4: Questionnaire for small scale farmers



### A. HOUSEHOLD DEMOGRAPHIC INFORMATION

1. Sex

Male	Female
------	--------

2. Age

18-30 years	31-45years	46-60 years	61-75years	+75years
-------------	------------	-------------	------------	----------

3. Marital status

Married	Single	Divorced	Widowed
---------	--------	----------	---------

4. Type of marriage

Civil marriage	Registered customary marriage	Unregistered customary marriage
----------------	-------------------------------	---------------------------------

5. Who is the head of this household?

Husband	Wife	Son	Daughter	Brother	Uncle	Others
---------	------	-----	----------	---------	-------	--------

6. Level of education

No formal education	Primary	Secondary	Tertiary	Other
---------------------	---------	-----------	----------	-------

7. What is the size of your household?

	Adults	Children
Male		
Female		

8. What is your main source of income?

Farming	Pension	Remittance	Government	Self-job	
---------	---------	------------	------------	----------	--

What other non-farm work do you do?

NGOs worker	Civil servant	Farm worker	Self employed	Others
-------------	---------------	-------------	---------------	--------

9. Income per annum (ZK)

1-10000	10000-20000	20000-30000	30000-40000	+40000
---------	-------------	-------------	-------------	--------

### B. LAND OWNERSHIP AND RIGHTS

1. How much land do you own (ha)?

1-5ha	6-10ha	11-15ha	16-20ha	21-25ha	26-30ha	+31ha
-------	--------	---------	---------	---------	---------	-------

2. Do you cultivate the entire farm by yourself?

Yes	No
-----	----

3. How much land is arable (ha)?

.....

4. How much arable land did you use last season (ha)?

.....

5. How do you describe the condition of your arable lands?

Very Poor	Poor	Fair	Good	Excellent
-----------	------	------	------	-----------

6. Do you think there is a possibility of increasing the productivity with the soil you are using?

.....

7. How far is your field from your homestead?

0-1km	1-2km	2-3km	3-4km	4-5km	Other
-------	-------	-------	-------	-------	-------

8. Do you need more land for farming?

Yes	No
-----	----

9. If yes or no explain

.....

10. Which of the following categories describes your land ownership status?

Lease state land	Freehold	Renting	Communal	Other
------------------	----------	---------	----------	-------

11. Do you really feel secure with land that you have in terms of ownership?

Yes	No/ not sure
-----	--------------

12. Explain your answer

.....

13. Which rights to land do you think may help you boost your agricultural produce?

Leasehold	Freehold	Renting	Communal	Other
-----------	----------	---------	----------	-------

14. Explain your answer

.....

15. Do you exactly know the boundaries of your land?

Yes	No	Not sure
-----	----	----------

16. What is your opinion on government privatisation of the communal land?

.....

17. Do your current land rights affecting your production in agriculture?

Yes	No
-----	----

18. Explain your answer

.....

### C. FARM OPERATION AND EQUIPMENT

1. Which of the following best describes your system of farming?

monoculture	diversified
-------------	-------------

2. Which type of crops do you mainly grow?

Food crops	Cash crops	Both
------------	------------	------

3. Which of the following describes your method of farming?

Subsistence	Mixed farming	Commercial	Others
-------------	---------------	------------	--------

4. Why did you engage in this type of farming?

.....

5. What factors influence your choice of crops in any growing season?

Climate	Food security	Market	Easy to manage	Others
---------	---------------	--------	----------------	--------

6. What types of inputs do you mostly use?

Hybrid seeds	Pesticides	Fertilizers	Labour	Others
--------------	------------	-------------	--------	--------

7. What are the sources of your inputs?

Government	Friends and relatives	Donors	Retailers	Input suppliers	Others
------------	-----------------------	--------	-----------	-----------------	--------

8. What agricultural equipment do you own?

Equipment	Owner	Hired	Borrowed
Tractor			
Draught animals			
Hand hoes/pangas			
Scotch cart			
wheelbarrow			
Planter			
Others			

9. What do you rely on to water your crops?

Rain fed	Irrigation	Both
----------	------------	------

10. If you use irrigation, which type of irrigation water do you have access to in close proximity to the cultivated area?

River	Dam	Public network (tape water)	Borehole water	Rain water tanks	Others
-------	-----	-----------------------------	----------------	------------------	--------

11. Is irrigation water helping to improve agricultural productivity?

Yes	No
-----	----

12. If NO, why?

Underutilized	Water is not sufficient	Poor soil	Poor maintenance	Others
---------------	-------------------------	-----------	------------------	--------

13. What do you use to improve your soil?

Inorganic fertilizer	Organic fertilizers	Both	Nothing	Others
----------------------	---------------------	------	---------	--------

14. If you use fertilizers, have you received any training on how and when to apply fertilizers? (e.g. rates of application, timing. etc.)

Yes	No
-----	----

15. Is there anybody in your household who has received training on how to apply fertilizers?

Yes	No
-----	----

16. Is soil fertility from your former land better than the current?

Yes	No
-----	----

17. Which of the following would you consider as factors affecting your farming?

Credit	Input	Labour	Land	Climate change	Property right	Skills & training	Other
--------	-------	--------	------	----------------	----------------	-------------------	-------

18. What kind of labour do you use?

Family	Hired labour	Friends and relatives	Cooperatives	Others
--------	--------------	-----------------------	--------------	--------

19. What kind of assistance do you receive from the government?

Inputs	Always	Sometimes	Rarely	Never
Training				
Credit				
Market				
Others				

20. What is the type of infrastructure that you have access and the condition?

Infrastructure	Fine	Good	Bad	No access
Communication				
Electricity				
Transport				
Health centres				
Others				

#### D. CREDIT FACILITIES

1. Do you have access to credit?

Yes	No
-----	----

2. If no, what are the reasons?

.....

3. If yes, what is the source of credit?

Government	Banks	Input suppliers	Friends and relatives	Cooperatives	Others
------------	-------	-----------------	-----------------------	--------------	--------

4. What kind of collateral security was requested?

Title deed	Insurance policy	Cash Saving	Business inventory	Others
------------	------------------	-------------	--------------------	--------

5. What interest did they charge you?

1-10%	10-20%	20-30%	30-40%	+40%
-------	--------	--------	--------	------

6. What is the repayment period? (Months)

1-6	6-12	12-18	18-24	24-30	30-36	Other
-----	------	-------	-------	-------	-------	-------

7. Why did you borrow the money for?

pay labour	Buy farm implements	Buy inputs	Family needs	Others
------------	---------------------	------------	--------------	--------

8. Has there been any significant change with the credit facility you acquired?

Income increased	Sold assets to repay loan	Food secure	No change	Other
------------------	---------------------------	-------------	-----------	-------

## E. MARKETING

1. Who determines the price of your produce?

Marketing boards	Input supplier	Cost of production	Demand and Supply	Middlemen	Others
------------------	----------------	--------------------	-------------------	-----------	--------

2. Does income from your produce cover for the costs of production?

Yes	No	Do not know
-----	----	-------------

3. Which markets do you usually use for selling your produce?

Formal	Informal	I do not sale
--------	----------	---------------

4. Where do you sell most of your produce to?

Homestead	Community	Town	Export	Others
-----------	-----------	------	--------	--------

Do you have access to market information?

Yes	No
-----	----

5. How difficult is it to look for buyers?

Easy	Fair	Difficult
------	------	-----------

6. What general problem do you experience in transporting your produce?

Small size transport	Lack of transport	High transport cost	Poor transport networks	Other
----------------------	-------------------	---------------------	-------------------------	-------

What do you use to transport your produce to the market?

Tractor	Foot	Car	Wheelbarrow	Bus	Others
---------	------	-----	-------------	-----	--------

8. Do you have access to storage facilities for your produce?

Yes	No
-----	----

7. If NO, what happens to the unsold produce?

Use as feeds	Throw away	Eat	Reduce price	Other
--------------	------------	-----	--------------	-------

9. Are you processing any of your produce?

Yes	No
-----	----

10. What can be done to improve the way you market your agricultural products?

.....

## F. AGRICULTURAL EXTENSION WORKS AND INFORMATION

Who provide you with agricultural skills and information in your community?

Government	Other farmers	Family	Friends and relatives	NGOs	Chief	Others
------------	---------------	--------	-----------------------	------	-------	--------

3. How is agricultural information and training presented to you?

Books/Pamphlets	Newsletters	Word of mouth	Audio tapes	TV/Radio	Others
-----------------	-------------	---------------	-------------	----------	--------

4. Are you comfortable with the language of presentation?

Yes	No
-----	----

5. Explain your answer?

.....

6. What language (s) are you comfortable with?

.....

7. How in your opinion do you view the quality of the skills and training offered to you?

Excellent	Very good	Satisfactory	Poor	Very poor
-----------	-----------	--------------	------	-----------

8. How often do you use extension officers' advices?

Not at all	Very limited	Sometimes	Quite often	Regularly
------------	--------------	-----------	-------------	-----------

9. What skills do you credit yourself with that you find useful in operating the farm?

Marketing	Financial management	Livestock/Crop production	Pest & disease management	Other
-----------	----------------------	---------------------------	---------------------------	-------

10. What other methods do you think may be used to give rural farmers adequate skills and training increase agricultural productivity?

.....

## G. LAND DISPOSSESSION AND COMPENSATION

1. Have you ever been evicted from your land?

Yes	No
-----	----

2. Were you given any alternatives before eviction?

Yes	No
-----	----

3. How were you removed from your former ancestral land?

Forceful with warning	Forceful without warning	Peaceful with warning	Other
-----------------------	--------------------------	-----------------------	-------

4. Were you given notice to vacate the farm?

Yes	No
-----	----

5. If yes, were you given enough time to vacate from your ancestral land?

Hours	Days	Weeks	Months	Years
-------	------	-------	--------	-------

6. How many evictions do you know of?

1-15 families	16-30 families	31-45 families	46-60 families	+60 families
---------------	----------------	----------------	----------------	--------------

7. Where you compensated after your removal?

Yes	No
-----	----

8. If yes, who compensated you?

Government	Investor	Both	Others
------------	----------	------	--------

9. Was the compensation enough for you to start a new life?

Yes	No	I don't know
-----	----	--------------

10. If you had a right to keep your land by all means, would you accept compensation for your land?

Yes	No
-----	----

11. If yes what amount would you accept as compensation?

.....

12. Do you think that actions to evict you from your ancestral land constitute a violation of human right?

Yes	No	I don't know
-----	----	--------------

13. If yes, did you seek any legal intervention to challenge the eviction?

.....

14. Do you still want to repossess the land that was taken from you?

Yes	No	I don't know
-----	----	--------------

15. Explain your answer

.....

16. Do you think you can be evicted from your present land again? Explain your answer

Yes	No	I don't know
-----	----	--------------

17. Who chose the present site for the relocation of displaced families?

Government	Traditional leaders	People themselves	Others
------------	---------------------	-------------------	--------

18. What do you think this site was chosen to relocate displaced families?

.....

19. Who provided the amenities (road, electricity, water and clinic) in your relocated area?

Government	Community efforts	Investors	NGOs	Others
------------	-------------------	-----------	------	--------

20. Are you satisfied about the land that you are now using?

Yes	No
-----	----

**F. PRIVATE INVESTORS ACTIVITIES**

1. What kind of investors acquired land in your community?

Foreign investors	Domestic investors	I don't know
-------------------	--------------------	--------------

2. Do you think your community was well informed in regards to leasing out land to private investors?

Yes	No
-----	----

3. Explain your answer

.....

4. What kind of farm activities or production done by foreign investors?

Food crops	Cash crops	Livestock	Mining	Others
------------	------------	-----------	--------	--------

5. How do your community benefit from the operation of these private investors?

Employment	Infrastructure	Food availability	Market	Others
------------	----------------	-------------------	--------	--------

6. Can you comment on how the presence of private investors has impacted on the environment?

.....

7. How many (ha) of land acquired by the foreign investors? Give estimation

.....

8. Do the activities of private investors have affected the community access to other natural resources such as water?

Yes	No
-----	----

9. How has the foreign land investments impinged your everyday life.

.....

10. What do you think about the future of small farmers with the coming of foreign land investments in your country?

.....

11. Do you have other issues you think could assist in understanding the situation on the ground in terms foreign land investments and how you survive as small farmers?

.....

**G. GENERAL INFORMATION**

3. Over the past five years do you produce enough to feed yourself and family up to the next harvesting season?

Yes	No
-----	----

4. If NO give reasons

.....

5. If yes, in which season did you run out of food?

Summer	Winter	Autumn	Spring
--------	--------	--------	--------

7. How long do you think that the food you have will last? (Months)

1-2	3-4	5-6	7-8	9-10	+11
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9. How does the household cope with food shortages?

Piece jobs	food aid	Borrow grain	Sell family assets	Remittances	Reduce meals	Others
------------	----------	--------------	--------------------	-------------	--------------	--------

10. What future development/improvement do you like to see on your land?

.....

11. In general what other challenges do you face in everyday life?

.....

12. How do you cope in light of these challenges?

.....

13. Other comments

.....

**WE HAVE COME TO THE END OF OUR QUESTIONNAIRE. THANK YOU VERY MUCH FOR HAVING TIME TO PARTICIPATE IN THIS STUDY.**

## **Appendix 5: Interview Guide for government officials**



### **INTERVIEW GUIDE FOR THE GOVERNMENT OFFICIALS IN THE MINISTRY OF LANDS, NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION**

1. What are the laws /regulations governing land acquisition or tenure with respect to your country?
2. What are the ways and methods private investors acquire land in the country?
3. What is your opinion on government privatisation of the communal lands?
4. What are the things you see as adequate compensation from the government and private investors to the affected families?
5. What are the problems associated with privatisation of the communal lands and how do you think these problems could be solved?
6. In what ways is the nation benefiting from these foreign investments?
7. What kind of assistance have the small farmers received from your department with respect to production input and equipments acquisition?
8. Do you think the government policies on small farmers are adequate enough to represent their problems?
9. Do you have other issues you think could assist in understanding the situation on the ground in terms foreign land investments and the survival of small farmers in your country?

**THANK YOU FOR YOUR COOPERATION IN THIS STUDY.**

## Appendix 6: Interview Guide for traditional leaders



### INTERVIEW GUIDE FOR TRADITIONAL LEADERS

1. What are the laws /regulations governing land acquisition or tenure with respect to your community?
2. Can you describe the traditionally legal process to follow when acquiring land in your community?
3. How have you been handling problems associated with land tenure in your community?
4. To what extent are you satisfied with the manner in which you are involved in key decisions about distribution and utilisation of land in your area?
5. Describe ways in which the government is assisting in providing both financial and non-financial services to the small farmers in your community?
6. What are the challenges associated with production input acquisition for small farmers in your community and how do you think these can be dealt with?
7. How can you describe the activities of foreign investors in your province since it began?
8. What is your opinion on compensation to land acquired?
9. How can you describe the manner in which foreign investments benefited your community in terms of social and economic development?
10. Do the activities of private investors have affected the community access to other natural resources such as water?
11. Does the conversion of communal lands into individual property affect your traditional authority?
12. Do you have other issues you think could assist in understanding the situation on the ground in terms foreign land investments and the survival of small farmers in your community?

**THANK YOU FOR YOUR COOPERATION IN THIS STUDY.**

## **Appendix 7: Focus Group Discussion Guide**



### **FOCUS GROUP DISCUSSION GUIDE**

1. Can you describe the way people were evicted from their ancestral land?
2. Do you think your community was well informed in regards to leasing out land to private investors?
3. What are the things you see as adequate compensation from the government and private investors?
4. Do the activities of private investors have affected the community access to other natural resources such as water?
5. In what ways is the community benefiting from foreign land investments?
6. How has the foreign investors impinged your everyday life?
7. What kind of assistance have you been received from the government with respect to production input and equipment acquisition?
8. What problems have you been experiencing in accessing production input and equipment?
9. How do you think these problems could be mitigated?
10. Do you have other issues you think could assist in understanding the situation on the ground in terms foreign land investments and how you survive as small farmers?

**THANK YOU FOR YOUR COOPERATION IN THIS STUDY.**