PLANNING OF LUSWISHI FARM BLOCK AND ITS IMPACT ON 'CITY-REGION' IN COPPERBELT PROVINCE, ZAMBIA

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DECLARATION

I, Biggie Chanda declare that with the exception of the assistance acknowledged, this dissertation is the result of my own research. This research has not been submitted before for any other degree or examinations at this or any other university.

Signature…… Date……

CERTIFICATE OF APPROVAL

This dissertation of Biggie Chanda on Planning of Luswishi Farm Block and its Impact on 'City-region' in Copperbelt, Zambia is approved as partial fulfillment for the award of the Degree of Master of Science in Spatial Planning of the University of Zambia.

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Abstract

The Government of the Republic of Zambia has been implementing a number of rural development programs through agricultural strategies but statistics indicate that there is serious rural-urban divide in terms of poverty levels. This poses a suspicion that planning approaches and interventions in these rural development programs have not been producing desired results. Hence, the study aimed at examining how regional planning approaches influenced the stimulation of linkages between Luswishi farm block and the 'City-region' (i.e. Lufwanyama, Kalulushi, Kitwe and Ndola districts). The objectives of the research were to examine planning policies that shaped the development of Luswishi farm block, to examine the resulting linkages between the farm block and the 'City-region', and to examine the institutional challenges in the development of the farm block.

Twenty-nine (29) respondents were selected from within the 'City-region' for interviews using purposive sampling method. These respondents include; government institutions, private investors, Ward Development Committees and farmer organisations situated within and outside the farm block were selected for interviews. Observations, documents from these organisations, literature on rural-urban linkages and data from Central Statistical Office (CSO) were used. The research focused on aspects of planning principles, regional development policies, institutional framework and resulting rural-urban linkages. Policy effectiveness was examined by looking at its availability, its detailed guidance on regional planning and implementation. Impacts on the City-region were examined through identification of resulting rural-urban linkages in terms of five types of flows; i.e. capital, people, commodities, information and production. Institutional effectiveness was examined by looking at how active the participation and collaboration of key stakeholders and frequency of monitoring.

The research indicated that lack of specific policy on farm block development has been an impetus to inadequate implementation capacity of Luswishi farm block. The Luswishi farm block development, through agro-value chain, triggered availability of jobs outside agriculture to both the rural and the urbanites within the City-region. This implied that the resulting impacts in terms of rural-urban linkages between the farm block and City-region were beneficial despite small and medium scale farmers, having not been organised into an outgrower scheme.

The research concludes that though linkages were beneficial in terms of job creation and generation of value chains, they skewed to the urban part of the 'City-region'. The development of the farm block mostly was dependent on foreign investment. Therefore the recommendation is to modify the current cluster model into concepts of Local Economic Development (LED) and Regional Network (RN) models in order to simultaneously empower the target groups and strengthen the linkages within the 'City-region'.

DEDICATION

To my people; my good and beautiful wife Ruth, my adorable daughter Mutale, and my son Biggie for the drive they give me to work for them willingly.

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Acronyms

7NDP	Seventh National Development Plan
CSO	Central Statistics Office
DPPH	Department of Physical Planning and Housing
FISP	Food Input Support Programme
GPL	Global Plantation Limited
GRZ	Government of the Republic of Zambia
IDP	Integrated Development Plan
LCMS	Living Conditions Monitoring Survey
LED	Local Economic Development
LFB	Luswishi Farm Block
LTC	Lufwanyama Town Council
MAL	Ministry of Agriculture and Livestock
MFNP	Ministry of Finance and National Planning
MLG	Ministry of Local Government
MLNR	Ministry of Lands and Natural Resources
NAP	National Agriculture Policy
NAIP	National Agriculture Investment Plan
NGO	Non-Government Organization
PPP	Public Private Partnership
PPU	Province Planning Unit
PRSP	Poverty Reduction Strategy Paper
RNM	Regional Network Model
RUL	Rural-Urban Linkages
SNDP	Sixth National Development Plan
TCPA	Town and Country Planning Act
URPA	Urban and Regional Planning Act
WDC	Ward Development Committee
ZDA	Zambia Development Agency

CHAPTER ONE: INTRODUCTION

1.0 Introduction

In most countries of the world, different geographical areas are not endowed the same way. While some areas are endowed with some category of resources, others are rich in other types of treasures. These resources, which are material and human, also vary in stock from one place to another. Hence some areas tend to grow and develop at a higher rate, and sometimes at the expense of others (Jelili et al., 2008). The resultant effects of this is overconcentration of activities and its connected problems of population explosion, congestion, housing shortage, environmental problems in the favoured areas or cities, and underdevelopment or backwardness in the less privileged areas especially the rural (Harrison, 2004). If the trend continues without being checked, it cannot only amount to social injustice and inequity to some class of people or areas but also constitute a setback to regional and overall national development (Jelili et al., 2008). This is the concern of regional planning which is aimed at correcting lopsided development and promoting regional and national development through the identification, analysis, and allocation of resources within and among regions of a state or country.

Planning has been considered as the most effective institutional instrument of controlling the means of production and equitable distribution of resources in socialist countries (Lennon and Mathews, 1996). During that time, it was the state that used to plan what to produce, how to produce, where and when to produce. Planning was done for effective control of national economy for the best interest of the society as a whole (Lennon and Mathews, 1996). According to (Harrison, 2004), planning distributes rationally public investment funds among the competing sectors of the national or regional economy for balanced sectoral development, tremendous increase in the gross domestic product and incomes, effective control of inflation and unemployment and alleviation of poverty.

In the Zambian context, there has been imbalance in economic development between the rural and urban regions. This is partly attributed to the unequal distribution of national

investment and wealth, a scenario which, in turn, can be attributed to inadequacies in regional planning practices (GRZ, 2005). However, the fortunate thing has been that successive Governments have been aware of this inequality and had since been initiating rural development strategies in order to narrow the development disparity (GRZ, 2011). For example, In the 1970s, a policy of taking investment to rural areas was embarked upon which saw factories in places like Chipata (bicycles assemblies), Mansa (production of batteries), Mwinilunga (pineapple cannery), Kawambwa (tea estate) and so forth. This contributed to income generation and employment creation and, in some instances, provided social amenities in these rural areas. With economic liberalisation and withdrawal of subsidies in certain cases, many of these state-owned enterprises folded up (GRZ, 2002). Conversely, these rural development strategies had not been seen to bringing the much-desired development in the rural parts of Zambia and the imbalance between urban and rural poverty still continued to increase. Today, the country's rural poverty is estimated to exceed 74%, according to the 2010 Living Conditions and Monitoring Survey, while urban poverty is estimated at 52% (CSO, 2010).

In view of the above, one of the recent rural development strategies that Government embarked on was the commercialisation of agriculture through the creation of farm blocks as development clusters in some parts of rural areas (GRZ, 2005). The program's main objectives were to commercialize agricultural land, exploit its full potential in order to attain economic diversification and growth. To enhance food security through production of adequate food for the nation and export and to open up undeveloped rural areas, reduce poverty and minimize rural to urban migration (GRZ, 2005).

As stated earlier, farm block development was initiated through Zambia Development Agency (ZDA) and the Ministry of Agriculture as one of the strategies to spur large scale investments in agriculture and narrow the development gap between the two regions (Urban and Rural) (GRZ, 2005). However, there has been no formal research to show how planning was done and how the impacts have been especially in terms of rural-urban

linkages between the Luswishi farm block and 'City-region', hence the reason for this study. The 'City-region', in this study, comprises of Lufwanyama, Kalulushi, Kitwe and Ndola districts, (see Figure 1 on page 31). This research examines the role of regional planning in stimulating interdependencies between rural and urban areas for mutual benefit from regional development programmes.

1.1 Problem Statement

Despite numerous strategies and implementation of government programs aimed at narrowing the development gap between rural and urban areas, disparities are still persistent leaving rural poverty levels at 74% while urban areas are at 52% (CSO, 2010). Luswishi farm block is one such development efforts which was initiated and implemented through these strategies. Owing to this background and to the observations by Bangwe and Koppen (2012), that the effects of farm block development may be marginal as host countries usually lack the capacity to govern and plan for these investments in a way that leads to rural development and poverty reduction, there is a problem of development disparity between rural and urban regions despite existence of planning structures. Hence there is need to examine how planning techniques have been applied on Luswishi farm block in maximizing rural-urban interactions for sustainable development of the 'City-region'.

1.2 Aim of the Study

The purpose of this study was to examine the regional planning framework so as to see whether it incorporates models and policies that result in strengthening rural-urban linkages for the purpose of narrowing the development disparity between rural and urban areas in regional development programmes.

1.3 Research Objectives

i. To examine how planning policies have shaped the development of Luswishi farm block.

ii. To examine the resulting linkages between Luswishi farm block and the 'City-region'.

iii. To examine the challenges faced in the development of Luswishi farm block on the 'City-region'.

1.4 Research Questions

i. What are the planning policies that have shaped the development of Luswishi farm block?

ii. What are the resulting linkages existing between Luswishi farm block and the City-region?

iii. What are the challenges being faced in the development of Luswishi farm block on the city region?

1.5 Significance of the Research

The research findings may provide empirical evidence on the operations of the Luswishi farm block regarding its planning and objectives for the community, district and province. The study findings may also provide literature on the way Luswishi farm block has been operating and learn from its successes and challenges for the future implementation of other similar farm block designs. These findings may also provide the policy makers with evidence on how to make and design new farm blocks which will meet the needs of the community, district, province and nation as per the implementing policy guidelines. The findings may also enlighten the district agriculture and councils on how best they have to implement the farm block ventures so that stakeholders can be identified and be handed over a complete and well planned project which should bring benefits to all. The results of this research may also assist key stakeholders with information on investment opportunities in relation to farm block development and contribute to the literature on the information gaps regarding planning of farm blocks for sustainable regional development in Zambia. The study conclusions may assist institutions involved in planning and

development of farm blocks by suggesting strategies that enhance the balancing of regional economic development between rural and urban areas through strengthening of rural-urban linkages.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents an elaborated understanding of regional planning concepts that induce balanced regional development in terms of strengthening rural-urban linkages. It further discusses interventions such as large-scale agriculture investments i.e. farm block development with regard to contemporary development concepts such as the Cluster, Local Economic Development, and New Regionalism and Regional Network models. It further explores on how planning can be used as a preliminary solution to imbalance development or urban bias with a focus on aforementioned contemporary development concepts. Literature material has been drawn from a wide range of academic, policy and professional publications relating to regional planning concepts on regional development.

2.2 Concept of Region and City-region

A region can be defined using a wide range of criteria, but common criteria include spatial or geographical variables. Richardson and Humphrey (1998), state that a region is a spatially interdependent, nodal, labour market or functional characteristics. Then, Trevor and Charles (2000) followed and defined a functional region as a geographical area that has inter-dependence of parts and functional relationships. The duo further state that a functional region or Nodal region or Polarised region, has a defined core that retains a specific characteristic that diminishes outwards. Leung and Pooley (2001) added that for a spatial phenomenon to be considered a functional region, at least one form of spatial interaction must occur between the centre and all other parts of the region. A functional region is organized around a node or focal point with the surrounding areas linked to that node by transportation systems, communication systems, or other economic association involving such activities as manufacturing and retail trading (Trevor and Charles, 2000).

From the above definitions, it follows that Luswishi farm block act as a node within the synthetic ‘City-region’ (comprising of Ndola, Kitwe, Kalulushi and Lufwanyama

districts). It is believed that within the 'City-region' there are functional interactions or flows between the Luswishi farm block and the surrounding towns. Further, relying on flows as units of analysis reinforces the patterns of interdependency among firms and workers or rural and urban areas in the region (Trevor and Charles 2000). The implications of these changes and interdependencies for the definition of a region are that regional boundaries become more difficult to define and may not represent the spatial dependencies between labour and employment centers (Markusen, 2004).

City-Region is a vast amorphous urban sprawl, consisting of a central city and many surrounding sub-urban areas. They share functional relationships in terms of flows such as people, goods, motor vehicles, mails and telephone calls (Trevor and Charles, 2000). The central city provides local administration, employment opportunities, transportation, communication, wholesaling, educational and professional services for the sub-urban areas (Coe, et al, 2004). In turn, the suburbanites serve the central city dwellers by providing surplus food, pip-borne water, raw materials, labour and residential accommodation. The definitions mirror with the synthetic City-region set-up where Ndola and Kitwe are highly industrialized befitting the urban set up whilst Kalulushi and Lufwanyama are less industrialized and representing peri-urban and rural part of the Synthetic 'City-region'. With regards to Luswishi farm block, it is an economic node situated in the rural of the City-region of Kalulushi district. It interacts with other nodes of within the City-region through the functional flows of labour, commodities, information in a symbiotic relationship.

2.2.1 Rural-urban Continuum

In a study conducted by Akkoyunlu (2013) looked at the generative versus parasitic role of cities in development. The study involved city planners and the councils where transformations have taken place from being rural into urban. With interviews and questionnaire used, the study found that the population of a country is divided into 'rural' and 'urban' according to particular features. The study found that rural households rely on

urban income sources such as remittances and income derived from producing for consumption in the urban markets. It should be noted that urban households also rely on rural resources, especially in low-income countries because these are partners where material and resource sharing is concerned.

Jacobs (2009) argued that the distinction drawn between city commerce and industry on one hand and rural agriculture on the other is artificial and imaginary. She also found it was difficult to make a distinction between 'city-created work' and 'rural work', as well as between 'city consumption' and 'rural production'. She also argued that cities can serve as engines of economic development of rural areas and vice versa. The cities and the rural population depend on each other and they have to live by each other's side for them to survive and earn a living.

A study was conducted by Taylor and Scott (2013) on Migration and Incomes in Source Communities of China. The study interviewed small scale farmers who migrated from rural areas and settled in the farms near the cities. The study found that the imaginary conception in the differences between rural and urban areas has been observed to be leading regional planners into overlooking the importance of enhancing the interdependencies of strengthening of rural-urban linkages in regional planning for mutual benefit of the two integral areas of the region. The study further found that each rural or urban area within same region is usually planned in isolation, leading to unsustainable interaction which is expected to enhance regional development. In this case, the rural agricultural areas outside the Chinese cities were planned before allowing the settlement to take part and start the farming activities. Planning of resettlement schemes for agricultural purposes have to be well implemented so that they meet the future standards of the city.

Tacoli (2018) conducted a study on rural urban interaction in Kenya. The study was conducted amongst the new small scale farm holders in the rural parts of Mombasa. The study found that all settlements should be seen as occupying a space along a continuum,

with respect to both their population size and economic activity. The functions and roles played by cities in rural areas are the outcomes of interdependencies that need to be seen as being mutually reinforcing. More rural urban interaction is usually created by the production of food and economic empowerment in the two areas. The two areas actually depend on each other for the production of food and services.

A topic on capitalism and underdevelopment in Latin America was conducted by Frank et al., (2007). The study interviewed the new farmers who migrated from urban to the rural area to hold small scale land. The study found that the urban farmers were also part of the rural community because they held land in the outskirts of town and stayed in the urban areas. It can be realised that urban-rural relationship has a long history in the study of economics, geography and regional planning. Urban-rural relationships are used to emphasize the visible and invisible flows of people, capital, goods, information and technology between urban and rural area. This is so because the conventional view of rural areas as equivalent to agriculture is no longer reflective of the reality of either rural regions or the rural component of rural-urban relationships.

2.3 Balanced versus Imbalanced Regional Development

There has been existing regional development debate on which should be a priority for development in developing countries. Agriculture or industry has been a major development issue in the 1950s to dates (Eversole and Martin, 2005). Glickman (1999) also added that ten (10) given experiences of developed countries where agricultural development preceded industrial development, a strong argument in favor of agriculture became a popular view.

However, despite these concerns and debates, there seems to be little consensus on the causes of spatial inequality and how policy makers should respond to growing spatial inequalities (Glickman, 1999). He adds that currently, most African countries have not developed an implementation policy for farm blocks so that they can narrow the gap between the urban farmers and the rural farmers where resettlement was concerned. In

addition, Glickman (1999) holds that the sub-Sahara nations lack strong agricultural policies which should guide farm block modeling and running. He adds that there is lack of planning for the land and that there is more political pronouncement that professional workmanship in making the farm blocks hence the projects have not been agricultural productive as mandated. In addition, most occupants of the area do not get the land for farming but get land for collateral and build non-farm ventures. Such problems have not helped the most sub-Saharan African work.

The standpoint of economic efficiency, Williamson and Jeffrey (1965) contended that spatial inequality may be beneficial or harmful. If spatial inequality results from regional specialization based on comparative advantage or returns to scale in production, then spatial inequality may be beneficial as productivity is increased. But if spatial inequality is caused by external economies that are not internalized, then the level of inequality may not be optimal. Hence Williamson and Jeffrey (2008) summed up that where development practitioners are not certain of what course of action to take in balancing up regional development, draws our attention to the importance of planning, and the fact that regional development policy for national development cannot be overemphasized in ensuring that economies are either based on returns to scale or external economies are internalized.

Kenny et al., (2001) argues that concentrating resources only in a few sectors especially those which have the absorptive capacity for modern technology would undermine the potentials of the other sectors, and this is what has been leading to notion in the urban bias and its eventualities. This is especially in cases where the other sectors comprise the major component of the economy and particularly difficult in cases wherein the sectors are closely linked and interdependent that lifting one or few sectors would risk others to be neglected in the process. Kohli and Atul (2004) observed that when a farm block is created through a policy guideline, it creates all the necessary infrastructure which are supposed to be put in place in a chosen locality. However, when a policy is not in place, the government fails to achieve total completion of the farm block. The duo advised that

every government should always put in place a policy to guide the creation of a farm block and this should be monitored to its completion.

The whole debate of balanced and unbalanced growth was extended in the area of spatial development. Like it has been observed by Fine et al., (2003) that the unbalanced growth advocates would pursue a spatially selective investment pattern while those who promote balanced growth would idealize a spatially balanced pattern. Fishlow (2003) supports that the inputs necessary for balance to occur such as capital, entrepreneurship, regulating policies and informational mechanisms on demand, supply and prices that are to be applied simultaneously within and among all the regions are very limited in underdeveloped countries. Fine et al., (2003) noted that a better option given this consideration is to have a clear identification of strategically correct sequences of investments that would realize the greatest total linkages among these investments.

Development theorists have raised the inefficacy of adopting a dichotomous development of the two sectors. Koppel (1991) observed that the choice of a rural or urban alternative seems to be a deceptive dilemma and has called it an ersatz debate. Misra (1981) summarized the arguments by raising three fundamental questions: first, whether it is possible to develop rural areas without urban development, and urban areas without rural development; second, whether there is a country that has developed relying solely either on rural and urban sector; and third, whether poverty and underdevelopment are divisible in clear-cut rural and urban components.

A negative response to these questions would lead to the proposition that the issue is not which to develop first between rural and urban areas but rather in finding ways to develop both in order to meet various national, regional and local needs (Fukuyama, 2004). Thus, development process should be redefined in such a way that urban development promotes rural development and rural development supports urban development (Fukuyama, 2004). Such linkage within a region can lead to the reduction of gaps in income, productivity, social services and quality of life in general between urban and rural areas (Evans, 1995).

This has triggered the development of modern balanced regional development theories that discusses the extent of compromise between the two sectors, the nature of development investments and structural changes in an economy (Fukuyma, 2004).

2.4 Rural-Urban linkages

When policy makers address important issues such as poverty reduction and economic development, they classify the economic activities as either 'rural' or 'urban'. This distinction between the 'rural/agricultural/natural resources' sector and the 'urban/manufacturing and services/infrastructure' sector, however, misses the important linkages that exist between rural and urban activities (Akkoyunlu, 2013). As argued by the World Bank (2006), ignoring rural–urban linkages in planning for regional development, leads to inefficiencies and causes growth-inhibiting inequality. In fact, an important part of industrial growth in most low-income countries manufacturing of agricultural raw materials (forward linkages); and manufacturing of agricultural inputs (backward linkages) is overlooked (Akkoyunlu, 2013).

2.5 Agricultural Value Chains

The interest of this research is deeply looking into how linkages or functional relationships have emerged between different nodes within the City-region. Luswishi farm block being a node in the rural part of the City-region supplying raw materials to processing industrial nodes in urban parts while it receives agricultural inputs in a forward and backward linkage set-up. Value chain is defined as a component of the manufacturing sector where value is added to agricultural raw materials through processing and handling operations, agro-industries are an important source of employment and income generation worldwide (Da Silva et al., 2009).

Indeed, in most developing countries agro-industries are dominant in terms of their contribution to value-added in manufacturing. In agriculture-based countries, this contribution is as high as 66 percent, whereas in transforming and urbanized countries it

reaches 38 percent and 37 percent respectively (Wilkinson and Rocha, 2009). Investments in agro-industries are known to have significant multiplier effects through both their backward and forward linkages along the value chains (Rusike et al., 1997).

Agro-processing enterprises generate demand for agricultural raw materials; this in turn creates work opportunities at the farm level and contributes to increased demand for agricultural inputs such as fertilizers, feeds and veterinary products, to name a few (UNECE, 2009). Todeva (2006) added that the demand for ancillary agro-processing inputs, such as packaging items and product ingredients, tends also to rise with new investments in agro-industries. By the same token, economic activity is generated in the downstream areas of logistics, distribution and service provision within the City-region space (Stabler et al., 1996).

A study by Weick (2001) established that there are many types of agro-processing and handling enterprises can be operated feasibly at the small- and medium-scale level, using low cost, labour intensive technologies. As such, small- and medium-scale enterprises, most of which are labour intensive, predominate in much of the agro-industrial sectors of the developing world (Todeva, 2006). The tendency to be located close to their sources of raw materials, agro-processing enterprises favour the attraction of investment to the rural space and thus are an important driver in the creation of non-farm rural employment (Wilkinson and Rocha, 2009).

2.6 Farm Block Development and Agro Value-chains

The Zambia Development Agency (2011) states that a Farm Block, like Luswishi farm block, is a cluster of large, medium and small scale farm investment based on an outgrower scheme for forging mutually inclusive and productive partnerships between smallholders, commercial farmers and agribusiness accompanied by infrastructure funded by the state and ancillary services provided by investors. With such a design, farms are arranged in an out grower cluster arrangement where the core venture coordinates

production and provides market thrust. Commercial farms are also associated with a degree of reliance on markets to source farm inputs, a substantial proportion of hired labour and an underlying motivation to seek profit, rather than minimize risk. In this context, the Luswishi farm block has the potential to provide the economical power to the nearby towns thereby creating an economical hub for the local people and surrounding communities.

Porter (2001) conducted a study on porter o konkurencji in Norway. The study used economic factors as basis for demarcating an area for economic development in the rural parts of the country. The study found that industrial clusters are geographical concentrations of interconnected companies with close supply links, specialist suppliers, service providers, and related industries and institutions (e.g. universities, standardizing units and branch associations). This arrangement triggers a big deal of agro value chains beyond the cluster but throughout a region. Therefore, the study was of importance of this one because it created a base for understanding how value economical chains can be created from the creation of rural economical points. Hence, clusters appear to be a system of integrated enterprises and institutions. The value of a cluster does not comprise the sum of the values of particular elements only, but it also takes “added value”. Then, the cluster initiates numerous processes which increase the competitiveness of the location (Malizia and Feser, 1999).

A study by Bangwe and Koppen (2012) looked at Smallholder Out growers in Irrigated Agriculture in Zambia. The study investigated how the out grower affected the local communities and the funding stakeholders in such communities. The study found that out growers were not benefiting from the stakeholders and funders who provided the material capital for the farming season. The challenge was that the small-scale farmers were used as labourers at the expense of the main beneficiary being the funders. The study concluded that out growers should be protected through formal contracts which should regulate the abuse of farmers because at the end of the season, they failed to sustain themselves.

A study was conducted by Evans (2005) who looked at embedded autonomy, states and industrial transformation in the United States of America. The study found that a geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities thereby providing and maintaining value chains. The study also found that the significance of these inter-industry linkages in the competitiveness of national and regional economies. However, these concepts are not entirely new but developed from previously used concepts.

Proponents of Farm block development such as Pinda and Wood (2003) asserts that to a larger extent, farm blocks provide a wide range of spillover benefits into the domestic sector in a synergistic and catalystic relationship. These include existing smallholder production systems and other value chain actors such as input suppliers and manufacturers. A closer look at Pinda and Wood (2003) argument, it clearly indicates that prerequisite for such a relationship is a domestic agricultural sector with absorptive capacity. Benefits arise from capital inflows, technology transfer leading to innovation, productivity increase, upgrading domestic production, quality improvement, and employment creation, backward and forward linkages. Other benefits are multiplier effects through local sourcing of labour, inputs supply, processing of outputs and possibly an increase in food supplies for the domestic market and for export. Therefore, a farming block like Luswishi was designed to provide such benefits to the local community and beyond through the established linkages.

2.7 Concepts of Regional Growth and Development

This section gives a discussion on different models and theories for regional growth and balanced regional development so as to get an understanding on each and their respective level of influence on inducing rural-urban linkages in the achievement of mutual benefits in regional development. This further helps this study in the analysis of how planning frameworks and institutions in Zambian have been incorporating these models in planning and development of Luswishi farm block for the study to see how the impacts have been.

Hence for the sake of this study, the following are the concepts which are discussed under thus theme.

2.7.1 New Regionalism (NR)

Mercado (2015) conducted a study on developing new regions in the new cities of Angola. The study sample was 15 planners who planned the new region which was demarcated to make small farming communities for the sake of providing food for the urban community. The study found that New Regionalism (NR) embraces a number of components or discourses. These associational economies include, learning regions, competitive regionalism, and regional innovations systems (RIS). NR is critical of both Keynesian (state-based) and neo-liberal (market based) approaches to regional development. The study argued that whilst useful, in the face of globalization and the knowledge economy, both approaches have past their use-by-date. However, the challenges which the project faced included that lack of effective monitoring mechanisms. Some parts of the farming communities were not well demarcated resulting into boundary wrangles, road blocking and none completion of the project infrastructure in far areas where the roads were impassable. This made the government and the funding communities lose funds as the planned implementation scheme was not monitored for quality assurance.

Hill (2001) investigated Spatial Disparities in Developing East Asia amongst the new and old developments. The study found that effective local governance is necessary to ensure regional competitiveness and sustainability in an increasingly globalized knowledge economy. The study maintained that in a knowledge-based economy employment growth and regional prosperity are dependent on the generation and deployment of economically useful knowledge through the processes of localized learning and innovation. It follows that NR connects these arguments about the changing political economy of regional development with particular types of governance. The challenge was that the planned rural development is hampered by poor road network and incomplete bridges which resulted into low inputs going to the market. Such challenges resulted into the farming community

not attracting new investment. These disparities are the hindering factors to development because land was distributed on political instead of economic benefits for the rural and urban population.

A study by Fabella (2007) was conducted on regional delineation using the delineation theory. The study found that this change in the objectives and organisations of governance is justified theoretically by arguing the knowledge economy is associated with. It also calls for the increased emphasis on investment in human and social capital. This brings about a tendency to move away from hierarchical modes of organisations towards networked modes. Therefore, NR is underpinned by an institutional logic that argues that regions are entities created by people acting through networks, communities, firms, governments and non-market organisations. Here, a region becomes a 'medium for social interaction' and the planning of new agricultural areas should make use of such concepts so that they create areas which depend on each other.

2.7.2 New Regionalism and Learning

With regards to new regionalism, MacLeod and Jones (2001) argue that learning occurs through the sharing and diffusion of codified (formal) and tacit (informal) knowledge, which enables individuals, communities and organisations to improve skills, create new products and refine business processes. Codified knowledge is defined as information that can be transmitted and stored while tacit knowledge is more informal and tends to be experiential. Further, Valdellon (2009) add that with a mixed breed of farming experts from one community of rural and urban, they help each other to make sure that they realise the need to provide the services for the sake of making the urban and the rural communities to interact and depend on each other. The challenges the rural farming communities faced included the lack of quality assurance monitoring to enable the farming community to follow the planned purpose for their farms. In other instances, the farms were found to be grazing areas and others were turned into garages because they were not well monitored by the authorities to ensure land management compliance is

followed. Such bring the regions to a downfall as planning is not respected by the land occupants.

2.7.3 New Regionalism and Innovation

NR defines innovation as an output of this knowledge generation and diffusion that is produced at the scale of individuals and organisations (OECD, 2001). Rather than being an outcome of structural, scientific research and development, NR argues that innovation at a regional level is better understood as a locally embedded understanding and a more micro process. In practice, NR argues that the actual process of innovation is sustained through the practices of individuals within these organisations and in more ad-hoc networks and communities generating and sharing knowledge. Furthermore, these individuals within networks and communities tend to be locally embedded (OECD, 2001). New regionalism brings about new developments which are regionalized and based on the fact that people have to make sure they depend on each other. This dependence is based on the way the small farms are supposed to be productive in order to make the urban population depend on them for their unban life.

2.7.4 New Regionalism: Implications for Policy

NR argues that the role of government in regional economic development need to be reconceived as the governance of regional innovation systems (Eversole and Martin, 2005). There are two elements to this re-conception. The first element is a substantial shift in policy priorities while the second one is an instrumental shift in the organisations and mechanisms of the state. In terms of policy priorities, the NR argues that a shift is occurring from uniform industry level intervention to promote sector growth and full employment towards investing in the pre-conditions that support learning and innovation within particular regions (Nel, 2001). These pre-conditions include investment in education and training, supporting small and medium enterprises, and building up the networking capacity of firms and research institutions (Malecki, 2007). Through the provision of the new regionalized areas, there is need for the provision of the social

sectors of the economy so that the occupants can be provided with such facilities. In terms of the instruments and organization of government, the NR argues a shift is occurring from a central and unitary role for the state toward governance through local partnerships with government as an enabler, facilitator and broker.

Other studies have suggested the lack of human resource investment in ensuring there is enough support to work in the farm blocks makes the areas unpopular. Eversole and Martin (2005) established that a well opened up farm block is supposed to have a complete surveyed area with full plot demarcation so that there is no conflict of boundaries between neighbours. They add that funding to any farm block should be complete so that all the needs are put in place before the new occupant can take over. These include funding for extension services and other centers which have to be built and should be running before the operationalization of such block. Contrary, OECD (2001) found that most farm blocks in Africa are not financially supported because they lack the needed capital to make them be fully operational. This makes them be opened in phases and at times be abandoned by government.

2.8 Local Economic Development (LED)

Porter (2000) elucidated that prosperity and wealth creation is determined by microeconomic factors. Prosperity means increasing the standards of living for the local people and ultimately their quality of life. This view corresponds to LED which hinges itself on improving the quality of life for the local people through economic empowerment (Nel, 2001). In addition, Malecki (2007) holds that regions are the primary spatial units for attracting investment as it is at the grass root level where knowledge and resources circulate. It is very important when it comes to the execution of LED since community participation, use of indigenous knowledge and locally available resources are at the heart of LED.

The new regionalism is supported by Keeble (2009) who holds that LED planning was concerned with creating spatial relationships between rural and urban centers that are conducive for compact development in the improvement of a local economy. The challenge with such type of planning was that major infrastructure was not considered to be a priority in such development plans. In areas of development, farming block lack major infrastructure like dams which are the main life line for the people, and this make them abandon such LED areas and go to their usual homes. Eversole and Martin (2005) suggest that LED was aimed at establishing orders which provided regulations for economic planning through designation of "special areas". The other aim was to act as insurance against unemployment and also to eliminate regional economic imbalances by creating environments conducive for business development in the periphery areas.

A study conducted by Nel (2011) on the sustainability of farm blocks in the rural parts of Malawi. The study interviewed the local community members and the beneficiaries of the newly constructed farm block in Dedza. The study found that the community was not benefiting from the farm block because they did not have the road network to support the transportation of the goods from the urban areas to the farm block and from the farm block to the market. This resulted into farmers abandoning the farm block and resorting to staying in town or along the main road. The other challenge was that the government did not fulfill the infrastructure development which was promised to the occupants of the farming block. There was no network for phones, no bridges constructed on major rivers and there was no electricity to easy life in the farm block. These challenges resulted into the farm block remaining a white elephant.

2.9 Regional Network Model

In a study conducted by Douglass (2008) which established that rural-urban dichotomy is no longer useful as new forms of organization for production, technologies and labor mobility has emerged through the transcending capabilities of telecommunications and transportation networks as well as biotechnology. The study argued for an alternative view

of rural development that redefined rural areas as no longer as consisting solely of agriculture and villages but as “part of the expanding urban and regional networks reaching from local to global scales”. The urban rural planning should make sure that networks are provided for the areas under development so that dependability is cautioned.

Reyes and Paderanga (2018) also revealed that the regional network model debunks the growth pole/center model in terms of the expanse of economic sectors involved and not confined to urban manufacturing. In this case, a horizontal urban system composed of a number of centers connected to hinterlands. They further contended that it is a complex rural-urban field of interaction with growth stimuli emanating from both rural and urban areas and the dependence on decentralized planning systems. The duo concluded that balanced regional development requires policy interventions not just related to industry but to a large degree agro-industry, resource-based manufacturing and agricultural diversification as well as urban services.

In another study, Keeble (2009) argued that rural development could best be achieved by linking rural with urban development at the local level which corresponds with what emphasized on the need for LED in regional development. He further stated that the approach incorporates local knowledge into the planning process through close interaction with rural producers and households. In addition, Friedmann (1992) found that a programme can be mutually beneficial to both rural and urban areas only through local capacity building like investing in human capital, skills and training and through popular participation. He further commented that greater potential would also exist to capture upstream and downstream linkages and multiplier effects in the region. The Regional Network approach advocates a more decentralized system of planning for working out the dynamics of rural-urban linkages.

2.10 Farm Block from National Development Plans

The genesis of the farm block development was as a result of a robust need for rural development and sustainability. The national development plans have had their own diverse political, economic and social objectives to achieve throughout the successive republics (Quick, 1971). During Transitional National Development Plan (1965-1966), First National Development Plan (1966-1971) through to Third National Development Plan (1979-1983), Zambia was one of several African nations experimenting with communal production, resettlement, and mechanization of peasant cooperatives (Klepper, 1980). The focus was for rural development to prioritize mass production of commodity crops by concentrating resources into state-capitalist ventures while pursuing a gradualist approach to peasant farming (GRZ, 1979).

2.11 Agriculture Development Plans in the Post-colonial Era

The focus of the Kaunda's regime was on having agricultural production which would guarantee national self-sufficiency, feed the growing towns, and alleviate economic reliance upon copper mining (Klepper, 1980). Heightening the challenge was the feared exodus of expatriate farmers who comprised 0.25 per cent of farming families but produced 72 per cent of commercial grain (Quick, 1971). The government through the efforts of its successive National Plans has been trying to narrow this gap between peasant and expatriate farmers but according to Chirwa and Odhiambo (2016), Zambia's agriculture is dominated by smallholder farmers and is still underdeveloped. First and foremost, they urged, ploughs and tractors must replace hand-hoes hence a huge programme of cooperative farm mechanization was suggested as the basis for rural development (GRZ, 1971). Comprising three thousand tractors distributed evenly around the country, it was lauded as the most ambitious of such plans in Africa (Kaunda, 1967).

The First National Development Plan (1966-1971) was meant to empower the rural communities where agriculture was concerned through community farming which was realized through cooperatives (GRZ, 1966). The Transitional National Development Plan

(TNDP) in agriculture received the biggest allocation of funds amounting to £9,500,000.7. Klepper (1980) observed that although these cooperatives were given empowerment such as tractors and other equipment, they were ill equipped to operate, maintain and use them effectively. This empowerment can be related to what has been obtaining in Luswishi farm block development especially that the core venture farmer has been operating for over five years but no small scale farmer has been partnered in an outgrower scheme. Through the fifth, sixth and seventh National Development Plans farm blocks have been promoted but the small scale farmers have not been prepared or equipped to participate as outgrowers.

This funding catered for both the peasant and commercial farmers so that they could be independent from depending on each other but through working together they could provide enough food for the growing urban population (GRZ, 1972). This though is also seen to be promoted in the development plans of today as being one of the objects of farm block development. There has been an increase in the need for cooperatives to be formed so that they can provide as anchors for fertilizer distribution to the larger poor farming communities and also act as out-growers in a farm block setup (GRZ, 2004). The subsidy is however prioritized to meet the needs of the farmers in the farm blocks and resettlement schemes which are already developed agricultural hubs (GRZ, 2004). Therefore, the plans regarding resettlements can be viewed to be circling around community empowerment and promote rural development communally.

Immediately after independence, Kaunda's humanism blended nationalism, liberalism and socialism with a reification of 'traditional' culture, and although flexible enough to incorporate many different development strategies (UNECA, 1964). In early articulations, it emphasized egalitarian, communal schemes targeted at the poorest. Cooperatives were in this sense about much more than economic because the community was seen to be the hub of the developmental agenda through cohesion and farming using a community possessed tractor. This later is what other national development plans have come to

promote as farm block and resettlement schemes. All these bordered on communalism where they depended on some common economic factors like dams, canals and road networks among others.

2.12 National Plans during and after first Republic in Zambia

UNIP, like kindred African socialist oriented governments, portrayed cooperatives as a distinctly African development strategy evoking a harmonious pre-colonial past (Quick, 1971). Cooperatives were proclaimed as a sort of salvation for the mass of the people and a revolution against the capitalist mode of production that would enable the unemployed to go back to the land and dig for victory which is also being promoted today in the current development plans (Klepper, 1980). These policies of communalism made the rural farming community find it easy to cultivate and stay in the rural because of the means of production which were provided for by the government (GRZ, 2004).

On the other hand, successive national plans during and after the second republic, brought about concepts of Structural Adjustment Programme (SAP), Privatization and Foreign Direct Investment in national economic development and industrialization efforts. These approaches have been seen and argued as pure capitalist as they appeared to be focused on multinational companies with huge capital and technology to drive large scale agriculture and partner with local farmers in an outgrower schemes (Bangwe and Koppen, 2012).

Resettlement schemes which were the main hub upon which rural communities were being organised have lost attention in contemporary national plans and farm blocks have become at the centre of government attention (Bangwe and Koppen, 2012). In the fifth, Sixth and Seventh national development plans, the government created farm blocks at least one in each province with the approach of empowering rural communities with inputs and skills through an outgrower scheme to be provided by the private commercial driver/famer of the core venture (FNDP, 2006).

The farm block policies in the Zambian context had plans intended to demonstrate how the government is developing the country through rural participation and opening up the rural communities to the market in the urban (GRZ, 2004). However colonial administrators had used cooperatives to provide marketing support to more prosperous African which they failed to mobilize and only supported commercial farmers at the expense of the majority peasant farmers (Klepper, 1980). In comparison to the fifth, sixth and seventh, the later has manifested through foreign direct investment which is making the rural community dependent on the out-grower provider who are the same capitalists humanism was trying to neutralize.

Similar to other contemporary commentaries, the Luswishi farm block is based on the technocracy which has been promoted by the fifth, sixth and seventh NDPs where they advocate for large scale farmers and out-grower schemes with sophistication of modern technology and huge capital injection (2004). The Farm block has been a good initiative because of its modern methods in terms of technology but up to now it appears unsustainable as it slowly overlooks the better way of making a mutual and beneficial partnership between the commercials farmers and the out-growers. The main farmer has all the access to the facilities like agro loans, electricity, water, roads and network while the rural out-grower are in the peripheral of the block where nothing attractive exist to make them enjoy and thrive.

The common scenario throughout these National Development Plans is that they have been recognition of the importance of both the commercial farmers and the peasants. In the early 1980s Dr. Kaunda managed to get on the flexible route to balance the support to both commercial famers' interests with that of peasant cooperatives. Hence in 1985 the government issued a Land Circular of 1985 in which it was allowed for individual and private companies to obtain a maximum of 250 hectors of agricultural land from customary and convert it state to land. The creation of National Agricultural Marketing Board (NAMBOARD) (1969-1989) also was introduced to give support in providing

markets to cooperatives and small scale farmers (GRZ, 2004). This led to an increase in the number commercial farmers in the districts of Lusaka, Central and Copperbelt provinces such as Mpongwe, Mkushi, Chisamba, and Chipata (Kajoba, 1993).

In 1992, the Zambian government embraced agricultural sector policy reforms, as part of the general economic reforms that fell under pursuit of the structural adjustment programs. These were targeted at liberalizing the agricultural sector alongside promoting private sector participation in the agricultural supply chain (GRZ, 2004). Since Zambia's launch of the Comprehensive Africa Agricultural Development Program (CAADP) in 2006, the expectation has been that the agricultural sector would improve. Currently the Government has been creating an enabling environment for the private sector to thrive in agriculture whilst support the peasants through input support programs such as Food and Input Support Programme (FISP) (7NDP, 2017). However the argument by Bangwe and Koppen (2012) has been that commercial farmers have quick access to land of their choice compared to peasant farmers who even do find hard to get security of tenure. They added that for about three decades agricultural reorganization in Zambia have had gone through a number of noticeable adjustments but these adjustments have not stricken a balance to both commercial famers and peasant cooperatives.

2.13 Gaps in the research

Evidence from literature has been provided on the way farm block development and agro value-chains are linked to each other for the common benefit of the farm block occupants. Further, studies reviewed have also provided evidence on the way agricultural value chains is maintained and strengthened as a result of the farm block position in the rural-urban linkages model outside Zambia. Literature has also provided how the concept of regional and city region planning and how this promote rural-urban continuum through interdependentness of the two through the farm block. These pieces of evidence have been the anchor for the creation of the Luswishi farm block on the Copperbelt. However, there has been lack of literature to demonstrate how these have been realized in the long term of

the operation of the farm block. In addition, the literature reviewed has provided evidence that studies have been conducted on the concepts of regional growth and development through well planned regional network model, local economic development, new regionalism and implications for policy outside Zambia. However, there was no literature on the framework which was used to develop the Luswishi farm block according the regional development plan hence this study was conducted. Through this study, it was foreseen that Zambian literature would be creates on the planning of Luswishi farm block and its impact on the city region of Copperbelt in Zambia.

CHAPTER THREE: STUDY AREA PROFILE

3.0 Introduction

This chapter presents the profile of the study area in detail. It reveals the most important features of the study and further gives insights on the rationale it was selected both for farm block development and as a study for this research.

3.1 Location

The 'City-region' is located on the Copperbelt Province of Zambia and lies between the lines of latitude 12 to 13 degrees south and the lines of longitude 27 to 29 degrees east. The City-region is composed of Lufwanyama, Kalulushi, Kitwe and Ndola districts, refer to Figure 1.

The Luswishi farm block is situated in the rural part of the City-region in Lufwanyama district and it is between 100 kilometres to 110 kilometres west of Kalulushi district. The farm block of almost 100,000 ha lies in a gently rolling terrain, with a few hills and elevations ranging roughly between 1,100m and 1,300m above mean sea level (MoA, 2012). The farm lock is also adjacent to smallholder farmers in Chief Shibuchinga and 20,000 ha under Kambilombilo Resettlement Scheme on the north-eastern end of Luswishi. The area lies between Luswishi River to the east and Mushingashi River to the west. In the north it borders the Mikelo River and in the south the Mirumbi River and Bwingimilonga River with many smaller streams (MoA, 2012).

3.2 Location of Map

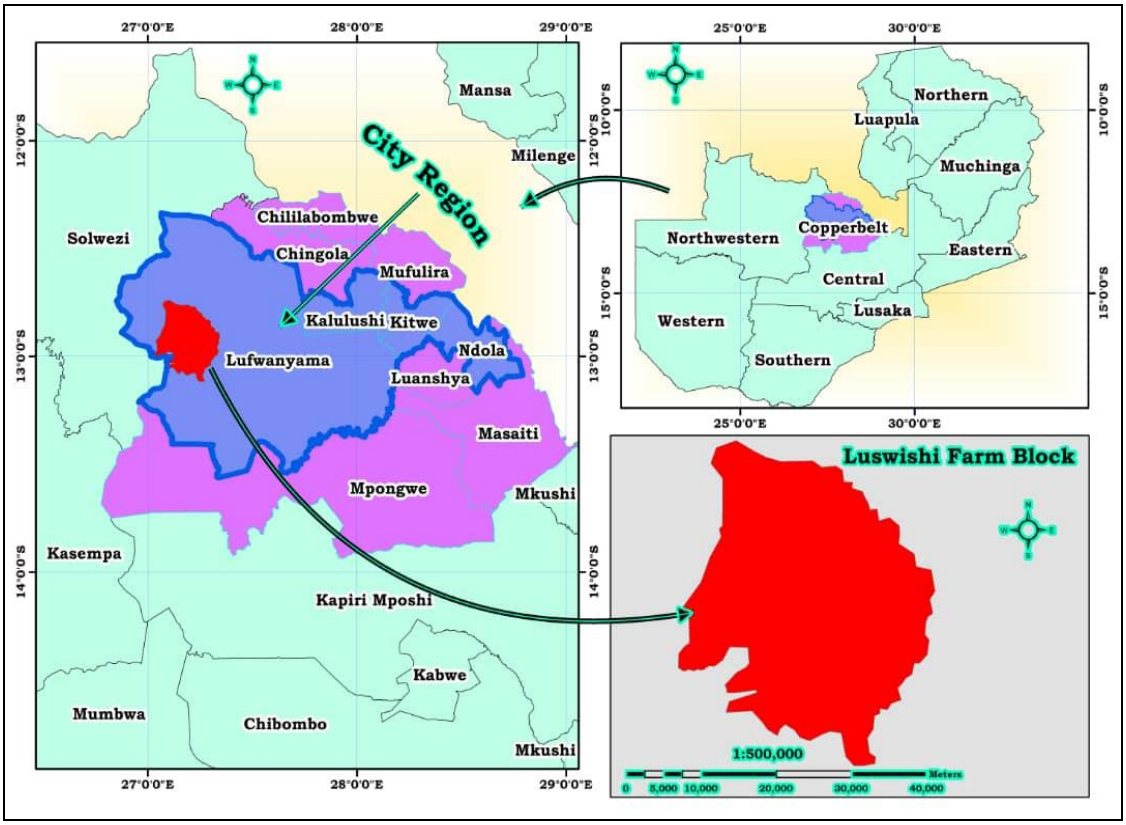

Figure 1: Location of Luswishi farm block and 'City Region' on Copperbelt Province Map
Source: Illustrated by author (2021)

3.3 Selection of Study Area

The selection of the study area was dependent on its location and its relative connectivity to both the urban and rural parts of the City-region. Since 2002, the Government had established eleven (11) farm blocks across the Country, and Luswishi farm block, though located in the rural part of Lufwanyama district, is the one farm block which operational and located closer to the highly industrialized (Copperbelt towns) urban parts of Zambia. The rest of the farm blocks are situated in rural provinces of the Country which are less or not industrialized. Additionally, apart from Luena farm block in Kawambwa, Luswishi farm block has been the most advanced in terms of development than the other farm blocks in other parts of the Country. As a result, it was observed that it would be able to

provide feedback to the research questions and able to provide a clear platform upon which rural-urban linkages can be assessed in terms interdependencies of those nodes within the City-region.

3.4 Rainfall and Temperature

The Luswishi farm block falls in Agro-Ecological Zone III, a Zone which supports most subtropical cash crops (GRZ and UNDP, 2010). It has a humid subtropical climate with average rainfall range between 1000mm to 1200mm and temperatures range between 10 degrees to 37 degrees centigrade depending on the time of the year. The prevailing winds are mostly south-easterly in the dry season and north-westerly during the rainy season (GRZ and UNDP, 2010).

3.5 Flora and Fauna

The area is mostly covered by Miombo woodlands, and elephant grass is the predominantly common. The level of anthropogenic agricultural activities in the area has led to the alterations of wildlife habitats. Fauna in the project area include small mammals such as rodents, lagomorphs, small antelopes and smaller carnivores (Timberlake, 2000). The local fauna in the area include a variety of snakes, insects, hares and bush rats. Others include lizards, chameleons and moles. Interviews and interactions the local people reveal that they have observed the presence of Black Rat (Rattus), Cane Rat (Thryonomys swinderianus), rabbits and bush Squirrel (Paraxereus cepapi). Insect life includes a variety of species of dragonfly, wasp, bees, crickets, grasshoppers, termites, mosquitoes, ants, red ants, lady bugs, Caterpillars, butterflies and moths (Timberlake, 2000).

3.5 Soil and Drainage

According to Timberlake (2000), about 238.5 km of rivers and streams run through the Luswishi Farm Block. All main water courses generally flow from north to south. Luswishi, the most important perennial river with an average flow of about 30m3 /s and its watershed covers 80% of the Farm Block. Mushingashi is the second largest perennial

river which watershed covers 20% of the Farm Block while its flow is much smaller than Luswishi River with an average annual flow of about 3.3m3 /s.

Predominant soils: Acrisols and some Ferralsols developed under conditions of high leaching intensity. These Soils are characterized by soil acidity, low bases retention capacity, low soil organic matter, low general soil fertility and soil degradation.

3.6 Demography and Population of the City-region

The according to 2010 Census of Population and Housing report, the 'City-region' has a total population of 1,147.673 which is composed of 49.6% males and 50.4% females. The 'City-region' has total of 217, 173 households and a spatial distribution of 10.2% of people living in the rural parts while 89.8% of people live in the urban parts of the City-region. This indicates that the City-region's urban areas are highly populated, is See table 3 below;

Table 1: City-region Population, by Sex, Rural/Urban, Household and Ave. Annual GR

District Name	Total Population	Male	Female	Rural	Urban	Households	Ave. Annual Growth Rate (2000-2010)
Ndola	451,246	223,020	228,226	0	451,246	85,707	1.9
Kitwe	517,543	256,740	260,803	16,183	501,360	96,666	3.2
Kalulushi	100,381	50,164	50,217	24,366	76,015	19,203	2.8
Lufwanyama	78,503	39,182	39,321	76,482	2,021	15,597	2.2
TOTAL	1,147,673	569,106	578,567	117,031	1,030,642	217,173	10.1

Source: CSO, 2010

The youths who are between the ages of 15-34 years are the majority followed by children who are 14 years and below. This indicates that the 'City-region' has a young population which needs proper planning in areas of education, housing and entrepreneurship. See table 4 below;

Table 2: City-region Land size, Age segregation and Pop. Density by District

District Name	Land Area	Pop. Density	0-14 Years	15-34 Years (Youths)	≥ 35 Years
Ndola	1,103	409	81,017	175,729	94,500
Kitwe	777	666	100,585	100,930	103,596
Kalulushi	725	139	41,542	18,553	21,030
Lufwanyama	9,849	8	37,092	24,654	16,757
TOTAL	12,454	1,222	260,236	319,866	235,883

Source: CSO, 2010

3.7 Land tenure

According to ZDA (2013), in 2008, Chief Shibuchinga, in whose area the block is located, released the land for development to the Ministry of Agriculture. Currently, much of the land tenure in the farm block is still in a transitional phase, from customary land to state land. The indigenous residents are holding traditional entitlement to the land through permits from the Chief. Others have settled without prior approval from the traditional authorities (ZDA, 2013). Some occupants have obtained title deeds. These occupants include the private investors who established large-scale commercial farms in the block. Title deeds have been prepared for about 1,691 retrenched miners in the area but the title deeds have not yet been issued. Other plots still need to be demarcated, beaconed, and surveyed (ZDA, 2013).

3.8 Main economic activity within the City-region

The main economic activities within the 'City-region' are mining, trade, industry and farming. The former activities are concentrated in the urban areas while the later is mainly done in rural areas of the city-region. The mining activities are mainly for copper, cobalt and gemstones while farming ranges from livestock, fisheries, and forestry to cash crops (Muchinda, 2001). The main crops grown in the city-region include; beans, wheat, sunflower, vegetables and maize as a most grown crop (MoA, 2000) The sparsely small-scale farmers who had been cultivating on portions of less than one (1) hector growing

crops such as maize, cassava, groundnuts, beans, sweat potatoes and, mainly for consumption on a rainy fed basis.

Settlements and cultivated land are sparsely spread. Luswishi Farm Block is a 100,000ha of land which was created amongst nine farm blocks in the 2002 Agriculture Master plan to drive Agribusiness through the promotion of international investments in Zambia (ZDA, 2013). According to ZDA (2013), the notable commercial farmers in the farm block are Xantium Dairies Zambia Limited with 15,000ha of land investing in dairy farming and milk processing. Luswishi Investment Zambia Limited and Hybrid Poultry Farms Zambia Limited, who have been allocated 5,000 hectares each. Global Plantations Limited (GPL), who has an allocation of 5,000 hectares of land producing sunflower, soya beans and irrigated wheat with a 200,000 metric tonnes capacity oil processing facility in Ndola.

CHAPTER FOUR: RESEARCH METHODS

4.1 Introduction

Research methods refer to the various specific tools or ways data can be systematically collected and analysed for a given research. For example, Participant observation, In-depth interviews, Focus groups etc. This chapter therefore focuses on presenting the research design and methods and how they would be used in collecting and analyzing data for the purposes of getting feedback to the three research questions in order to achieve the objectives of the research.

4.2 Research design

A research design is the scheme, outline or plan that is used to generate answers to the research problem (Orodho, 2003). Other scholars like Kombo and Tromp (2006) says a research design is like a glue structure that holds all the elements in a research project together. This study used a phenomenological design to explore the research questions of the study. Cohen, Manion and Morrison (2007) says interpretive phenomenological design is a theoretical point of view that advocates the study of direct experience taken at face value; and one which sees behaviour as determined by the phenomena of experience rather than by external, objective and physically described reality. Heidegger (1962) an interpretive phenomenology research design is one which seeks to uncover the subjective understanding which individual human agents ascribe to their social situation. Furthermore, Heidegger maintains that reality is only found in the minds of the social actor (participant) hence interpretive phenomenology or hermeneutic was adopted for the study.

In relation to this study, phenomenology in this case revolves around the development of Luswishi farm block existing as an integral part of the City-region. Hence, to understand how it had been developing from inception, an inquiry using qualitative research method was employed. This design was relevant as it enabled the researcher to explore how the

developments of Luswishi farm block activities have been unfolding with regards to the City-region framework.

4.3 Sampling Techniques

Sampling techniques are classified into non-probability and probability. However, this study applied non-probability sampling techniques with the intention of selecting individual participants for the sample that does not give all the individuals in the population equal chances of being selected (Msabila and Nalaila, 2013).

4.3.1 Purposive Sampling

The study employed purposive sampling which involves purposely handpicking individuals from the population based on the researcher's knowledge and judgment (Msabila and Nalaila, 2013). In this study, Luswishi farm block was purposively sampled because it is the farming block that is currently operational and is situated in the industrialised part of the country. Therefore, this farming block has interdependency characteristics between the rural and urban communities which this study was looking for. The other participants who were purposively sampled included the Provincial Planning Unit, Department of Physical Planning and Lufwanyama Town Council. The Ministry of lands and institutions in charge of planning like the Provincial Planning Unit, Department of Physical Planning and Lufwanyama Town Council. Ward development committees and farmers' cooperatives within the Luswishi farm block and those located in the City-region (Lufwanyama, Kalulushi, Kitwe and Ndola districts) which have a stake or role to play in the planning and development of Luswishi farm block were engaged into focus group discussions. Cooperatives were purposively sampled because they were only four registered with legal documentation.

4.3.2 Probability sampling

The participants for the focus group discussion were randomly sampled. The cooperatives had about ten members in each and four members were selected for the focus group discussion. In selecting these members, a raffle draw was conducted amongst the

cooperative members. A box was placed on the table which contained 10 pieces of paper. Four were written 'YES' and six were written 'NO'. The participants who picked the 'YES' papers participated in the study while those who picked NO' did not participate. With this procedure, the researcher was able to include everyone in the research and few participated in the study.

4.4 Sample Size

According to Onwuegbuzie, & Leech, (2007), sample sizes should not be too small that it is difficult to get saturation on feedback response. On the other hand, it sample must not be too large for it to be difficult to conduct an accurate analysis. (1) key informant from each of the following institutions; Lufwanyama Town Council, Provincial Planning Unit, Department of Physical Planning & Housing, Department of Agriculture, Department of Livestock & Fisheries, Community Development, Zambia Development Agency, Zambia National Farmers Union, Global Plantations Limited, Xantium Dairies Zambia Limited and Hybrid Poultry Farms Zambia Limited. Four (4) members from four farmer Cooperatives and two (2) Ward Development Committees were both selected and consultations were made to ensure there were gender balanced. The total sample in this study was 29 participants.

4.5 Data Collection Methods

4.5.1 Primary Data

Primary data was obtained through in-depth interview guides to the key informants from the selected public and private institutions. Focus group discussions were used in collecting first hand perceptions, feelings and experiences from ward development committees and farmers' cooperatives for the purposes of attaining the three (3) objectives of the research.

4.5.2 Secondary Data

This involved examining of already existing literature or documents and government statutes in order to cross check findings. Academic and policy literature on regional planning, rural-urban linkages, case studies on farm block development were reviewed to give a wide understanding concepts and discussions on the experiences surrounding the development of Luswishi farm block.

4.6 Data Analysis

Kasonde-Ng'andu (2013) defines data analysis as a manipulation of the collected data for the purpose of drawing conclusions that reflect on the interest, ideas and theories that initiated the study so as to uncover the underpinning structures and extracting cardinal variables thereby testing any underlying assumptions. Data from interviews and focus group discussion analysed thematically. This stated with data transcription from the recorded voices which were put according to the emerging themes. Some responses which were directly answering the questions and their supporting statements were directly presented according to how the ideas were presented.

4.7 Ethical Considerations

Ethics concerns what is wrong and what is right in the conduct of research. Since research is a form of human conduct, it therefore follows that such conduct has to follow generally accepted norms and values. Just like in many spheres of human life, certain kinds of conduct are morally acceptable while others are not, (Mouton, 2012). Cohen *et al*., (2000) explained that ethical issues are matters which are highly sensitive to the rights of others. In this regard, ethical issues where upheld in the study. The researcher obtained permission from the school of natural sciences, the various departments at the province and district, the cooperative and the individuals who took part in the study. The researcher ensured that participation by all members of the cooperative was voluntary. This was done by explaining to them the procedure, relevance and purpose of the study. Participants were assured that the data collected was kept confidential and only to be used for academic

purposes. Furthermore, the researcher assured the participants that names and personal details would not be revealed or published. Names of the areas, positions and participant's identification were not presented to ensure anonymity.

CHAPTER FIVE: FINDINGS AND DISCUSSION

5.1 Introduction

The aim of this chapter is to give a report on the findings concerning planning of Luswishi farm block and its impacts on the 'City-region'. The views of the interviewees and the data obtained from observations and other relevant documents constitute the focal point of this chapter. The findings herein have been segmented according to the categories under which the respondents participated. The respondents were institutions that have a stake or role to play in planning of farm block development in Zambia, farmer organisations and private investors in Luswishi farm block. The data is presented in line with the research objectives of the study. The field data collection instruments applied was the in-depth interview guides, observations and also analysis of relevant documents such as planning statutes, reports and publications on farm block development.

5.2 Availability of Policy and Development Concept of Luswishi Farm Block

In exploring the available policies and developmental concepts of Liswishi farm block, the participants were asked on the purpose of construction this block. The findings revealed that the purpose of constructing Luswishi farm block was to open up potential rural areas for agricultural investment in order to narrow the development gap between the urban and the rural areas. One participant said:

> Government had observed that the rural population has been receiving FISP for a good number of years yet there has been no sustainable development. Therefore, the government thought of narrowing this gap by making the rural communities come closer to the production level and increase their output. This was only possible through the creation of farming block in different provinces and one of them was Luswishi farm block.

Another participant said:

> The rural communities have been marginalised for so long because the people perceived FISP as a handout and they sold these inputs. Therefore, Government through of industrializing the rural areas through the use of farm block. The actual policy is that farm block must be a platform upon which farmers should be maturing and leave the FISP program for others. The farm block owners would be moving from small scale farmers to industrialized farmers who are able to stand on their own.

The study established that farming blocks were relevant in the country because they created a cluster of agriculture industry so that they work to support the communities around them. This made the development of this farm block become useful to the towns of the Copperbelt.

The findings of the study are supported by Taylor and Scott (2013) who found that the imaginary conception in the differences between rural and urban areas has been observed to be leading regional planners into overlooking the importance of enhancing the interdependencies of strengthening of rural-urban linkages in regional planning for mutual benefit of the two integral areas of the region. Consistent to the findings, Malizia and Feser (1999) add that cluster initiates numerous processes which increase the competitiveness of the location. The value of a cluster does not comprise the sum of the values of particular elements only, but it also takes “added value”. In this case, the creation of a farm block was an idea to empower the community so that they can compete with other communities in production and service provision of agricultural produce in the neighbouring towns.

Participants were further asked if the development of the Liswishi farm block was relevant to them and the community surrounding it. The findings revealed that the local communities were not informed on the purpose and organizational planning of the farming

block. What they knew was that the development of agriculture stated in their local communities, yet they did not know how far it would go. One participant said:

> The people who came to tell us about the farm block said there will be employment opportunities from this community. But, we are only told that we should enhance our agricultural practices so that we can produce enough to sell.

Another participant said:

> I had a big farm where my animals and my family depended upon. But this thing called farming block left me with very small farm and they are telling us to move to another place where we even do not know. Even my children do not even work with the company which is in this farm block. So, some of us have not benefited and are not benefitting, there is nothing knew or change that we are seeing.

The study findings are in agreement with Taylor and Scott (2013) who found that each rural or urban area within the same region is usually planned in isolation, leading to unsustainable interaction which is expected to enhance regional development. In this case, the rural agricultural areas outside the Chinese cities were planned before allowing the settlement to take part and start the farming activities. In the Zambian case, the displacement of the indigenous was an indication that the planning of the farm block was an afterthought by the government hence land has been reduced for the local people. Further, Porter (2001) noted that industrial clusters are geographical concentrations of interconnected companies with close supply links, specialist suppliers, service providers, and related industries and institutions. Such are the factors which the local people fail to understand and complain that there was land grabbing because the companies have come to make use of it. Therefore, the Luswishi farm block was a cluster of development which was not well executed by law and planning.

To the contrary, other participants established that they were happy that the farm block came to their area because they were able to find employment and sustain their families. This was through casual workers and security guards in the new farms which have come on board. One participant said:

> We were happy with the coming of the farming block because we have stopped going to Kitwe and Ndola where we used to export our labour. This time we work within the farms and earn a living. We have even built iron roofed housed as a result of working within the big farms in the farm block.

Another participant said:

> I have been working for the farming black since the area was developed. Some of us have even managed to be paying school fees for our children because we work in these schemes. We even buy fertilizer for our small field because we work from these schemes. Before these came, we used to go to other towns to look for employment and come with basic needs for our families.

From the conflicting ideas, it was clear that when a farm block is established, other land owners are bound to complain because the large chunk of land is redistributed to potential investors. However, the creation of these economic zones brings about employment creation as well as resources to the poor surrounding communities.

The study findings were supported by Akkoyunlu (2013) who found that rural households rely on urban income sources such as remittances and income derived from producing for consumption in the urban markets. He adds that urban households also rely on rural resources, especially in low-income countries because these are partners where material and resource sharing is concerned. Consistent to the findings, Jacobs (2009) also found that it was difficult to make a distinction between ‘city-created work’ and ‘rural work’, as well as between ‘city consumption’ and ‘rural production’. In addition, it was also found

that the cities and the rural population depend on each other and they have to live by each other's side for them to survive and earn a living.

The findings are further supported by Tacoli (2018) who found that the functions and roles played by cities in rural areas are the outcomes of interdependencies that need to be seen as being mutually reinforcing. More rural urban interaction is usually created by the production of food and economic empowerment in the two areas. Therefore, the farm block was key in providing economic related labour to the new farms and farm owners because they need such cheap labour. Also, the absence of the cheap labour makes the farm fail to run because they need such local labour. In this case, the farm block depends on the new farm owners while the farm owners also need the local community for services. In this case, the creation of the farm block is an opportunity for employment creation in such an area.

Participants from the agriculture and planning sections were asked as to how the policies surrounding the farming block shaped its existence in the chosen community of Lufwanyama district. The participants established that there has been no specific policy for farm block development. What existed was the national agriculture policy in which the decision for the nation to create farm blocks in each province was enshrined. The guidelines show that the farm block should follow a cluster model of development. One participant said:

> As far as the policy is concerned, there is no clear-cut policy which guide on the farm block establishment in the country. What happens is that a province just has to ensure that land is identified, planned, surveyed and offered to successful applicants who in turn are told that this is a farm block and not a residential or commercial area. Through this, many areas have been opened up to support agricultural activities in the provinces.

Another participant added that:

> The only guideline which exists is that the land to be made farm block should have the potential to create an economic hub for the areas around it. There must be farmers organised into outgrower scheme and available market where such agricultural products should be sold so that the farming community can be significant to the surrounding major markets.

With such pieces of policies existing in the planning and farm block establishment, there was clear evidence that these might be political oriented developments yet professional are not involved in their devising better strategies for the actual development.

The study findings are supported by Kohli and Atul (2004) who observed that when a farm block is created through a policy guideline, it creates the entire necessary infrastructure which is supposed to be put in place in a chosen locality. However, when a policy is not in place, the government fails to achieve total completion of the farm block. The duo advised that every government should always put in place a policy to guide the creation of a farm block and this should be monitored to its completion. In addition, Glickman (1999) holds that the sub-Sahara nations lack strong agricultural policies which should guide farm block modeling and running. He adds that there is lack of planning for the land and that there is more political pronouncement that professional workmanship in making the farm blocks hence the projects have not been agricultural productive as mandated. In addition, most occupants of the area do not get the land for farming but get land for collateral and build non-farm ventures. Therefore, when a policy is in place, there is consistent in following the construction procedures of the farm block and there is total completion achieved.

Consistent to the findings, the central city provides local administration, employment opportunities, transportation, communication, wholesaling, educational and professional services for the sub-urban areas (Coe, et al, 2004). In turn, the suburbanites serve the central city dwellers by providing surplus food, pip-borne water, raw materials, labour and

residential accommodation. The role of the government is to support the communities which are in the rural while the rural has the role of being productive and ensure that they depend on each other for their survival. In this context, the policy formulation and implementation process is the only way in which a farm block can be built and be sustained in the manner the government and communities would appreciate.

5.3 Resulting linkages existing between the farm block and the City-region

The second question was meant to indicate how impacts have been in terms of the linkages as a result of planning of Luswishi farm block. Here the aim was confined to assessing resulting linkages in terms of five types of flows between the farm block and the rest of City-region. The respondents were purposively selected because the study was looking for institutions that have a role in monitoring and impact analysis of agriculture development in Luswishi farm block.

5.3.1 Flow of Capital

The first component of the second research question was to examine how capital flows have been triggered in the advent of Luswishi farm block. The responses were obtained from Global Plantation Limited, the private company, which had been running a core venture on a 10,000ha farm, has been growing soya beans, wheat and sunflower for over five (5) years.

The plant supervisor explained that:

> The processing plant facility which you seeing was completed about six years ago and it was constructed at a cost of over US$100 million. The facility from sunflower and soya beans is able to make cooking oil, animal feed, and flour from wheat. We decided to put it in Ndola's industrial area because many factors were favouring this kind of investment. The location is very conducive for the plant to be powered by electricity, and its market connectivity has been

> making it easy for us to transport and supply our finished goods. At the same time the wholesale customers find it very easy to come and purchase our processed goods just we find it easier to get ancillary services from within Ndola town.

The manager added that:

> Likewise we have heavily invested on Luswishi farm block plantation which has been expanding in terms of hectorage. we have procured machinery such as earth moving equipment to enable reach a target of 15,000 ha of cash crop plantation by 2022. However the limitations have been on the road from Lufwanyama Boma to the farm block is not so good and it becomes worse during rainy season.

Observation by the research was that the area under cultivation has increased from 5,000ha in 2013 to 10,000ha in 2016 whilst expenditure on plant and machinery has increased from US$40 million to US$310 million from 2013 to 2017. The positive changes in both plant (such as grain storage warehouses) and machinery (such as combine harvesters, tractors, graders, tipper trucks) is an indication that there has been an increase in the capital flows towards the expansion of the plantation as this is evidenced by the expansion of the farm hectorage by 50% in the same period.

The positive improvements arising from capital injections in both processing plant facility and on the plantation have been laying a platform upon which agro value-chains within the City-region are increasing their business endeavors. Frank et al (1997) added that local players need to have active participation in benefits arising from capital inflows, technology transfer leading to innovation and productivity increase thereby ensuring quality improvement. Pinda and Wood (2003) indicated that when capital injections are made in localities with absorptive capacity, it leads to employment creation, backward and

forward linkages and multiplier effects through local sourcing of labour, inputs and processing of outputs.

The manager continued that:

> The initial stages have been very expensive in term of capital. Apart from machinery on the farm, we have been paying wages to workers for expansion works and harvesting activities at the plantation and over 60% of the profits that we have been making is ploughed back into expansion of the investment at both the core venture farm and processing plant facility. The wage bill usually ranges between US$25,000 and US$15,000 from 2013 to 2017 per month, depending on the season of year.

The research observed that during harvesting seasons, the company spends between US$20,000 and US$25,000 whilst during rainy season wages drop to less than US$15,000 on average since mechanical irrigation mostly becomes rain fed. The fluctuations in the wages indicated that there were a number of non-permanent unskilled labourers which were occasionally employed on the plantation according to the demand of that job in the particular season.

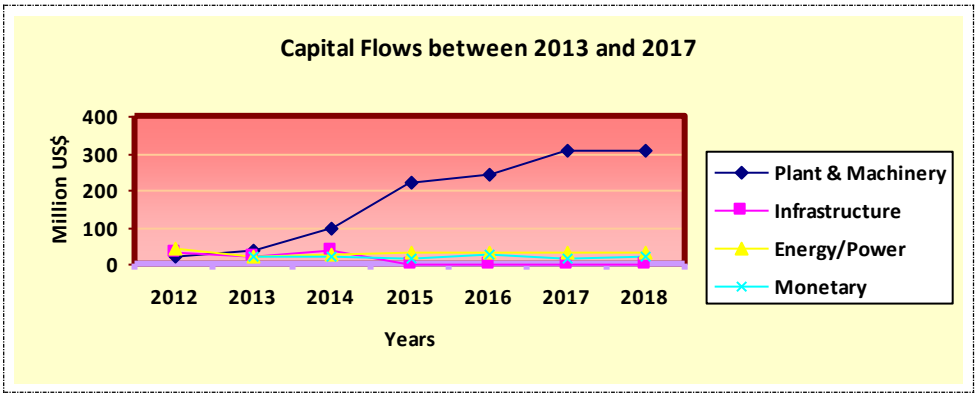

Figure 2: Capital Flows between 2013 and 2017
Source: Compiled by Author (2017)

Figure 2 also shows that capital expenditure on infrastructure in terms of roads and water facilities into the farm block increased from US$20 million to US$40 million between 2012 and 2013. On the part of the Government, A 53 Km gravel road was done from Lufwanyama Town Center then to link the Core Venture farm. Expenditure on Energy in terms of ZESCO power grid and substations increased from US$20 million to US$30 million between 2012 and 2016. ZESCO ran and installed grid lines from Lufwanyama to the farm block and installed a 33/11 Kv substation at Funda, 20km from the Core venture farm.

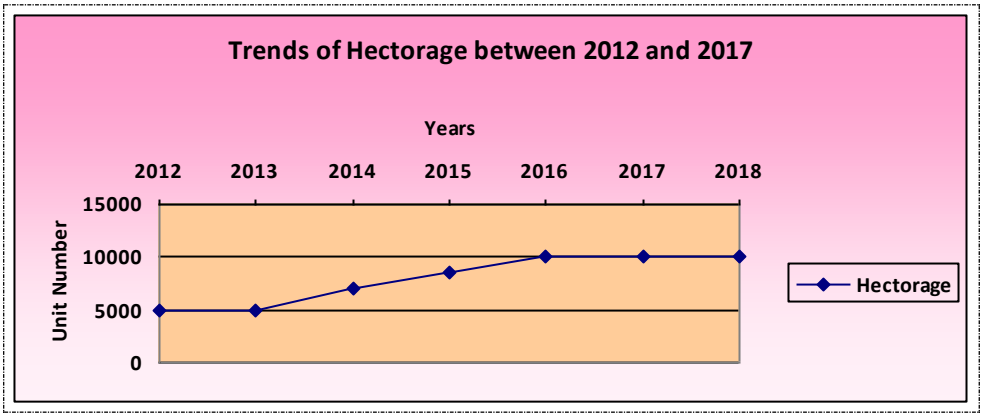

Figure 3: Trends of Hectorage Size between 2012 and 2017
Source: Compiled by Author (2017)

The research further shows that the total number of workers on both the farm block plantation and Ndola plant has been increasing between 2012 and 2016. The number of workers from around Luswishi farm block started decreasing between 2016 and 2018 whilst the hectorage continued to grow. The research indicated that as more machinery for harvesting and clearing was being bought, shading off of unskilled labourers was being carried out. Hence between 2016 and 2018 due to improved mechanization on the plantation and after commissioning of the Ndola Plant 300 unskilled labourers lost their jobs.

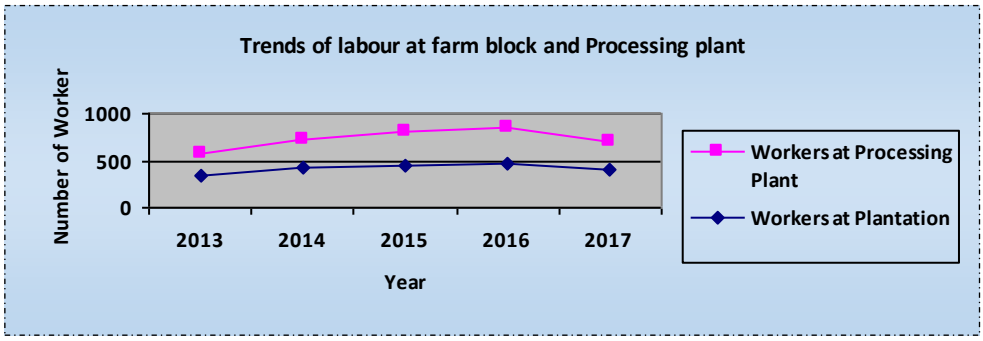

Figure 4: Flows of Labour at the Farm block and processing plant
Source; Compiled by Author (2017)

5.3.2 Flow of People

The development of Luswishi farm block has triggered the movement of people within the City-region. People have been attracted to the employment prospects that have been created through farm block development and the establishment of the processing plant facility. However, the findings indicated that the semi-skilled and skilled labour have been originating from the urban areas of the City-region to getting available employment on the farm block and at the Ndola processing plant.

The manager at the plant indicated that:

> Currently we have employed about 400 casual workers working on a plantation in the farm block and a total of 550 casual works and 30 permanent workers at its processing plant. The number of casual workers changes depending on the season of the year but as of this period we have reached the peak because we are clearing more land and at the time harvesting thereby increasing production at Ndola plant.

On the other hand, research findings indicated that 66% of the unskilled labour has been originating from the rural parts of the City-region and getting employed on the plantation while 34% of the unskilled originated from urban areas of the City-region.

Arising from above, Luswishi farm block project in the rural part of the City-region has triggered agro based employment and economic activities across the City-region. This has proved that all settlements should be seen as occupying a space along a continuum, with respect to both their population size and economic activity regardless of them being rural or urban they play a functional role in region (Taylor and Scott, 2003). Hence Tacoli (1998) indicated that there was need for planners not to segregate but to enhance the interdependencies of rural-urban linkages in regional planning for mutual benefit of the two integral areas of the region (Tacoli, 1998).

As a result, it is reported that each rural or urban area within same region is usually planned in isolation, leading to unsustainable interaction which is expected to enhance regional development (Evans, 1995). The functions and roles played by cities in rural areas are the outcomes of interdependencies that need to be seen as being mutually reinforcing (Evans, 1995). Douglass (1998) summarized this relationship by noting that, for every role a city is expected to play, there is a necessary role to be played by rural areas.

5.3.3 Flow of Commodities

The development of Luswishi farm block has triggered an increase in the flow of materials in terms of commodities between the Luswishi farm block and the City-region. Agro-inputs such as fertilizers, pesticides, packaging materials, fuel and electricity have been flowing from the City-region into Luswishi farm block. On the other hand, farm produce such as soya beans, wheat and sunflower have been flowing from the farm block to processing plant in Ndola. The processed products such as edible oil, soya pieces, animal feed and soap have been flowing throughout the urban parts of the City-region, and quantities have been increasing annually.

The manager at the processing plant indicated that:

> We have huge market for processed products from the urban parts of the Copperbelt and Democratic Republic of Congo then

> followed by Lusaka. The Market demand is still high in all these areas and we have not satisfied in terms of quantities. So to supplement the raw materials we get from the our plantation, we have been buying Soya beans, Wheat, Sunflower and Maize from other farmers across the Copperbelt as long as they bring to us. This strategy has helped us to improve in terms of more for the market.

The research observed that processed products were more supplied in the urban parts of the City-region because people in the urban parts of the City-region were able to afford and buy these products compared to those in the rural areas. Hence the supply of processed products is biased towards the urban parts of the City-region. Further, the study has indicated that the urban parts of the City-region have been the main market to value added products. This is partly because the urban parts are more populated with more income capacity and able to provide a wider market for commodities than the rural parts of the City-region.

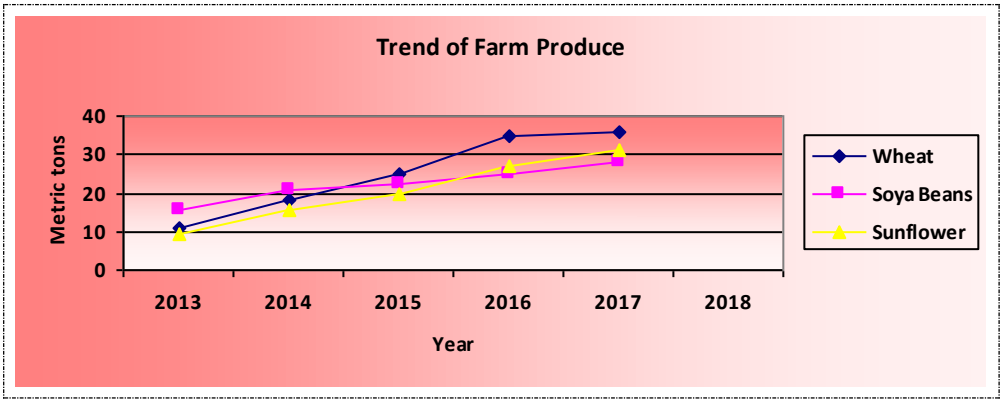

Figure 5: Trend in Farm Produce (Metric Ton/annum) between 2013 and 2017
Source: Compiled by Author (2017)

The trends shown on the graph conforms to what Rusike et al. (1997) indicated that investments in agro-industries are known to have significant multiplier effects through both their backward and forward linkages along the value chains. It awakens the demand

for ancillary agro-processing inputs, such as packaging items and product ingredients, tends also to rise with new investments in agro-industries Todeva (2006).

However, the geographical scenario with the City-region has not yet conformed to what Wilkinson and Rocha (2009) had put across that agro-processing tend to be located close to their sources of raw materials and thus are an important drivers in the creation of non-farm rural employment. This is so because Global Plantation Limited is located in the urban part of the City-region while the source of raw materials, Luswishi farm block is 170 kilometers apart in the rural part of the City-region. A situation which has been be attributed to under development in terms of infrastructure in rural part of the region to support manufacturing industry and lack of market for processed products. As agro-processing enterprises generate demand for agricultural raw materials, opportunities of work at the farm level are created and contribute to increased demand for agricultural inputs such as fertilizers, feeds and veterinary products throughout the City-region (UNECE, 2009).

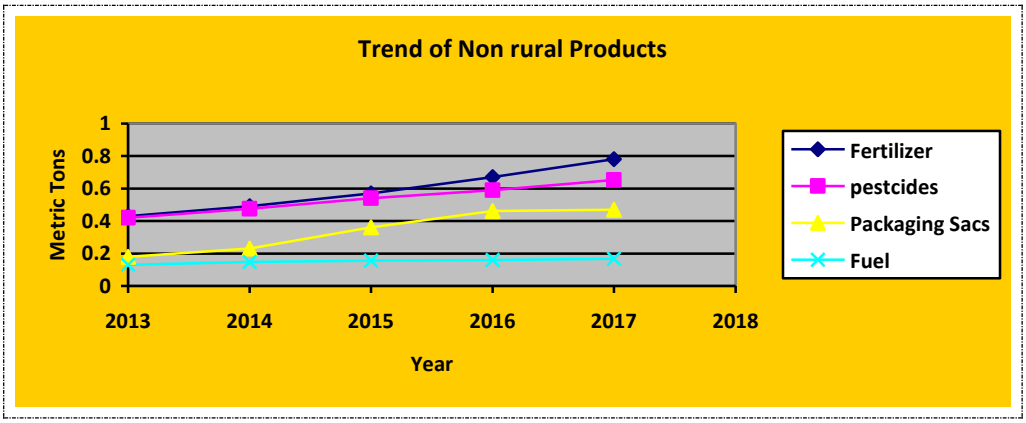

Figure 6: Trends in the non-rural products
Source: Compiled by Author (2017)

Over 400 workers on the plantation also have been earning wages and salaries. These incomes are in turn spent on purchasing household commodities from urban areas of the City-region. Likewise, workers at the Ndola processing plant spend the income within the

urban areas of the City-region. Filling stations have an increased customer base for diesel bought for operation of machinery and equipment at the plantation, see Figure 6. This has also applied to haulage companies transporting inputs to the plantation and farm produce to Ndola. It was evident enough through the existence of large productive plantations, heavy farm equipment and plant shades that huge capital had been flowing from the 'City-region' into the Luswishi farm block.

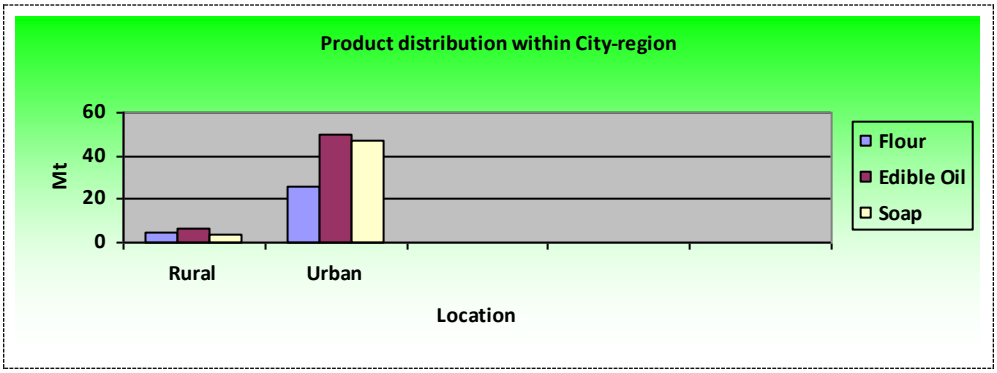

Figure 7: Product distribution within 'City-region'
Source: Compiled by Author (2017)

In Kenny et al (2001)'s view, argues that concentrating resources only in a few sectors especially those which have the absorptive capacity for modern technology would undermine the potentials of the other sectors, and this is what has been leading to notion in the urban bias and its eventualities. Figure 7 clearly shows that urban population is providing larger market for the finished products than of rural. However thus does not indicate that its urban bias at play but that the rural population of the City-region very small and hence provides small market for the finished products. The argument by Tacoli (1998) and Kenny et al (2001)'s view about the effects of urban bias in which rural economies are organised to serve urban interests is not being favoured by these research findings.

On the other hand, it can be argued to that fact that the small holder farmers in the rural area of the City-region have not been organised into cooperative or outgrower schemes for

some of them to be part of direct production. It then implies that only a few unskilled labourers from the rural population are benefiting from the wages they get but not sustainable enough to earn them skill through knowledge transfer.

5.3.4 Flow of Information

Information has been flowing between the Luswishi farm block and the City-region and has influenced labour flows, income and innovations. However apart from the workers benefiting from skills transfer, the flow of knowledge to has not enhanced the local people skills since there has been no trainings for small scale, medium scale and farmer cooperatives into practicing outgrower schemes or other forms of agri-business. Small scale farmers in the farm block are still growing traditional crops using same methods and tools.

On the other hand, key stakeholders have information gaps in terms of how the Luswishi farm block has been performing as this was observed through getting unclear responses on same questions from different respondents. Findings on figure 8 further indicate that some small scale farmers opted to get employed to work on the farm block for wages because not all rural people are farmers. As a result, they opted to earn a living outside agriculture which is in line with the 7NDP on its aim to create decent jobs for the rural people through rural industrialization.

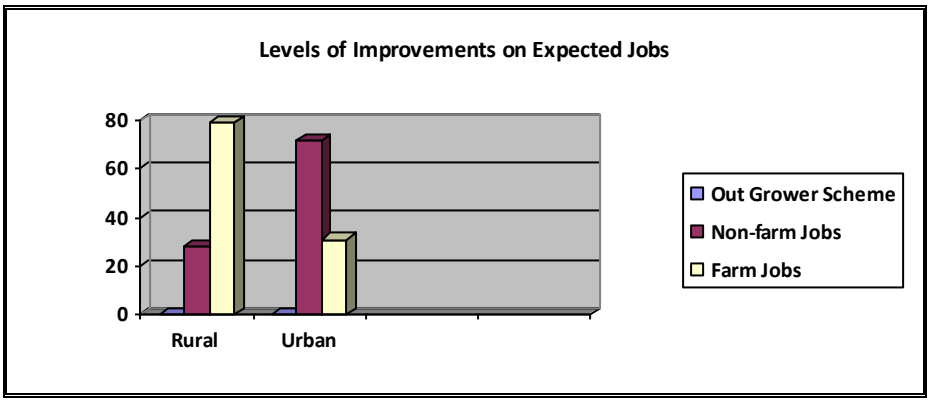

Figure 8: Levels of improvements on expected jobs
Source: Compiled by Author (2017)

5.3.5 Flow of Production

When agricultural raw materials increases, agro-processing industries increase their contributions thereby economic activities generate in the downstream areas of logistics, distribution and service provision within the City-region space (Stabler et al., 1996). This is evidenced in terms of upstream and downstream linkages, there has been an enhanced production in both the Farm block and the City-region. Production has been intensified within the City-region i.e. production of edible oils, flour, livestock feed and packaging materials have intensified thereby influencing and improving the investment of related and tertiary industries such as banks, transport and insurances within the urban centers of the City-region, see figure 9. Produce such as soya beans, wheat and sunflower from the farm block and other farmers of soya beans within the City-region act as input for the Ndola processing plant. The value added products such as animal feed are then distributed as inputs to livestock farmers within the City-region.

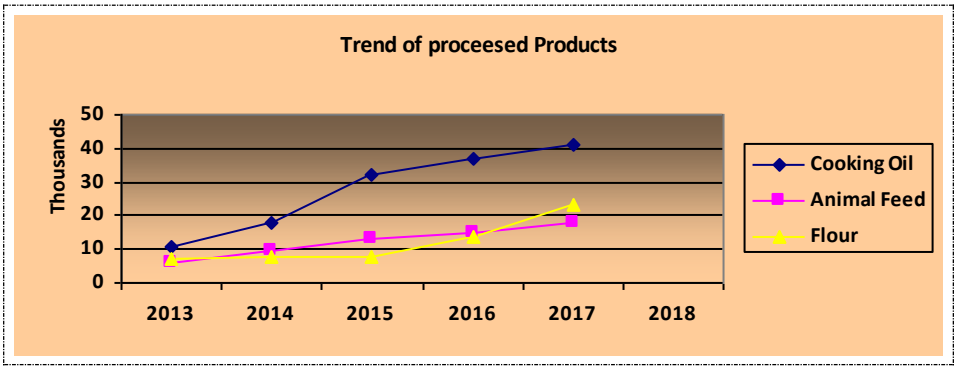

Figure 9: Trend in Processed products (Metric Ton/annum)
Source: Compiled by Author (2017)

Figure 5 and figure 9 shows the production trends at the plantation and Ndola processing plant per annum. The trends from both graphs have been increasing from 2013 to 2017 indicating the company's production has been steadily increasing which has also been corresponding to the expanding investment on the plantation.

5.3.6 Summary of findings to the Second Research Question

The development of Luswishi farm block has triggered linkages that have resulted into both on-farm and non-farm job opportunities within the 'City-region'. Both rural and urban people are benefiting from the employment opportunities at the Ndola processing plant and the farm block. However the question of sustainability in terms of local empowerment through skill and knowledge transfer is what indicates a weakness through information flow in terms of technology, agri-business promotions and new agriculture practices. This implies that existing policies pose uncertainty in terms of continuity of the investment as it relies more on the discretion of the investor. The development implies that the moment a commercial farmer decides to pull out, locals would likely remain with no idea of taking or running farm block business. This is because the non-involvement of the local rural people limits knowledge and skill transfer which has been the essence of outgrower schemes.

There have been increased employment opportunities and incomes as well as demand on non-farm and processed products but this has not been sustainable since the majorities of the workers on the farm block are casuals and are employed and discharged depending on the crop season. Information flow also has not given yield to new agriculture practices, methods or crop diversification amongst small scale, medium and farmer organisations due to lack of knowledge, skill transfer, agri-business promotions and trainings for the purposes of the non-existence outgrower schemes. Other services that come along with the cluster model include; education facilities, health facilities and micro finance systems which enhance small holder famers' meaningful participation have not been set up in the farm block.

3.4 What are the challenges being faced in the development of Luswishi farm block on the City-region?

There were a number of challenges which were faced in the operationalization of the Luswishi farming block. These problems were ranging from community to institutions

with a stake in the development of Luswishi farm block. The first challenge was the inadequate financial support to government institution which were charged with the responsibility of creating, running and handover the farm block. These challenges started with the non-completion of the farm plots creating and survey by the ministry of lands survey department and the Ministry of Agriculture. One participant said:

> The plan of creating a full and complete farm block was very promising according to how activities were being laid down in the planning meeting as Ministry of Lands, survey department. The only challenge which came in was that the financial support to finish the plot/farm surveying was not enough. As a result, we have some areas which have not been subjected to surveys such as reconnaissance as well social and economic to ensure before we demarcate plot prevailing situations on the ground are well taken care of. As a result about more than 75% of farm plot have not been demarcated and in some cases we are receiving resistance from the local due to lack of finances for us to conduct an engagement with them.

Another participant said that:

> As the main players in the farm block, Ministry of Agriculture, we have not been involved mostly in the assessment of the land so that we also give our technical advice on where to demarcate small, medium and large farms. This has been so because the funding which was supposed to have come for this particular phase has not been disbursed up to now. This is why you are seeing the farm block being not well developed up to now. When making budgets there were collaboration with Ministry of Lands, we made the budget for creation of farms but only part of it was disbursed to the

> Ministry of Lands, Survey department to carry out demarcation of the Core venture farm.

Another participant added that:

> The other funding which was meant for extension services provision has never been sent to us so that we can make our presence available to the farmers and the affected communities. These extension services included the advice on the crops to plant according to the climatic conditions within which the block is located, the market possibilities, the out grower collaboration and when to grow a type of a crop and the quantities among others. Some commercial farmers have already started operations but as a Ministry we have remained behind in terms of preparing our farmers and cooperative on issues of out-grower schemes.

Financial challenges can be seen to be key in the development of the block because it is the injection of initial capital that strengthens the momentum of the project. However funders have not fulfilled their financial responsibility as planned. In doing so, the block cannot function fully to meet the planned aspirations.

These findings are supported by Eversole and Martin (2005) who established that a well opened up farm block is supposed to have a complete surveyed area with full plot demarcation so that there is no conflict of boundaries between neighbours. They added that funding to any farm block should be complete so that all the needs are put in place before the new occupant can take over. These include funding for extension services and other centres which have to be built and should be running before the operationalization of such block. Consistent with the findings, OECD (2001) add that most farm blocks in Sub-Saharan Africa are not financially supported because they lack the needed capital to make them be fully operational. This makes them be opened in phases and at times be abandoned by government. Therefore, the challenges show that the Luswishi farm block

was not well implemented by the government to enable the farmers be incorporated by means of out-grower schemes and be sustained.

The other challenge was the one which surrounded the infrastructure development in the farm block. The participants revealed that Luswishi farm block was supposed to have four dams but only one was built and it does not keep enough water for the current Core venture and other farms. The other dams were only on plan and not executed. One participant said:

> When we were planning for this farm block, we had planned for four dams which would have supported the entire farm block with the irrigation and water needs for a longer life span. However, we have had not achieved this infrastructure milestone because the planning has stalled due to financial challenges.

Another participant added that:

> The dams indeed have not been completed as the farm block plan stipulates because the other departments have not been funded to finish their phase before we could go in and finish the dams. So, as we can see, there is only one dam out of the planned four which is not enough for the small population which is practicing farming here.

These findings are supported by Nel (2011) who found that the government did not fulfil the infrastructure development which was promised to the occupants of the farming block. There was no network for phones, no bridges constructed on major rivers and there was no electricity to easy life in the farm block. In addition, Keeble (2009) also added that the challenge with such type of planning was that major infrastructure was not considered to be a priority in such development plans. In areas of development, farming block lack major infrastructure like dams which are the main life line for the people, and this make them abandon such LED fertile areas and go to their usual homes. Consistent with the

findings, the provision of dams was the main purpose of having a farm block in the area was the planned development where infrastructure is concerned while their absence are the set back to the farm block sustainability.

The other infrastructure challenge was the lack of road through the farm block and linking the farm block to the other parts of the surrounding areas. This challenge created a connective challenge hence other and subsequent services remained underdeveloped. One participant said:

> We have only one road which goes to the core venture farm which act as an example to what would come. The other roads which were meant to open up the farm block have not been done up to now. This has created the biggest challenge because we cannot go to other farms and carry out our services accordingly.

Another participant added that:

> Developing a farm block starts with the road network which has not been done. Practically the farm block is still closed because it has not been opened up for business to the entire community in it. Such have made the project to be on paper with minor implementation as farmers cannot easily access their farms.

It was evident that the road network hindered the development of the Luswishi farm block since it has not been opened up. This was a challenge which needed urgent attention for this economical venture to make sense to the investors and people within and around it.

The study findings are supported by Nel (2011) who found that the community was not benefiting much from the farm block because they did not have the road network to support the transportation of the goods from the urban areas to the farm block and from the farm block to the market. This has resulted into farmers who do not own four wheel drive vehicles abandoning the farm block and resorting to staying in town or along the main road. The findings are also supported by Hill (2001) who found that the challenge in

farm a block was that the planned rural development is hampered by poor road network and incomplete bridges which resulted into low produce going to the market. The poor road network being faced by the Luswishi farm block was a stumbling block to rural urban connectivity and development because the purpose of a farm block is to take development to the people in the rural areas and not to halt the development of infrastructure like roads. Anywhere where a road is developed, other economic openings are seen coming up which was supposed to be the case with the Luswishi farm block.

The other challenge which the farm block faced was the inadequate of power connectivity to enable most parts of the farm block have access to the national power grid. The participants also established that power connections have only reached first core venture farm while other power lines have not been done. One participant said:

> ZESCO was able to complete one line of connectivity from the constructed Funda substation which is meant to service the farm block. The other lines have not been done because the roads and farms have not been completed. This gives a chain reaction challenges.

Another participant said:

> The power connection does supply the needed power to meet the demands of the few farms around the farm block. Also, the area is constantly load shaded making the farmers not making use of the power connectivity as expected.

It can be agreed that power connectivity is important to any farm block because it enables the running of equipment and farm utilities effectively. This challenge was a hindering factor to the Luswishi farm block development.

These challenges are not supported by Malecki (2007) who holds that regions are the primary spatial units for attracting investment as it is at the grass root level where knowledge and resources circulate. It is very important when it comes to the execution of

LED since community participation, use of indigenous knowledge and locally available resources are at the heart of LED. Further, the study findings are also not supported by theory by Eversole and Martin (2005) who suggests that LED was aimed at establishing orders which provided regulations for economic planning through designation of "special areas". The other aim was to act as insurance against unemployment and also to eliminate regional economic imbalances by creating environments conducive for business development in the periphery areas. With the power challenges at hand, the farm block is still not a reflection of a planned community where agriculture was supposed to provide some form of economic relief to the people around it and the nearby towns. In this context, these challenges have brought about poverty into the farming communities and they are neglected hence the project cannot take shape anymore.

The other challenge was the lack of monitoring for the entire project so as to see the progress and what was to be done next. This challenge came as a result of lack of logistical organisations and finances to monitor the entire farm block. One participant said:

> This program did not come with an implementation plan. I do not know if it was a political move or motivated program or not. This is because any program in government is planned and an implementation program drawn where monitoring is the main feature. The Luswishi farm block did not come with this part of implementation part so it is difficult for us as front-line officers to implement the program we do not have guidance.

Another participant added that:

> Any project needs monitoring so as to understand the progress and report how far the implementation was taking place. However, the lack of implementation brings the project to a lack of direction where reporting is concerned, and this is the actual situation for

> this farm block. Sometime we just receive instruction from the Lusaka to take potential investors to the area for viewing.

The other challenge in this farm block is the lack of cooperation between the project planners and community. This has resulted into the farm block not having support for corporative formation so that they plan and trade as an organised entity. One Ward Development Committee participant said:

> When this farm block idea was being told to us, we were told that we have a number of cooperatives which will be operating in the farms. Since that time up to today, we have not been able to see a cooperative coming to register us or even us coming up with one. We do still remain in the dark not know where we are in terms of what we were told because of this disorganization.

A farm block is an area where communities have to work together and meet the common goal of providing services to the other communities. In doing so, this can be achieved through collaborative work and togetherness.

The foregoing findings are supported by Mercado (2015) whose study found that the challenges which the project faced included that lack of effective monitoring mechanisms. Some parts of the farming communities were not well demarcated resulting into boundary wrangles, road blocking and none completion of the project infrastructure in far areas where the roads were impassable. This made the government and the funding communities lose funds as the planned implementation scheme was not monitored for quality assurance. In addition, Valdellon (2009) also support that the challenges the rural farming communities faced included the lack of quality assurance monitoring to enable the farming community to follow the planned purpose for their farms. In other instances, the farms were found to be grazing areas and others were turned into garages because they were not well monitored by the authorities to ensure land management compliance is followed. Therefore, the challenges faced by the Luswishi farm block were not new to the

world but were supposed to be controlled so that the area is made to meet the goal it was created for, bring about balanced regional economic development in the rural communities of Zambia.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter gives a concise account on the findings of the entire research. It then provides suggestions that can be taken into consideration to improve the current investment scenario regarding development of Luswishi farm block within the City-region.

6.1 Conclusion

Arising from the study, it clearly shows that the development of Luswishi farm block has triggered backward and forward linkages taking place within the City-region which have culminated into employment opportunities to people, to investors and agri-businesses such as agro value-chain at various levels. The linkages have been in form of visible and invisible flows of people, capital, goods, information and technology between rural and urban within the City-region. These linkages have brought about jobs which have contributed livelihood improvements to both the rural and urban people. Agro value-chains have also gained agri-business improvements in terms of increased market for goods and services. Investors in the farm block are buying packaging materials, fuel, machinery spare parts, power bills to ZESCO, fertilizers, agriculture inputs, hiring of haulage services whilst on other hand, they are selling/exporting their finished products (feed, soap, edible oils, flour) to wholesalers across the City-region and beyond.

In view of the above, it is clear that the move to develop Luswishi farm block was a good one. However, the research has indicated that there is weak institutional framework attributed to lack of specific policy leading to weak implementation capacity on farm block development. This has led to some important desired objectives, such as small scale farmer outgrower scheme as well as installation of other physical and social infrastructure, not be implemented. This weak setup further adversely affected coordination, monitoring and evaluation; a situation which has led to inability to a progressive technical guidance through the cycle of implementation. This implies that there is no guaranteed sustainability of the farm block especially when the investors decide to pull out and go

elsewhere. The notion is that development must be human centered. Hence from its onset it must be inclusive of all categories of stakeholders in its implementation process. Therefore, if local people take meaningful participation in the farm block development, there would be no absolute dependence on foreign investment; this means the investment shock can be less devastating and thereby guaranteeing sustainability of the farm block development.

Arising from the study, it is worth noting that the conventional dichotomy between rural and urban spaces still dominated in the development thinking of Luswishi farm block as evidenced in the planning actions where development of rural areas is thought to be purely through agriculture based. The processing plant was placed in the urban part of the City-region while the plantation was right in the rural part of the City-region. As a result, the resulting linkages are only strong in production and commodity flows while weak in information and people flows. Hence there is need to revisit the entire development mechanism of Luswishi farm block and provide strategies like models that can strengthen and balance the impacts of rural-urban linkages and bring about human centered development.

6.2 Recommendations

The results from the research have also indicated that development of rural areas is not synonymous with well-being of agriculture; benefits were seen to be ranging from agro-value chains to other value chains within the City-region and people were benefiting from them. Hence new strategies are needed to be devised to ensure that Luswishi farm block achieve its full economic and social potential in a sustainable way. The following recommendations concentrate on suggesting measures such as specific policy mechanisms that can provide proactive planning principles and adaptive institutional structures that can provide sustainable, inclusive and appropriate agro-investment models to strengthen the current linkages.

1. **Local Economic Development and Regional Network Model**

- There is need to modify the current cluster model and happenings in Luswishi Farm Block into Local Economic Development Strategy (LEDS) to ensure that private sector, public sector and community sectors have a meaningful participation in its development.

- The Regional Network concept is based on rural-urban linkages which do not rely on a single center to lead regional growth. Relations among centers are more horizontal, complementary and reciprocal.

2. **Policy Review**

- There is need to have a specific policy to give guide on the formulation of Farm Block Development Plan in which concepts and models like those proposed above must be well stipulated.

3. **Planning and Institutional Framework**

- Regional planning's institutional framework must be reviewed and updated to respond to changing values and conditions. Likewise, planning and its laws must be properly harmonized at sub-national level to improve sectoral integration in regional planning.

- Decentralization must be fully implemented so that all local institutions are falling under one local institutional framework for forging mandates clearly and ensure proper coordination.

- There is need to embrace the contemporary integration concepts as embodied in the 7NDP and IDP Guidelines. This will enable public institutions to stop planning and performing regional tasks in isolation and thereby minimizing the existing institutional gaps and inconsistences in matters of collective responsibility.

- In addition, general institutional weaknesses need to be addressed within a programme-based approach to facilitate implementation of a well-structured and prioritized investment framework.
- Land use planning and Land administration need to be improved in order to achieve sustainable land management by enhancing security of tenure of smallholder farmers, through efficient and effective land policies, legislation, and certification.
- There is need to enhance an improved understanding of rural-urban linkages amongst regional planning players as this will provide a basis for measures that can improve both urban and rural environments as well as livelihoods that occur in both rural and urban areas.
- Develop regional development policy which can also be infused into rural-urban approaches for symbiotic regional development as the future of rural economies is heavily dependent on focusing on the interdependencies and commonalities rather than on differences.

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Appendices

Questionnaire One *Code Number: ……*

THE UNIVERSITY OF ZAMBIA

SCHOOL OF NATURAL SCIENCES

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES
MASTER OF SCIENCE IN SPATIAL PLANNING
Interview Guide Government Institutions: Planning of Luswishi Farm Block and its Impact on 'City Region'

Dear Sir/Madam,

I am a student at the University of Zambia, pursuing a Master of Science Degree in Spatial Planning. As part of my studies, I am conducting a research on the Planning of Luswishi Farm Block and its Impact on 'City-Region' (i.e. Lufwanyama, Kalulushi, Kitwe and Ndola) of Copperbelt Province.

You have been selected to be interviewed and I would greatly appreciate your assistance. This is purely an academic exercise and therefore all the information that will be availed to me will remain strictly confidential and for academic purposes only. Your timely and sincere responses will be highly appreciated. The results from the data I am collecting will be used for the production of a Dissertation in partial fulfillment for the award of the Master of Science Degree in Spatial Planning.

Pre-Interview Information

Name of Respondent (Optional)	
Name of Position (Optional)	

Name of Institution/Organization	
Department Name	

a) Planning, Policy and Institutional Structure

1. Please, explain the legal mandate of your institution?

   ……

   ……

2. What roles does your institution play in regional planning and development?

   ……

   ……

3. What other institutions does your institution collaborate with in carrying out these roles?

   ……

   …….

4. Please explain how you collaborate with these institutions in the development of Luswishi farm block;

   ……

   ……

5. Please explain how the public participated in planning and development of Luswishi farm block;

   ……..……

   …….....

6. What development model or theory was used in planning/designing of Luswishi farm block?

   ……

   …….

7. Please explain why the development model or theory was preferred?

   ……

   ……

8. Is the development model or theory responding according to the desired results?

   Please explain;

   ……

   ……

9. Were there planning principles/approaches incorporated into planning/design of Luswishi farm block to ensure sustainability of its operation and existence? Please explain;

   ……

   ……

10. Is there a deliberate policy governing the planning and development of farm blocks? Please explain;

    ……

    ……

11. Please explain if there have been any monitoring and evaluation of the Luswishi farm block development;

    ……

    …….

b) Linkages between Luswishi farm block and the City-region

1. Please explain if there has been existence and flow of materials between the Luswishi farm block and City-region (i.e. Lufwanyama, Kalulushi, Kitwe and Ndola).

   ……

   ……

i) Agro-based Industry (millers/processing, packaging, value chains, capital, etc.) and their spatial location within the City-region.

   ……

   ……

   ……

ii) Agricultural Support Services (i.e. repair, transport, information, extension services, credit facilities, storage, land alienation etc.) and their direction in the City-region.

   ……

   …….

iii) Non-agricultural Services (i.e. health, education, security, land survey etc.) and direction and spatial location within the City-region.

   ……

iv) Non-farm and farm jobs (i.e. trade, ploughing/tilling etc.) and their direction and spatial location within the City-region.

……

v) Goods and People (i.e. labour, crop produce, raw materials, inputs, tools/equipment, processed products etc.) and their directions within the City-region.

……

vi) Technology and Innovations (i.e. tools/equipment, methods and practices etc.)

……

2. Please, where possible, quantify the trends or indicate the frequency of the above material flows from the time Luswishi farm block became operational.

……

c) Impacts of Luswishi farm block on the City-region

1. Please explain if there have been impacts on City-region through creation of Luswishi Farm Block.

……

i) Has there been strengthening of rural-urban linkages in terms of agro-trade and investments within the City-region? Please explain;

……

ii) Has there been agricultural intensification (rural infrastructure, production incentives, education & capacity to adopt/adapt innovation)? Please explain;

……

iii) Has there been rural income and demand for non-agricultural goods and services? Please explain;

……

iv) Has there been cash increased crop production and agricultural diversification. Please explain;

……

v) Has there been increased agricultural production and food security?

……

vi) Has there been creation of employment opportunities within the City-region?

……

d) Challenges

2. Please explain if there have been any other investment opportunities that have been created within the 'City-region' through the development of Luswishi farm block;

……

3. Please explain if there have been challenges that your institution experiences in the planning and development of Luswishi farm block.

   ……

4. Please explain how these challenges have impacted interaction and interdependence of the farm block and City-region.

   ……

5. Please explain what measures can be put in place to curb the challenges you explained above;

   …….

END OF INTERVIEW

THANK YOU VERY MUCH FOR YOUR TIME

Questionnaire Two *Code Number: ……*

THE UNIVERSITY OF ZAMBIA

SCHOOL OF NATURAL SCIENCES

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES
MASTER OF SCIENCE IN SPATIAL PLANNING
Interview Guide for Private Companies: Planning of Luswishi Farm Block and its Impact on 'City Region'

Dear Sir/Madam,

I am a student at the University of Zambia, pursuing a Master of Science Degree in Spatial Planning. As part of my studies, I am conducting a research on the Planning of Luswishi Farm Block and its Impact on 'City-Region' (i.e. Lufwanyama, Kalulushi, Kitwe and Ndola) of Copperbelt Province.

You have been selected to be interviewed and I would greatly appreciate your assistance. This is purely an academic exercise and therefore all the information that will be availed to me will remain strictly confidential and for academic purposes only. Your timely and sincere responses will be highly appreciated. The results from the data I am collecting will be used for the production of a Dissertation in partial fulfillment for the award of the Master of Science Degree in Spatial Planning.

Pre-Interview Information

Name of Respondent (Optional)	
Name of Position (Optional)	
Name of Institution/Organization	
Department Name	

a) Impacts of Luswishi farm block on the 'City-region'

1. What type of investment has your company engaged into the Luswishi farm block?
   ……
2. When was the investment established in Luswishi farm block?
   ……
3. Please explain how and why you decided to take your investment or business to Luswishi farm block?
   .....
   .
4. Where and how do you access markets for your products?
   ……
5. Please explain the development incentives the company is privileged to benefit from by investing in Luswishi farm block?
   ……..
6. Roughly how many employees has your company employed with regard to the investment in Luswishi farm block?
   ……
7. Please explain where your market is or where your clients are for your produce or supply.
   …….
8. Are there any partnerships existing between your company and other organizations?
   …….

b) Investment Challenges

9. Please explain the challenges that your company experiences regarding its investment in Luswishi farm block;
   ……
   i) Infrastructure
      ……
   ii) Labour
      ……
   iii) Regulations
      ……
   iv) Markets
      ……
   v) Services
      ……
   vi) Capital

……

vii) Competition

……

10. Please explain the measures that you think can be put in place to curb the challenges you indicated above.

……

……

11. What are your company's future plans in Luswishi farm block?

……

END OF INTERVIEW

THANK YOU VERY MUCH FOR YOUR TIME

Questionnaire Three *Code Number: ……*

THE UNIVERSITY OF ZAMBIA

SCHOOL OF NATURAL SCIENCES

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES
MASTER OF SCIENCE IN SPATIAL PLANNING
Interview Guide for Farmer Organisations: Planning of Luswishi Farm Block and its Impact on 'City Region'

Dear Sir/Madam,

I am a student at the University of Zambia, pursuing a Master of Science Degree in Spatial Planning. As part of my studies, I am conducting a research on the Planning of Luswishi Farm Block and its Impact on 'City-Region' (i.e. Lufwanyama, Kalulushi, Kitwe and Ndola) of Copperbelt Province.

You have been selected to be interviewed and I would greatly appreciate your assistance. This is purely an academic exercise and therefore all the information that will be availed to me will remain strictly confidential and for academic purposes only. Your timely and sincere responses will be highly appreciated. The results from the data I am collecting will be used for the production of a Dissertation in partial fulfillment for the award of the Master of Science Degree in Spatial Planning.

Pre-Interview Information

Name of Respondent (Optional)	
Name of Position (Optional)	
Name of Institution/Organization	
Department Name	

a) Impacts of Luswishi farm block on the City-region

1. What is the purpose of your organization?

   ……
   .
2. Did your organization take part in the planning/design of Luswishi farm block?

   ……
3. Please explain what roles your organization plays in the development of the Luswishi farm block?

   ……
4. Please explain if there has been any form of collaboration with public/private institutions in the development of Luswishi farm block;

   ……
5. Please explain if there have been impacts on City-region through creation of Luswishi Farm Block.

   ……

   vii) Has there been strengthening of rural-urban linkages in terms of agro-trade and investments within the City-region? Please explain;

   ……

   viii) Has there been agricultural intensification (rural infrastructure, production incentives, education & capacity to adopt/adapt innovation)? Please explain;

   ……

   ix) Has there been rural income and demand for non-agricultural goods and services? Please explain;

   ……

   x) Has there been cash increased crop production and agricultural diversification. Please explain;

   ……

   xi) Has there been increased agricultural production and food security?

   ……

   xii) Has there been employment created opportunities within the City-region?

   ……

   xiii) Has there been reduction in the vulnerability small scale farmers?

   ……

   xiv) Has there been sustainable use of Natural Resource base?

   ……

6. Please, where possible, quantify the trends or indicate the frequency of the above material flows from the time Luswishi farm block became operational.
   ……
7. Please explain if there are any opportunities for which your organization has identified with the coming of Luswishi farm block;
   ……

b) Organizational and Investment Challenges

8. Please explain if there are any challenges your organization experiences in line with the development of Luswishi farm block;
   ……
9. Please what measures would you suggest for curbing the challenges you have highlighted above?
   ……

END OF INTERVIEW
THANK YOU VERY MUCH FOR YOUR TIME