Towards an appropriate model for skills transfer to land reform beneficiaries in South Africa

by

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DECLARATION

I, Mutondi Priscilla Mmushi, declare that the dissertation, which I hereby submit for the Master's degree in Agricultural Rural Development at the University of Pretoria, is my own work and has not been submitted by me or anyone for a degree at this or any other tertiary institution.

SIGNATURE: MP MMUSHI

DATE:

DEDICATION

This work is dedicated to my husband, Tshepo Joseph Mmushi, for his unfailing love, support, motivation and inspiration, to my 4-year old daughter, Bontle Munaka Mmushi, for being a well-behaved daughter throughout, and to my 18 months old son, Omphile Tshepo Mmushi, whose presence gave me strength to complete my dissertation.

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ABSTRACT

Land reform is important as it serves as a means to redress the imbalances created by apartheid. Evidence revealed that the land reform programme in South Africa has not been fully effective. This is partly because of lack of focus on the post-settlement support by Government or other interested stakeholders such as the private sectors, Non-Governmental Organisations (NGOs) as well as government entities. Lack of skills amongst land reform beneficiaries is one of the critical elements identified to be problematic in South Africa and leads to failure of these emerging farmers.

The South African government has introduced programmes, such as the Recapitalization and Development Programme (RECAP), the Comprehensive Agricultural Support Programme (CASP), and the Comprehensive Rural Development Programme (CRDP), to address the issues of post-settlement support. Skills transfer to land reform beneficiaries was one of the issues that RECAP tried to address. The Department of Agriculture introduced extension services to the land reform beneficiaries as a means to transfer skills to land reform beneficiaries. The Department of Rural Development and Land Reform also played its part through RECAP by introducing strategic interventions (strategic partners and mentors) to ensure that necessary skills are transferred to farmers. Other than government departments, NGOs, commodity organisations, and private sectors have been participating in ensuring that the skills of the land reform beneficiaries are developed. Despite this, evidence shows that the efforts made by both government and other involved stakeholders are not really effective in all the provinces across South Africa.

The main objective of this study was to identify an appropriate skills transfer model for land reform beneficiaries in South Africa. Successful models that exist in Brazil, Kenya and China, were studied to identify and propose a skills transfer model that could best suit South Africa. In addition, the study used data and information from secondary sources such as government, NGOs, private sector, and reviewed existing literature on issues around skills transfer to emerging farmers and land reform beneficiaries. A comparative analysis was done on the existing skills transfer models from the three countries and South Africa.

The analysis revealed certain common characteristics in the skills transfer models that exist in China, Kenya and Brazil, and also revealed how these models differ from the existing models in South Africa, thereafter distinguishing the success of these models from the failures. Over and above the most-used and successful model in the three countries, is the pluralistic type of model that involves working together of government, non-governmental organisations, and the private sector. What is much more appealing with this latter model is the fact that it takes into account the participatory, bottom–up approach, where farmers are engaged in whatever skills needs that have to be transferred to them.

Literature revealed that the differences between the models that exist in South Africa relate to the involvement of research in skills transfer, unclear policies on skills transfer. The policies are not clear in explaining the institutional arrangements, roles and responsibilities of the different parties that have the ability to assist farmers or transfer skill and the monitoring and evaluation framework of skills transfer. The pluralistic approach, if well designed and taking into all aspects mentioned above, could be very effective for South African land reform beneficiaries.

Key words: Skills transfer, land reform beneficiaries, smallholder farmers

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LIST OF ACRONYMS

AESTF: Agricultural Extension Special Task Team Force

ANC: African National Congress

ATE: Agricultural Technical Extension System

CASP: Comprehensive Agricultural Support Program

CB: Capacity Building

CPFSP: Community Project Fund for Support Programme.

CRDP: Comprehensive Agricultural Programme

DAFF: Department of Agriculture, Forestry and Fisheries

DRDLR: Department of Rural Development and Land Reform

EC: Eastern Cape

FAO: Food and Agriculture Organization

FFS: Farmer Field Schools

GP: Gauteng

ICT: Information and Communication Technologies

IGDP: Integrated Growth and Development Plan

KZN: KwaZulu-Natal

LARP: Land and Agrarian Reform Project

LP: Limpopo

LRAD: Land Redistribution for Agricultural Development

NAFU: National Agricultural Farmers Union

NC: Northern Cape

NDA: National Development Agencies

NDG: National Development Goals

NERPO: National Emergent Red Meat Producers

NGO: Non-Governmental Organisation

NW: North West

RADP: Recapitalisation and Development Programme

RDP: Rural Development Programme

RECAP: Recapitalization and Development Programme

RSA: Republic of South Africa

SAPPO: South African Pork Production Organisation

UNDP: United National Development Programme

WC: Western Cape

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CHAPTER 1
INTRODUCTION

1.1 Background

Land reform programmes are regarded as a vehicle to correct the unfairness or inequalities suffered by disadvantaged people. The land reforms programmes are also used to encourage growth and sustainable development. This has been achieved through providing previously disadvantaged people with land. Post-apartheid, the democratic government developed the Reconstruction and Development Programme (RDP) as a policy framework that is intended to encourage an essential, economic revolution, based on the ethical and social foundation of humanity (Jacobs and Hart, 2014).

It was through the RDP where land reform was identified as a key component to meet the needs and build the economy. Land reform was considered to be a catalyst for a programme for rural development and set a target of 30% redistribution of the agricultural land within five years of the democratic government. The Department of Rural Development and Land Reform (DRDLR) was mandated to implement land reform based on three pillars, namely, redistribution, restitution and tenure. Redistribution pays attention to different needs of people for land in an affordable, equitable way and simultaneously contributing to poverty reduction and economic growth. Restitution is aimed at restoring the land. Land tenures aimed at upgrading the various tenure arrangements for disadvantaged individuals (Jacobs and Hart, 2014).

As part of the land reform endeavours, the Recapitalization and Development Programme (RECAP) was rolled out and launched in 2010, with the aim of increasing agricultural production, eliminating food insecurity, graduate smallholder farmers to commercial farmers, contributing to employment in the agricultural sector, and establishing rural development monitors. As a means to achieve the objectives of RECAP, strategic partnership and mentorship was introduced as a model for transferring necessary skills to land reform beneficiaries. There are, however, a number of agencies, private sector, and service providers who are involved in ensuring that skills are being transferred to smallholder farmers. The question arises as to how effective these strategies for skills transfer are (Jacobs and Hart, 2014).

It is crucial for farmers to have access to farm resources and farming skills in order to maximise their productivity. After 1994, the new democratic government made commitments to lessen the inequity experienced between farmers during the years under the apartheid regime. Different models or strategies were put in place to ensure skills transfer through the RECAP programme and other government programmes for farmers in South Africa. Agriculture is regarded as a complex, rapidly modernising sector, and this therefore requires that farmers be capable of managing their farms in order to ensure effective adaptation changes in the sector. The transfer of skills is therefore a crucial element in improving the effectiveness of farmers in the agricultural sector (Khapayi and Celliers, 2015).

It is known that some farmers have the relevant farming skills, such as those relating to crop farming, cattle farming, pig farming, and fish farming. Nonetheless, in the face of changing and increasingly erratic agricultural conditions and technological advancement, it is essential that farmers be flexible and modern to ensure that feasibility and sustainability is maintained. The changing and increasing advances in technology maximise agricultural productivity. Diversification plays a critical role in risk reduction and income sustainability. For these reasons, skills transfer and the amalgamation of skills contribute to success in the agricultural sector (Machethe, 2004).

Horwitz et al. (2011), agreed that the development of knowledge and skills for members who were previously disadvantaged is one major issue in addressing food security, existing inequalities, and unemployment. During the apartheid era, skills development or access to skills was only permitted for white citizens, while the non-white citizens had no access to skills. This discriminatory act has had a negative impact, as it has resulted in a large number of black people who are unable to experience vertical growth, particularly the smallholder producers. This has made it more difficult for individuals, even after obtaining their land. to be able to utilise their land to its maximum potential (Silolo and Oladele, 2012).

Agriculture is traditionally understood to be a sector in South Africa that is dominated by white people. This agricultural sector has been in media and academics debates, particularly with regard to its reform, which also takes into account ensuring that the land reform beneficiaries are equipped with agricultural skills. The aim of the South African Government, as well as the private sector, is to engage in reform developments and the sector of agriculture since agriculture

is a major building block of the economy. One imperative issue identified is the readiness of the land reform beneficiaries or smallholder farmers to engage in some of the farm managerial activities to ensure that their farming becomes productive (Jacobs and Hart, 2014).

1.2 The research problem

The lack of farming skills hinders factor empowerment of farmers in South Africa. The agricultural sector is modernising and this is evident from an increasing reliance on modern systems of technology. The inadequate skills of farmers limit their agricultural development and prevent farmers from taking advantage of natural resources acquired (Machethe, 2004). A farmer with all required skills is able to make decisions and is also capable of going beyond the technical requisites. Agricultural extension services in South Africa are aimed at providing a farmer with relevant advice as required by that farmer, including advice on marketing issues, technology adaptation, financial information management, and farming strategies (Gbetibouo et al., 2010).

To date, extension has been seen not effective, resulting in a major setback to the development and productivity maximisation by farmers, including land reform beneficiaries. The democratic government has succeeded in providing arable land to the disadvantaged black individuals, but with a lack of skills, farmers are still struggling to turn these natural resources to commercially viable enterprises that would improve their livelihoods while increasing food security in the country (Terblanche, 2011).

Government has introduced various strategies in endeavours to capacitate farmers, such as strategic partnership and mentoring. The strategies have had the intention of transferring skills to farmers from the relevant skilled individuals or NGOs. In 2012/2013, an implementation evaluation of the Recapitalization and Development Programme was undertaken. The evaluation was aimed at providing the Department of Rural Development and Land Reform, as well as relevant beneficiaries, with information on how the implementation of RECAP could be improved. One of the critical findings was on strategic partnership and mentorship (Enterprises, 2013).

The study revealed that mentorship and strategic partnership are not resulting in the effective skills development of farmers across the country, particularly the land reform farmers. There is

still a great variation in skills transfer to land reform farmers in the different provinces. Although the mentorship and strategic partnership skills transfer models have been put in place, they are still not reaching out to most land reform beneficiaries across the country. The private sector and various agencies are also showing an interest in transferring skills to the land reform beneficiaries. However, they are not effective due to the unclearly defined roles and responsibilities between government, private sectors, agencies and commodity organisations. It is therefore clear that an appropriate skills transfer model, does not exist yet in South Africa. There is a necessity to review skills transfer models in other countries and to draw lessons from their experiences.

1.3 Main objective of the study

The main objective of this study is to identify an appropriate skills transfer model for land reform beneficiaries in South Africa.

1.4 Specific objectives of the study

1.4.1 To outline the skills needed by land reform beneficiaries to effectively manage their farms;

1.4.2 To identify the shortcomings in the existing skills transfer model for land reform beneficiaries in SA;

1.4.3 To review skills transfer models adopted in various countries to capacitate farmers; and

1.4.4 To identify key characteristics of successful skills transfer models.

1.5 Definitions of key concepts

Skill

A skill is defined as an important tool for any progress to be made within the sectors of the economy. Skills deficit occurs when the level of skills supplied and used is below the desirable level (Hallinger and Heck, 2010).

Capacity Building

In order to understand capacity building, Hallinger and Heck (2010), explained the meaning of the term capacity. They defined capacity as being both a process and an outcome that occur in order to carry out certain actions. Otsuka and Larson (2012), considered it as the ability to carry out stated objectives.

Land reform

Land reform is the redistribution of land, coupled with the right to acquire it, which is afforded to the landless farm labourers as well individuals (Cousins, 2007).

Beneficiaries of land reform

Land reform beneficiaries comprise all the previously disadvantaged individuals who lived during the apartheid era and who have benefited from the land reform programme (Cousins, 2007).

1.6 Organisation of the dissertation

This dissertation is presented as follows. Chapter 2 reviews previous literatures. Chapter 3 explains the research and methods that has been applied to carry out this dissertation. Chapter 4 defines the skills that are required by land reform beneficiaries. Chapter 5 explains the shortcomings in the existing programmes or models of skills transfer revealed in the literature review. Chapter 6 discusses the case of Brazil with regard to their skills transfer model and reveals the characteristics of the models that exist. Chapter 7 discusses the case of Kenya and reviews their skills transfer model and reveals the characteristics of the models that exists. Chapter 8 discusses the case of China and their skills transfer model and reveals the characteristics of the models that exist. Chapter 9 discusses Chapters 4, 5, 6 and 7, and then proposes the best skills transfer model for South Africa. Chapters 9 and 10 set out a summary of the major findings, conclusions, and recommendations.

CHAPTER 2
LITERATURE REVIEW

This chapter examines what the literature says about the need for skills transfer models for land reform beneficiaries. It also elaborates on the existing programmes supporting the smallholder farmers, while the different programmes and their implementation processes will be explained through discussing previous studies.

2.1 Land reform in South Africa

A land reform programme was designed and implemented by government in the year 1994.The programme's intentions are to rectify the inequalities of forced evictions and the previous denials of access to land by black farmers. The programme is geared to provide previously disadvantaged individuals access to natural resources, such as land, to enhance their living conditions and address the problem of food insecurity. The land reform programme is comprised of three sub-programmes, namely restitution programme that deals with the restoration land to the rightful owners, redistribution that utilises grants to help underprivileged people to obtain land, and land tenure that deals with security of an individual's rights to own the land (Jacobs and Hart, 2014).

Greenberg (2010) argued that land reform may result in a decrease in agricultural production at first, and his view was based on the radical change of the production arrangements. Cousins (2009), explained the importance of land in the rural areas, and emphasis was placed on how rural people rely on land as the source of their daily food as well as income. If land is secured for rural people, increased food production will be realised. While it is true that, to some extent, the South African Government has succeeded in rolling out land reform programmes, the evidence has nevertheless shown unease in that some of the redistributed land is not utilised to its maximum, and this is due to various limitations (Cousins, 2007).

Greenberg (2010), indicated that land alone is not enough to ensure food security and reduction of poverty (land cannot be viewed as a panacea). They argued that other aspects, such as financial services and farming expertise, are essential to ensure that a beneficiary becomes successful and productive. Greenberg (2010) agreed with Cousins (2007), as they alluded to the

fact that investments and technical advice, as well as skills transfer for land reform beneficiaries, are vital and they complement the land. The enforcement of land reform was a great move for South Africa, although it is criticised to a certain level. This view was confirmed by a Food and Agriculture Organisation (FAO) report which explained that the South African Government focused more on the number of black individuals and hectares to be allocated than other valuable resources such skills and knowledge that makes land more productive (FAO, IFAD and WFP, 2015).

Government prioritises land reform as a form of redress for past issues of dispossession. Some 30% of agricultural land is targeted to be transferred to black ownership by 2025 (FAO, 2015). However, land reform success has been limited to date, with no sustainable production or economic growth. This is because many beneficiaries lack the necessary production skills and business acumen to farm effectively. There is a need for mentors and strategic partners to help emerging farmers succeed. However, it was reported in July 2016 that land reform had the potential to deter investment in agribusiness activities and that the growing exodus of South African farmers could have a detrimental impact on the agribusiness sector, depriving it of knowledge and skills (Jacobs and Hart, 2014).

The 2014 Agricultural Policy Action Plan noted that small-scale commercial farmers, of whom land reform beneficiaries are a subset, are disappearing at an alarming rate. Small farms being taken out of the market by larger producers who survive because of economies of scale. These findings, point to the urgent need to retain existing skills in the sector, and to mentor emerging farmers in management skills and enterprise development in the field (Feder et al., 2006).

To assist with skills development within the different sectors of the economy, Sector Education and Training Authorities (SETAs) were established under the Skills Development Act. The AgriSETA seeks to regulate skills development in the agricultural sector. However, the question that is being raised in many relates to the extent to which AgriSETA and affected stakeholders, who are supporting the farmers, work together to ensure that the roles and responsibilities in the skills transfers to farmers are being regulated. It is not established that there is a clear system in place to ensure that clear skills audits are undertaken for those who are transferring skills and those who are receiving the skills (Adendorff and Ortell, 2011).

The AgriSETA carried out an analysis in 2010 that revealed a wide range of scarce skills in the agricultural sector, particularly among the land reform beneficiaries. The small-scale farmers were found to have minimal or no skills with regard to farm management, entrepreneurship, record keeping, financial planning, decision making, management, marketing processing, and packaging. It is quite clear that the land reform programme in South Africa has focused on ensuring that land is given back to as many rightful owners as possible, but did not take into account the post-settlement support. This is particularly noticed as a gap in ensuring that the land beneficiaries are equipped with the necessary skills to ensure that their farms become successful and there is productivity within their farming businesses (Adendorff and Ortell, 2011).

Evidence has shown that there is land that is still underutilised, although it belongs to its rightful owners. The reasons behind this underutilised land are that the beneficiaries have neglected the land because they do not know how to operate on the land. The South African Government realised its failures on the issue of post-settlement support and thereafter developed policies and implemented various programmes to ensure that the land reform beneficiaries receive relevant skills to ensure success in their farms. Private sector, NGOs, and commodity organisations have joined forces to ensure that the new entrants to farming receive the necessary support with regard to skills and capacity building (Greenberg, 2010).

The South African Government, through national departments and state-owned entities, has developed a number of policies, such as the National Extension and Advisory Services Policy, which aim at responding to the local, national, and global demands in the fields of agriculture, forestry and fisheries. The policy was also aimed at addressing the concerns of the land reform programmes. The policy takes into account the fact that the extension aspect is part of the many other services needed by farmers for acquiring relevant skills and knowledge to enhance their productivity. The National Extension and Advisory Services Policy has various strategic objectives (Horwitz et al., 2011) that are discussed below.

2.2 Post-settlement support programmes for land reform beneficiaries

The post settlement support refers to the programmes that were introduced after the land reform programme. The support programmes were designed to ensure that the farmers are able to utilise their land and be more productive. Below are the programmes that were introduced to farmers.

2.2.1 Recapitalisation and Development Programme in South Africa (RECAP)

RECAP was initiated in 2010 for communities and farmers who obtained land through the land reform programme, but did not receive support to sustain their production. The Programme addresses issues regarding the revitalisation of irrigation schemes, government farms, and private farmers who owe amounts to institutions that provide credits. The Department of Rural Development and Land Reform (DRDLR) committed itself to recapitalising over one thousand unproductive and underutilised farms. The initiative is designed to enhance production and food security, to graduate small-scale farmers into commercial farmers, and to contribute to job creation within the sector. Overall, the Recapitalisation and Development Programme (RADP/RECAP) objective can be summarised to: (i) enhance production in agriculture; (ii) ensure food security; (iii) move smallholder farmers into the commercial farmer category; (iv) establish job opportunities in the agricultural sector; and (v) establish development monitors (Enterprises, 2013).

The RECAP/RADP constitutes the strategic intervention to try to address the issues of transferring skills to the beneficiaries. The strategic interventions comprise strategic partnership and mentorship. The plan was for the land reform beneficiaries to enter into a contract with partners who are considered to be strategic or qualified mentors in order to acquire skills and knowledge with regard to managing their farms (Enterprises, 2013).

2.2.1.1 Strategic partnership

- The land reform beneficiaries were expected to enter into contracts with a strategic partner from the private sector, and they are then expected to work closely together. The following different strategic partnerships exist.

- Contract Farming, which emphasises an agreement between a processor and a farmer. The farmer would be expected to provide a specific commodity in the agreed quantity and according to quality standards specified by the processor or the receiving firm. Such firm was expected to also provide the necessary support to the farmers.

- Co-management, where a number of actors negotiate and agree on the fair share of the functions related to management, responsibilities and entitlements for a given activity.

- Share equity, which is an arrangement whereby land reform beneficiaries buy shares in an agricultural enterprise or company responsible for processing, and the idea of the scheme was to try to incorporate private sector participation in the land reform processes. (Enterprises, 2013).

2.2.1.2 Mentorship

In this strategy, the more skilled farmers, or those with higher expertise, were expected to guide and provide coaching to the land reform beneficiaries who were obviously less experienced. The idea was to develop the technical and management skills of farmers. The commercial farmers would be the perfect individuals to becoming mentors, as they have experience and can assist the smallholder farmers to graduate into becoming commercial farmers themselves. Such mentors are assigned to various activities or projects in relation to the skills and knowledge that they possess (Enterprises, 2013).

2.2.2 Micro-Agricultural Financial Institution of South Africa (MAFISA)

The Micro-Agricultural Financial Institution of South Africa was introduced through the Department of Agriculture, Forestry and Fisheries with the aim of ensuring that land reform beneficiaries have the financial support needed to run their farms. The finances of MAFISA were initially managed or overseen by the Land Bank, and then later moved to intermediaries (Hall and Yoganand, 2004). Other than finance, MAFISA provides production inputs, such as fertilisers and pesticides, to its successful applicants. One critical issue noted regarding this kind of support is that although it has assisted some farmers, it does not provide skills transfer or development of the farmers in terms of their capacity. It is therefore important to realise that some of the farmers who were successful in receiving the finance might have nevertheless failed due to their lack of skills to manage their finances (Khapayi and Celliers, 2015).

2.2.3 Comprehensive Agricultural Support Programme (CASP)

Realising all the problems encountered by farmers after receiving their farms back, the South African Government, through the Department of Agriculture, Forestry and Fisheries, introduced the Comprehensive Agricultural Support Programme (CASP). The programme aims at assisting

by providing support to land reform beneficiaries, particularly the new farmers, to promote development in the agricultural sector and in the overall economy (Cousins, 2007).

The programme focuses on six pillars, which are: regulatory services; business and marketing development; knowledge and information management; advisory and technical assistance; training and capacity building; financial mechanisms; and on- and off-farm infrastructure service. Although the programme was successful, to some extent, it did not show much success in the skills development sector, as its main focus was placed on providing farm infrastructure. Most land reform beneficiaries failed having the access to such infrastructures because they did not have the relevant skills and knowledge for operating and managing such infrastructure (Greenberg, 2010).

2.2.4 National extension support services

Extension is one of the government services that was introduced through the Department of Agriculture, Forestry and Fisheries and was is provided by the Department of Land Reform and Rural Development. The service is intended to provide support to the land reform beneficiaries by providing training and advisory services to ensure that farmers become successful. The problem with the extension service is associated with the lack of trained and skilled extension officers who might be able to provide what is relevant and what the beneficiaries need. The extension officers have been found to be either incompetent or not sufficiently equipped to convey the necessary skills to the farmers. Although government has introduced the Extension Recovery Plan to address the shortcomings of extension services, with the idea of addressing the problem of the skills gap, the programme still has some shortcomings and it is not necessarily benefiting the land reform beneficiaries (Greenberg, 2010)

An extension service is recognised as one of the services that rest on the government sector in most countries. Studies have revealed that a deficit in the capacity of extension officers imposes a negative impact on the rendering of agricultural extension support services to the farmers. There is only a small proportion of smallholder farmers who have access to agricultural extension support and training. Agricultural extension in some countries has not yet made a recognised impact, and a number of cases have shown that this is due to the fact that the

extension practitioners are not adequately trained and they operate without the necessary work tools (Davis, 2008).

2.2.5 Support by other governments departments, development agencies, and private sectors

A number of private, civil society, agencies, and other institutions, such as the Department of Environmental Affairs, the Department of Trade and Industry, the Department of Social Development, Forestry SA, Agro Dealers Associations, the Agricultural Research Council, Agri Ways Development, and Grain Farmers Development Associations, their different roles in supporting farmers at various stages of the value chain. Studies have confirmed that the earlier apartheid government initiatives, as well as the later policies, have ignored or neglected to take into account the extension support that all these stakeholders can offer to land reform beneficiaries. It is clear that the advisory services have been fragmented by various classifications. The advisory service grouping and institutions contribute differently to the overall producer's development, and this can be seen through capacity development, skills transfers, and financial support for the farmers. The support from all these other stakeholders has not been able to make a remarkable impact on smallholder producers of South Africa (Terblanché et al., 2014).

Most of the service providers in the agricultural sector provide what they feel is relevant and appropriate for them. Some of the private sectors and the NGOs engage in extension without having the relevant agricultural skills and knowledge, and this has a huge, negative impact on type of skills transferred to farmers or on the services being rendered to farmers. This eventually causes the smallholder farmers to fail and become more confused (Horwitz et al., 2011).

2.3 Importance of skills transfer to farmers

2.3.1 Challenges faced by farmers

Many developing countries, including South Africa, still recognise and experience the lack of skills as being one of the main challenges in their agricultural sectors. Successful land reform is characterised by farmers with relevant skills and knowledge of using natural resources and who are able to manage the resources. Productive farming requires an individual to have knowledge

of farming, farm management skills, financial management skills, human resources management skills, and product marketing skills. Machethe (2004) has argued that such skills cannot be offered by extension services only, and that training programmes offered by colleges are vital for skills transfers to beneficiaries of land reform.

Terblanche (2011), emphasised the need for mentorship and partnerships for land reform beneficiaries, and he further explained that financial management skills and management skills are best transferred by individuals that possess these types of skills. It is indeed true that mentorship and partnership can be effective in transferring various skills to farmers; however, periodic monitoring and evaluation is necessary to ensure that the skills transferred are relevant skills that the farmer indeed requires.

Chikazunga and Paradza (2012), explained that the agricultural sector in South Africa has little room for smallholder farmers. There is a lack of robust systems available to provide support to disadvantaged black farmers. Zhang et al. (2002), explained that the lack of robust support systems results in farmers not utilising their land to its full potential. The importance of land as a natural resource does not take into account the fact that if land is not coupled with necessary skills and resources to make it productive.

Khapayi and Celliers (2015), defined market participation as an activity that requires skills. The majority of farmers are faced with a challenge in gaining access to formal agricultural markets. This has caused the emerging farmers to disregard the formal markets. The lack of market participation by farmers is one of the factors that affect the development of emerging farmers. The literature by Chikazunga and Paradza (2012),further emphasises the point that there are a number of limitations that restrict farmers in participating in commercial markets. This has a negative impact on emerging farmers as they might never graduate to commercial farmers; hence, marketing skills are required to assist farmers in marketing their products.

The efforts made by farmers to market their commodities are mostly affected by poor infrastructure, inadequate property rights, low education levels among the farmers, lack of credit access, absence of innovative production implements needed to increase yields of the commodity produced, and lack of entrepreneurial skills needed to turn the efforts of the farmers into a success. Research conducted by the National Emergent Red Meat Producer's Organisation has

recognised a number of skills shortages among emerging farmers as constituting a major constraint on growth (Khapayi and Celliers, 2015).

2.3.2 Benefits of skills development to farmers

Farmers require comprehensive skills to ensure productivity and development in their farms. The development of farm workers is crucial because once these farm workers are trained they can then transfer the knowledge and the skills to new farmers. The new farmers will therefore become effective in agricultural production. This will also encourage greater participation in agricultural practices and ensure that land that is underutilised will become better utilised. There are a number of farms and schemes that have previously failed, and some are still failing, because of development models that take little or no recognition of skills, entrepreneurial development, and social realities. The focus has been on establishing networks for farmers and farmer diversification (Chikazunga and Paradza, 2012).

The issue of a green economy is one of the issues that is currently being prioritised or emphasised, and this is stipulated in the National Development Plan and the New Growth Path. This, therefore, requires the use of environmentally sustainable farming practices. Emphasis has been made of the fact that, for these practices to be effective and functional. The appropriate knowledge and skills are therefore required. What is known as 'green knowledge' is imparted through specific training industries, across the different agricultural sectors. There is a need to carry out research and development on the functions of a green economy in the agricultural sector. There is a need for coordination with other sectors within the economy to ensure that farmers and are well trained and skilled for pursuing the green economy (FAO, 2015).

The identified problematic issue in the agricultural sector regarding technological developments and skills transfer required to advance farmers is recognised to cut across the globe. This is quite an interesting case because large numbers of farmers, particularly smallholder farmers and subsistence farmers who were previously disadvantaged, have little or no access to the modern practices and are less exposed to sets of advanced skills needed to enhance their agricultural production (Chikazunga and Paradza, 2012).

Following 1994, and after the previously disadvantaged farmers had received their land back, farmers and the new government were interested and more focused on giving back the land that

had been forcefully taken away from them. Less attention was given to how these black farmers would attain the skills to fruitfully utilise their land for agriculture. Gradually, the government has been trying to ensure that these farmers receive sufficient post-settlement support, through its policy development and engaging with other agencies, as well as private sectors. The importance of the agricultural sector in South Africa has been recognised for many years, and government investment in the development of those individuals working in the sector has been in place since before the country became a democracy (Verschoor et al., 2005).

The South African Government and the other stakeholders have indeed endeavoured to invest in various agricultural projects and activities in efforts to establish ways to ensure that previously disadvantage farmers are exposed to the advanced skills and knowledge of farming required to enhance agricultural production. Notwithstanding all these governmental endeavours, a number of loopholes and factors have hindered the success of these attempts, and the success was therefore never sustainable (Greenberg, 2010).

However, a number of studies have revealed that most farmers or individuals who were previously disadvantaged during the apartheid era are still paralysed from the effects of apartheid as a result of the development gap suffered within that era, and this results in these farmers remaining under developed, with a mind-set that is resistant to change. This is indeed backed up by the fact that most of these farmers or individuals could not access development, education, and skills opportunities, and these individuals are therefore considered to be vulnerable with regard to skills and development in the agricultural sector (Silolo and Oladele, 2012).

An argument proposed by Kraak et al. (2005), is that there are farmers who naturally have the ability to prosper in the agricultural sector, although there seem to be a disjuncture between what these farmers really require or the type of skills that these farmers need, and what government, private sectors, and NGOs propose to give to the farmers. (Kraak et al., 2005),argue that government uses umbrella methods in trying to solve the skills development issues to most previously disadvantaged farmers, and this is considered to be a crisis in the development of these various individuals. Mayer and Altman (2005), agreed with the view of Kraak et al. (2005), and also noted that a situation where skills development for these farmers is left unattended, or is not done in the right manner, might result in serious damage to the economic sectors; hence, the

agricultural sector would not grow and become sustainable, and the unemployment rate would remain high.

According to Adendorff and Ortell (2011), the importance of skills development is to be emphasised, in that economic growth and development is much more dependent on technology innovations, national growth, and development in skills, as well as capital. It is also critical to note that skills development is a crucial element which positively leads to the expansion of farms, strengthening of value chain activities, and the reduction of the unemployment rate.

2.4 Chapter summary

This chapter reveals what the previous studies have reported about the concepts of land reform beneficiaries and smallholder development, and the status regarding existing skills and its effect on the beneficiaries. It is also explained in the chapter that stakeholders such as government departments and private organisations are participating in the agricultural sector, although there seems to be no alignment and proper coordination of the support services that are offered to land reform beneficiaries by these different stakeholders. Over and above the foregoing, the chapter also reveals the need to develop a skills transfer model that can be adopted by all stakeholders.

CHAPTER 3
RESEARCH AND METHODS

This chapter explains the mechanisms and techniques that were employed to ensure the reliability and validity of the data used. Over and above this, the chapter provides a motivation for selecting three countries for further study, namely, China, Kenya and Brazil.

3.1 Motivation for selecting Brazil

In the recent years, the export performance of Brazil (being one of the successful Latin American developing countries) has been recorded to be a success. Brazil has been considered to be one of the largest exporters of leading commodities, which are coffee and poultry. One of the reasons for this success has been the fact that Brazil has developed certain good policies that have driven the success in the agricultural sector. The policies take into account all aspects that lead to maximised production of those commodities, including ensuring that farmers in Brazil have the necessary skills to ensure maximised and quality production (Rada and Valdes, 2012).

Brazil's top produced and exported commodities are sugar cane, soybean, coffee, beef, orange juice, poultry, corn and tobacco. Studies have confirmed that corn is one of the most important products in South Africa, and about $630 million of corn is imported annually. This clearly confirms that there is a high demand for corn in South Africa which must be supplemented with imports, while Brazil, on the other hand, has the capability of producing enough corn for its own consumption and exports to almost 100 countries in the world. Something must have surely gone right with regard to the production system of corn in Brazil, and the Brazilian skills and understanding of corn production is on a high level. It is crucial for South Africa to learn from the Brazilian (Rada and Valdes, 2012).

It is also critical to note that land reform and agrarian reform has been an issue in Brazil in the same way it has been in South Africa. Although there has been some success in South Africa, it cannot be ranked the same as Brazil. Brazil has marshalled its resources well and has implemented various strategies and policies to ensure that skills are transferred to farmers, land reform beneficiaries have advanced in their production systems, and this is something that South

Africa can learn from, considering the similar political struggles encountered. The agricultural sector in Brazil contributes approximately 23,5% to the overall GDP (Rada and Valdes, 2012).

3.2 Motivation for selecting Kenya

Kenya is regarded as being among the developing countries in Africa and has over the years demonstrated its success with regard to agricultural production, with it being among the largest producers of coffee, tea, spices and variety of vegetables. The successful skills transfer strategies that Kenya has adopted to ensure maximisation of their production. There are lessons for South Africa from Kenya to ensure maximised production. Kenya has made good progress in developing policies that take into account the needs of land reform beneficiaries, including farming skills. Kenya's agricultural sector contributes 5,6%to the GDP (Willer et al., 2018).

There are certain common crops that farmers in Kenya produce mainly and in bulk, such as cassava, sweet potatoes, sorghum, millets and cowpeas, and most land reform in South Africa have attempted to grow such products – some with success, and some with failures. Evidence has shown that the farmers in Kenya who specialise in producing these crops have acquired special skills to ensure that their farms become much successful, which is something that South Africa can learn from (Willer et al., 2018).

Kenya is one of the African countries that has gone through land issues just like South Africa has, and has over the years shown success with regard to its citizens receiving their land, particularly for agriculture, and they have made a success from the land received (Willer and Lernoud, 2016). Taking into account the common apartheid struggles of Kenya and South Africa, there is much that can be learned by South African's land reform beneficiaries as to how they might be able to manage their farms to ensure maximum success.

3.3 Motivation for selecting China

China is one of the developing Asian countries and it is considered to have the world's largest agricultural economy. China is known to be among the main producers of wheat, port, rice, tea, cotton and fish. These commodities are similar to what most land reform beneficiaries or farmers in South Africa are producing (Otsuka and Larson, 2012).

The reasons for the success of the maximised production of these commodities include the skills that the country has acquired in ensuring that the production of such commodities is at its best. Over and above this, China contributes 20% of the world's food. Agriculture in China contributes almost 13% to its GDP. This is definitely something South Africa could learn from (Amanor and Chichava, 2016).

Although there are a number of farmers in South Africa who are producing crops such as wheat, cotton, pork and fish, many of these farmers are not achieving maximum productivity because of the lack of skills for ensuring that their commodity farms become successful. Accordingly, it will be critical to do an analysis of what methods of skills transfer are being utilised to ensure that necessary farm or commodity skills are acquired by farmers (Chikazunga and Paradza, 2012).

China has had a series of land reform programmes, some of which became successful and some of which failed in the process. Although the failure of some programmes was a hindering factor, China has over the years been persistent in maximising productivity of their most-grown commodities due to the skills and expertise that their farmers have acquired. Evidence has shown that most farmers in China who obtained land never had any agricultural expertise to produce or to run their farms, but skills were transferred to them over time and they became a success.

Over and above what is critical in these selected countries, they are all developing countries where there is evidence of the best agricultural systems and maximised production of different commodities. They faced a host of land struggle issues, yet have become successful in their own ways. Agriculture is one of the most critical sectors that contribute much to a country's GDP. All these factors are much more common to South Africa.

3.4 Description of the research design

This study was entirely based on secondary sources. Hence, the design and the analysis involve a desktop study of material that is classified as secondary data. The study has also made use of the qualitative secondary data.

3.5 Data collection

A desktop review was done of the existing government policies that deal with land reform in South Africa, skills development, and knowledge transfer. A review was made of the programmes and plans with regard to skills transfer to land reform beneficiaries in South Africa. The interest in reviewing such data was to identify the existing skills transfer models in South Africa, as well as the shortcomings of the strategies. Such information was reviewed from the period when the land redistribution programme came into existence prior 1994, up to the current time. A review of the policies, programmes, and plans of the three recognised developed countries that are also seen to be doing well in the agricultural sector (Brazil, Kenya and China) was done to try to identify the effective skills transfer models for the land reform beneficiaries or the smallholder farmers. Documentation, reports, theses, and previous research studies that have been recently done in the three countries were also reviewed and used as data that has led to this study analysis and recommendation.

3.6 Data analysis

A narrative analysis was done for this study and the focus was placed on narrating what exists as skills transfer models in South Africa, and again points out the shortcomings of the existing skills transfer models for land reform beneficiaries in South Africa. A comparative analysis was also done to compare the information obtained between the three countries (Brazil, Kenya and China) with regard to their successful and effective skills transfer models. The comparison was done on the three countries as well as against South African models. From the comparison, the characteristics of the best model were then identified.

3.7 Chapter summary

This chapter summarises the research design and method used to arrive at the recommendations. Most importantly, this chapter gives the motivation as to why the three countries (Brazil, Kenya and China) where selected. The study used secondary data sources and looked at both quantitative and qualitative data. The data was obtained from government websites in the three countries, and previous research/studies published by NGOs, donors, universities and private sectors. Data from the departments of Agriculture, Forestry and Fisheries and Rural

Development and Land Reform, and from South African NGOs and universities were reviewed. A comparative analysis was done of all the provinces by comparing their models, the implementation of the models, institutional arrangements, roles and responsibilities, and other factors in order to best propose the best model that could be better effective for land reform beneficiaries in South Africa.

CHAPTER 4
SKILLS REQUIREMENT BY LAND REFORM BENEFICIARIES

The literature has revealed that, considering the unstable agricultural environment, farmers need to obtain the necessary skills to ensure that their farming standards keep up with the rest of the world (Lahiff, 2008). This chapter highlights the skills that are needed by land reform beneficiaries to ensure productivity on their farms. The types of skills are also explained or defined. The chapter also gives details of what skills the land reform farmers should acquire in order to be productive and become able to realise growth in the sector.

4.1 Defining the skills required by land reform farmers

4.1.1 Technical skills

The technical farming skills are comprised of the following sub-skills that are essential in ensuring that a farmer becomes productive:

(i) Communication skills (including both written and oral skills). Farmers should be able to communicate about their businesses. A farmer that has good communication skills is associated with an individual who is able to negotiate in all the stages within the value chain (Otsuka and Larson, 2012).

(ii) Farming system skills and technology use skills. The National Food Management Institute (2013) explained that farmers should be able to run the necessary farming systems, and this speaks to the understanding of the production systems, the monitoring of performance, and being able to improve the designed systems. With regard to technology in agriculture, farmers should be willing and able to accept, learn and adapt to new technology systems and eventually be able to choose, apply and maintain the appropriate technologies on their own (Knowler and Bradshaw, 2014). As technological resources for effective production techniques increase, so too will the demand for skilled workers to operate these new technologies. There is much pressure placed on farmers to produce greater volumes of food in order to sustain food security, and demands for

specific production certification or qualities are changing (e.g. organic produce demand, certification demands), and farmers are being presented with the challenge of remaining competitive in an increasingly globalised market. This requires the commercial farmer to invest in the capacity of human resources to meet new production needs, which can be done through targeted skills/development initiatives (Sentanin et al., 2008).

(iii) Farmer research skills –Research is a critical activity that a farmer should know about, understand, and be able to practice or participate in. Farmers who have research skills will be able to keep themselves updated in the agricultural sector with regard to issues of markets, technology, export and imports, climate change and many other issues that may have an impact in their farms. Farmers should therefore be engaged in the research that is conducted by relevant institutions. The need to carry out various types of research should be stimulated by the demand from farmers (Knowler and Bradshaw, 2014).

(iv) Interpersonal skills –In this case, a farmer should be able to transfer knowledge to others, play a role as a leader, be able to negotiate and be decisive (Greenberg, 2010).

(v) Mechanisation skills –Fortunately, government has a number of programmes such as CASP that ensure that mechanisation is made available to farmers. The biggest challenge is encountered when farmers are not able to operate the machines that are supplied to them. Farmers, therefore, need mechanisation skills in order to ensure that the resources supplied to them are used effectively and efficiently (Otsuka and Larson, 2012).

4.1.2 Personal Skills

i. Self-development disciplined skills – The agricultural sector is a very complex business in the sector and profit is not made overnight. Farmers require the skill of self-development discipline in order to remain focused on their intended goals within their farms (Adendorff and Ortell, 2011).

ii. Risk-taking skills – Agriculture is considered to be a constantly changing sector and is associated with many risks; hence, it is crucial that farmers should develop the skills to recognise when to take risks and what kind of risks should be taken (Lahiff, 2008).

iii. Innovative skills – These skills relate to developing, searching for, and trying out new products, new markets, techniques, and many other things. A 'proper' farmer is engaged in dynamic, active and competitive economic striving in an on-going pursuit of opportunity (Otsuka and Larson, 2012)

iv. A change-oriented farmer tries to promote the exploration of current and better ways of carrying out his or her own farm activities. In this case, a farmer should be able to uncover hidden potential in his or her farm workers, things or situations (Greenberg, 2010).

4.1.3 Management Skills

Management skills comprise the complete package of skills that a farmer would use in order to develop a farm business. The scope of management and strategic planning is based on these factors: objectives, business plans, being purpose driven, sale increases, policy formulation, management information, time strategy, performance measurements, social orientation, growth orientation, being financially conservative, and having concerns about the future. Literature revealed that, considering the unstable agricultural environment and those land reform beneficiaries with no expertise to manage or run their farm business, these farmers need to obtain the necessary skills, to ensure that their farming standards keep up with the rest of the world (Lahiff, 2008). Skills necessary for a farmer to acquire are:

i. Goal setting. In this case, farmer should be able to engage in the process of identifying what he or she wants to accomplish together with relevant measurable development goals and timeframes. Farmers cannot just decide and act without proper planning, and the planning is determined by many other factors that a farmer should look at (Lahiff, 2008).

ii. Farm Planning – This serves as a blue print of the future, and a farmer needs this skill in order to be able to plan logically while conforming to the economic principles as to what is to happen in the future. This means that a farmer should be able to plan or decide what is to be done in the future with regard to the best combinations of livestock and crops to be raised, what resources are needed, what the budget is, and how the budget should be allocated. A competently skilled farmer is one who can manage resources, and interpersonal communication systems, as well as technology. This implies that a farmer should have the ability to receive and evaluate information regarding his or her farm, to

organise, process and ensure the information is maintained, and be able to interpret and transfer information to others (Otsuka and Larson, 2012).

iii. Financial Management skills and record-keeping skills – Financial management skills constitute a very important skill set that a farmer should have. If a farmer does not have these skills, the farmer may not realise the success of his or her own business, no matter how much money the farmer is able to source or make in the form of a profit. Financial management skills comprise being able to plan, organise, direct and control all of the financial activities that involve issues around the procurement and utilisation of funds with regard to the operation of a farm. One should have the skills to understand and follow management principles and to also manage the financial resources of the enterprise. Financial management skills can never be separated from record-keeping. A good farm business should have accurate records. Without records, a farm business may not be productive. Good record-keeping can help farmers to find the information they need, and such information can be crucial when applying for finance, negotiating for new business, and advertising the business. It promotes the development of full and accurate records. It also involves storing and managing records appropriately so that the information becomes available whenever it is needed in the future. The skill of record-keeping is very important because a farmer will be able to track the development of his or her business (Sentanin et al., 2008).

iv. Negotiation skills – Many farmers may be able to produce competently and as planned within their farms, but are unable to secure a good deal for their products. Accordingly, negotiation skills are critical, e.g.in cases where a farmer has to sign a contract with a processor or the market. Farmers who do not possess good negotiation skills may be taken advantaged of or may end up settling for less in the contract (Horwitz et al., 2011).

v. Marketing skills – These are essential skills that a farmer should have, as they determine what profit a farmer can generate. Farmers need this skill in order to be able to identify what the market demand is and to be able to sell their products. A farmer will only succeed in sourcing many contracts to sign if he or she has done well in marketing his or her own business. There is a view of skills development as providing a great catalyst for addressing

the issues of food security at household and national levels, as well as combating the unemployment rate and poverty (Horwitz et al., 2011).

4.2 Chapter summary

It is important to note that not all farmers across the world can be successful, especially if they have not acquired various kinds of skills. The literature reviewed in this chapter establishes the fact that, for farmers to be successful, they should not focus on just one type of skill. For a farmer to realise productivity in his or her farm, he or she needs various types of skills, which are technical and personal skills, as well as management skills, and the literature emphasises that a farmer needs to become a 'jack of all trades' to ensure a successful farm. It is critical to note that some land reform beneficiaries do not even have agricultural skills; as a result, they end up having land that is not utilised. If necessary skills are transferred to a farmer, productivity can be realised, of course with other extension support services taken into account. This chapter also reveals that technology is rapidly changing, and therefore it is important for farmers to keep acquiring new sets of skills as far as technology is concerned. Over and above the foregoing, for every farmer to be productive, production skills, financial skills, marketing skills, and administration skills are crucial.

CHAPTER 5
SHORTCOMINGS OF THE EXISTING SKILL TRANSFER MODELS FOR LAND REFORM BENEFICIARIES

Chapter 2, in the review of literature, revealed that there are a number of programmes and models have been developed and implemented to ensure that farmers receive the necessary support with regard to skills development. This chapter explains the shortcoming of the existing models of skills transfer for land reform beneficiaries.

5.1 The shortcomings derived from literature

5.1.1 Lack of alignment of support by various institutions/stakeholders

A number of policies have been development in the agricultural sector, such as the National Extension and Advisory Services Policy, which seems to duplicate the views and strategies in many of the other items of documentation reviewed. However, the existing policies covering the stakeholders do not seem to be aligned, as every department is developing its own policies and strategies, without consulting others. Because of this non-alignment of the support services, duplication is being experienced. As a result of this, there is no single model of extension that best suits the skills transfer needs of farmers across South Africa. There seem to be non-alignment between the spheres of government, and between government and the entities owned by the state. As a result, it is difficult for the existing programmes to be implemented satisfactory. The CASP report conducted by the Department of Agriculture, Forestry and fisheries has revealed that there are many other institutions and private sectors that are offering the same support of skills for land reform beneficiaries.

5.1.2 Lack of strong public–private partnership

The development of public–private partnerships is critical. However, there do not seem to be many visible relationships between the private sectors and government departments. A number of private sectors have the ability and resources to transfer skills to land reform beneficiaries. Farmers across the country have agreed that they have been reached out to by a number of NGOs

and agencies (AFGRI, agro dealers association, and AgriSA) with their different strategies. Government departments also reach out to farmers with their own strategies. The concept of public–private partnership confuses farmers in terms of what to believe with regard to the skills being transferred to them (Domik and Fischer, 2010).

There is no collaboration between public–private institutions and as a result there is a lack of policies that speak to integrated policy with regard to skills transfer models. There seems to be a silo approach being taken which is characterised by various disjointed and conflicting programmes and strategies. The shortcomings of the lack of public–private partnerships lead to inefficient and counterproductive different support mechanisms being offered by to farmers.

5.1.3 Poor institutional arrangement

The programmes offered by government institutions, such as the Department of Agriculture, Forestry and Fisheries and the Department of Land Reform and Rural Development, seem to be offering the same support to farmers. With regard to programmes such as CASP,CRDP,RECAP, MAFISA, and Illima Letsema, there seems to be a lack of the coordination and collaboration that is required to clearly understand what skills are needed by farmers and what strategies should be collectively put in place to ensure that farmers receive the necessary skills to manage their farms (Vink and Kirsten, 2003).

5.1.4 Lack of cooperative governance

The existing programmes of CASP, MAFISA, CRDP, and RECAP, as well as the support offered by private sectors, lack a comprehensive policy that takes into account the issues of skills transfer for land reform beneficiaries. It seems as if there is no proper monitoring and evaluation of such programmes, and as to how they are being implemented, that is being done. As a result of this lack of proper monitoring and evaluation, there is no understanding of what roles and responsibilities that the stakeholders should account for. The RECAP evaluation revealed that the models of RECAP on strategic partnership and mentorship have not been successful for all farmers across the country. The reason for the failure of models is seen in the inefficient monitoring of the services rendered by the service providers. The lack of monitoring of the

services rendered has resulted in difficulties in holding service providers accountable for their services (Enterprises, 2013).

5.1.5 Lack of relevant research

Engaging in research constitutes one of the best activities that institutions should be undertaking before sending extension officers out to farmers. Studies need to be conducted with farmers in order to establish what the farmers require. Extension officers do not have a clear understanding of their roles. There is still a skills gap in what they offer to beneficiaries (Vink and Kirsten, 2003).

The appropriate approach to extension, as developed by the University of Pretoria, revealed that at least 63% of farmers indicated that the advice of extension practitioners added no value, while 37% agreed that some of the information transferred to them was valuable (Horwitz et al., 2011).

5.1.6 Limited skills and capacity development for stakeholders who transferring skills

The evaluation report on RECAP revealed that the strategic and mentorship model has been failing because the mentors and strategic partners do not have the relevant skills, and as a result, no or irrelevant skills are being transferred to farmers. The report on extension services support revealed that the extension officers who are tasked to render extension support to farmers have no necessary skills. There is no skills audit of the stakeholders that are involved in transferring skills to land reform beneficiaries (Enterprises, 2013). Literature revealed that most land reform beneficiaries in South Africa do not have all set of skills to operate their farms. It is critical that farmers are equipped with all necessary skills in order to tackle all issues arising in their farms.

5.1.7 Poor implementation of the programmes

Government is known for its ability to plan programmes, but yet fails to implement the programmes in such a way that the agricultural sector is fully enhanced. This is seen in the CASP, where the success of training and capacity building for farmers failed because capacity building and skills transfer were not taken into consideration, and the focus was placed on the infrastructure required by farmers (Greenberg, 2010). The programme should have been rolled

out in a manner that took into account the needs of the land reform beneficiaries to acquire skills in order to ensure that the land received is fully utilised.

The RECAP evaluation revealed with regard to the models of skills transfer (strategic partnership and mentorship) that farmers feel that they have been taken on as employees in their own farms by the mentors and strategic partners. This explained by the fact that the programme implementation is designed in a way that does not take into account the needs of the farmers. There is no clear implementation plan that clearly states the roles of strategic partnership and mentorship (Enterprises, 2013).

It has been seen that the MAFISA programme has not been successfully carried out because the implementation of the programme has only focused on giving loans to land reform beneficiaries, and did not focus on ensuring that farmers have the necessary skills to manage their funds.

The literature has noted that the skills transfer strategies offered by various stakeholders, such as the Agro dealers associations, Agri SA, ARC, AFGRI development agencies, and other relevant departments, do not reach all the farmers across the country, because of the challenges surrounding implementation. This is so due to the lack of implementation plans that are developed in a way that they ensure that skills needed by all farmers are catered for.

South Africa has indeed developed a number of policies and various regulatory initiatives under the land reform programme, as well as strategic interventions, to ensure that extension services are available to all the farmers. Studies have shown that the unclear or undeveloped implementation policy framework makes it difficult for extension support, such as skills transfer, to reach farmers across South Africa. It is indeed great news that South Africa has developed norms and standards for extension and advisory services, together with the National Framework for Extension Plan (Adendorff and Ortell, 2011).However, the existing extension support services provided both by government and by other stakeholders, such as colleges, commodity organisations, NGOs and private sectors, remain unregulated and there is still a lack of a National Framework for public and private agricultural extension services that clearly defines roles and responsibilities to ensure accountability. There is still no clear regulatory framework within which the appropriate skills transfer services and strategies are embedded (Alexandratos and Bruinsma, 2012).

5.2 Chapter summary

It is critical to note that South Africa has a considerable number of actors who are involved in agricultural extension services, but do have the necessary expertise, and what seems to be common in South African models is that they are not clearly stipulated in the policies. Although a number of policies exist in South Africa, it is critical to note that such policies do not necessarily clearly stipulate who does what in the sector, and that is one of the reasons leading to the duplication of services offered by different actors. The communication of these models to land reform beneficiaries is still a problem. The policies do not put emphasis on the monitoring and evaluation of the interventions by various actors, and this is causing a problem because when the interventions are not effective, it is difficult to ensure the accountability of the actors involved. South African models do not put research as a priority for developing models for skills transfer. Government is seen to be playing a huge role with regard to service delivery that speaks to skills transfer, but this is still not very effective. South Africa still exercises the push-based approach models, which is evidence for land reform farmers that indicates that some of the services given to them are imposed on them, and that they are not being involved in decision making.

CHAPTER 6
THE CASE OF BRAZIL

This chapter examines the agricultural sector in Brazil and highlights the existing skills transfer models and programmes that exist. These models and programmes are defined as being the successful programmes undertaken in order to ensure that farmers in Brazil are equipped with all the necessary expertise in order to be productive on their respective farms.

6.1 Agriculture in Brazil

After gaining independence from Spanish colonisation, relatively few individuals managed to obtain land, with 67% of smallholder farmers occupying only25% of the actual, redistributed land. A review on the Central American Agricultural Policy has revealed that the support provided by the public sector has been a mixture of a many things. In Central America, the support was mainly for farmer-to-farmer and cooperative approaches. In the Caribbean, skills transfer is mainly achieved by the government sector, with more emphasis being placed on pest management control, business skills development, the use of ICT, and making use of other organisations that utilise research and extension services. Furthermore, individual departments of the government support research and extension within their sectors, although there is shortage of a coordinated evidence base that supports the best skills transfer models that are related with farmers 'needs (Alexandratos and Bruinsma, 2012).

The extension policies that exist in Brazil support a pluralistic, systematic strategy for the delivery of advisory services to their farmers. The Department of Rural Development in Brazil believes that, for Brazil to address the challenges of skills transfer for farmers and the required advisory services there should be a joint effort by both state and non-governmental agencies, making using of a participatory model. The policies take into consideration the indigenous knowledge of smallholder farmers (Lambais, 2008).

6.2 Skills transfer models in Brazil

6.2.1 Extension model in Brazil

Brazil's rural extension services were mainly developed to ensure that agricultural production by the smallholder farmers is maximised, which would then lead to increased rural families, as well as food-secured rural communities. The Brazil extension services unite the various stakeholders to work together through a properly aligned system. Brazil has demonstrated one of their successful events that has occurred over the past 30 years with regard to its agricultural revolution. The issues around food scarcity were problematic in the 1970s when the country was experiencing rapid urbanisation and expansion within the middle class. A short-lived growth in wages was then experienced that temporarily increased household demands for goods and demands for smallholder farmers to expand to cover the demands of the households needs. The Brazilian government then introduced an Embrapa initiative that sought to resolve the stagnant agriculture sector and shortages of food (Domik and Fischer, 2010).

The initiative has transferred over 9 000 items of technological equipment to farmers and also ensured the necessary skills were transferred to the farmers, applicable to that technological equipment. The key contribution of Embrapa in agricultural development involves skills transfers regarding agricultural liming, which is a technique that transforms acidic soil of Brazil into arable land through the neutralisation on the soil PH levels; and regarding cross-breeding techniques that have led to the development of varieties of soybean that are much more tolerant of the acidic soil of Brazil; as well as the development of cotton seed that is much better adapted to the semi-humid conditions, which made it much more feasible to achieve higher yields per hectare (Finger and Benni, 2014).

By the years after 2000, Brazil had met the country's needs regarding consumption, and had reduced poverty drastically, thereafter becoming one of the leading global markets for products such as coffee, sugar, orange juice, and poultry. Evidence has shown that the smallholder farmers in Brazil, after the intervention of the initiative, have graduated to commercial farmers and are perfectly integrated, horizontally and vertically within the market (Sentanin et al., 2008).

Embrapa was then seen as the most important factor contributing to the systematic increases in agricultural productivity in Brazil. Embrapa was regarded as a successful driver of extension, while the fact that the initiative worked together with all other stakeholders supporting farmers contributed to its success. The success of agriculture in Brazil is predominantly related to gaining improved tropical agriculture knowledge and its successful use by local smallholder farmers. The Brazilian government, with the support from its initiative research, has taken into consideration the fact that the skills needed by farmers mainly relate to crop management, business administration, and organisation, as well as the marketing of the agricultural products (Martha et al., 2010).

6.2.2 Private and public pull-based models

Brazil is one of the countries that, through its robust research, has now shifted to a private and public pull-based model of transferring skills to its farmers in the agricultural sector. Its main focus is on farming mechanisms and information technology transfer. This type of approach is supported by NGOs, government and other stakeholders. The approach is developed to assist farmers to generate, adapt and translate the technological skills, farm management skills, and business skills into their own contexts and understanding (Emerick et al., 2016).

The agricultural sectors in Brazil, particularly the smallholder farmers, have been growing and excelling due to the support and development of the farmer cooperatives that support skills transfer through farmer-to-farmer learning. In this type of learning, farmers learn from each other's successes and draw such success to their specific needs. Over and above this, these skills transfer approaches have encouraged the smallholder farmers to share knowledge, improve food security, and sustain environmental services, as well as agro-ecological knowledge. Examples are drawn from these approaches, such as where a successful organic coffee cooperative has increased its member's production scales through skills generated via farmer-to-farmer learning. (Altieri and Toledo, 2011).

Nationally driven training initiatives, including those for poultry, beef, coffee, and orange production, are conducted through co-operatives where the processes support extension by taking into consideration of government expertise. In order for farmers to receive the support

needed, the extension system requires integration to ensure that issues that are more significant are addressed (Emerick et al., 2016).

6.2.3 Experiences with pull-based approaches

A ‘pull-based’ approach model is normally based on the assumption that smallholder farmers adapt much more easily to certain technologies, such as those relating to crop options, fertiliser seed, harvesting methods, pesticides, market accessibility, farm management, business skills, and prices, when they are able to understand why and how such technological skills are directly related to their context or understanding. In most cases, farmers need to have skills to determine what type of soil they have, what seed variety is relevant to their needs, the costs of production, financial uncertainties, and available cash flow. The pull-based model takes into account skills transfer across cooperatives and farmer-to-farmer learning initiatives, as well as participatory research (Kyle et al., 2016).

Co-operatives are there to make sure that the priority needs of smallholder farmers are clearly explained to extension practitioners, and that clear, well-coordinated and properly negotiated prices for groups of farmers are secured. The success of these cooperatives, as a medium for the transfer of skills to farmers, is attained when there is clear involvement of government that serves to regulate, monitor and evaluate what these cooperatives are providing to the smallholder farmers. The farmer-to-farmer approach is explained to be the common element of farmer cooperatives, as it includes skills transfer during demonstration periods, study visits to specific smallholder farmers, and social learning where various farmers share their success stories and failures, and in this model, social learning is seen to be very effective, as compared with learning derived from extension practitioners (Bacon, 2005).

Participatory research, and in this case research initiatives, draw in representatives from various farmers who seek specific needs and engage them in their designing and trialling of variety seed or crops, plant rotations, pesticides, and fertiliser uses. In some instances, the researchers and specialists utilise smallholder fields to give demonstrations, while others call the farmers in to their own research stations. These methods have been seen to be very effecting, as farmers learn through doing or participating in certain activities, and when they go back to their own fields,

they are able to carry out the same activities in the same way that they had done with the specialists and researchers. In some cases, the research initiatives also pay the smallholder farmers to participate in order to stimulate their interest (Martinelli et al., 2010).

Farmers in Brazil have emphasised that their participation in research has provided much more affordable access to resources and inputs, and moreover has increased their opportunities to learn, while they have gained improved skills on how they could improve their farm productivity. This makes it easier for them to manage their farms and expand their farms, and they have begun to experiment with alternative crops and crop rotations on lands of other family members. They hoped that the additional income would mean they could reinvest the cash surpluses received from crop improvements into higher-value fruit trees in the near future. It is quite evident that farmer-to-farmer learning, more especially through cooperatives, is recognised to deliver, specifically on what the farmers need, and easily incorporates a mixture of public and private collaboration, while it does not impose or enforce approached on farmers. Monitoring, evaluation, and soundly structured policies are strictly considered by these cooperatives to ensure that corruption is avoided and that the needs of the vulnerable farmers are addressed (Correa and Schmidt, 2014).

6.2.4 The use of Non-Governmental Organisations

Over the years, the government has realised that it has greater responsibility and has decided to shift some of the responsibilities. The movement of responsibility from the government to non-profit organisations or non-governmental organisations by transferring extension services has been found to have led to the most modern and dynamic organisation that responds to what farmers require. Organisations such as INASE, INIA and IPA work together with panel of managers, and also involve representatives from farmers' associations to try to engage on the farmers' issues and transfer relevant knowledge to the vulnerable farmers (Oelofse et al., 2010).

Most importantly, farmers are engaged in every decision and accountability of the organisations, thereby ensuring that a robust, demand-driven strategy approach, as well as participatory involvement, is taken. Recent studies have revealed that all this is achieved through implementing improved accountability between stakeholders and beneficiaries. However, this

multifaceted institutional system leads to replication and rivalry among stakeholders who serve the same customers, even though the stakeholders have unique perspectives. A multi-institutional system can sometimes develop, where agencies with the same perspectives transfer the same skills to the same farmers, leading to duplication, and this can be avoided by the establishment of partnerships to encourage well-organised development and to make good use of resources, which should become priorities for addressing such issues (Arboleya and Restaino, 2004).

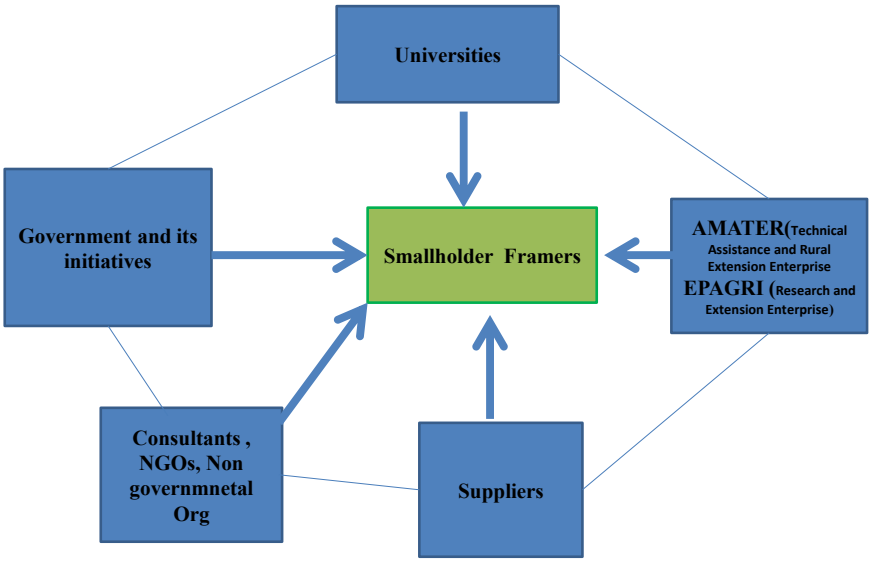

Figure 1: Identification of main institutions transferring skills in Brazil

Source:(Martha et al., 2010)

Figure 1 above indicates the extent to which skills are transferred to farmers, together with the magnitudes of the main skills transferred to farmers. The relative sizes of the arrows denote the importance of the flow of the skills to farmers in Brazil. The arrows connecting the farmers to surrounding stakeholders indicate that the success of the farmer is dependent on the involvement of all stakeholders. The diagram above explains that Government must work together with universities, NGOs, suppliers and other agencies to ensure farmers skill development (Alves, 2010).

6.3 Common characteristics of the models

It is crucial to note that the Brazilian models have some common characteristics, such as the high quality of research done on what farmers need, and on what is needed overall to increase their agricultural production. The models also take into account the importance of good engagements between public and the private extension service to try to address the needs of the farmers in terms of the skills that they specifically require. Investing in the human capital is crucial, as the Brazilian system takes into account the fact that education and training are much more essential to both the government practitioners and the private officers who mainly distribute knowledge to the farmers, while experience is also crucial in the skills transfer model. Interactions with universities and collaboration with other research institution are also critical, as well as developing and making use of the policies to guide the engagements between institutions, government, private sectors, researchers, consultants, cooperatives, and farmers (Rada and Valdes, 2012).

The collaborations between government and its initiatives in Brazil to develop farmers have created a huge catalogue of extension bulletin numbers and videos for sharing the crop technical management skills and knowledge, across all farmers. The collaboration has ensured that extension practitioners, consultants, researchers and farmers have access to internet and are trained to utilise resources, such as emails, and this has improved the communication channels. These communication channels ensure that all planned activities, including organising field days, demonstrations of any farming methods on particular crops, workshops, videos, radio interviews, stakeholders' educational gatherings, and farmer roundtables, can be easily carried out. During these activities, specialists from technological laboratories, senior specialists from agronomies, well-trained extension practitioners with experience, representatives from the food processing and marketing sub-sectors, and researchers are available to cater for the needs of the farmers (Swanson and Davis, 2015).

6.4 Chapter summary

It is obvious that Brazil promotes a pluralist model or approach, and this is so because of the number of actors who are involved in the sector. Very crucially, Brazil takes into account the importance of universities, NGOs, private sectors, and expertise offered by various enterprises to

ensure that farmers receive the necessary skills to run their farms. What is common to the Brazilian model is the importance of research that aims at identifying what farmers need. Farmers are involved in all the activities that involve them, and universities are involved particularly with research expertise to work hand-in-hand with the farmers. Various organisations and enterprises also take into account the importance of research and encourage farmers' participation in research. Communication of policies, monitoring and evaluation is also crucial in Brazil to ensure the development of good models that benefit the farmers. The pull-based approach seems to be very effective in Brazil, and this is where farmers decide and voice what they want, rather than the organisations, private sectors or government imposing and enforcing services that farmers do not require.

CHAPTER 7
THE CASE OF KENYA

This chapter examines the agricultural sector in Kenya and highlights the existing skills transfer models and programmes that exist. The explained models and programmes are defined as being the successful programmes undertaken in order to ensure that farmers in Kenya are equipped with all the necessary skills in order to be productive on their land.

7.1 Agriculture in Kenya

The agriculture sector in Kenya contributes 25.4% to the Kenyan GDP and approximately 65% of earnings from product exports. The sector offers income to over 70% of the total population, providing employment to over 40% of the total population, while 70% is among the rural population. The observed growth within the sector is attributable to the fact that there is strong communication within the sector. This therefore affects the approach taken regarding improving the communication skills of smallholder farmers, as well as the communication among the institutional arrangements that support or play a role in supporting the smallholder farmers, particularly with regard to skills transfer to the most needy or vulnerable farmers (Gautam, 2000).

Recognising the need to ensure sustainable production and positive earnings from greater exports, Kenya has developed a number of policies and has developed strategies to ensure that production is maximised at all times. One of the strategies is to ensure that proper support and arrangements in those supports be established. There is a need for the growing numbers of farmers in the sector to be equipped with the necessary skills required to meet the agricultural demands in Kenya. Skills transfer, which is mostly related to extension services in Kenya, is one of the critical strategies to ensure that farmers remain up to date in the agricultural sectors. Such skills involve farm management skills, knowledge of farming methods, business skills that include administration, marketing, and technological-related knowledge, and financial management skills (Sifuna, 2005).

The extension service in Kenya started in the 1990s. A number of models and strategies were attempted, such as a group method, visits to individual farmers, management of farms, and unified extensions, as well as Integrated Development Agricultural Extension. Several approaches were tried, including individual visits, group methods, unified extension, and specialised extension commodity programmes. Most of the affected farmers were smallholder producers. The Kenyan Government worked together with World Bank, and then adopted the Training and Visit (T&V) system to ensure the management of the extension service. The World Bank assisted in financing the extension system, facilitating national extension programmes, which were then later put on hold due to high costs and not reaching the intended goals (Gautam, 2000).

7.2 Models for skills transfer in Kenya

7.2.1 The models within extension in Kenya

The extension services and programmes of extension in Kenya are embedded within the public sector, as in most countries. Various models of extension have come and gone over the years, with attempts to find a suitable and most effective model to transfer skills to smallholder farmers. The progressive farmer approach model, the training and visit model (with support from the World Bank), and the integrated agricultural rural development approaches were the commonly used models before the year 2000. There was, however, a period when there was a decline in the sector's performance due to the private sector not being able to fill the gap left when the public sector withdrew from providing extension support. Taking into account the fact that a high percentage of farmers was financially disadvantaged, the private sector on its own failed to maintain the farmers; hence, they could no longer afford to provide extension and research services (Anderson and Feder, 2004).

During the period of market liberalisation in Kenya, a commodity-based extension service was introduced, as facilitated by the parastatals and cooperatives, that broadly took into consideration the services around skills transfer to smallholder farmers, market information, and research. Although the afore-mentioned models have led to successful development within the smallholder sectors, including employment, some shortcomings have been identified in the models, which included the lack of consultation with farmers regarding some of the decision-making processes.

The National Agricultural Extension Policy (NAEP) was developed in 2001 by the Ministry of Agriculture and Rural Development, together with the Swedish International Development Agencies (SIDA), with the purpose of guiding improvements within extension services and trying to address the gaps realised in the existing models of extension.

The NAEP approach has put much more focus on bottom-up planning, farmers' same-interest groups, and stakeholder inclusion within a targeted area. The interviews done with farmers concluded with the analysis that above 80% of the farmers who responded indicated that the programme has created new opportunities and sustainability for smallholder farmers, while many more have claimed that it has left them with valuable skills that are critical for ensuring that their farming businesses become a success, and the evidence of this is the profit that they have generated from these farming businesses (Mutisya et al., 2010).

Skills transfers to farmers through the utilisation of strengthening of extension services was one critical focus in the policy. The National Agricultural and Livestock Extension Programme (NALEP) was aligned with the National Agricultural Extension policy (NAEP) with the purpose of supporting the development of smallholder farmers and improving the effectiveness of an integrated extension system. The programme has brought about positive impacts and all these are realised through the collaboration of the Ministry of Agriculture, agencies, and other service providers. The implementation of NAEP has had its shortcomings due to the confusing institutional arrangements and became destabilised, after which the policy was then reviewed and the National Agricultural Sector Extension Policy (NASEP) came into existence (Clark et al., 2016).

7.2.2 Pluralistic system/model

Extension services in Kenya is considered to be the sole responsibility of government, and emphasises the top-to-bottom approach and has taken for granted various sources of knowledge and forming partnerships with a number of service providers, as well as other capable agencies. The pluralistic model therefore takes into account the inclusion of various agencies of government, non-governmental organisations, and the private sectors which include input suppliers, buyers of agricultural products, training organisations and media groups, with all of

these structures functioning together to assist the smallholder farmers in Kenya (Ison and Hubert, 2017).

The pluralistic model came to existence because of the NAEP implementation that had shortcomings due to institutional arrangements that were found to be very confusing and contained duplications with regard to the roles of various stakeholders in dealing with farmers. The National Agricultural Sector Extension Policy then came into existence in Kenya, taking into account the pluralistic model (Krone et al., 2016). The adoption of the policy and the implementation of the policy have made the following achievements:

- Improved extension support services.
- Support and rehabilitating research–extension–farmer linkages, for all farmers.
- Connected demand-driven extension models and strengthened capacity within the institutions, particularly local institutions.
- Recovered from and improved institutional weaknesses with regard to technology, skills development, and transfer.
- Strengthened cooperation in the public–private sector and the extension services.

The economic survey conducted by Katumo (2018), reflected that agriculture had grown by 3.8%, and contributed 17.6% of the overall Gross Domestic Product. This is attributed to the policy transformation to support and build up the agricultural extension service and to the government's commitment to partner with the private sector and other agricultural service providers in the agricultural sector. Within recent years, an increase in agricultural production and output has been realised, and the extension service is considered to be one of the many contributing factors, as it reaches over three million farmers. In Kenya, there is also what is called the Kilimo Biashara (TV program) public–partnership arrangement. This is an arrangement whereby stakeholders within the public sector are united to facilitate sustainable agricultural growth and reduce unemployed population. It provides farming information, it links

smallholder farmers to possible markets, tracking the value chain from farm to the final consumer It is through this arrangement that skills transfer, capacity building, and the provision of finance is facilitated (Otsuka and Larson, 2012).

7.2.3 Commodity-based extension model

The commodity-based extension service delivery model was put in place in the 1990s and has been found to be very effective in addressing the challenges faced by most smallholder farmers in Kenya, particularly with information regarding marketing knowledge. Farmers previously had no knowledge of accessing markets or at least of marketing their commodities. Considering the fact that most formal markets in Kenya, and across all countries, have their own specifications and requirements with regard to volume, quantity and quality, the commodity-based model plays a crucial role in ensuring that specific farmers have the skills needed to reach the economies of scale and be able to respond to the needs of such formal markets. With the necessary skills gained by farmers, farmers were able to increase their bargaining power (Davis, 2008).

The success of the model has furthermore been made visible through a case study that explains the high production yield of black tea that has placed Kenya as the third-largest producer, where the success was made possible by well-structured and effective institutional support, policies conducive to investment, and land redistribution policies (Aker, 2011). The Kenya Tea Development Authority, a farmer-controlled commodity institution, serves as one of the sources of institutional support. The commodity organisation transferred skills to farmers with regard to all processes within the value chain, including transportation logistics, and processing and marketing processes.

The skills that were gained positively benefited the smallholder farmers, enabling them to produce over 225 million kilograms of tea in 2010, and overall, close to 560 000 smallholder farmers have improved their standards of living from the production of tea. The smallholders are now seen to be moving towards the global markets; hence, they have graduated to supplying quality tea products to international brands. It is true that a well-trained or skills-equipped farmer will expand his or her farm, thereafter creating greater employment opportunities and thus alleviating poverty (Aker, 2011).

7.2.4 Information and Communication Technologies model

The agricultural sector recognises the Information and Communication Technologies Model (ICT model) as a model with greater potential for ensuring that information with regard to any skills needed by farmers reach those farmers. The ability for farmers to gain access to information is vital for growth in the agricultural sector. The lack of the success of the extension system is attributable to the inability to access technology. The use of the ICT model in Kenya has transformed the knowledge gap that had existed within the smallholder sector. The partnership between international donors as well as with NGOs, and as accompanied by sound policies, played an effective role in ensuring that there is a flow of information and skills transfer to the neediest and vulnerable farmers through improving their communication channels. The collaboration of the NGOs and the International Development Research effort introduced a project called the Drum Net, which provides extension support, such as skills transfer and marketing information, business management skills, financial management skills, and farm management skills, to the farmers in Kenya. The model is designed to have business support centres that are situated closer to the farmers for easier access, which minimises their costs. Over and above this, these centres are aimed at improving the overall business efficiency of farmers. The Drum Net ensures that proper linkages and fair interactions are put in place between the smallholder farmers, commercial farmers, and retailers, as well as exporters (Chapman et al., 2003).

7.2.5 Model: Farmer Field Schools (FFS)

The approach utilising Farmer Field Schools was introduced in the 1990s, particularly in sub-Saharan countries. They are widely dispersed in at least 27SSA countries. The FFS originated in Asia, and were established to promote integrated pest management programmes. In African countries, the FFS are utilised for various activities, which include imparting skills transfers to farmers, food security, and soil and water conservation. The FFS take into account experimentation by farmers, group actions, and discovery learning. This model uses the practical and interactive method of achieving skills transfer and also ensures that farmers become their own technical experts on major aspects of their farming systems (Bunyatta et al., 2006).

Farmers are assisted to carry out their own research, diagnose and test problems, and be innovative in terms of finding solutions. Although the Farmer Field Schools have been seen to be successful for some farmers, there is currently no hard evidence to confirm the 100% effectiveness of the FFS, even in countries such as Kenya. Many of these programmes depend on post-hoc evaluations, which do not provide the exact results as to how the FFS programme compares with others. The available data often remains in grey literature and in project documents, where such information is not accessible to stakeholders who might be able to validate the methods and results of the programmes (Davis et al., 2012).

7.3 Characteristics of good models in Kenya

- Public services are still responsible for extension services;
- Extension in Kenya has a strong focus on pluralistic and demand-driven extension services;
- Private and public sector collaboration is a high priority for government to ensure a good skills transfer model;
- Good models in Kenya encourage a group model in their support to farming communities.
- Private–public models work well, with functional and proper coordination at both local and regional scales.

7.4 Chapter summary

Kenya seems to demonstrate very good examples of skills transfer models, which explains the importance of having detailed policies in place that stipulate what needs to happen in the extension service. It is also crucial to note that such policies also clearly articulate the roles and responsibilities regarding which actor does what, and this is critical because it emphasises accountability issues. Monitoring and evaluation comprise a key aspect that is explained in detail in such policies. It is clear that the government still plays an important role in ensuring that policies that deal with extension services are developed, and are developed in a way that involves various actors who bring in different areas of expertise. Over and above this, the models found in

Kenya are more involving of public and the private partnerships. These are further expanded to a pluralistic approach because NGOs, farmers, and civil society elements are involved in the sector.

CHAPTER 8
THE CASE OF CHINA

This chapter examines the agricultural sector in China and highlights the skills transfer models and programmes that exist. The explained models and programmes are defined as being the successful programmes undertaken in order to ensure that farmers in China are equipped with all the necessary skills to be productive on their land.

8.1 Agriculture in China

The agricultural sector in China is one of the critical sectors that make a significant contribution to the overall economy. Evidence of its role is seen in the 10% contribution to the national GDP. Over 300 million farmers are active in the sector, which amounts to 20%of the total population. Extraordinary achievements have been realised in China's economy with regard to maximising production in the agricultural sector. The country is one of the largest producers of grain products, and grain production has reached over 500 million tons in a year (Ison and Hubert, 2017).

One of the critical reasons behind China's success in agricultural production is attributable to the fact that China has developed the largest extension system, named the Agricultural Technology Extension system (ATE), which is characterised by a wide range of policy reforms. Critically, extension services in China take into account the importance of skills transfer to smallholder farmers; hence, they contribute a large proportion to the overall agricultural productivity (Wang et al., 2009).

The agricultural structure in China takes recognition of the involvement of the private sectors and farmer cooperatives in maximising the role of agricultural extension, as well as in the marketing system. In actual fact, the public and private partnerships are greatly encouraged and strengthened in the agricultural sector to try to assist the farmers to attain maximum production. However, the role of the public sector still remains huge, as it still serves as the pillar of the extension system in China. Studies have shown that China also takes into account the use of a

pluralistic approach as a model for providing extension support, such as skills transfer to smallholder farmers.

8.2 The models for transferring skills to farmers

8.2.1 Extension in China

In the China, roundtable discussions on agricultural extension services are held where smallholder farmers themselves are involved. The farmers have participated in some skills transfer models and the approaches were found to be very effective for the smallholder farmers and they included that the smallholder farmer prefers and finds it very effective to receive the skills or knowledge from the progressive farmers, farmer to farmer learning through the farmer field schools, participatory learning and action approach (Binswanger-Mkhize and Zhou, 2012).

It has been reported inKnörzer et al. (2009) that extension support in China is based on a communist model. This model takes the collective farmers and communities into account. From the 1980s, the pluralist model had already started in China and entailed the government working with the private sector, universities and research institutions.

8.2.2 The Public Agricultural Technology Extension (ATE) system

The ATE system in China was established by a government organisation and its agreement with the central government was that it would provide the farmers in China with the required agricultural extension support services. The main focus of the system was to provide and implement, as well as communicate, policies for agriculture, and it served as the research vehicle for technological development and transferring technological skills to farmers. It has been seen to be very effective, since its role has contributed to increasing crop production to 500 million tons per year (Binswanger-Mkhize and Zhou, 2012).

8.2.3 Farmers' Home: Public–Private Partnership

The Farmer's Home Information Centre is led by entities of the government that are supported by private companies, such as input providers. The Farmer's Home also ensures that farmers have access to the skills they require for their specific farm activities, and the information that is

contained in the Farmer's Home includes transferring new knowledge on how farmers should utilise the inputs and resources they receive from companies. The extension workers from the government also play an important role in the Farmer's Home Centre through the provision of extension support. Knowledge on the issues regarding markets is also made available, and extension workers are responsible for transferring marketing skills to the farmers who access the Farmer's Home. Essentially, the Farmers' Home Centre recognises the government extension workers as advisors and mentors who are expected to transfer skills to farmers and the suppliers of input serves as sales representatives. This combination has the potential to facilitate farmers in gaining access to unbiased facts and able to make decisions on how to use agricultural resources(Fao, 2015).

8.2.4 Farmer cooperatives involved in extension (farmer-to-farmer learning)

The numbers of farmer organisations have grown in the years following 1990, and the reason for this growth was simply that farmers believed that their farms function effectively when they work together as a group. Farmers with various levels of expertise would join together to form a cooperative, with the idea of transferring skills to one another in order to maximise their farm productivity. The Government of China takes much recognition of farmers' cooperatives. In this model, the farmers themselves ensure that they are involved in decision making, as well as in voicing the types of skills they require. The farmer cooperatives enforce a bottom-top approach whereby the farmers indicate to the private sector what kinds of skills they need, rather than having the government and private sector imposing their skills transfer strategies and choices of skills categories from above. Studies have revealed that some of the leading farmers in many of the organisations have extensive skills in marketing and management, which makes it appropriate for them to transfer these skills to other farmers. The organising of agricultural extension within the private sector requires the major participation of farmer organisations (Pittelkow et al., 2015).

8.2.5 The Public Agricultural Technology Extension (ATE) system

The ATE system in China is a government organisation that is tasked to provide public agricultural extension services. The ATE system has been designed to implement and communicate the agricultural policies of the communist administration to ensure that research

and technology development plays an effective role in overall agricultural productivity. The system was explained to have the main achievement of securing an increased crop production of approximately 500 million tons per year (Jin and Zhou, 2011). The ATE has been designed to operate across the country (Binswanger-Mkhize and Zhou, 2012).

In 2006, the ATE system was able to employ up to 787 000 extension workers, of whom637 000 provided services to villages. This indicates that the system provides one extension practitioner per 0.81 village or per 283 household farms (Wang et al., 2014).In the 1980s, the country employed over one million extension workers through the system, and 70% of the extension workers graduated from higher agricultural education institutions. The ATE has been adapted and has operated at different levels, including national, provincial, prefectures, counties and townships (Fok and Xu, 2011).

8.2.6 Multi-Dimensional actors participating in agricultural extension

The agricultural extension service in China comprises few multinational players or actors. The United Nations Development Programme (UNDP) started the extension programme in 1998, and one of the major priorities of the programme was to ensure that necessary skills are transferred to farmers, so that the farmers would become capacitated and maximise their production levels. The programme initiated the Agricultural Extension Special Task Force (AESTF),which is an initiative that ensures that greater market access is facilitated for farmers, promotes smallholder farmer enterprises in the rural areas, ensures maximised production through setting up of profit sharing schemes, and introduces market-oriented and demand-driven mechanisms to link farmers to current technology and new channels for marketing (Kumari and Patil, 2017).

The AESTF extension practitioners were selected from various sectors which included research institutions, agricultural schools and public extension workers. The selection approach emphasised the pluralistic approach. The actors were selected, based on the relevant skills they had, to ensure that the skills they transferred to farmers would significantly increase the farmers' productivity. The AESTF practitioners created demonstration areas and sites to clearly illustrate the benefits of recent agricultural commodities and products to farmers, as well as technology systems and technologies. The AESTF team supported and transferred valuable knowledge to

farmers regarding how to market their various products and commodities. More importantly, proper monitoring and evaluation was done regularly to ensure that the extension teams were giving farmers what was relevant, and to assess the results achieved by the farmers. Most farmers across the country have responded positively to the interventions by the AESTF team (Kumari and Patil, 2017).

8.2.7 The involvement of private actors in the Chinese extension system

Various agricultural companies play a variety of roles, but most importantly for the ATE system of China, many of them work with farmers to ensure that farmers promote their agricultural products, and a few of them transfer skills that educate farmers on how to promote their various products. The following companies were identified as being the leading companies that transfer a variety of skills to farmers, while farmers had responded positively to their interventions (Deichmann et al., 2016).

- **Nestlé – which focuses mainly on research and extension**

In 2011, the Nestlé company sent out its agronomists to train over 17 000 dairy farmers, and working together with the government agencies, it distributed over 1000 milking machines at no cost and ensured that the necessary skills were transferred to farmers to ensure the proper operation of the machines. Again, working with various provinces, it initiated the setting up and construction of a high-technology dairy farming institution to strengthen the involvement of farmers in research and skills transfer with regard to dairy production (Jia et al., 2012). A total CHF 30 million was invested in setting up the organisation and in conducting various tests, as well as farm demonstrations. The organisation was launched in 2014 and was recognised as being the largest research institute for dairy products in China. It further accommodates and educates 700 extension graduates for dairy farmers before they graduate to services for transferring skills to farmers (Kohler, 2015).

The overall objective of Nestlé is to enhance dairy production in China and to expand the growing dairy sector. Nestlé was also involved in the training of coffee farmers in the Yunnan province since 1997 (Alff, 2014). An agreement between Nestlé and the Yunnan provincial

departments was signed, in which both actors decided on the formation of a Nescafe training and experiment unit. The established institute has the ability to mentor 5000 producers and specialists in coffee industries, as well as agronomists. The mentorship services are provided to producers at no cost. Nearly all coffee companies at national level are represented in Yunnan Province to source coffee. Recently, over 2000 farms joined the Nestlé programme, and most of them produce for Nestlé (Wang et al., 2015).

- **Da Bei Nong Group – An example for implanted services**

This group of companies plays a huge role by utilising professional technology extension teams that are comprised of 9600 promotional staff members, who work all over the country, based at 1000 stations. Their main priority is to ensure that farmers' products are marketed and that farmers themselves know how to market and promote their products. They also provide over 500 training sessions annually to farmers, and involve farmers in market research. The group conducts agricultural trials jointly with farmers, including those for the cultivation of crops, disease control, and new feeding methods, with the idea to directly demonstrate benefits to farmers. The group's aim is to promote its technologies and their use in order to strengthen farmers 'acceptance of the technologies and to collect first-hand data for convincing farmers. A number of farmers have benefited from the group's interventions (Barrett et al., 2012).

- **Crop Life/Syngenta – Public Private Partnership**

Crop Life/Syngenta comprises a joint association of Syngenta BASF, Dow, FMC, DuPont, Sumitomo, and Monsanto that established a public–private partnership, together with the GoC. A stewardship team at the local level assists the NATESC of the Ministry of Agriculture with skills transfer projects regarding the appropriate use of pesticides across 20 provinces. Over 200 million farmers have acquired skills on farm management and the use of the distributed pesticides since the launch of the programme in 2000. Guides, protective equipment and manuals have been distributed annually, and monitoring and evaluation have been conducted to ensure the effectiveness of the use of the pesticides. Syngenta also works with the Centre for Agrifood Quality and Safety, and has so far trained over 3000 food safety auditors. Together with Crop life

China, pest management training sessions for farmers have been conducted, where it has trained over 3000 food safety auditors. Crop life China and Syngenta have collaborated with the NATESC and have been involved in the secure-storage education projects, and recently, over 2500 farmers have received the training and are responding positively to the intervention (Amanor and Chichava, 2016).

8.2.8 Supermarket value chains

Influenced by maximised urban returns in the rural areas, government investments have increased rapidly in the recent years in retail markets and supermarkets engaged in the agricultural value chain (Michelson et al., 2013). In 2000, supermarkets provided almost 30% of the food for urban consumption. The main recognised supermarket actors are Carrefour, Walmart, and China resource enterprise RT-MART, which together accounted for 36% of the country's total supermarket retail revenue in 2012. Supermarkets are highly concerned about food safety, more especially with regard to fresh vegetables and fruits, and product traceability is a priority for supermarkets in China. The supermarkets in China have organised 'direct farms' that are situated within the production areas and are responsible for the collection, storage, organisation of production, and transportation of the products. The GoC plays a critical role in supporting the establishment of these direct farms. Farmers are then asked to produce specific products that meet the set supermarket criteria, and as a result, the farmers receive training on recent and modern production technologies and seed varieties. Farmers sell the products at a set and agreed price to the supermarkets (Reardon et al., 2012).

8.2.9 Involvement of civil society in the extension services in China

The GoC ensures control over the services rendered by non-governmental organisations (NGOs) in China. Different from other countries, Chinese NGOs are not only expected to find a government or ruling party sponsor for the purpose of registration, but are also funded directly by the government. Three examples of Chinese NGOs are described below (Toillier et al., 2015).

- **China Foundation for Poverty Alleviation (CFPA)**

This Foundation was instituted to cater for rural farmers and individuals who were previously agriculturally disadvantaged, and it ensures that skills are transferred to the farmers to manage their farms from production, record keeping, business plans, through to the marketing of their products. It achieves all this by providing rural education on farming through the Institute of Agriculture, which monitors and evaluates the effectiveness of the Foundation. The Foundation has specialised individuals who have the expertise for transferring knowledge on the use of technologies for farming. The Foundation has been well communicated to farmers across China and farmers have responded positively to the interventions of the Foundation.

- **The Amity Foundation**

This Foundation was established in 1985 to serve the rural agricultural individuals who are mainly disadvantaged, and the Foundation promotes skills transfers regarding all the agricultural activities carried out by farmers. The Foundation ensures that a one-year training course is conducted for rural farmers. Such training is initiated after research with rural farmers has been carried out regarding the issues and the challenges that the rural farmers encounter. Farmers across the country have responded positively to the intervention of the Foundation, and most importantly because the farmers are involved at every step of the way, and not a single intervention is imposed upon them.

- **The Rural Women Knowing All Association**

This Association was established in 1993 to cater for rural women in China who have access to land, and the Association has focused on providing basic literacy skills to rural women to enable them to run their farms and maximise their production (Toillier et al., 2015)

8.3 Common characteristics of the models in China

The following are common characteristics of extension models in China:

- Involve both public and private partnerships.
- Farmers are involved in all the decision-making processes.
- Public extension is regarded as critical.

- Research is one of the critical components in skills transfer models.
- Skills transfer models are derived from well-designed or developed policies.
- Monitoring and evaluation is key in the design of skills transfer models.
- Government works with other stakeholders in supporting farmers.
- Farmers are involved during the design and development of skills transfer models.

8.4 Chapter summary

This chapter explains some of the great achievements in China that are mainly based on the types of extension services and models for skills transfer in China, and it is critical to note that there are various actors in China who are involved in rural agricultural development. What emerges as important are the ways in which these various actors involve farmers to ensure that the necessary skills are being transferred to these farmers. There seems to be less duplication with regard to the services that are rendered to farmers, unlike the case in South Africa. The interventions by the foundations are based on the actual needs of the farmers or actors within the value chains. The models utilised in China seem to share the same characteristics of involving various actors in the agricultural sector, supermarkets, NGOs, civil society elements, and the public, as well as the farmers themselves. Accordingly, farmer involvement is seen in all the models. Public extension services still play a very important role, as well as services provided by private sectors. The roles of various actors are seen to be clearly defined and monitoring and evaluation is also common in most of the successful models in China.

CHAPTER 9
MODEL PROPOSED FOR SOUTH AFRICA

This chapter explains the model proposed for South Africa. A discussion and comparison of the successful skill transfer model in Kenya, Brazil and South Africa is presented in this chapter. A summary of how the proposed model for South Africa should be is also discussed in the chapter.

9.1 The need for skills development - A comparison of Brazil, Kenya, China and South Africa

Various studies reported in the literature that discuss smallholder farmers across their countries, including South Africa, Kenya, Brazil, and China, agree with the reality that the agricultural sector has been greatly transformed into a knowledge-intensive area; hence, change in the sector is rapid (Knowler and Bradshaw, 2014). The complexity of farm management is also identifiable in South Africa by virtue of the numbers of confused farmers who fear for the future productivity of their farms, considering the destructive issues that hinder their overall productivity, which issues include the changing climatic conditions that are affecting farmers, globally (Otsuka and Larson, 2012).

9.2 Common skills required - A comparison of Brazil, Kenya China and South Africa

The existing farmers in Kenya, South Africa, Brazil and China all require different sets of skills and knowledge. General need for farmers' skills and knowledge is much more critical for ensuring that smallholder farmers become more successful in running their farms, and eventually graduate to becoming commercial farmers. A study conducted by Zhang and Donaldson (2008) on the success of farmers in China has noted the fact that farmers require a wide variety of skills and practices. This is supported by research carried out by the Ministry of Agriculture in Kenya on the skills required by farmers in Kenya which reported on the variety of skills needed by farmers. These included skills related to smallholder farm management skills, financial management, farming systems, and decision-making. There is consensus with regard to the importance of the skills required to ensure that smallholders become much more productive.

In South Africa, smallholder farmers who obtained land through the land reform programme need to be given much more attention with regard to skills and knowledge in the agricultural sector. Studies have shown that much land is left underutilised, although food insecurity is an everyday issue for most South Africans (Khapayi and Celliers, 2015). The Brazilian Government has been able to prioritise the entrance of new farmers into farming and their skills gaps were taken into consideration, with the result that such farmers are acknowledged as becoming successful smallholder farmers who will contribute much to food security in Brazil. The agricultural programmes of Brazil placed emphasis on ensuring farmers are not only equipped with one skill but have all sets of skills to ensure high level of productivity in their farms. It is critical to note that the four countries (South Africa, Brazil, Kenya and China) have a common understanding of the variety of skills that are needed by smallholder farmers for ensuring that their farms run smoothly and are productive.

The literature reviewed regarding Brazil, Kenya, South Africa and China can be summarised as agreeing that the three essential skills are associated with obtaining, organising and being able to assess the information needed in a farming business. These provide an understanding of what is happening in and outside the farming business. This clearly indicates that the two skill sets encompass the skills required for the management of farming information and entrepreneurship, as well as planning and strategic thinking. Skills that relate to the utilisation of resources to implement decisions revolve around finance, marketing, operations management, human resources, and production (Otsuka and Larson, 2012).

9.3 Characteristics of a successful model - A comparison of Brazil, Kenya and China

Table 1: Summary of different models and characteristics

Countries	Models	Characteristics
Brazil	• Private and public pull-based models. • Pull-based approaches. • The use of Non-Governmental Organizations.	• High quality of research. • Good engagement between public and the private stakeholders. • Education and training is critical. • Collaboration among different institutions/ stakeholders. • Proper alignment of skills programmes.
Kenya	• Pluralistic system/model. • Commodity-based model. • Information and Communication Technologies model. • Farmer Field Schools (FFS).	• Public services are still responsible for extension services. • Strong focus on pluralistic and demand-driven extension support services. • Strong private and public sector collaboration is a high priority for government. • Functional and proper coordination at national, provincial, local and regional scales.
China	• Public Agricultural Technology Extension (ATE) system. • Farmers' Home: Public–Private Partnership. • Farmer-to-farmer learning. • Multi-dimensional actors participating in agricultural extension.	• Involve both public and private partnerships. • Farmers are involved in all the decision-making processes. • Public extension is regarded as critical. • Research is one of the critical components in skills transfer models. • Skills transfer models are derived from well-designed or developed policies. • Monitoring and evaluation is key in the design of skills transfer models. • Government works with other stakeholders in supporting farmers. • Farmers are involved during the design and development of skills transfer models

The information presented in Table 1 shows that the models for skills transfer implemented successfully in the three countries have common characteristics. Different institutions, agencies and NGOs work together to ensure that farmers are trained to have multiple skills. The success of the models in Kenya, Brazil and China is attributable to the following: development of

policies to transfer skills, effective implementation of skill transfer programmes, continuous research, and involvement of farmers during planning.

The stakeholders that often play a role in addressing skills gaps among farmers in South Africa include the government, operating through the Department of Agriculture, Forestry and Fisheries and the Department of Rural Development and Land Reform; government-owned entities such as Agricultural Research Council; private sector actors and consultants such as Abalimi; a number of NGOs; and commodity organisations (Greenberg, 2010).

It is quite the same in other countries, as seen in Brazil, China and Kenya, where extension services remain a core mandate of government, and the literature regarding these countries has shown that the involvement of various stakeholders is used as a platform for transferring skills to smallholder farmers. Brazil has had a government initiative, called the Embrapa, which was successful in its own time due to the fact that the organisation focused on research and ensured that it formed partnerships with various agencies and the private sector. The roles and responsibilities of these stakeholders are clearly stipulated and were followed through. The government's role was placed more on ensuring that there is a strong monitoring and evaluation system to ensure that the stakeholders involved would be held accountable, should they not deliver to the smallholder farmers, as agreed. This approach is quite similar to the approach taken by Kenya, whereby the National Agricultural Extension Program (NAEP) policy has been developed with a clear mandate and implementation modalities set out in their very effective model, called the pluralistic approach (Mutisya et al., 2010).

This approach has been recognised to be very effective, with farmers agreeing that the model is effective, and it focuses on the involvement of various stakeholders. The model was implemented based on research findings. A policy was then developed which clearly stipulated measures for regulating governance, communication strategies, accountability, roles and responsibilities, and clear monitoring and evaluation systems, as well as well-defined institutional arrangements. Although described in different terms, the pluralistic model is not different from the Brazilian model (the public–private, pull-based model), which has been considered as effective. This is because it was mainly based on research, and universities and research institutions were involved in ensuring that programmes and initiatives for assisting farmers were in place. In Kenya, the NAEP policy focused on bottom-up planning that

emphasised the involvement of farmers in decision-making processes, and this is considered to be a participatory approach (Khapayi and Celliers, 2015).

South Africa has various actors involved in the transfer of skills to land reform beneficiaries, private actors, NGOs, agencies, and farmer cooperatives, as well as government. Government remains the leading driver or champion for funding, policy development and ensuring the implementation of programmes. South Africa can be expected to do its best in adapting to the pluralistic model of transferring skills (Khapayi and Celliers, 2015). The shortcomings in South African models mainly relate to roles and responsibilities, and most importantly, the lack of a clear indication as to who should be held accountable. Policies, such as the National Extension Policy, should better define or clearly state such institutional arrangements, and this is clearly not the case in South Africa. The policies in Brazil, Kenya and China clearly stipulate the roles and responsibilities of all actors (NGOs, organisations, private sectors, and government and its entities), and clearly provide for the decentralisation of extension services, such as skills transfer and capacity building, which is imperative for minimising the duplication of services and facilitating cooperation between various supporting actors and the smallholder farmers.

The literature on the three countries, China, Brazil, and Kenya, has revealed that the farmer-to-farmer skills transfer model was, to a large extent, implemented successfully. The progressive farmers who were chosen to be mentors were well trained, and proper skill audits were conducted with them prior to them offering any services to the smallholder farmers. Government also regulates the process through its policies and a proper implementation plan that stipulates how the farmer-to-farmer model should be rolled out. These countries also introduced clear assessment tools to assess the effectiveness of the skills transferred by the progressive farmers. In the case of South Africa, strategic partnership and mentorship is not really effective because of the unclear implementation modalities of RECAP strategic intervention. There is no clear monitoring and evaluation system in place to ensure that strategic partnerships and mentors deliver what farmers need (Enterprises, 2013).

9.4 Lessons for South Africa (SA)

South Africa has the relevant stakeholders in place for ensuring that the land reform beneficiaries are assisted, represented by a number of farmer cooperatives, agencies, service providers,

universities, and government institutions and initiatives. What South Africa is lacking is a comprehensive skills transfer/extension model that clearly defines the roles and responsibilities of the stakeholders, and stipulates how these stakeholders should work together. This is where the models of other countries for capacitating farmers differ from how the models are rolled out in South Africa.

In the case of Brazil, Kenya, and China, a bottom-up approach is used, and these countries ensure that farmers are engaged in cases where service providers or farmer cooperatives are involved. These countries also ensure that farmers are involved in experimental farming and in research studies, and that they are able to identify the skills that they lack. This is not the case in South Africa. Farmers in South Africa have indicated that they are not happy with the skills transfer model, and mentioned that the model was not effective because it was imposed on them (Enterprises, 2013).

The extension officers in China were highly trained before working with farmers, and they are involved in research done by commodity organisations. In addition to their qualifications, they acquire practical experience within the farming sector, and this enables them to transfer relevant and reliable skills to farmers. Literature in South Africa has revealed that farmers feel that the extension services given to them by fresh graduates from universities are not valuable enough, and the farmers feel that they know better than what extension officers seem to be giving to them. Indeed, in South Africa, there is much debate regarding certain extension practitioners who are required to transfer skills, but are not well-trained and inexperienced. However, the good news is that South Africa, through the Department of Agriculture, Forestry and Fisheries, has initiated the development and rolling out of the Extension Recovery Plan (ERP) within all the nine provinces (Terblanché et al., 2014).

The commodity-based extension model in Kenya is also a good approach that explains the possible and relevant solutions for output market requirements as to quality and quantity. These requirements usually constitute barriers to entering markets, particularly for the smallholder farmers, and this is precisely the case in South Africa. The utilisation of Information and Communication Technologies (ICT) as a means of transferring skills to farmers is a success story experienced in the country, although a shortcoming might be in the ability of farmers to utilise the ICT systems. The difference in South Africa is that ICT is not only directed at extension

staff, but also directly at farmers. The ICT ensures that information reaches all farmers timeously. This ensures that there is swift access to information which is credible, since the quality of information in the public domain is monitored and controlled (Jacobs and Hart, 2014).

Although the work done by government and other stakeholders is productive, this study revealed that there is an amount of ineffectiveness in these efforts. The ineffectiveness is caused by the stakeholders working in silos and no clear implementation strategy. These efforts would have much better results if the structures were to work well together, and not in silos. There seems to be a disjuncture in the various work efforts being undertaken by these various stakeholders, and there are no sound policies, institutional arrangements and evaluation systems in place, as compared with how China, Kenya and Brazil operate.

Different actors in the agricultural sector have a common interest in ensuring that the smallholder farmers, and previously disadvantaged farmers, are assisted in terms of skills transfer. It is, therefore, critical that the policies are developed and clearly define the roles and responsibilities of the various actors, and stipulate how such responsibilities converge and are carried out (Swanson and Davis, 2015).

9.5 The proposed model for South Africa (SA)

9.5.1 Model proposed for South Africa

The model proposed for South Africa is the pluralistic model. The model is also defined as comprehensive skill transfer model. See Figure 2 of the proposed model.

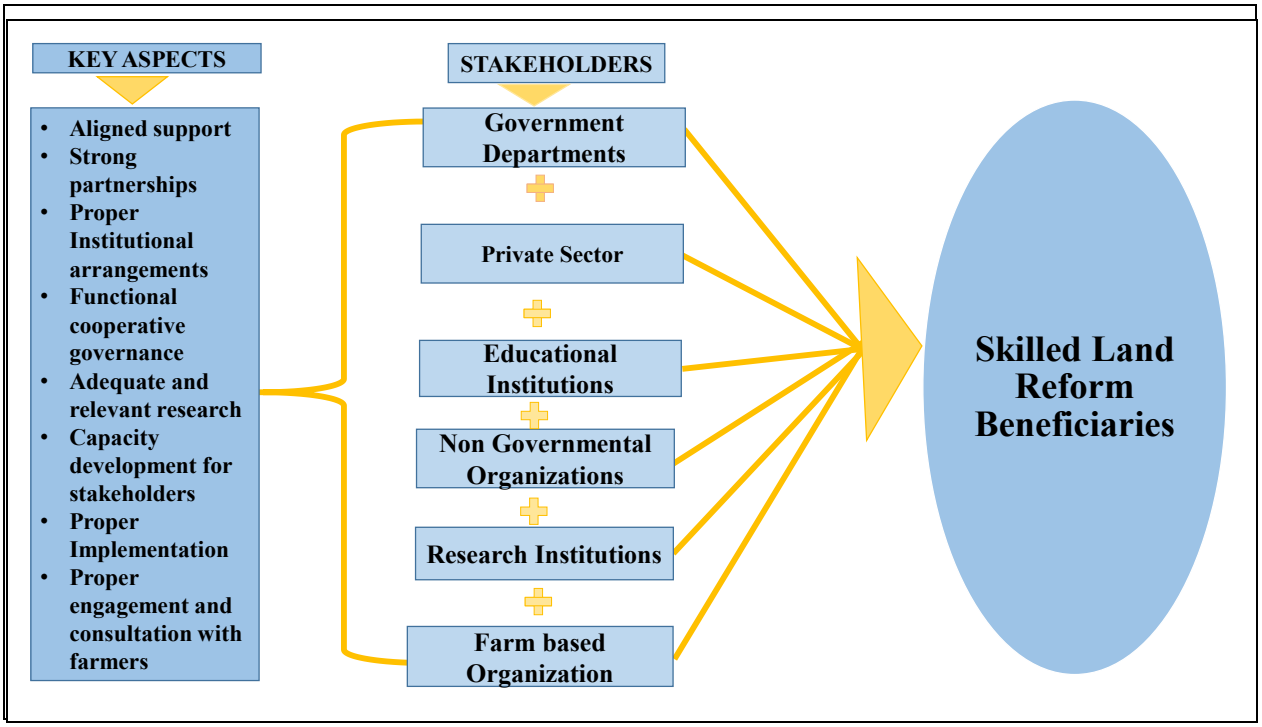

Figure 2: Comprehensive skill transfer

As shown in Figure 2 a pluralistic model can only be developed through ensuring that all stakeholders work together. Government departments must ensure that they work with the private sector, educational institutions, non-governmental organisations, farm-based organisations and other relevant stakeholders. The involvement of these different stakeholders will ensure that farmers receive adequate and relevant skills. There is a need to also ensure that all stakeholders participate in the development of policies, ensure aligned support, partnerships, adequate and relevant research, stakeholder capacity building, and proper engagement with farmers. Figure 2 emphasises that the skill transfer model can only be effective when all stakeholders work together and all aspects are taken into consideration.

The skills transfer models that exist in Brazil, Kenya and China share some characteristics with the models that already exist and are being implemented in South Africa. The issues regarding the South African models relate to the requirements for implementation modalities, governance, institutional arrangements, and robust monitoring and evaluation systems. South Africa has the resources and stakeholders exist in the agricultural sector, therefore pluralistic model would be effective in South Africa. The success can be achieved through clear stipulation for accountability, robust monitoring and evaluation, defined roles and responsibilities, and implementation modalities. The shift in these models has been complemented by a shift from government-based service provision to pluralist extension service provision, where governments, input suppliers, exporters, NGOs, farmer organisations, and cooperatives are all engaged in extension provision (Swanson and Davis, 2015).

The private–public, pull-based model from Brazil, which is much more similar to the pluralistic model described in Kenya, could also be effective for South Africa. The models involve various actors and are driven by what farmers demand in their respective territories. These models do not impose skills needs on farmers, but rather directly involves farmers in research and decision making. There is, however, a need for the South African government to strengthen the skills audit system to ensure good service delivery for the farmers.

The universities and other colleges have a role to play, as far as equipping extension workers with relevant, scientifically derived information is concerned. These institutions would need to fine-tune their curricula to meet the needs of the emerging realities experienced in the privatised agricultural extension service. The government also has a role in providing technical expertise on agricultural issues, and should be available to do so, when called upon by other providers. It should serve as the final referee or arbitrator of conflicting extension information.

9.6 Chapter Summary

This chapter discuss the successful models in China, Kenya, and Brazil. A comparison of characteristics of the successful models in the three countries is discussed. The model that exists in Brazil, Kenya and China share the same characteristics. The models involve, high quality of

research, good engagement between public and the private stakeholders, involvement of farmers in planning and decision making as well as proper alignment of skills programmes. The models in the three countries are successful model because they take into account different aspects. A comprehensive skill transfer model or pluralistic model is critical for South Africa.

Over and above the foregoing, and in order for the pluralistic model to be effective in South Africa, the Government of South Africa should develop a National Monitoring and Evaluation Skills Framework that would ensure that the various actors involved do not function in silos but work together. This should be done through a robust investigation that involves participation by farmers and all actors that are involved in skills transfer activities

CHAPTER 10
SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter gives a summary of this dissertation. It re-examines the set objectives of the study and summarises the main findings related to the intended objectives. Thereafter, the conclusions from the findings and recommendations are presented.

10.1 Summary of findings

The first objective of the study was to outline the skills needed by land reform beneficiaries to effectively manage their farms. The study has shown that land reform beneficiaries do not only need one set of skills to become fully productive, but also require sets of various skills. The major skills defined in the literature include technical skills, personal skills and management skills. Technical skills encompass communication skills, farming system skills, interpersonal skills, mechanisation skills, technology use skills, and farming research skills. Personal skills cover self-development discipline skills, risk-taking skills, innovative skills, and change-oriented skills. Management skills cover goal setting, farm planning, negotiation skills, financial management skills, and record-keeping skills.

The second objective was to identify the shortcomings in the existing skills transfer model for land reform beneficiaries. The study revealed the following shortcomings: (i) lack of alignment of support between various institutions that give support to land reform beneficiaries; (ii) lack of strong public–private partnerships; (iii) poor or improper institutional arrangements; (iv) lack of cooperative governance; (v) lack of relevant research studies being undertaken prior to providing support to land reform beneficiaries; (vi) limited skills or no capacity building for stakeholders who support land reform beneficiaries; and (vii) poor implementation of programmes.

The third objective was to review skills transfer models adopted in various countries for capacitating farmers. The study identified the following skills transfer models in Brazil: the extension support services model, the private–public, pull-based model; pull-based approaches; and the use of Non-Governmental Organisations (NGOs). The models identified for extension services in Kenya are: the pluralistic system/model; commodity-based extension models; information and communication technologies model; and the Farmer Field School model. The

skills transfer models identified in China are: the extension support service in China; the public agricultural extension technology extension model; the Farmers Home public–private partnership; farmer-to-farmer learning; and multi-dimensional actors participating in agricultural extension.

The fourth objective was to identify the key characteristics of successful skills transfer models. The study revealed the following as being characteristics for a successful model: demand-driven support services; functional and proper coordination between all spheres of government and between private sectors and government; research is a key component of skills transfer models; private and public partnerships; the use of institutions such as universities; and monitoring and evaluation is a key component of skills transfer models.

10.2 Conclusion

The main objective of this study was to identify a skills transfer model for land reform beneficiaries in South Africa. The study findings revealed that skills development in the agricultural sector is crucial. The need for skill transfer is a cross-cutting issues worldwide. To attain maximum production and ensure growing of farm businesses relevant skills must be acquired by land reform beneficiaries. Literature revealed that there is indeed a number of existing programmes in South Africa providing skills to farmers. However, there is still a gap with regard to the planning and implementation of the existing models, particularly with regard to the coordination of the support (skills transfer) to farmers, as well as with the monitoring and evaluation of the existing programmes.

The study has revealed that countries such as Kenya, Brazil and China have also given high priority to skills development in the agricultural sector. Successful models were identified in the study and the skill transfer models in the three counties have similar characteristics. The models are well-planned, coordinated and all relevant stakeholders are involved in the implementation.

10.3 Recommendations

The following are recommended:

- *Formulate a policy for a comprehensive national skills transfer model.* This model should take into account all the stakeholders that are involved in skills transfer programmes for land reform beneficiaries. The literature revealed that farmers require all the necessary skills to be fully productive on their farms, a farmer who has certain skills and lacks other related skills cannot guarantee success of his/her farm, and this is a result of no clear existing policy focusing on comprehensive skills development for land reform beneficiaries.

- *Strengthen public–private partnerships.* Strategies for achieving this should also be stipulated in the comprehensive policy for skills transfer. There is lack of proper coordination of public –private partnerships. And in most cases private and public sectors works in silos creating much confusion to land reform beneficiaries.

- *Ensure that cooperative governance covers issues relating to monitoring and evaluation.* This should also ensure accountability by stakeholders who provide support to land reform beneficiaries. Enterprises (2013) has revealed that there is no proper monitoring of the individuals that are transferring skills to farmers, no clear audits are done on those responsible for transferring skills to land reform beneficiaries. The skills transfer issue is a critical, anyone involved in transferring skills should be monitored and evaluation on skill transfer models should be undertaken timely.

- *Conduct continuous research with regard to the needs or demands of land reform beneficiaries.* Such research should involve the farmers (need for farmer participatory research). This will address the lack of existing research involving farmers to investigate what farmers need.

- Over and above the foregoing, the South African government should *strengthen the pluralistic skills transfer model.* A joint effort by both state and non-governmental agencies, making use of a participatory model is best to ensure support to land reform beneficiaries.

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