

Towards Reconfiguring the Agricultural Expert System (AES) for Black Small to Medium Farmer Development for Commercialization:

**A progressively focused policy literature review and social learning
dialogue in the Eastern Cape Raymond Mhlaba Local Municipality**

Thesis submitted in fulfilment of the requirements of the Degree of Masters in Environmental
Education

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Abstract

This study focuses on the agricultural expert system (AES), its inherited and potential reframing capabilities for the development, growth and transition of black small to medium farmers (BSMF) into the commercial sector. The study was conducted as a critical analytical policy review of implemented policies pre-and post 1994 that subsequently highlighted the thematic continuities and discontinuities of policy reform and the subsequent impact on BSMFs using the AES as a conceptual lens.

The study aimed working with stakeholders in the AES in the Raymond Mhlaba Local Municipality as a case study to critically engage and question the AES and its contemporary framing and potential reframing and continued impact on the BSMFs development. This was conducted through a dialogical social learning process in partnership with diverse voices that cut across the contemporary agrarian landscape that included “universities, think tanks, vocational training providers, standards-setting agencies, trade associations that provide specialized training, education, information, research and technical support” (Porter, 2000, p. 17).

The data for the social learning dialogue process was generated through an iterative analysis of dialogical social learning workshops, focus groups and semi-structured interviews. The analysis focused on the framing (Chapters 2, 3, and 5) and reframing of the AES (Chapter 6). Through dynamic engagement within the knowledge hub (contextual social learning and literature), the study surfaces a potential alternative discourse that actively includes the BSMFs as a crucial component of the commercial sector AES as the analysis shows these are largely excluded. This alternative discourse occurred through dialogical interactions with all participants via a pro-actively constituted social learning process, enriched and deepened by literature as indicated above.

Main recommendations of the study are:

1. The AES must be framed to address the holistic value chain of BSMFs to help address underlying policy dualism,
2. Public Private Partnerships are needed to support BSMFs development and these should adopt a social learning approach that is reflective of complex realities
3. There is need for better understanding of roles and contributions of stakeholders in the AES to avoid duplications.

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‘I could not have done it without myself’

Acronyms

AES	Agricultural Expert System
RM	Raymond Mhlaba Municipality
SLAG	Settlement/Land Acquisition Grants
LRAD	Land Redistribution for Agricultural Development
GEAR	Growth, Employment and Redistribution
BSMF	Black Small to Medium Farmer
MTSF	Medium Term Strategic Framework
IDP	Integrated Development Plan
GDP	Gross Domestic Product
DBSA	Development Bank Southern Africa
FPT	Field Practical Training
FSP	Farmer Support Programme
ANC	African National Congress
RDP	Reconstruction and Development Programme
LRPP	Land Reform Pilot Programme
MLAR	Market-based Reform
PLAS	Proactive Land Acquisition Strategy
BATAT	Broadening Access to Agriculture Trust
CASP	Comprehensive Agricultural Support Programme
NSI	National Systems of Innovation
OECD	Organisation for Economic Co-operation and Development
ASSAF	Academy of Science South Africa
AET	Agricultural Education and Training
NPC	National Planning Commission
TVET	Technical and Vocational Education Training

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Chapter 1: INTRODUCING THE STUDY

1.1 Introduction

This chapter seeks to provide a brief orientation and introduction to the study. It outlines the purpose, and the goals of this research. It also discusses the context in which this research was conducted with more detail provided in Chapter 4 and 5. The chapter introduces the overall structure of the thesis and provides an outline of the six chapters that make up the study.

1.2 Locating the study

The case considered in this study, is related to wider debates about land reform and its potentials. According to Hall (2010, p. 213) land reform has “been informed by shifting politics in the post-transition period in South Africa”. This, in her opinion has failed to “restructure the rural economy and overcome the apartheid legacy of dualism in the agrarian structure” (Hall, 2010, p. 219).

As a result, the ‘dualistic’ agricultural sector continues to actively privilege ‘capital intensive commercial farming’ which has distinctly been predicated on racial capitalism “understood as the collusion of racism and capitalism interests” (Hall, 2010, p. 213). The operational function of the dualistic agricultural landscape has alienated black farmer participation within commercial markets this has subsequently limited black small to medium scale farmers (BSMF) development within the emergence and small farmer categorization. Hebnick, Fay and Kondlo (2011, p. 224) considers BSMFs as “virtually absent” within the commercial sector. This demands radical reconfiguration of the socio-political and economic landscape for the purpose of cultivating an environment that is conducive for BSMF development and meaningful contribution within the commercial sector. The agricultural expert system (AES) and how it is framed and functions is central to this, hence this study.

With an interest in sustainable growth and development of BSMFs, the study will aim to expand the conceptual framework of the commercial sector to include the reconfiguration of the food value chain that includes “big agribusiness, food manufacturing, input industries and,

at the retail end of the value chain, the super-market” (Hall, 2014, p. 9), but with emphasis on the AES. This will include the important role cooperatives continue to play in the “development of the commercial agricultural sector” (Ortmann and King, 2007, p. 219) and the role of the AES in this process. Therefore, the need to focus on cooperatives as one of the key components in enhancing “the development of small scale farmers” (Ortmann and King 2007, p. 219) is paramount in broadening the conceptual framing of Land Reform in South Africa and how these factors affect the growth and development of BSMFs within the sector. How the AES is dealing with this (or not), will be a key focus of this study.

Specifically, the study aims to understand the role of the AES in the cultivation and development of BSMFs in the transition into commercialization. BSMFs are defined by Cousins (2010, p. 7) as established “producers who consistently market a surplus”. This particular cohort of farmers has access to water resources (including irrigation), arable land and engages in various forms of production. The study will aim to interrogate issues of how the AES supports access to markets by BSMFs more importantly, the cultivation of alternative and inclusive markets for the purpose of growth and development. These processes will be aimed at understanding the needs of BSMF and how best to incorporate them into AES support for the commercial sector as “new small and medium-scale aspirant famers” (Ntsebenza and Hall, 2007, p. 75).

To inform the analysis of the AES and its role, framing and potential reframing, the study aims to situate this investigation within the intricate continuities and discontinuities prevalent within the agrarian sector post 1994. This will help form clarity in understanding “institutional and discursive linkages” (Hebnick et al., 2011, p. 222) and how these linkages continue to influence and or shape the contemporary agrarian landscape. The AES will be used as a conceptual framework defined by Hebnick et al. as a multi-faceted network that is able to interconnect at “national, provincial and municipal level, various professional organizations and individuals” (2011, p. 223). Focusing on the role, framing and potential reframing of the AES, this focus will be used as an analysis tool to demonstrate the “extent to which the transformation of institutional infrastructure in agriculture has proceeded hardly unchanged in its content” (Hebnick et al., 2011, p. 222) or otherwise.

There are a number of continuities and discontinuities in land reform policy application in South Africa that can be traced back to the 1894 Glen Grey Act. That, according to Bouch, has introduced “implicit and explicit segregationist legislation” (1993, p. 3) that skewed land ownership towards the white minority whilst eroding indigenous land tenure systems. The Act advanced the integration of black people into the economy as laborers whilst “moving towards a separate system of pseudo-representation” (Bouch, 1993, p. 3). The rise of racial dualism within the sector further entrenched by the application of the 1913 Land Act is argued by Rich to have dismantled “an independent black peasantry” (1976, p. 2) reducing this cohort to a proletarian status in order to serve the needs of white agriculture at the time. Ntsebenza and Kepe (2012) argue that the 1913 Land Act was a critical turning point in the agrarian sector as it made inroads for spatial and economic dualism which solidified the hegemonic control of the sector by a white farmer minority that has subsequently shaped the contemporary agrarian landscape of South Africa, including the AES.

Through the application of various policy applications within the sector that were aimed at the development of the white farmer, the legislation of the 1937 Marketing Act allowed for state intervention and regulation of the markets of the agricultural sector through the use of Control Boards. ‘Control Boards’ ensured the standardization and control of markets and subsequently ensured that prices “were pan-territorial and pan-season” (Vink et al., 2012, p. 3). Pan-territorial prices according to Vink et al. (2012) enabled cross-subsidization of farmers thus cultivating an enabling environment for white farmer development who were either at entrée level, and or who were characterized as emerging farmers.

These legislations systematically and actively raised the capital value of white agriculture that “benefited from substantial state subsidies” and agricultural extension services inclusive of research resources (Ntsebenza and Hall, 2007, p. 109). With this dualistic background, it is unfortunate that black farmer development post 1994 in regards to policy reform has “failed to redress the structural imbalance and broaden ownership of the economy” (Hall and Cousins, 2015, p. 2). Post 1994 saw the deregulation of control boards and the abandonment of pan-territorial pricing actively facilitating the vertical integration of markets that resulted in “big food-the growing dominance of just a handful of powerful co-operations” (Hall and Cousins, 2015, p. 3) as a consequence of policy reform. As a result, the monopolization of large scale

commercial farming and corporate agri-business in the agricultural sector in terms of value chains, as well as dominance of knowledge in the AES became solidified.

Government has attempted through various policy rectification methods to cultivate a socio-economic and politically just agrarian landscape, however there remains disproportionately skewed white commercial farmer dominance within the sector. Policy reforms such as the Settlement/Land Acquisition Grants (SLAG 1995 -1999) and the Land Redistribution for Agricultural Development (LRAD, 2000) failed to reconfigure the agricultural landscape. As a result, according to a report by the Department of Land Affairs (2004) “only 2.9 percent of agricultural land was transferred in the first decade of democracy” (Hall, 2004, p. 219). This has meant that white agriculture has continued to benefit from skewed systems of access and control of markets and commercially driven AES support, which allows growth and development at the continued exclusion of black agriculture. As result, 1994 white farmers occupied “10.6 million hectares that were under arable cultivation” (Bernstein, 2013, p. 26). By 2010 land reform had gained little traction with less than 5 percent commercial land transferred to BSMFs (Bernstein, 2013).

Lahiff and Cousins argue that since 1994 little has been done to “develop the smallholder sector, and this may even have contributed to its long run decline” (2005, p. 127). The adaption of a neo-liberal policy in the form of the Growth, Employment and Redistribution policy of the post-apartheid state (GEAR, 1996) repealed the 1937 Marketing Act. I argue that the repeal of the Marketing Act without ensuring an equitable strategy of how to incorporate BSMFs has contributed to the current hostile environment black farmers experience who are “wishing to expand their production” (Lahiff and Cousins, 2005, p. 127).

Consequently, the status quo almost undisrupted has continued to protect and perpetuate gross inequalities and skewed representation within the commercial terrain, with resonances in the AES. These inter-linking factors have limited the scope the impact of agrarian reform, and the emergence of a more just-oriented AES which is currently bifurcated between commercial agricultural system that supports market actors. While smallholder farmer support is mainly provided by agricultural extension services of the state, who are also critiqued for being under-resourced and inadequately prepared.

1.3 Research Goals

This study aims to consider the role of the AES in agricultural development policy and programmatic practice with an emphasis on the BSMF. It proposes via its assumptions, that in order to ensure growth and development of BSMFs it is imperative that a study is conducted on the AES, its inherited and potential reframing. The AES, I argue, will highlight the intricate interdependencies that exist in the sector and how best reform can be implemented for the incorporation of BSMFs as dynamic actors in the commercial sector. However, this is with the understanding that should a paradigm shift be articulated as a potential ‘reframing’ of the AES, there will also be a need to “overcome a number of structural constraints arising from history and geography” (Delgado, 1999, p. 165). Nevertheless, there is need to begin investigating how the AES can potentially be reframed out of this history and geography, hence the study.

This particular study will seek a “pro-active policy stance that goes beyond the very necessary but insufficient-by-themselves market reform of the 1980s and early 1990s” (Delgado, 1999, p. 165). The study will draw on historical literature review as proposed here to consider critically why the AES has yet to incorporate equitable policy for BSMFs, and thus also illuminate the need for reframing of the AES. This will be complemented with in-field engagement and dialogical social learning. Through a progressively focused literature review process that responds to and seeks depth of insight into field-based data, the study will aim to engage and understand socio-political and historical conflicting knowledge systems, values, attitudes and desires that can assist in cultivating an effective and inclusive AES model with potential to cultivate human action within the sector, and that can inform a reframing of the AES.

1.4 Research Questions

In order to answer this research, the questions the study aimed to understand are,

- how the agricultural expert system (AES) is configured out of a policy and programme history and how has this structure the AES; what roles are discernible and how the AES been constructed;

- how have black small to medium scale farmers (BSMFs) been operating to date within the AES;
- what are the aspirations of BSMFs for commercialization, and what implications does this have for reframing the AES as it currently operates, also viewed with a sustainable development lens; and
- how can multi-actors in the AES potentially help to reframe current AES practices in support of BSMFs informed by an in-depth policy literature analysis and social learning dialogue?

1.5 Study location and contextual profile

The field-based component of the study was carried out in the Raymond Mhlaba Municipality, Eastern Cape South Africa. Subsection 1.3.1 below will introduce the research site and its context.



Figure 1.1 Map of EC Municipal Districts Raymond Mhlaba

The study was conducted in the form of an in-depth, and progressively focussed literature review, which was iteratively developed via a social learning dialogue case study situated in one agricultural ‘knowledge hub’ that centres around the BSMF’s in Raymond Mhlaba (RM) Local Municipality. RM under the jurisdiction of the Amathole District was established under the amalgamation of the Nxube and Nkonkobe local Municipalities in 2016.

According to the Integrated Development Plan (2017/2022) report RM is “the second largest local municipality covering 6 474 km²” and is simultaneously positioned as the second largest economy in the Amatole District Municipality. The Municipality is considered a largely a rural municipality with an approximate 70% of its residents residing in farm and village areas.

The municipality has identified rural development, food security and land reform as one of the key priority areas that need development. These key identified priorities are part of the Medium Term Strategic Framework (MTSF) aimed at cultivating a “comprehensive rural development strategy linked to land and agrarian reform and food security” (IDP, 2017/2022) for the purpose of establishing cohesive and sustainable developmental modalities. The Gross Domestic Product (GDP) of RM contributes 1.54% of the Eastern Cape’s economy. Agriculture in the municipality has been identified as an area of economic development as it has been ear-marked by the RM Municipality Socio Economic Review and Outlook 2017 as the fastest growing component of the economy’s growth with an average growth rate of 16.1%. From 2016-2021 the expected average growth rate of the sector is 3.47%.

The RM IDP identified that the sector has “exhibited an average annual growth rate of over 4.0% since 2005” (2016/2022, p. 52). The case study site was used as a knowledge hub surrounding BSMFs (i.e. knowledge hubs will come into focus via the AES investigation). This provided the space to generate nuanced contextual data to complement the critical literature review, and to also iteratively point out areas that required further literature examination. It further provided insights into the contextual AES landscape in which BSMFs operate in addition to illuminated the challenges and opportunities this cohort face(s) in peri-urban and rural operational contexts that reflected potential implications in reframing of the AES.

1.6 Structure of the study

Chapter one is an introduction to the study and gives a broad description and overview of the intention of the study, and subsequent chapters. This chapter provides the objectives and aims of the study and outlines the research questions and introduces the fieldwork site.

Chapter two draws on an in-depth literature review to give a chronological account of land policies pre-and post 1994. The chapter seeks to intricately locate the developmental trajectory of BSMFs within the context of disproportionate socio-economic and political legislative framework(s) that have contributed to the contemporary material conditions experienced by this cohort of farmers. The continuities and discontinuities prevalent in the policy discourse critiques the use of the unframed AES and the need to reframe it for the growth, development and transition of BSMFs into the commercial sector.

Continuing with the in-depth literature review work, Chapter three aims to give an in-depth critical and analytical overview and understanding of the AES, its origins, use, evolution and continued impact and or influence(s) in the agricultural sector as it pertains to BSMFs. Furthermore, the chapter attempts to critically engage and critique the broad based pro-poor public policy approach and its impact on the developmental discourse and trajectory of BSMFs post 1994, highlighting how an (un)reframed AES has negatively impacted the developmental agenda of BSMFs emphasizing the need for a reframed AES.

Chapter four gives a details account of how the methodology used in the generation of data, the theoretical lens used and how the data was analysed, especially for the social learning component of the study. In a step by step account, the chapter defines and motivates the usefulness of the social learning theory for this study. It then further explains how the data was conducted and the methodological approach used and more importantly, explains how the data was analysed. The chapter details the how the semi-structured interviews and focus groups were conducted. Lastly, the chapter unpacks how issues of transparency, trust, reflexivity, respect and dignity and data management were addressed within the study in the field-based component.

Chapter five deals with data analysis from the social learning dialogue, and deepens insights iteratively with further literature review work. The chapter attempts to engage in an reiterative conversation between the voices of the participants and the literature. The chapter attempts to give context to the systemic challenges faced from a grassroots perspective and the diverse and multi-linked community of practice but also seeks to find potential solutions. The reframing of the AES is starkly brought into context and attempts to find alternative conceptual framings

and understanding in the policy AES framing that is contextually responsive to the needs of BSMFs necessary for the transition into the commercial sector.

Chapter six offers an overview of the chapters and highlights the thematic themes emergent throughout the study that help to inform a reframed AES. Furthermore, the chapter six will provide analytic statements that will give context to the recommendations made in concluding the study.

Chapter 2: HISTORY OF LAND DISCOURSE IN SOUTH AFRICA

2.1 Introduction

The contentious land debate in South Africa provides a complex and re-iterative narrative of land dispossession shaped by “indirect and direct governmental intervention” (Kristen et al, 1992, p. 19) through policy implementation, cultivating a complex dual agrarian landscape that has subsequently impeded the socio-economic development of BSMF pre-and post 1994. This chapter will aim to give a chronological account of land policies in an attempt to highlight “state power with advancements” (Hebnick, 2013, p. 29) and how consecutive land policies and legislative mechanisms have negatively impacted the growth, development and transition of BSMFs into the commercial sector. Furthermore, it will aim to highlight prevalent contextual issues that continue to hinder the development of this particular cohort of farmers.

2.2 Legislation of land rights in accordance to race and the rise of white farmers ‘commercial agriculture’

The agrarian landscape in the 1890s according to Binswanger and Deininger (1993) was highly competitive. According to Hall (2003) discriminatory land policies and market sanctions against black farmers allowed for the cultivation of incubation and protectionist driven policies centred on white farmer development. Legislative policy was used as an enforceable mechanism in which expansion and control of the frontier was secured and simultaneously “laid the foundation of racial segregation” (Hebnick, 2013, p. 29). Subsequently, the land discourse in South Africa has been predicated on race as a social construct in relation to land ownership, property rights and market participation in the commercial sector (Ramutsindela, 2012).

Subsequently, the emergence of white farmers interchangeably recognised as “commercial agricultural” (Hall, 2003, p. 2) was supported by increased and favourable legislative and policy mechanisms that ensured conducive modes of access to the markets and land, to the direct gradual decline of black farmer participation within the sector. The marginalisation of black farmer participation in markets which according to Ramutsindela resulted in “racial and

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economic subordination” (2012, p. 754). That, according to Hebnick, was intensified by politically discriminatory policies that aimed to institute “control over land and labour but also to facilitate early forms of agricultural commodity production” (2013, p. 31).

2.3 The 1894 Glen Grey Act and the subsequent marginalisation of black farmers within the markets

The 1894 Glen Grey Act served as the first legislative mechanism that regulated land rights by which colonialists defined “their land rights and the subsequent definition of the land rights of others” (Ramutsindela, 2012, p. 755). Consequently, the implementation of the Glen Grey Act dramatically limited the amount of land blacks could hold. That laid the foundation for the ‘one-man-one-plot’ policy principle. This policy principle aided by the Fencing Act(s) of 1883-1910 laid the foundation for the recognition of private property laws and solidified the “commoditisation in the countryside” (Hebnick, 2013, p. 31).

As a direct consequence to the policy implementations white farmers experienced exponential surges in growth between the period of (1890-1900), arable land increased from “35, 700ha to 226, 000ha” (Binswanger and Deininger, 1993). The Agricultural Development Act(s) of (1904-07) strengthened and institutionalised fragmented state assistance programmes directing state resources towards credit and marketing initiatives for commercial farming. The culmination of these legislative policies led to the establishment of the Land and Agricultural Bank in 1912 that formalised financing structures in the development and expansion of the commercial sector.

The implementation of the 1913 Lands Act barred the establishment of “new farming operations in the reserves” (Binswanger and Deininger, 1993, p. 1461) prohibiting the purchase of land, sharecropping and cash rentals on white farms by black farmers. The introduction of the cash nexus system disintegrated the pre-existing “economic order” (Bundy, 1972, p. 369), expediting according to Philip, the then “existing processes of de-agrarianisation in the former Bantustans” (2011, p. 8), significantly shrinking the buying power of black farmers and subsequently reducing homelands into dormitories of “cheap African labour” (Binswanger and Deininger, 1993, p. 1461).

This process was further assisted by the institutionalisation and establishment of the Department of Agriculture (DOA) in 1924, supported by research institutions and agricultural colleges. As of consequence, according to Hebnick the “agricultural expert system became associated in rhetoric and policy with attempts to forge a unified and modern white nation” (2013, p. 33) at the exclusion of black farmer participation and development within the sector.

The Native Trust and Land Act No. 18 of 1936 relegated black agriculture to “communal grazing” (Hebnick, 2013, p. 34) with limited agricultural support services. In contrast, the implementation of the Marketing Act (1937) through the “use of various policy instruments (such as single-channel schemes, pool schemes, and export monopolies)” (William et al., 1998, p. 70). The subsequent 23 marketing control boards in hindsight performed the function of market volatility buffers and shock absorbers insulating commercial development from vulnerability to external factors. That included but was not limited to “uncertain climate, volatile prices and the inability of foreign and local markets to absorb their output” (William et al., 1998, p. 70).

The extensive and successive state interventions solidified the dual agrarian landscape that is characterised by “large-scale, capital-intensive, heavily subsidized and protected white farms, which provided the bulk of marketed production, and the small-scale Black subsistence sector” (Lipton and Lipton, 1994, p. 25). It is important to note in the years between 1910 to 1935 approximately 87 acts were passed in response to the state’s political mandate to position agriculture as a source of economic generation. That according to Hebnick “expanded to become the chief source of commodities for national and global markets” (2013, p. 31) under the apartheid state.

2.4 Potential trajectory that could have influenced and or facilitated the transition of BSMFs in the commercial sector

The 1950 Commission of Enquiry into the Socio-Economic Development of the Bantu Areas, commonly referred to as the Tomlinson Commission was established as a response to the Group Areas Act (1950) that had institutionalised the formation of homelands. The state tasked the Tomlinson Commission with recommendations of establishing a viable rural economic policy of separate development that would allow white South Africa to “maintain economic

and political relationships” (Hebnick, 2013, p. 35). BSMFs were identified by the commission as an integral component to poverty alleviation and economic activity development. The commission had recommended that this particular cohort of farmers be awarded state subsidies through larger plots for “progressive farmers” (Hall, 2003, p. 5) who had proven skill, capacity and capability. Unfortunately, the recommendations of the report were rejected marking the “end of any designs to promote African commercial farmers” (Bernstein, 1998, p. 12).

Government instead “embarked on a renewed process of Betterment Planning to re-organise land use in residential, cropping and grazing ones” (Hall, 2003, p. 6; De Wet, 1989; McAllister, 1989) effectively limiting the scope of development and growth of homelands and subsequently that of BSMFs. Through the Betterment program the state was able to exact its continued “control over the population in the native areas” (Hebnick, 2013, p. 36). Govern Mbeki rejected the proposed policy describing it as hostile economic system that rendered the homelands as dormitories for cheap labour that resulted in the collapse of black agriculture (Binswanger and Deininger, 1993).

In response to the socio-economic situation in the homelands’ the Development Bank of Southern Africa (DBSA) established the Farmer Support Programme (FSP). The FSP became “the primary source of capital for black agriculture” (Hall, 2003, p. 7, Levin and Weiner 1981, p. 31). The funding was aimed at the establishment of an agricultural expert nexus that would facilitate the interlinkages between extension, training, infrastructure and marketing support initiatives that successfully incubated 25 000 farmers (Hall, 2003). According to Hall, the success of the farmers was largely attributed to farmers ability to “cross-subsidise their farming from other sources of income” (2013, p. 8; Schirmer 2000, p. 159).

2.5 The shift in the 1990’s political landscape that formed the foundation of democracy in South Africa and the consequential impact on the agricultural sector

The radical shift in the political landscape in South Africa in the 1990’s brought the land debate into a sharp focus. The African National Congress (ANC) adopted the Reconstruction and Development Program (RDP) policy framework, which was a state led interventionist programme aimed at reversing “the effects of apartheid and attack poverty” (Dollery and Snowball, 2003, p. 321), which included the inclusive expansion of the agricultural sector in

regards to “land, extension support and training” (Nel and Davies, 1999, p. 254), aimed at transforming the agrarian landscape. Through the strengthening of property rights by reconfiguring the inequitable “buying power and collective bargaining of established agri-business and cooperatives of white farmers” (James, 2011, p. 397). The RDP was meant to establish an “efficient market-directed farming sector” (Tregurtha et al, 2010, p. 1) that was seen to be crucial in restructuring the rural economy of South Africa.

The Agricultural White Paper (RSA, 1995) was a policy blue-print for achieving the objectives set out by the RDP, and aimed at,

- i) Developing a new order of economically viable, market-directed commercial farmers, with the family farm as the basis of that economic activity;
- ii) Broadening access to agriculture via land reform, with enhancement from adequate agricultural policy instruments, and supported by means of the provision of appropriate services;
- iii) Providing financial systems which focus on the resource-poor and beginner farmers, and which enable them to purchase land and agricultural inputs;
- iv) Supporting trade in, and marketing of, agricultural products which reflect market tendencies;
- v) Undertaking agricultural production based on sustainable use of natural agricultural and water resources; and
- vi) Developing and enhancing agriculture’s important role in the regional development of Southern Africa and other countries.

The subsequent adoption of the Land Reform Pilot Programme (LRPP) in 1997 was geared towards “overcoming rural poverty, redressing gender inequalities” (Bernstein, 1998, p. 6). The failure of the LRPP program according to Bernstein can be attributed to the programme’s inability to align its objectives with “market-based reform” (MLAR) (1998, p. 6) that overestimated the capacity of local and provincial governments to fully implement the policy directives of the programme. As of consequence state-led interventionist approaches to land reform failed to effectively respond to “the actual needs at the local villages” (Saturnino and Borrás, 2003, p. 368) through inefficient institutional mechanisms that failed to identify and support efficiently BSMFs needs as per material conditions faced.

Hence in 1996 the state adopted the Growth Employment and Redistribution (GEAR) a macro-economic strategy geared towards MLAR, which was premised according to Bernstein, on “market and institutional conditions of farm efficiency” (1998, p. 7). The MLAR was geared towards the establishment of “efficient and competitive individual family farms” (Saturnino and Borras 2003, p. 371) and concurrently limited state intervention through the ‘willing buyer and willing seller’ policy. The aim was to promote commercial farming through “experimental approaches which could generate a learning experience to inform a more widespread programme” (Cliffe, 2000, p. 278). According to Hebnick ‘market-led’ reform resulted in the “withdrawal of the subsidies white farmers had enjoyed for years but also instigated changes that were not foreseen, landholdings remained consolidated at large; farming became more capital-intensive; and agricultural employment declined substantially” (2013, p. 38 and Hall, 2009).

Akram-Lodhi (2007) critiques the MLAR approach arguing that it failed to recognise skewed land relations. Bernstein further argues that the deregulation of the agrarian sector was necessary for the deregulation of “the historic supports of capitalist agriculture qua white farming” (1998, p. 13). However, I argue the all-inclusive blanket approach has failed in my opinion to recognise the systematic “material oppression/poverty of the rural majority” (Bernstein, 1998, p. 14). Hence, the MLAR approach benefited farmers who had access to “human capital, previous savings, and adequate knowledge of how to make use of the opportunities” (Saturnino and Borras, 2003, p. 371), a policy position according to Kepe (2009) that has actively perpetuated dualism entrenching BSMFs in the emergence rhetoric that fails to transition into the commercial sector.

In 2006 government adopted the Proactive Land Acquisition Strategy (PLAS) a combination of a “needs-based approach and a supply-led approach” (Lahiff, 2008, p. 21) aimed at fast-tracking land reform objectives as set out by the LRAD programme. Greenberg critiques the PLAS program in that it lacked in “timeous support to farmers leasing land” (2010, p. 5). Furthermore, PLAS failed to engage beneficiaries on contextual needs of farmers and instead leased land as per availability. The Broadening Access to Agriculture Thrust (BATAT) was government’s first flagship programme aimed to transition BSMFs into the commercial sector that relegated “non-market production to the background” (Greenberg, 2010, p. 7). However,

the decline in state support mechanism such as extension services translated into the poor development and success trajectory for grant holders of the BATAT programme.

The Comprehensive Agricultural Support Programme (CASP) a response to PLAS and BATAT was aimed at redressing the issue of ‘post-settlement support’ (Lahiff, 2008) that had been prevalent in the aforementioned policy programmes through rigorous “provincial farmer support programmes” (Greenberg, 2010, p. 11). CASP through the ‘sunrise package’ identified six key areas that demanded state intervention “on-farm and off-farm infrastructure; advisory and regulatory services; capacity building; information and training; market development; and financial services” (Greenberg, 2010, p. 8) for post-settlement BSMFs assistance. CASP however was limited in scope and focused on infrastructural development (Lahiff, 2008) and failed to be comprehensive in the development and growth of BSMFs.

The Land and Agrarian Reform Programme (LARP) as a response to the aforementioned policies aimed to “accelerate the rate and sustainability of transformation through aligned and joint action by all involved stakeholders” (Lahiff, 2008, p. 28). LARP moved away from collective farming models introducing the concept of contract farming directing its initiatives towards the “decentralisation of services to districts and municipalities” (Greenberg, 2010, p. 11), situating land reform at the centre of local governments governed through the policy guidelines and regulations of the Integrated Development Planning (IDPs). LARP aimed according to Greenberg to provide efficient support systems, increase agricultural production by 10-15% through the letsema/illima campaign (2010, p. 11). Greenberg argues that LARP “merely inserted smallholder farmers as junior players in the existing agricultural structure” (2010, p. 11). Furthermore, it is important to note that of the 1260 farms transferred under LARP 29% failed, more importantly according to Sapa, “a further 22% were in decline due mainly to lack of ‘post-settlement’ support” (2009, p. 11).

2.6 The consequence and reality of the negotiated settlement for black farmer growth, development and transition into the commercial sector

The negotiated land settlement of 1994 according to Hall (2009) “altered the framework of debate on land reform” (Cousins, 2013, p. 122). Focusing on “addressing poverty” (Kepe, 2009, p. 639) instead of addressing structural inequality, as a means to achieve “political

stability” (Wegerif, 2004, p. 4) through the expansion of social security. Consequently, the democratic transition according to Hebnick et al. (2011) failed to reconfigure the economic monopolisation of the agrarian landscape particularly that of the commercial sector. As a result, “cultural and ideological, as well as institutional and social structural” (Wolpe, 1995, p. 88) networks remained uninterrupted.

Colonial and apartheid legislative and policy legacies continue to impede socio-equitable transformation. To date the conceptual framework of the agricultural expert system represents white commercial farming (Hebnick, 2013). Policy continuities and discontinuities are embedded in the “design and knowledge repertoires” (Hebnick, 2013, p. 30) despite them have emerged from paradoxical governance regimes and political ideologies. I thus argue that the sustained and systematic failure of black farmer’s post 1994 can be partly attributed in the misplaced ideological and conceptual misuse of the agricultural expert system.

Land reform as of consequence according to Lahiff gravitated towards “household livelihoods” (2008, p. 6). Consequently, the transition of BSMFs into the commercial sector has effectively been “non-existent” (Nel and Davies, 1999, p. 261), making trying to “penetrate established markets extremely difficult” (Nel and Davies, 1999, p. 266). The disjuncture in policy objectives and overall impact Lahiff attributes to insufficient and inadequate planning, capital shortages, capacity building initiatives and “post-settlement support from state agencies” (2008, p. 6). Cousins attributes this disjuncture to contested politics of policy that has resulted in the “failure to advance a coherent strategy of agrarian reform” (2013, p. 59). Hence the need to reframe the agricultural expert system that will need to encompass the “social, political and institutional factors and economy” (Bernstein, 1998, p. 3) has become an imperative.

To inform the analysis of the AES and its role, framing and potential reframing, the study aims to situate this investigation within the intricate continuities and discontinuities prevalent within the agrarian sector post 1994. This will help form clarity in understanding “institutional and discursive linkages” (Hebnick et al, 2011, p. 222) and how these linkages continue to influence and or shape the contemporary agrarian landscape. The AES will be used as a conceptual framework defined by Hebnick et al. as a multi-faceted network that is able to interconnect at “national, provincial and municipal level, various professional organisations and individuals” (2011, p. 223). Focusing on the role, framing and potential reframing of the AES, this focus

will be used as an analysis tool to demonstrate the “extent to which the transformation of institutional infrastructure in agriculture has proceeded hardly unchanged in its content” (Hebnick et al., 2011, p. 222) or otherwise.

2.7 Conclusion

As outlined above, and in Chapter 1, this study aims to consider the role of the AES in agricultural transformation. It proposes via its assumptions, that in order to ensure growth and development of BSMFs it is imperative that a study is conducted on the AES, its inherited and potential reframing. The AES I argue, will highlight the intricate interdependencies that exist in the sector and how best reform can be implemented for the incorporation of BSMFs as dynamic actors in the commercial sector. However, as noted earlier, this is with the understanding that should a paradigm shift be articulated as a potential ‘reframing’ of the AES, there will be a need to “overcome a number of structural constraints arising from history and geography” (Delgado, 1999, p. 165), hence this chapter has provided some of this historical perspective.

This particular study will demand “a pro-active policy stance that goes beyond the very necessary but insufficient-by-themselves market reform of the 1980s and early 1990s” (Delgado, 1999, p. 165) which are outlined in this chapter. The study will continue to draw on historical literature review as opened up here in this chapter to consider critically why the AES has yet to incorporate equitable policy for BSMFs, and thus also illuminate the need for reframing of the AES. The study will aim to engage and understand socio-political and historical conflicting knowledge systems, values, attitudes and desires that can assist in cultivating an effective and inclusive AES model that will cultivate human action within the sector, and that can inform a reframing of the AES. The next chapter focuses more on the AES.

Chapter 3: CONTEMPORARY POLICY DISCOURSE AND THE NEED FOR REFRAMING OF THE AGRICULTURAL EXPERT SYSTEM (AES)

3.1 Introduction

This chapter aims to unpack the complexity of the agricultural expert system, and its origin in the historical application of the AES within the context of South Africa, its evolution and impact on the growth, development and transition of black small-scale to medium farmers into the commercial sector. The chapter gives a reflexive view of policy post 1994, the impact of public policy on the BSMFs and the continued marginalisation from commercial sector. Finally, the chapter highlights what can be done to potentially reform the AES, a point that I return to in the final chapter of the thesis.

3.2 The historical trajectory of the AES in the South African agricultural landscape

The AES in the South African context was motivated by the socio-political material conditions under the colonial and later the apartheid regime as argued in the previous Chapter. It was used as a catalyst for the preservation of commercial interests and increased levels of agricultural production. That later metastasized into an implicit and explicit regulatory mechanisms and systems in knowledge production, implementation and application of legislative policies through “practices, discourses and rationalities” (Philips and Ilcans, 2004, p. 359, Escbour, 1952, p. 40). Therefore, it is important to understand that the core function of the AES was primarily geared towards the “stabilisation, protectionism, and deregulation and producer interests” (Karaan, 2006, p. 245) for commercial growth and development.

Simultaneously, systematically through legislative and institutional mechanisms, the AES under the colonial and apartheid regimes gradually marginalised and disqualified black farmers premised on “racial origin, in order to justify conquest and establish systems of administration and instruction” (Escbour, 1952, p. 9). I therefore argue that the AES cultivated a culture of practice as argued by Philips and Ilcans (2004) that has defined which “objects, concepts, theories, and strategies can be incorporated” (Escbour, 1952, p. 41) into the developmental model and discourse of the commercial sector.

The historical trajectory of the AES is underpinned in the conceptual, ontological and epistemic lens of the commercial sector that in turns informs “institutions’ routine work practices” (Escbour, 1952, p. 107) in community practices, markets, research institutions and policy making institutions. As of consequence, black farmers in post-apartheid South Africa have been predefined “through the use of ready-made categories” (Escbour, 1952, p. 107), thereby implicitly and explicitly reinforcing the colonial and apartheid sentiment that “small farmers were black, and they lived in the Bantustans” (Vink, 2001, p. 133).

This thematic theme in black farmer positionality in the agrarian discourse has unconsciously influenced the conceptualisation of redress mechanisms post 1994 that have constructed a discourse of black farmers with continuities with this historicity that is yet to be shifted. Despite progressive redress policies post 1994, agrarian policies implicitly perpetuate and preserve the status quo by conserving “conceptions, meanings and descriptions” (Escbour, 1952, p. 107). Thus the conservation of systematic binaries that have entrenched black farmers in an emergent status treadmill. As consequence, the continued use of the AES post 1994 in the absence of reform has continued to incorrectly pre-define through policy the role of black farmers within the agrarian sector.

3.3 Why the AES needs to reform

The reframing of the AES must acutely disrupt institutional culture(s), norms and values that “protect the status quo and preclude people from challenging others” (Kim, 1993, p. 7). Therefore, there is need to critically engage organisational routines located in “standard operating procedures (SOPs)” (Kim, 1993, p. 7). I argue that SOPs are repositories for “past learning” (Kim, 1993, p. 7) that serve as an assertive re-enforcer of organisational memory.

Organisational and or institutional (used interchangeably) memory is constituted by what “organisations pay attention to, how it chooses to act, and what it chooses to remember from its experience” (Kim, 1993, p. 11). As a result institutional memory and culture have the capacity to implicitly and explicitly impact the “way an individual or organisation views the world and takes action” (Kim, 1993, p. 11) that translates into shared and individual mental modes. Therefore, the need to emphasize socio-equitable transformation through critical engagement with epistemic and ontological reframing(s), which is necessary to introduce new ways according to Kim (1993) to conceptually understanding ‘how’ the AES ought to function.

This has the potential to systematically introduce “new frameworks and routines but also knowledge about how the routines fit within the new frameworks” (Kim, 1993, p. 12).

Kolb and Kolb (2011) argues that the learning component is situated within the parameters of human adaptation facilitated through social learning supported by expansive learning research methodologies. A process according to Kolb and Kolb whereby “knowledge is created through the transformation of experience” (2005, p. 194). Therefore, I argue that the reframing of the AES must be located within the meso-level, integrating formal and informal social structures that according to Kolb and Kolb impact an individual(s) “immediate environment, such as institutional policies, procedures and institutional culture” (2011, p. 47).

This according to Kolb and Kolb, needs to be supported by a macro-system mechanism geared towards reframing “overarching institutional patterns and values of the wider culture, such as cultural values favouring abstract knowledge over practical knowledge, that influence actor’s in the person’s immediate microsystem and mesosystem” (2011, p. 47). Thus generating a reframed AES that can be more reflexive of multi-linear models that can be more responsive to contextual demands.

3.3.1 Public policy as a redress mechanism post 1994

Post 1994 state led intervention redress mechanisms for agrarian reform were geared towards poverty alleviation and economic inclusivity by addressing according to Gumede the “challenge of poverty and underdevelopment as well as national unity” (2008, p. 16). The intended objective was to facilitate “social, cultural, and political costs” (Escbour, 1952, p. 40) transformation through land use. That would, according to Philips and Ilcans, catalyse “social and economic stability” (2006, p. 246) for a post-apartheid and democratic South Africa. The state focused on transforming “social welfare, social institutions and social relations” (Gumede, 2008, 8; Mkandawire, 2001) as also reflected in Chapter 2.

This was attributed to the series of challenges to which public policy needed to respond through state machinery generating between “social cohesion, social capital and social networks” (Gumede, 2008, p. 9). As a result, socio-economic reform was a prerequisite for social cohesion for “sustained economic development” (Mkandawire, 2001, p. 12). However, according to Gumede there was “little disruption to economy” (2008, p. 16) by means of land reform and new black farmer entrants into the commercial sector as discussed in Chapter 2. Therefore,

according to Hall, state policy post 1994 was geared towards providing a “structural basis for broad-based pro-poor development” (2004, p. 214).

Consequently, according to Backeberg land reform was a mechanism used for achieving reconciliation and stability by supporting “economic growth and improve household welfare and alleviation of poverty” (1996, p. 163) in order to achieve economic viability and environmental sustainability for implementation of land reform programmes. Backeberg (1996, p. 163) thus argues that land reform focused on three key areas,

- Land redistribution requires providing the poor with land to improve their livelihoods;
- Land restitution involves restoring providing land to people dispossessed by discriminatory legislation and;
- Land tenure reform ensures security of tenure of different forms of land tenure, which enables individuals or groups to earn the benefit of their property; enjoy recognition and protection, without fear for arbitrary action by the state. Grants are offered in support of land reform.

Hall however, argues that whilst the state adopted “ambitious policy and targets, we have a shrinking state with inadequate institutional and financial resources” (2004, p. 219).

As argued in Chapter 2, the policy directive of the state was hostile to BSMFs growth, development and transition into the commercial sector. State policies continue to fail due to the inability to reconcile, according to Philips and Iicans, business incentives “between state and market” (2006, p. 248). That has consequently perpetuated inappropriate risk and a multiplicity of deficiencies in the system rendering BSMFs hostage to the small scale and or emerging farmer treadmill as noted in the above. As a result, land reform policies meant to address systemic challenges faced by BSMFs fundamentally lack “transformative pedagogy” (Nagda et al., 2003, p. 168) that is by and large divorced from reality, which is reflected in the AES.

3.3.2 Impact of the GEAR policies on BSMFs

The adoption of GEAR ensured that the policy direction of state in regards to the agrarian sector was and continues to be one of “progressive capitalism” (Hall, 2004, p. 220), and is geared towards intensifying “production and growth output” (Knickle et al., 2018, p. 198), as

shown in Chapter 2. Despite concerted effort through various programmes, the state has failed to effectively “achieve its own limited targets, let alone restructure the rural economy and overcome the apartheid legacy of dualism in the agrarian structure” (Hall, 2004, p. 219). Instead Hall argues that the macro-economic imperatives of GEAR has created systemic fixation on retaining the commercial sector “which tends to undervalue the land uses of the poor” (Hall, 2004, p. 221).

I argue that to establish traction towards growth, development and transition of BSMFs into the commercial sector “requires improving access to markets and developing modern market chains. It requires a smallholder based productivity revolution” (Poole et al., 2013, p. 155). If it is to result in the sustainable development and poverty reduction “through the development of commercial agriculture” (Poole et al., 2013, p. 155). The role of a reframed AES will be central to such a process.

3.3.3 How the changes in public policy impacted the agrarian sector

The conceptual framework of the public social cohesion policies adopted by South Africa post 1994 have to address “structural problems in the agricultural sector” (Koopmans et al., 2018, p. 252) including those found in the AES. As discussed in Chapter 2, policies implemented post 1994 continue to implicitly and explicitly simultaneously “legitimize and undermine” (Scott et al., 2018, pp. 127) BSMFs due to the inability to acutely respond to the systematic challenges that face this cohort of farmers, which will be highlighted further in Chapter 5 via the social learning data. This I argue has been attributed to state’s skewed public policy that has been focused on “industrial, urban and service sectors at the expense of agricultural development” (Anriquez and Stamoulis, 2007, p. 1).

Adesina argues that the state through its legislative powers focused on social protection instruments in order to “mitigate the impact of adjustment” (2011, p. 454) in transitioning into a democratic state underpinned by inequality, skills and infrastructural deficit in the former homelands. However, the failure in reframing the AES post 1994 I argue, has undermined and further marginalised BSMFs inequalities and has drastically failed to address “neo-liberal underpinnings of social vulnerability” (Adesina, 2011, p. 459 cited from Esping-Andersen and Korpi, 1987). Therefore, I argue for the need to interrogate concepts such as the ‘good farmer’ in order to redress “political economies and power relations” (Scott et al., 2018, p. 127) shaping

the AES and its constructs for the purpose of including black farmer participation within the commercial sector as “subject of support services on a priority basis” (Vink, 2001, p. 160) in the conceptual framing of policy and practice in the AES.

I argue that land reform was used by the state as a social development vehicle and catalyst for rural development. Consequently, according Koopmans et al., “rural and agricultural issues were considered to be virtually synonymous” (2018, p. 252) with each other. As a result, state focus on BSMFs development has been primarily focused on “means (grants, landing, planning etc.) instead of the real prerequisites (human capital, entrepreneurship incentive)” (Philips and Ilcans, 2006, p. 249), explaining why the dual agrarian sector is still divided based on race, a consequence of apartheid historicity and policy legacy, despite state efforts to restructure the sector.

The advent of non-racial democracy has also seen a new configuration of class interests and the emergence of a powerful alliance that is committed to deracializing ownership but retaining the structure of the commercial farming sector rather than restructuring the agrarian regime, including the AES.

3.3.4 What needs to be done to develop BSMFS

As indicated above and in Chapter 2, very little has changed following the new policy agenda’s post 1994 in the conceptual framing of agrarian reform (Hall et al., 2000). A national systems of innovation approach (NSI) geared towards policy analysis that “views innovation in systematic terms, where the connectivity of organisations is key” (Hall et al., 2000, p. 72) is needed. Hall argues that the AES institutional development pattern reflected within the agrarian landscape is and remains “a tacit endorsement of a linear model of innovation” (Hall et al., 2000, p. 75) that reflects patterns of research application and development in which the research produced increases through “downstream incremental investments in adaptive research” (Hall et al., 2000, p. 75).

An alternative is structural reform that is underpinned by a sustainable development model geared towards acutely addressing issues pertaining to “social, economic imbalances and challenges” (Knickle et al., 2018, p. 198) faced by BSMFs with a particular focus on the commercial sector. The AES will therefore need to critically engage “foreseeable trends and unexpected events or disturbances, responding and recognising” (Knickle et al., 2018, p. 198)

sustainable growth and development. It is within that regard that the reforming process of the AES be underpinned by transformation and adaptive capacity of the agricultural sector is central in the development and transition of BSMF's into the commercial sector.

Therefore the reframing of the AES process will need to include both "state and non-state actors" (Koopmans et al., 2018, p. 253), involving a multi-faceted approach of institutional and stakeholder engagement for the purpose of improving "direct involvement of beneficiaries" (Giles, 2001, p. 2). Thus can further strengthen "existing and develop new mechanisms for linking top-down government and bottom-up initiatives" (Knickle et al., 2018, p. 200), thus generating synergies between different "sectors both economic and political" (Koopmans et al., 2018, p. 253) as a catalyst for stakeholder(s) and their related networks reform. This will ensure according to Giles (2001) a multi-faceted understanding of challenges faced and more importantly transgressing "traditional approaches in order to achieve the required systematic changes" (Knickle et al., 2018, p. 207).

In generating a contextually relevant and resilient system of adaptation according to Knickle et al., a reframed AES can assist in understanding prevalent issues of the inter-relationships "between farm, local/community and regional levels" (2018, p. 198) necessary in executing the sustainable growth and development agenda of this sector. Therefore, the need to understand clearly what works by conserving according to Knickle et al. "existing functions and structures (persistence), the capacity to deal with uncertainty through reorganisation and learning (adaptability), and the capacity to create a wholly new trajectory that involves a change in the very nature of the system (transformation)" (2018, p. 198), and the overall dualist conceptual framing driving the AES that was articulated in Chapter 2.

Furthermore there needs to be a change in policy framework and relation between government structures and "local actors, enhance the existing and develop new, mechanisms for linking top-down government and bottom-up initiatives" (Knickle et al., 2018, p. 200). In order to "go beyond traditional approaches in order to achieve the required systematic changes and we need to look for more effective strategies and approaches" (Knickle et al., 2018, p. 207) a point that I also argue for in this study.

Therefore, there is need to focus on "building transformative capacity, supporting co-learning and reorienting support for agriculture" (Roling and de Jong, 1998, p. 149) towards BSMFs

sustainable growth, development and transition into the commercial sector. This also requires an epistemic departure located in the conceptual understanding, according to Roling and de Jong, that “learning is an active knowledge regulation instead of learning as the (passive) absorption and reception of knowledge” (1998, p. 149).

In summary there needs to be a clearly defined separation between rural development from agricultural development as they, according to Anriquez and Stamoulis, “are not the same thing” (2007, p. 19) for a targeted approach geared towards the sustainable growth and development of BSMFs. Currently, through the rural development strategy Anriquez and Stamoulis highlight through “past policy perceptions and practice have often equated rural development with agriculture, and rural development policies have been subsumed under an agricultural policy package” (2007, p. 1), that has been part of a more broader strategic objective geared towards “the improvement of welfare of rural populations through sustained growth of the rural economy” (Anriquez and Stamoulis, 2007, p. 19).

Anriquez and Stamoulis argue that the origins of rural development were premised on the conceptual and policy framework of diversifying the economy and more importantly, “away from agriculture” (2007, p. 2). Furthermore, understanding that any agricultural growth facilitated under rural development according to Anriquez and Stamoulis “leads ultimately to a significant decline in the share of agriculture to total employment and output and in the proportion of rural population to total population” (2007, p. 3).

Therefore BSMFs need an agricultural development and AES strategy geared towards maximisation of “agricultural production and productivity” (Anriquez and Stamoulis, 2007, p. 3) in order to effectively and efficiently address systemic challenges facing this cohort of farmer.

3.4 Conclusion: what needs to be done in reframing the AES

In order to reframe the AES according to Cornelissen et al. there needs to be an impact assessment of “present agricultural production practices” (2003, p. 1) geared towards the growth and development of BSMFs and or lack thereof. This should be centred towards cultivating through transgressive and expansive learning corrective measures geared towards the transition of BSMF into the commercial sector through new and or reframed “discourses and practices” (Esbour, 1952, p. 24) in order to respond effectively and efficiently to the histo-

contextual issues. The AES should aim at generating redress mechanism geared towards “structural effects of past deregulation” (Vink, 2001, p. 161). Simultaneously according to Vink (2001) integrated research development models for anticipated policy shifts that address macro and micro structural issues for the purposes of introducing “measures to reduce economic and social exclusion” (Radcliffe, 2012, p. 242). Therefore, the need to generate a “constructive engagement between state and the market” (Philips and Ilcan, 2006, p. 253).

There needs to be relative vertical and horizontal integration among stakeholders and institutions for the purpose of according to Adesina achieving “production, protection, redistribution” (2007, p. 15). Therefore, the reframing of the AES must fundamentally be geared toward combating “exclusion and marginalisation and create opportunity of upward social mobility” (Cloete, 2014, p. 1; OECD, 2011, p. 51) for BSMFs within the commercial sector.

There is need to generate a transformative AES framework that transgresses circumscribed focus on welfare “excessive emphasis on destitution, vulnerability, and short-term analysis” (Adesina, 2011, p. 455; UNRISD, 2006; Adesina 2007, 2009; Mkhandawire, 2007). Such an AES should be geared towards a more redistributive economic policy focused on the “productive potential of members of society” (Mkandawire, 2011, p. 150-151; Adesina, 2011, p. 455).

To reframe the AES is to critically engage in the discourse of transformation and decolonising pedagogy due the historical use of content and pedagogy as “sources of domination” (Nagda et al., 2003, p. 167), marginalisation and discrimination as experienced in the agrarian sector. The need to exist actively problematize the “overtly and covert exercise of domination-subordination” (Nagda et al., 2003, p. 167) structurally and contextually prevalent in the agrarian landscape, for the purpose of enabling an environment in which transformation occurs through changing “environmental, cognitive, and pedagogical contexts” (Nagda et al., 2003, p. 167; Gay, 1995, p. 160). Generating a reframed AES that critically engages with issues pertaining to “democratic ideals of equality, freedom and justice” (Nagda et al., 2003, p. 167).

This can only be achieved through addressing “the excluded voices of racial and ethnic minority groups and challenges of institutional racism” (Nagda, Gurin and Lopez, 2003, p. 167), which is one of the reasons why I wanted to develop this review via an iterative approach

between literature and farmers voices (see Chapter 5). Radcliffe stresses the need for “recognition of support for diversity” (2012, p. 242) of previously marginalised in policy formulation within the agrarian sector, including the AES.

The targeted approach through the AES will need to effectively and efficiently respond and mitigate longstanding labour market interventions in establishing buffers with market-based institutions related to risk provisioning and management (Adesina, 2011), and enhance macroeconomic responses geared towards “welfare and equity, and promote economic development” (Holzmann and Jorgensen, 2000, p. 6-9).

Roling and de Jong argues that the reframing of the AES is “not a goal in itself but an attempt to realise less rigid knowledge acquisition” (1998, p. 148), for the purpose of cultivating a conducive environment for BSMFs growth and development, and redress. This is important because it allows for a conducive environment in understanding a structural dynamic which will allow for “exact knowledge, other domains, personal (pre) conceptions and personal interpretations” (Roling and de Jong, 1998, p. 148; Anderson and Roth, 1989).

Chapter 4: METHODOLOGY OF PROGRESSIVE FOCUSSING AND SOCIAL LEARNING DIALOGUE

4.1 Introduction

The study has been geared toward transgressing “historical power relations and cognitive exclusions” (Lotz-Sisitka et al., 2017, p. 903) for the purpose of influencing the process of a new or reframed AES. As argued in Chapter 2 and 3, this involves the need to critically engage the diffusion of policy, and its extensive and collative impact recognised by Eyestone (1977) as the “pattern of successive adoptions of a policy innovation” (Burnett, 1997, p. 214). This, Burnett concedes, when he highlights that cross-national policy formulation can only be derived from “propositions drawn from both literature is systematically and logically investigated” (1997, p. 215). However, policy transfers can only be understood “within the context of the relationship between structure and agency” (Evans, 1999, p. 373). Therefore, the need according to Evans to engage active stakeholder participation in order to tap into epistemic communities and policy network(s) in the reframing process of the AES through “literatures on policy transfer, policy transfer networks which can operate at different levels of speciality” (1999, p. 374). Along these lines Burnett concluded that structural domestic factors “are not independently responsible for policy adoption” (1997, p. 215) hence, I focus on a social learning approach in this study to complement the literature-based policy analysis. It is my contention that the combination of local social learning dialogues, iteratively developed by in-depth critical policy analysis can potentially offer a strong platform for transformative praxis development and reframing in the AES. This study offers a first step in this direction.

4.2 Social Learning Theoretical Framework

The social learning theoretical framework in the study was used to explore ‘policy-orientated learning’ aimed at critically engaging and interrogating systemic dynamics of entrée barriers within the commercial sector. Stakeholder engagement within a social learning approach was used to transgress “intra-government stages of the policy cycle” (Bennett and Howlett, 1992, p. 275) in order to support more in-depth and grounded views on the reframing of the AES. Systems adaptation requires learning underpinned by a sustainability development framework geared towards the cultivation of “responsible and effective way in anticipating and solving

problems” (Wals, 2007, p. 35) in the co-creation of knowledge. In this study, the reframing process of the AES is used as a lens through which I explored systems of knowledge that “collaboratively puts together and maintains a complex system” (Engeström, 2005, p. 13).

Bennett and Howlett describe a system as an alternative transmission belt “by which changes in the socio-economic environment are transmitted to governments” (1992, p. 279), and which can cultivate a conducive environment geared towards stimulating capacity to “create, adapt and deliver performances by a group of people with different instruments, skills, perspectives, histories” (Collins and Ison, 2009, p. 365). Such a process can potentially give rise to systems of adaptation generating an alternative paradigm governed by “new roles and responsibilities” (Collins and Ison, 2009, p. 369) reframing the redesign of policy and practices, and through this potentially generate an enabling environment for the emergence of a distributive knowledge system that can potentially “enable change to a new state” (Wals, 2007, p. 71) for an increased role and visibility of BSFMs within the commercial sector. This offers potential for policy adaptation motivated by the “desire to realise core policy beliefs” (Rose, 1991, p. 284).

In this study, I sought insight into the potential generation of systems and mechanisms aimed at mitigating conflict by shifting and reframing “norms, values, and taken-for-granted practices” (Lotz-Sisitka et al., 2017, p. 903) for the purpose of actively transgressing pre-existing systematic and adaptive challenges. The social learning theoretical framework offers an approach to critically engage a diverse range of material conditions through diverse stakeholder engagement in enquiring into the overall “structural configuration of state institutions” (Bennett and Howlett, 1992, p. 278) in this case the AES and policy discourse as discussed in Chapter 2 and 3. It can also potentially generate contextually rooted community of practice centred policy model(s) that Bennett and Howlett argue is “influenced by a network of ideas to which actors in the state and society both contribute” (1992, p. 380).

Sectoral stakeholders guided by the social learning theoretical framework can critically engage the “what has been done by past government’s efforts but also about how it was done” (Rose, 1991, p. 283). This can prove to strengthen understanding that state policy is not a “self-driven, neutral process of information accumulation” (Rose, 1991, p. 283) as it is influenced by a diverse range of socio-political variables in a structured context, that fundamentally challenge the epistemic, ontological and axioms in policy and systems of governance. Therefore, the

reframing of the AES can be informed by learning processes aimed at the identification of niches, social networks geared towards “greater actor interaction, promotion of social learning and seeking institutional changes” (Seyfang and Smith, 2007, p. 589), potentially generating a best practice policy response that is contextually rooted and value driven for BSMF sustainable development and growth.

This may also enable a conducive environment for the emergence of new conceptual frameworks through the process of critical analytical engagement by the way of “clarification and exposure to conflicting or alternative frames” (Wals, 2007, p. 41). Thus, in this study I sought to co-develop a AES conceptual framework that can acutely interpret historical and contemporary “complex phenomena that shape the environment, and encourage ethical, economic and aesthetic values” (Wals, 2007, p. 36). This was to unpack the agrarian landscape issues pertaining to understanding diversity and strengthening co-operation by reinforcing existing community links geared towards development and growth in alignment with enacting “moral responsibility and citizenship” (Shum and Crick, 2012, p. 2).

4.3 How the research was conducted using a progressive focusing and social learning dialogue approach

4.3.1 *Progressive focusing*

As indicated above and in the introduction of the study, this study was set up as a ‘progressively focussed’ literature review that was iteratively informed by a social learning dialogue. The literature review work included historical analysis as reflected in Chapter 2, and contemporary policy and programmes analysis as indicated in Chapter 3. As indicated in both of these chapters I drew on literature critically to help understand the underlying historical and structural challenges to the AES as these are and have been shaped by policy discourses and praxis in South Africa. However, such a policy analysis can be narrowly inscribed by published literatures, and fail to take the voices of farmers and practitioners into account. Hence, I complemented it with a social learning dialogue process, which I will elaborate on below. As can be seen in Chapter 5, the social learning dialogue gave rise to further need for in-depth understanding, and hence the literature review work was iteratively generated and further developed through the insights gained from the social learning dialogue process.

Progressive focussing, as described by Stake (1981) involves the following process, which I have adapted for combining literature and social learning dialogue research processes iteratively, as was done in this study,

Researchers are urged to guard against presumption, and to focus on the issues gradually, as they emerge under observation [and literature reviewing]... Progressive focusing requires that the researcher be well acquainted with the complexities of the problem before going to the field, but not too committed to a study plan [or assumptions or literatures]. It is accomplished in multiple stages: first observation of the site [and analysis of the problem via literature reviewing], then further inquiry, beginning to focus [in] on the relevant issues, and then seeking to explain [with more depth]. (Stake, 1981, n.p. [in brackets are my additions])

In this study I followed a progressive focussing process via literature review to understand the context, followed by social learning dialogues to observe the situation more carefully, and then deepen the inquiry via iterative literature review as the social learning dialogues raised complexities that were not covered earlier in literature reviews. In this way I was able to probe the issues more deeply. Overall I sought to explain what was observed with more depth in order to inform a reframing of the AES.

4.3.2 *Social learning dialogue process*

With this as background, I now provide further information on the social learning dialogue. The field-based research process was constituted as a social learning process involving the facilitation of learning cycles with “continuous reflection on actions and ideas, and on the relationships between knowledge, behaviour and values” (Cundill et al., 2013, p. 39). I broadly followed the social learning process of Wals (2007) that is aligned with the expansive learning cycle of Engeström and Sannino (2010) outlined below (see Figure 4.1), seeking integrative solution based outcomes that utilised “diversity and creating synergies” (Wals, 2007, p. 37). I also sought to foster an environment that enables and promotes critical thinking and that simultaneously interrogates values, norms and interests in an attempt to broaden the transformative framework of the AES for the development, growth and transition of BSMFs into the commercial sector. The aim was geared towards capturing through a learning discourse to reflect “tacit as well as the explicit dimensions of knowledge” (Shum and Crick, 2012, p. 2), thus also seeking to bridge the gap between experience and knowledge creation as outlined in Figure 4.1.

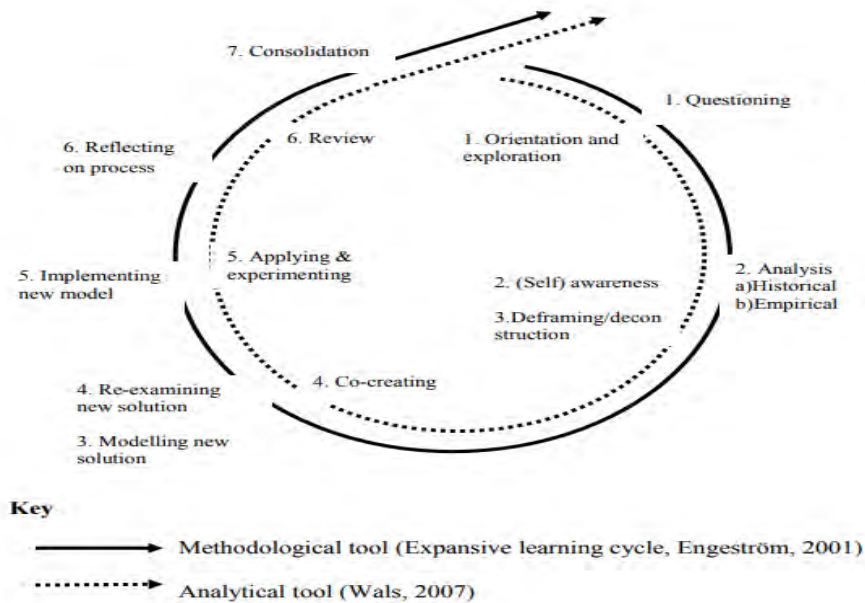


Figure 4.1, Social Learning Model of Wals (2007) aligned with Engeström's expansive learning framework (Masara, 2011)

This social learning orientation was guided by Wals (2007) is analytical learning tool which provided an analysis framework for analysing the social learning process (see Masara, 2011; Figure 4.1 above). The social learning processes that emerged from the co-engaged dialogical learning workshops helped to interrogate the AES and its role in supporting BSMFs (or not). The social learning followed the process of questioning, and then moved onto modelling of solutions, broadly enacting principles of expansive learning outlined in five stages of Engeström and Sannino's (2007, p. 7) expansive learning model (see Figure 4.1 above, source Masara, 2011). As indicated above, this was done via in-field engagement, but deepened with iterative literature review, leading to a potential reframing discourse reported on in the last Chapter 6. *Note, this was not a 'traditional' expansive learning process using Change Laboratory Workshops, but rather was more a dialogical process emerging over time in conversation with stakeholders in the setting and progressive literature reviewing work.*

The steps followed from 1-5 (Figure 4.1),

1. Questioning, criticizing or rejecting some aspects of the accepted practice and existing wisdom [Chapters 2 and 3; as well as field-based work in Chapter 5 and further literature review]

2. Analyzing the situation. Analysis involves mental, discursive or practical transformation of the situation in order to find out causes or explanatory mechanisms. It seeks to explain the situation by tracing its origins and evolution. [Chapters 2 and 3; as well as field-based work in Chapter 5 and further literature review]
3. Modelling the newly found explanatory relationship in some publicly observable and transmittable medium. This means constructing an explicit, simplified model of the new idea that explains and offers a solution to the problematic situation [Chapter 6]
4. Examining the model, running, operating and experimenting with it in order to fully grasp its dynamics, potentials and limitations
5. Implementing the model by means of practical applications, enrichments, and
6. Evaluating the process and consolidating its outcomes into a new stable form of practice.

In this study, I worked towards **step 3** (Chapter 6) of the social learning process. Further development of the process will need to be done post the study. However, I found that such a process model allows for generative research aimed at “changes in the object of the collective activity” (Engeström and Sannino, 2007, p. 8). In the case of this study, this was for the purpose of catalysing potential to lead to organic and purposeful qualitative transfiguration of the AES system’s practices as currently constituted. In this study, the transformation pillars and deliberations in the learning cycles were used for analysis at two levels (see Appendix B) and were predicated on issues pertaining to,

Level 1 Analysis (i.e. analysis of the situation as found) – Addressing Questions 1, 2 and 3, including,

- cultural historical,
- social-spatial (in relation to who ought to be included?),
- anticipatory-temporal (what conceptual and practical steps should be taken for change), and
- moral-dialogical (decision and collective action also as it pertains to sustainability) aspects. [Reported on in all Chapters]

Level 2 Analysis (process of change analysis emerging from the dialogical social learning workshops) - Addressing Question 4

- systematic-development of the AES (questioning, future planning, implementation and development of the AES as seen by multi-actors engaged in the process) [Reported in Chapters 5 and 6].

An initial historical analysis was used as a yardstick for assessing progression and transformation of the AES (and will address Question 1, 2 and 3). The historical analysis was aimed at identifying key contradictions that “need to be resolved and charting the zone of proximal development that needs to be traversed in order to move beyond the existing contradictions” (Engeström and Sannino, 2007, p. 9). This assisted in articulating the aspirations of the BSMFs (Question 3) and assisted in developing a co-engaged conceptual understanding the AES, that opened possibilities for transformation of the AES (addressing question 4). This enabled a conducive environment in which boundary crossing occurred through a series of continued engagements where stakeholders actively moved “across boundaries to seek and give help, to find information and tools” (Engeström and Sannino, 2007, p. 12), and which I further enriched through progressive literature reviewing. An interexchange of ideas occurred that lead to the “adoption of ideas driven by a shared, potentially expansive object a process called developmental transfer” (Engeström and Sannino, 2007, p. 13).

It is important to recognise that the research operated at different hierarchical levels simultaneously that demanded horizontal and vertical integration through “boundary crossing between different organisational levels” (Engestrom and Sannino, 2007, p. 13). The study did not undertake in-depth activity analysis, but rather focused more on a multi-actor engagement process and the framing and reframing processes of the Wals (2007) social learning process model.

4.4 How the data was generated and analyzed

Table 4.1 below offers a rubric used in the field which pertains to the key questions asked, tools of used to generate data and further explains how the data was subsequently analysed from the data generated, illuminating the relationship between data generation and analysis.

The rubric shows how the different research questions were approached, and how they guided data generation and analysis.

Table 4.1 Rubric used to guide data generation and analysis

Questions	Data generation process	Data analysis, what I will analyse for
Question 1, How is the Agricultural Expert System (AES) configured, what roles are discernible and how has the AES been constructed?	Historical data involving collection of relevant documentation; interview data and insights gained from the questioning stage of the SL process (first interactive SL focus group)	History and current structure of the AES, discernible roles in the AES, factors influencing the historical and current structuring of the AES in the two case study sites.
Question 2, How have the BSMFs been operating to date within the AES and what needs do they have for support from the AES?	Observations, interviews with BSMFs and insights gained from the questioning stage of the SL process (first interactive SL focus group)	Identification of BSMFs roles in the AES, identification of BSMFs support needs from the AES.
Question 3, What are the aspirations of the BSMFs for commercialisation, and what implications does this have for reframing the AES as it currently operates?	Interviews with BSMFs and insights gained from the questioning and analysis stage of the SL process (first and second interactive SL focus groups).	Identification of BSMFs aspirations for commercialisation and any factors that are enabling or impeding these aspirations. Identification of contradictions and absences in the AES as these relate to need for support and aspirations of SSFs for commercialisation and how these relate to the following framework analysis dimensions, • cultural historical, • social-spatial (in relation to who ought to be included?), • anticipatory-temporal (what conceptual and practical steps should be taken for change), and • systemic-development for the AES (future planning, implementation and development) aspects.
Question 4, How do/can multi-actors in the AES reframe current practices in support of BSMFs via a social learning engagement process?	Third, fourth and fifth social learning focus group sessions where the emphasis is on responding to contradictions, co-developing model solutions and evaluating these.	Analysis of tacit and explicit knowledges associated with reframing of AES current and intended practices. Analysis of any reframing processes as these relate to the following framework analytical dimensions, • cultural historical aspect • social-spatial (in relations to who ought to be included?) • anticipatory-temporal (what conceptual and

		practical steps should be taken for change) • moral-dialogical (decision and collection action) • systematic-development of the AES (future planning, implementation and development)
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Table 4.2 and Table 4.3 below articulate a detailed account of the phased approach undertaken in generating and analysing the data. The social and expansive learning theory enabled a generative process that critically engaged the historical and empirical contexts; detailing the lived experiences and material conditions and linking them to literature for further analysis and interpretation. This enabled me as the researcher to contextually understand the challenges and opportunities presented. Level 1 data generation and analysis focussed primarily on questioning the current *status quo* as experienced by participants in-field on the AES. In Chapter 5 this analysis is reflected in the sections related to each of the stakeholders identified in the AES, and reflects their questioning of the AES. It speaks to the following categories used for reporting the data in Chapter 5,

- 1) Context and history;
- 2) The form and nature of what exists; and
- 3) Diagnostic examining the reason for what exists.

Table 4.2 First level of the data generation and analysis

Level 1, Analysis			
Social and Expansive Learning,	Generated data will be,	How will this be conducted,	Duration of the process,
Questioning of Cultural Historical aspects analysis • Historical • Empirical By rejecting or criticizing some aspects of the accepted practice and existing wisdom 2. Anticipatory - temporal change (what conceptual and practical steps should be taken for change?) through seeking to explain the	Contextual, descriptive data of the status quo	• Stakeholder engagements • Interviews • Social learning focus group discussions	• 1-2 Months of field work

situation by tracing its origins and evolutions 3.Moral - dialogical (decision and collective action) through Modelling the newly found explanatory relation. This means constructing an explicit, simplified model of the new idea that explains and offers a solution to the problematic situation.			
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Table 4.3 below shows the research process linked to the generation of solution deliberations. It allows for generative solution oriented solutions premised on social learning collective thinking and diverse stakeholder engagement of the sector. This section seeks to acutely respond to the identified gaps and maximisation of opportunities. Moreover, this table offers a framework to test the viability of the identified solutions and whether or not they are contextually responsive to the material conditions.

As indicated above, however, the social learning dialogue process did not engage fully with the full expansive learning cycle as it was a Master's thesis, and though I initially did plan to expand into Steps 4, 5 and 6 of the expansive learning cycle via in-field engagements, I found that there was need to progressively focus and more substantively interpret the findings from the Level 1 analysis, so as to offer a well-grounded proposal for a reframed AES which could then be developed further via in-field engagements with various stakeholders and their roles in the AES (as uncovered in the Level 1 analysis). Therefore Level 2 analysis is offered as a preliminary synthesis of the analysis offered above in Level 1, which was done in some depth and detail, as can be seen in Chapter 5. Chapter 6 offers the proposed solution modelling in the form of proposed recommendations to inform a reframed AES. This model will need to be field tested via a more extensive study, potentially as a PhD study as the scope of the study did not allow me to do both with equal depth of engagement.

Table 4.3 Second level of data generation and analysis

Level 2			
Social and Expansive Learning	Data generated will be	How will this be conducted	Duration of the process,

4. Systematic development of the AES (future planning, implementation and development). By examine the model, running, or operating and experimenting on it in order to fully grasp its dynamic, potentials and limitations. 5. Implementing the model by means of practical applications, enrichments, and conceptual extensions.	Social Learning dialogues complemented by practical tasks that may be implemented within the field of prospective participants	The data will be generated through practical implementation of recommendations made in the social learning focus and semi-structured interviews and through in field observations of practices where relevant	Proposal for systematic development of the AES is indicated in Chapter 6, but will require longer term engagement(s) with the multi-actor AES for further consolidation, implementation and evaluation. Steps 4 and 5 of the social learning process are therefore not included in the scope of this study, but are included here for indications of their potential future development, based on the recommendations of this study.
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4.5 Methods

As indicated above, the study was premised on an in-depth qualitative and iteratively constituted literature and social learning dialogical interrogation of the AES and how it can potentially be reframed via ongoing expansive social learning in an attempt to understand “people, interactions, observations, behaviours, events, and attitudes, thoughts from people who have experienced or are experiencing” a phenomenon (Srivastava and Thomson, 2009, p. 73). A number of different research methods were used in this process, and are elaborated below.

4.5.1 *Semi-structured interviews*

Semi-structured interviews allowed participants the opportunity to interrogate how they perceive the AES and share their aspirations for the configuring of change. Through the semi-structured interviews, I was able to immerse myself within the data and gained “detailed insights of the phenomena being explored” (Smith and Firth, 2011, p. 3). The interviews were used to gain historical and situational data, along with relevant documents which were used for preliminary analysis.

Consequently, the semi-structured interviews were used as a mechanism to generate a contextual overview and understanding of the agrarian landscape and AES as it pertains to the BSMFs, their growth, development, lived experiences and material conditions faced. The in-

depth stakeholder engagement process enabled for a better conceptual understanding of the challenges faced and the contextual positionality of BSMFs within the present context in the sector. Patton indicates that inductive analysis helps identify and highlight “patterns, themes and categories” (1980, p. 360) that, in the case of this study, would not otherwise occur on their own.

More importantly, the data generated from the interviews enabled me to structure contextually relevant and explorative questions for the focus groups that enabled the participants to delve deeper into the multi-faceted conundrum(s) that hindered the trajectory of BSMFs and explore alternative reform mechanisms with implications for the AES that could be used for the purposes geared towards development and commercialisation, and reframing of the AES.

I conducted one round of extensive interviews that were further benchmarked and explored in the more in-depth and rigorous engagement, contestation and exploration of possibilities in the focus group session(s).

The cohort of participants interviewed ranged from BSMFs and commercial farmers, lecturers, extension officers, NGO’s and Big Industry. The semi-structured interviews occurred within the following venues as per participant availability and comfortability,

- Raymond Mhlaba Local Economic Development Office
- Fort Hare Dairy Trust Farm- Amadlelo
- Fort Cox Agriculture and Forestry Training Institute
- Middledrift District Extension Office
- Seymour
- Nxumbu
- Fort Beaufort
- Mvelo
- SPAR
- Fort Hare University

4.5.2 *Focus groups*

Focus groups were used as a mechanism to explore diverse epistemologies of the agricultural sector, how it functions and how ought it to function. The focus groups were used as a key strategic mechanism for engaging participants in the **social learning dialogues**, conceptualised according to the social learning cycle of Wals (2007) that emphasised orientation, framing and reframing. The dialogical understandings and engagements with the first steps of the expansive learning process of Wals (2007) – see Figure 4.1, leading to a reframing process that can be integrated into an expansive learning cycle that according to Engeström and Sannino (Figure 4.1) critically questions and analyses the object of activity, via questioning, analysis and modelling of solutions and testing of solutions that align with the framing and reframing notions of the Wals (2007) social learning cycle as shown in Figure 4.1 above. In the focus groups useful suggestions were made towards reframing the AES, although the focus was more on the historical and current experiential base of the respondents. Their contributions have, however, strongly shaped the recommendations for reframing of the AES as presented in Chapter 6.

The use of focus groups was further used to cultivate an environment where dissenting voices and ideas could be critically engaged where “inconsistencies both between participants and within their own thinking” (Kitzinger, 1994, p. 106) were discussed. This iterative process of engagement was aimed at participants being at the forefront in the co-creation of knowledge. I thus aimed to achieve the following from the use of focus groups for the purpose of my research, highlight the priorities, attitudes and conceptual understandings of participants; extrapolate from diversity; identify dominant norms that arise; facilitate the expression of ideas and experiences that might be left under-developed in an interview (Kitzinger, 1994).

This was achieved through rigorous group engagement. A system of practice developed was to first congregate a large singular group and we discussed the findings and or data that was generated in the semi-structured interviews. This enabled an environment in which participants engaged freely in debate and discussion, simultaneously exploring the sometimes diverging and conflicting conceptual understandings, epistemic and ontological positioning.

Secondly, we would split into smaller focus groups and discussed key issues that emerged in discussion. This allowed for more pointed identification of key issues and challenges.

Thirdly, these findings helped with the systematic identification of key areas of concern, challenges, opportunities, areas to improve and what needed to change. This allowed for the generation of rich data through an iterative social learning process, which I was then also able to probe further with the progressive literature reviewing strategy adopted for this study.

The social learning focus group workshops occurred in a three-day interval(s) that happened three times on the following dates in the year of 2019, 12-14 June, 23-24 July and August, 20-21. Each focus group interview was 4 hours long. Focus group 1 had 20 participants, focus group two had 16 participants and focus group 3 had 10 participants. The focus groups were attended by farmers, college and university lecturers, LED officers, extension officers, NGO representatives, and market representative.

Spreading the focus groups over the period of time indicated above, allowed me the opportunity to analyse the data, highlight key emergent issues and reflect to the participants for further engagement, debate and reflection, thus also enabling iterative depth to emerge between the sessions.

4.6 Analysis within a multi-layered approach leaning towards second and third loop learning

4.6.1 The multi-layered data analysis process

As indicated above, **analysis** was twofold,

- Level 1 was centred on probing the cultural historical, spatial, aspirational and moral-dialogical dimensions of the AES as found at the start of the process (i.e. orienting / questioning / framing / analysis phases of the social learning cycle in Figure 4.1) – reported on in detail in Chapter 5.
- Level 2 was geared towards probing the emergence of new perspectives on the AES as a result of a potential reframing that brings the BSMFs needs more into focus within a sustainable development and commercialisation frame – Summatively engaged as recommendations for a reframed AES in Chapter 6.

In undertaking the analysis within the process framework at level 1 and 2 as outlined above, the reframing process AES was located within a framework analysis (Ritchie, Spencer, Bryman and Burgess, 1994, p. 173/194) used for applied policy research, that is premised on and complemented by first-hand accounts and observations of stakeholders that according to Ritchie et al. (1994) generate a conducive environment for reflexivity. The interactive stakeholder engagement with the AES assisted in the cultivation of “shared goals of social transformation” (Fals-Borda and Rahman, 1991, p. 4).

Therefore, in this study, the reframing process of the AES was premised on co-creating sustainably viable practices premised on inclusivity (Srivastava and Thomson, 2009) via the interviews and focus group sessions that enhanced “the rigour of the analytical processes” (Smith and Firth, 2011, p. 2). This proved integral to the development of the more in-depth progressive focussing of the literature review, which helped me to relate at times abstract policy concepts to real issues and experiences of BSMFs and the AES that arose from the in-field social learning dialogical research data (Smith and Firth, 2011, p. 7) - see Chapter 5.

4.6.2 Analysis framed by first and second loop learning using a social learning methodological framework

Semi-structured interviews and group analysis, complemented by the iterative literature review work, was used in an unfolding social learning dialogue to understand how the agricultural sector is organised through the “knowledge that they construct and the relationships that exist between individuals, institutions and the state” (Collins and Ison, 2009, p. 360). This particular route of inquiry required unpacking the multi-layered role in which stakeholders conceptualise “participation rooted in concerns about interest-based politics and relations of social power” (Collins and Ison, 2009, p. 360). This aided understanding of what Collins and Ison refer to as “system-level characteristics of interdependency, complexity, uncertainty, controversy and multiple stakeholders and thus perspectives” (2009, p. 363).

The co-learning and generation of the reframed AES critically engaged the with the ways of knowing and second order learning that aims at understanding “meta-cognition and deals with knowing about the nature of knowledge” (Collins and Ison, 2009, p. 364). Hall argues that

‘first-order learning’ is understanding the contemporary moment in relation to “past experiences” (Rose, 1991, p. 285). First-order learning can be supplemented by second-order learning through the co-generation of “alternative socio-cultural values underpinning the niche and implications for diffusion” (Seyfang and Smith, 2007, p. 586), thus opening the reframing process to a spectrum of capabilities, contexts, constituencies and markets recognising the need for “acknowledging and learning from failure as a well as success” (Seyfang and Smith, 2007, p. 589).

Second-order learning is when the “use of various instruments themselves is considered” (Rose, 1991, p. 285) enabling critical debate on the role of structures as the “primary resource enabling action or constraining action” (Evans, 1999, p. 370). This leads to the realisation that social structures according to Evans “cannot exist independently of the activities they govern as they are given essence through the practices of agents” (1999, p. 285). Furthermore, third-order learning changes “involve the hierarchy of goals behind the policy itself” (Rose, 1991, p. 285), which is what I was aiming to work towards in this study, hence the need for the iterative and progressive focussing relationship between the literature and the social learning dialogue in order to come up with a substantively constituted proposal/s for reframing of the AES.

Third loop learning enables a recursive relationship between “responsibility (as enacted) and responsibility (as enabled) as an in lieu dynamic in learning” (Collins and Ison, 2009, p. 364). It speaks to the fact that epistemic change is necessary in order to enact institutional change and through the use of social learning it is possible to question assumptions and explore contexts in some depth as I was aiming to do in this study (Collins and Ison, 2009). Hence, in this study I encouraged stakeholders to interrogate past initiatives and scrutinize “lessons learned from, past experiences which inform contemporary choices” (Rose, 1991, p. 286), and it is for this reason that I also analysed the current policy histories and discourses shaping the AES (cf chapter 1 and 2, and iterative and progressively focussed literature reviewing work in Chapter 5).

First and second loop learning in this study was geared towards unpacking the complex relationship that exists between the participants and the contexts of their experiences. According to Beland “historical institutionalism is grounded in the assumption that political

institutions and previously enacted public policies structure the political behaviour of bureaucrats, elected officials and interest groups during the policy-making process...” and “... this approach views the polity as the primary locus for action, yet understands political activities, whether carried by politicians or by social groups, as conditioned by institutional configurations of governments and the political party system” (2005, p. 3).

It was through interviews and group discussions that the stakeholders this study were able to deconstruct “mental models used to inform current practices of participation- as a category of power” (Collins and Ison, 2009, p. 364). Furthermore, the use of social learning in the study for policy and praxis purpose was geared towards encompassing “an awareness of levels of learning and was able to generate practices that question norms, policies and objectives through interactive processes involving multiple stakeholders” (Collins and Ison, 2009, p. 364). Therefore, it was through the first and second learning loop that participants critically engaged and assessed “whether structural processes external to the process of transfer we are looking at have an impact (directly or indirectly) upon the context, strategies, intensions and actions of the agents directly involved” (Evans, 1999, p. 370) (reported in Chapter 1 and 2).

As a result, the social learning theoretical framework in this study through the first and second learning loop critically engaged policy content and the “convergence may occur on public outcomes, impacts or consequences- the results (positive or negative, effective or ineffective) of implement” (Burnett, 1991, p. 218).

4.7 Validity and ethical considerations

4.7.1 Integrity and academic professionalism

During the research process, I aimed to cultivate fluid power relations “in the researcher-researched relationship” (Holland et al., 2010, p. 363) co-creating an environment of co-learning that could strive for equitable symmetries of power. The nuanced positioning of self as a researcher-activist with an interest in transformation of BSMFs conditions required that I share these interests with integrity and honesty with all participants. Maintaining honesty, openness and integrity within the study also helped me to understand the contextual and contemporary discourse shared by the participants. Co-creating a study that is rich in context

and multi-faceted in its ability to speak to diversity that is the South African contemporary agrarian landscape was my aim in order for the study to be professionally relevant and of interest to the sector.

The study was used as a medium to “stimulate constant reflection and, if necessary, adaptation of practices, outcomes and impacts” (Mistry et al., 2010, p. 29) hence I strove to cultivate an environment of co-learning defined by Cornwall (1996) as a process where “local people and outsiders share their knowledge to create new understanding and work together to form action plans...” (Mistry et al., 2010, p. 29). This according to Mistry et al. (2010) can help articulate the complex nuances of the agrarian landscape by combining local ideas in conjecture with academic ideas through the production of relevant and relatable interaction of ideas. The aim of reframing the current status quo of the AES was geared towards traditional ethical frameworks that are “built on the principles and values of ‘Do-No-Harm’”, as well as principles of ethics of care, respect and dignity (McGarry, 2017, p. 2). According to McGarry (2017) this will cultivate an environment that embraces sustainability aspirations and objectives and more importantly, seeks to ensure social justice.

4.7.2 *Respect and dignity*

As indicated in Chapter 1, the explicit aim of this study was to critically examine “the processes, challenges and opportunities” (Holland, Renold, Ross and Hillman, 2010, p. 360) that exist within the potential reframing of the agricultural expert system (AES). The study aimed to critically engage and challenge pre-existing “categories and narratives” (Sultana, 2007, p. 376) for the purpose of reframing the AES to include other forms of knowledges. This was for the purpose of generating actionable research that can be used “to inform decision making” (Williamson and Prosser, 2002, p. 588).

Thus, in this study, the stakeholders have been acknowledged and recognised as co-producers of knowledge and their own social learning (cf Chapter 5). The study through the use of partnership, co-valuing and respect for differences has generated recommendations for a contextually representative AES that is responsive simultaneously to the challenges and successes of the AES in the wider context of the agrarian landscape (cf Chapter 6). Furthermore, to the best of my ability I tried to relate to all participants in their home language

in order to ensure a dynamic and multi-faceted environment that enabled robust engagement sessions.

4.7.3 *Transparency and honesty*

All participants were given a comprehensive disclosure on the study (cf Appendix A for ethics documentation used) and purpose. Social Learning group discussions were interchangeably facilitated in isiXhosa and English as per the specification to group dynamic(s). This cultivated an environment where participants were able to engage matters of interest with confidence and ease, cultivating an environment for robust contributions. We therefore, collectively drafted a social contract that outlined mutual expectations and behaviour of the participants (see Appendix A). This enabled an environment of group accountability and helped to establish trust, partnership and ownership of the study.

As for myself, an iterative process of reflexivity was key in negotiating access and the multi-faceted forms of consent that existed in the various levels of operation. These included that I,

- Continuously at the various stages, assessed levels of comfortability and willingness to continue participation within the study
- Asked participants if they are still willing to use their real names or would they prefer pseudonym names
- Continuously reflecting the work back to the participants to ensure that I have captured the work accurately
- Continuously reflected on my bias and interests and potential impact it might have on the status of the analysis.

At all times, I sought to align the research with ethical standards of conduct premised on “not doing harm, not breaching confidentiality, not distorting data, informed consent and the right to withdraw” (Williamson and Prosser, 2002, p. 589).

The aim was to engage the “participants ordinary everyday lives” (Holland et al, 2010, p. 367) as active social agents within the study. As such I, through the social learning dialogues facilitated learning and co-learning. This included open engagement with perceived

understandings of power and historical circumstances, and the diverse impact it has had on the various participants within the sector, thereby critically engaging, according to Holland et al., the “relationality, co-dependence and constitutive force (via a nexus of power relations)” (2010, p. 364), providing nuanced understandings of different contexts, identities and cultures of practice(s). This provided insight into the management and negotiations “within and beyond their positioning” (Holland et al, 2010, p. 364) within the sector.

4.8 Researcher reflexivity, accountability and responsibility

The contemporary agrarian landscape is a composition of globalisation, histories of colonialism and local realities in order to avoid perpetuating exploitative and biased forms of research based on “domination and control” (Sultana, 2007, p. 375), (see also Chapter 1 and 2) with a need to actively address challenges pertaining to “marginalisation, essentialisms, and differences in representations” (Sultana, 2007, p. 375). This is necessary for generating a study according to Nagar (2002) that is “politically engaged, materially grounded, and institutionally sensitive” (Sultana, 2007, p. 375).

In partnership with the participants in the process of reframing of the AES, I encouraged participants to actively “take part in the decision making in the institutions, programs and environments that affect them” (Florina and Wandersman, 1990, p. 43). This was with a view to cultivate an inclusive community development model that aims to improve the socio-economic conditions of the agrarian landscape to include the development of BSMFs. Through this, I sought to contribute towards generating new and dynamic ways of thinking centred on non-fragmented ways of thinking and “community-oriented ways of knowing” (Lincoln, 1995, p. 281). The objective, according to Lincoln is to reframe the agrarian sector towards “counter hegemonic” (1995, p. 281) perspectives.

The reflexivity process practiced was premised on actively encouraging continuous “review and critique of research practice” (Cassell and Symon 2004, p. 506). Throughout the study I aimed to be cognisant of my own epistemic bias and social constructionism and aimed to adopt a commitment to “render as transparent as possible the subjectivities inherent to the researcher and the research process which influence the interpretation generated” (Nadin and Cassell, 2006, p. 210). The journaling subsequently assisted me in “continuously think about their own

research practices and assumptions, by recording those thoughts in a systematic way” (Nadin and Cassell, 2006, p. 210). This allowed for me to describe in my own words the body language, mood and other communicative makers curating contextual representation “social or otherwise of everyday action that would not otherwise be available” (Markham and Couldry, 2007, p. 679). This enabled for me whilst transcribing the data for the different phases to acutely capture and translate the what was said and how. Thus, enabling me to explore “methodological issues, (such as the adequacy or efficacy of the interview schedule), as well as supplementing the content of the interview data where relevant (e.g. by noting general themes or perhaps non-verbal aspects of the interviewees’ behaviour”) (Nadin and Cassell, 2006, p. 211). Furthermore, this was accompanied by me voice recording my own bias as a researcher and contrasting these sentiments against the data and journaled notes. These three techniques enabled a conducive environment for critical reflexivity and a reiterative process for the sifting of data.

The complementary reflexivity techniques used in the data collection process proved imperative highlighting key emergent issues identified in chapter(s) 1 and 2 that were the literature review and reflection of the histo-contemporary status of BSMFs respectively. This enabled me probe further on issues reflected, identify key issues that presented as thematic themes key to the study and its objective. More importantly actively aim to expand knowledge production that speak to present limitations.

4.9 Conclusion

This chapter outlined the methodological steps undertaken in the study and covered the methods and approaches use throughout data generation and analysis phase. The chapter outlined the role and use of the social learning theoretical framework which was an important foundation for the way in which the study was carried out as it provided a contextually grounded approach for the iteratively and progressively focussed literature study offering situated and co-engaged approach to the policy review undertaken in this study. The chapter gave a detailed account of how the data was analysed and approached using the first and second loop learning perspective. Lastly, the chapter reflects a reflexive process wherein ethical and validity questions and concerns where brought into sharp focus in strengthening the quality of the study and its execution.

Chapter 5

THE AGRICULTURAL EXPERT SYSTEM AS FOUND AND AS CHANGING

5.1 Introduction

This chapter according to Srivastava and Thomson aims to build “a complex, holistic picture” (2009, p. 73) in the analysis of documents, observations, semi-structured and focus group interviews through qualitative analysis. The aim of this chapter has been geared towards acutely and holistically understanding and determine according to Basit “the categories, relationships and assumptions that inform” (2003, p. 143) how the conceptual framings that have come to inform the commercial sector and the general role and categorisation of BSMFs within agricultural landscape have come to into being. Through this chapter, I will be guiding the reader through the raw data for an in-depth analysis that will aim to 1) unpack the histo-contemporary complexities, 2) outline the contemporary landscape, and 3) potentially articulate a way forward. I will do this by detailing the navigation traversed by BSMFs in the agrarian landscape and attempts made in transitioning and or migrating into the commercial sector from the social learning dialogues, and complement this with the progressively focussed literature study.

For the purpose of intricately engaging with the data the following questions will be engaged in this chapter to help structure the reporting. I found this helpful for structuring interpretation of the raw data and bringing out the authentic voices of the diverse stakeholders that took part in the study in a relationship to the literature.

Table 5.1 Framework for policy analysis guiding this chapter construction (adapted from “Qualitative data analysis for applied policy research” by Ritchies and Spencer in Bryman and Burgess (1994, p. 173-193))

Category	Goal	Sample questions
Contextual	Identifying the form and nature of what exists	What are the dimensions of attitudes or perceptions are held? What is the nature of people’s experiences?

		What elements operate within a system?
Diagnostic	Examining the reasons for of what exists	What factors underline particular perceptions? Why are decisions or actions taken, or not taken? Why do particular needs arise? Why are services or programs and not been used?
Evaluative	Appraising the effectiveness of what exists	How are objectives achieved? What effects the successful delivery of program services? How do experiences affect subsequent behaviours? What barriers exist to systems operating?
Strategic	Identifying new theories, policy plans or actions	What types of services are required to meet needs? What actions are needed to make programs services more effective? How can systems be improved? What strategies are required to overcome the new defined problems?

These questions will be located within the context of the current policy system and agricultural expert system (AES) as described in Chapter 1 and 2, and the subsequent impact implementation has had on the growth, development and transition of BSMFs into the commercial sector. Therefore, the coding was used to establish categories that are catalysis in the generation of a “conceptual scheme that suits the data” (Basit, 2003, p. 144). This process assisted me, through a reiterative and reflexive process, in which I attempted throughout the study to compare, consolidate and map-out the contemporary agrarian landscape in regards to the growth, development and transition of BSMFs into the commercial sector (Basit, 2003).

This chapter follows an analysis of the historical and contemporary landscape, followed by the articulated way forward as analysed as per main stakeholder group in the AET as found in the case study site. These are the,

- Agricultural Education and Training Institutions (section 5.2)
- The BSMFs (section 5.3)
- Extension, LED officers and NGO’s (section 5.4)

For each of these I use the following analysis categories,

- Context and history,
- The form and nature of what exists, and
- Diagnostic examining the reason for what exists.

In each case I discuss the data drawing on literature to deepen understanding and interpretation to lead the reader into the issues discussed in the social learning dialogues, and to further elaborate around these in order to develop further insights.

5.2 Agricultural Education and Training Institutions

5.2.1 Context, historical and contemporary layout of Agricultural Education and Training Institutions

Post 1994, the RDP policy was used a vehicle for transformation and a mechanism to catalyse a “coherent socio-economic policy framework” (ANC, 1994) geared towards the previously disadvantaged. The 2016 Academy of Science of South Africa (ASSAF) issued a report which is the largest recent study into the AES, titled ‘*Revitalising Agricultural Education and Training in South Africa*’. Besides offering an extensive review of the many challenges being experienced in the AES including issues related to the structuring and governance of the AES, as well as issues related to the need for curriculum innovation that is more farmer-centred, it highlighted that the intent of the RDP in regards to the agrarian sector was strategically aimed at redressing inequality, deracialising access and acutely address poverty. Tregurtha et al. (2010) further argue that there has since been various state led land reform policies implemented geared towards BSMFs development in “improving the efficiency of the commercial sector, and addressing the structural inequality characterising South African agriculture”. However, as indicated in Chapter 1 and 2, I argue that within the context of South Africa the conceptual framework used to inform land reform has been and continues to lack critical rigour of the ‘pre-existing’ conceptual structures of the AES that continue to inform the socio-economic contemporary landscape.

As argued above, the critical rigour negated in the conceptual design and implementation of land reform policies explicitly continues to fail to acutely outline the strategic function and

facilitation role of the Agricultural Education and Training (AET) sector in regards to the growth, development and transition of BSMFs into the commercial sector (ASSAF, 2016). This despite the sector's clear reliance on AET in the overall operational success of the agrarian sector, and its central role in the AES. Subsequently, land reform in regards to the AET sector has failed to translate into "well-resourced nationwide programmes" (ASSAF, 2016, p. 54) geared towards BSMFs growth, development and transition into the commercial sector. As of consequence, the agrarian landscape has remained by and large unreformed and subsequently ineffective as it pertains to actively redressing the apartheid legacy of a dual agrarian landscape characterised by a history of socio-economic and political marginalisation as also discussed in Chapter 2 and 3 (ASSAF, 2016).

It is within this contextual and historical overview as presented in this study (Chapter 1, 2 and 3) that the National Department of Agriculture (NDA) (2003, p. 9) consolidated its first attempt at a developmental strategy for AET, focusing on the following three key areas,

1. The development and maintenance of an effective and well-coordinated AET aimed at respond appropriately to the South African Agricultural landscape,
 - 1.1 Ensure policy and curriculum development is coordinated and harmonised,
 - 1.2 Ensure that AET delivery at provincial level is well coordinated,
 - 1.3 Ensure that AET learning is mobile and portable from one AET institution to another and articulates with hierarchies of AET qualifications
2. Enhance equitable access and meaningful participation in AET for all South Africans (particularly the previously disadvantaged)
 - 2.1 Aimed to develop and implement a systematic plan to identify, priorities and remove access barriers to AET
 - 2.2 Improve the image of agriculture as a career and livelihood choice, Develop and implement a high-impact public education programme promoting the image of agriculture particularly among children and youth.

This was attributed to a conceptual recognition and understanding that agriculture was and continues to be a key economic driver, and that the revitalisation of the AET would be integral in actively,

- Improving competitiveness through enhanced skills, knowledge and technology,
- Improving quality of life,
- Improving social cohesion through greater inclusiveness, and
- The generation of wealth. (NDA, 2003, p. 2)

Unfortunately, the ASSAF report highlighted that there remained little to no evidence to suggest implementation towards the desired outcomes “despite its significant time importance” (2016, p. 55). This can be clearly understood in the table below, in contrasting the objectives of the NDP (2011) against the systematic challenges and material conditions that continue to hinder the developmental agenda of the AET sector as set out by the earlier NDA (2003) Strategy Report – also highlighted in the ASSAF (2016) report, with the ASSAF (2016) report subsequently indicating that little change has occurred within the sector.

Table 5.2. NDP (2011) developmental aspirations for the AET sector vs reality and material conditions faced as highlighted in the ASSAF (2016) report

Key development focus areas for the NDP (2011) for the AET	Historical challenges that will need to be mitigated in order to achieve aspired towards developmental goals
The creation of an additional 643 000 direct jobs and 326 000 indirect jobs in the agriculture, agro-processing and related sectors. Increased investment in new agricultural technologies, research, and the development of adaptation strategies for the protection of rural livelihoods. Support services for small scale and rural farmers and expansion of commercial agriculture. Maintaining a positive trade balance for primary and processed agricultural products. Expanding the college system with a focus on improving quality. Improved skills development and training in the agricultural sector, including entrepreneurship training. This should include the training of new cadre of extension officers that will respond effectively to the needs of smallholder farmers and contribute to their successful integration into the food system value chains.	AET lacked coherence and coordination both between the formal and non-formal sub-sections, and vertically within the formal education and training sector. The funding of the programmes was skewed and uneven across different sites of provision with former white institutions, still better resourced than their historically black counterparts. Programmes differed markedly in quality, standards, outcomes, and curriculum and therefore, limited the opportunities for students to change institutions, which created further barriers to progress to higher levels.

5.2.2 Identifying the form and nature of what exists

The Fort Cox Agriculture and Forestry Training Institute (FCAFTI) is one of the main AET institutions in the case study site and is therefore a key contributor to the AES in the case context under study.

To begin with, I probed the form and nature of what exists in interaction with lecturers (L1 and L2) at FCAFTI. They indicated their primary role as,

... an agricultural college, our primary role is to teach and or facilitate teaching and learning- we are focusing much on practical. (L1, L2)

This is further affirmed and expanded upon by L2 when he states,

... our core mandate as per Department of Higher Education and Training (DHET) is to ensure that we teach and or facilitate the transferal of skills of the next sectoral workforce. The foundation of which is quality education and learning and as it pertains to our sector, quality practical experience ...

The sentiments shared by L1 and L2 are in fact supported by the Quality Control Office at FCAFTI by incorporating the Post Graduate Diploma in Higher Education (PGDHE) as a requirement in the contractual employment for lecturing staff. The PGDHE certification according to Machingambi (2020) enables a teaching and learning environment that promotes “nuanced approaches to understanding constraints to and enablers of student success” (p. 37), enabling the lecturer to facilitate a co-engaged teaching and learning environment that actively acknowledges the complexities of the “multidirectional relationships” (Leibowitz et al., 2015, p. 317) that exist within the classroom. This represents a significant departure according to Boughey (2010) from the transmission mode and moves “towards more student-centred or problem-based approaches to teaching” (Machingambi, 2020, p. 37). This was reflected in the discourse of the FCATI lecturers who said,

Our practicals - field practical training (FPT) - must align much with our objectives for teaching and learning. Without the two, agriculture cannot happen ... (L1/L2)

In agreement with the integration of theory and practice mentioned above, Nikolova-Eddins et al. (1997) argue that the linear traditional classroom teaching within the context of the AET sector is insufficient in producing the student cohort with the broad-based skills necessary needed in the increasingly evolving sector. Van Crowder et al. (1998) highlight that the AET sector in recent history has marginalised the role of FPT programmes in curriculum development, impacting negatively the sector’s ability to align “production needs and employment demands of the agricultural sector” (p. 71). FPT is defined by Koyenikan and

Anozie (2018) as a process that “promotes ‘learning by doing’, where students combine theoretical knowledge and hands on skills during programme implementation” (p. 128). It is within this purview that L2 continues in mentioning that,

In my past experience, students in the TVET have a prone dislike for practicals. Students even here at FCATI prefer theory based teaching than FPT. This is concerning, as agriculture is very much a hands-on trade. Advising the farmer, the student must have practical knowledge and experience in the trade.

This Iwuamadi and Akaraonye (2010, p. 2) attribute to an array of intersecting issues that range from and include,

- inadequate curriculum to which they are exposed,
- regarded as time consuming and energy consuming,
- dirty and best for illiterates and peasants who are not interested in getting rich [i.e. stigmatisation of agriculture].

This, according to Nkajimeje (1996) impacts interests, abilities, understanding and attitudes. As argued by Iwuamadi and Akaraonye, the failure to integrate FPT into the curriculum leaves instruction incomplete as said, “unless the skill being taught is put into practice by students, the instruction is not complete” (2010, p. 21). Students according to Tang (2012), must have the ability to “accumulate knowledge and the aptitude to blend acquired knowledge with context” (cited in Yusuf et al., 2019, p. 212). Therefore, the incorporation of FPT within curriculum development is integral to innovation in the AES as it increases problem-solving capacities in responding to the diverse and “dynamic workplace typical of an agricultural farm” (Oladele et al., 2011, p. 924; Navarro, 2004; Acker, 1999) broadening graduate skills and capacities (Ayanda et al., 2003). This generates a cross cultural experience that enables the student(s) to bridge the gap between theory and practice (Bruening and Frick, 2004).

While they reflected on progress related to integrating theory and practice in their teaching, the lecturers also noted that,

However, in the South African context, we have an AES that is really much isolated from each other. (L1)

In relation to the issues raised by the lecturers, Spielman et al. (2008) further expands to note that the AET sector, despite reform and redress mechanisms instituted, continues to “operate

as loose sets of isolated organisations” (p. 3), impacting negatively, I argue, the ability to cultivate public-private partnerships that are multilateral in design and are implemented bilaterally through formal and informal linkages with state organisations and institutions with complementary mandates (InterAcademy Council, 2004; Michelsen and Hartwich, 2004; Michelsen et al., 2003).

L1 and L2 elaborated further on the importance of agricultural education for the economy and for addressing unemployment at the same reflecting on stagnation in agricultural qualifications ‘for a certain people’. They also point to the potential value of an agricultural qualification as a ‘qualification on its own’,

In terms of how we address unemployment, understanding that agriculture contributes a lot in terms of our GDP, in terms of the economy....so, without these systems working together we are doomed to fail. In so much that there are still people who believe agriculture is for certain people but in reality, agriculture on itself is a qualification on its own. (L2)

This can be further interpreted with an understanding that globalisation has created new and emerging opportunities for learning that has necessitated the need to reframe “education-for-jobs” (Movchan and Komisarenko, 2019, p. 33). Therefore, there is need to contextualise the role and significance of agriculture within the ‘glocal’ economy by interrogating the interdependencies that exist “between the agricultural industry, economic and social structure of the community, state and world” (2019, p. 35) as also mentioned by the lecturers. The clear articulation and interrogation of challenges, risks and opportunities will assist in generating problem-responsive strategies and systems for the changes and adaptations. This is necessary according van Crowder et al. (1998) in effectively contributing “to improved food security, sustainable agricultural development and rural development” (p. 71). Overcoming the implied stigmatisation in AET qualifications as per the lecturer(s) comments will be important in South Africa.

Empirical evidence shows that if the developmental agenda of black farmers is to be actualised, something needs to change. As stated by one of the lecturers,

I say, I am and I sure that my colleagues would agree that change starts with how we in the FET sector do things. But we must also recognise that changes in the FET cannot

happen in isolation. We need all hands-on deck ... Every stakeholder in the sector working together to actualise the change. (L1)

The AET sector must refocus efforts towards quality human capital development strategies that are seen by Rivera (2006) as integral in “intensifying linkage-building efforts” (Spielman et al., 2008, p. 4) through interdisciplinary learning and a systems approach, cultivating knowledge systems, expansion and strengthening of existing structures where necessary as this is the catalyst for “greater innovation in agriculture” (Spielman et al., 2008, p. 4). There is potential in using the AET sector as a leverage entrée point in which skills transferal is facilitated to “transmit and adapt new applications of existing information and processes, and new organisational cultures and behaviours” (Spielman et al., 2008, p. 2). As indicated in the lecturers statements above, this could be possible if stigmatisation is overcome and if the qualification is more highly valued as also mentioned by the lecturer(s). Generating a nuanced systems approach that is responsive to socio-contemporary strategies, has the potential to assist the AET sector in cultivating a reframed AES “thus building on the comparative advantages of different actors and institutions” (Spielman et al., 2008, p. 4), as will be elaborated across this chapter.

Elaborating on this, the lecturer(s) also noted the importance of a research-based orientation in the qualification, noting, and making the qualification more visible and valued.

You need to be qualified in order to know and be a competent future researcher, in order to research future agricultural problems (L2).

This raises the research-teaching relationships in the AES. Therefore, the AET sector and mandate must be strategically aligned with national development aspirations by “facilitating priority-setting processes” (Spielman et al., 2008, p. 2). Spielman et al. (ibid), emphasises that AET institutions should generate graduates that are problem solvers in regards to “changing socio-political, economic, scientific, and agro-ecological conditions in sub-Saharan Africa” (p. 2) which will require engaging a research orientation, as indicated by the lecturer(s). This can strengthen intra linkages between the AET, research orientations and “diverse user communities, knowledge sources, and private industry” (Spielman et al., 2008, p. 2). The above mentioned can be reinforced by supportive economic policies and by investigating ecological changes “related to climate change and urbanisation, and new technological opportunities in information, communications and biotechnology” (Spielman et al., 2008, p. 3).

How current programmes address the needs of small-scale farmers (or not) is related to the issue of perceptions of difficulties of agricultural careers and farming. This was raised by the lecturers as follows,

As I have said, many people fear agriculture. It is a very risky business because you rely much on the weather conditions and resources which may be very much be expensive if you are an emerging farmer (L1).

The multifaceted anxieties associated with agriculture as a chosen career path according to Magagula and Tsvakirai (2020) can be attributed to the failure in “institutional and infrastructural investments that have followed state-led directives” (p. 235). This is further compounded by issues pertaining to climate change that intersect with other socio-economic and political drivers that have substantially impacted agricultural practices and productivity already (Chakeredza et al., 2009). It is within this mentioned context that Chakeredza et al., argue that adaptation strategies be “taken in tandem with government policies and strategies of poverty alleviation and food security” (2009, p. 12).

That said, L2 highlights through observation that,

Increasingly, in the community outreach programmes that we do around the College and even among our own students, we see an increasing concern and anxiety around the issue of start-up capital, particularly among the youth. This increase has been in tandem with governments call for youth participation in agriculture and the move to develop black farmers and upskill them within the value chain.

Madibana et al., (2020) reflecting the sentiments of L2 argues that without ownership “young and mostly black entrepreneurs find it hard to penetrate the agricultural sector as a whole, even harder for less known sectors” (p. 16691). Moreover, Magagula and Tsvakirai (2020) highlight that the impact of factors such as “market liberalisation, climate change, increased dominance and penetration of modern food chains, and waning levels of farmer support” (p. 235) have influenced how the youth and broader community of practice perceive the sector and commitment to engage. It is within this context that Madibane et al. (2020) argue that if we are to see change of the issues mentioned by L1 and L2, there needs to be a concerted effort geared towards a more coordinated approach in regards to “government and the private financial institutions to achieve rapid and sustainable development” (p. 16691). Therefore, a

cost-benefit analysis must be implemented as a redress mechanism aimed at actively reducing “vulnerability and increased resilience through the utilisation of available commons assets” (Chakeredza et al., 2009, p. 12). Stage (2010), notes that cost-benefit analysis is an “integral part of developmental policy” (2010, p. 151) geared towards emerging farmer skills, capabilities, indigenous and localised knowledge(s) and financial capability.

This is reflected further by L2 when he notes that part and parcel of the discussion is fundamentally understanding that,

Agriculture is a patient career before you can actually start seeing the results and hard work [meaning it requires patience]

It is in the context of the above that Garton et al. (2002) argue that lecturers must align the curriculum with the sectoral needs that impact employability. This Gilmer and Deci, way back in 1977, argued will influence farmer attitudes towards the sector and “reflect the extent to which they are satisfied with their jobs and their work lives” (p. 228). The points raised above indicate that curriculum development and innovation must be context sensitive and responsive to socio-political and economic landscapes (Powell et al., 2008). This will demand “value judgements about the impact of agriculture as an economic and environmental activity” (ibid, p. 86). Powell et al. (ibid) argue that this can contribute towards creating a cohort of graduates that are able to “analyse and evaluate ‘trade-offs’ to individuals and to society resulting from agricultural enterprises” (p. 86).

Powell et al. (2008) articulate the interactive symbiotic relationship that exists between “knowledge and process skills used to ‘build’ emergent agricultural literacy” (p. 91). This helps in the cultivation of value judgements that are intricately used to develop simultaneously farmer and sectoral value judgements frameworks. These, in turn, are strategically used to “access and prioritize value judgements, placing them in context” (ibid) for the purpose of generating knowledge frameworks and commons that are able to effectively build contextually responsive competency skills.

One of the contextual realities to be considered is the need for viable livelihoods and income in agriculture as reflected in this discourse from the lecturers,

In my personal view, we need to find ways of working together in terms of developing our land, in terms of addressing the needs of our people through the agricultural expert system. After 26 years of democracy, if we are to be honest we have not yet seen real traction in the development of black farmers. I blame it on policy. Ambiguous policy. For instance, we have had many good programmes developed by the state. The implementation and lack of monitoring and evaluation has resulted in many failed projects. We need to do better. I have many instances where I can give examples. Cooperatives for instance do not work. Yet we keep giving money to cooperatives. If we do not rectify these challenges our current policies are subject to failure (L2).

Additionally, L2 at FCATTI in the citation below points to the ambiguities and failures of policy (cf Chapter 2 and 3) and how these have affected the AES in practice. The above, together with this citation from L2 points to the need for a systemic reframing of the AES,

We need to find more innovative ways of dealing with the systematic challenges facing farmers particularly black farmers within the agrarian sector. That means, getting to the root of the problem. Thinking outside the box and more importantly, finding solutions that are sustainable not only for the economy but the environment as well. (L2)

According to Grindle and Thomas (1989) there is need to cultivate a conducive environment for policy reform geared towards “establishing a macro-policy climate to improve economic performance; adjust sectoral policies to encourage efficiency and responsiveness to market forces; and the imperative to lessen bureaucratic constraints on economic interactions” (p. 213). This approach demands that we critically engage sectoral-centred responses that according to Grindle and Thomas (1989) acutely engage “causes of decisions made to adopt, pursue, and change public policies” (p. 216) thus impacting, I argue, conceptual frameworks in regards to implementation and desired outcomes. Therefore, curriculum design adopted within the AET becomes imperative. Kemmis and Green (2013) argue that curriculum development, design, development and innovation must reflect the socio-economic environment that influences the agrarian sector. This will be aimed at co-generating a conducive and enabling environment that allows for the adoption of “new and valued approaches to skills development” (Kemmis and Green, 2013, p. 110) for the purpose of bridging the gap between formal and informal learning within the sector through “education and training” (Kemmis and Green, 2013, p. 110) aligned with industry needs.

However, ‘industry needs’ also need to be qualified further as reflected in this interview,

Agriculture is a very broad community of practice. You find sometimes there is a concentration of resources in production line and for others resources are far and few in between. Key to the sector's development is diversification and focusing more on value adding produces such as mushrooms, nuts, cotton etc. These are production avenues that are not necessarily common among black farmers. (L2)

And L1 continues to add and notes,

... when we talk enterprises, do you want to deal with crops or animals or do want to be an intermediate guy - buying products from here and selling them there. So firstly, you look at what enterprise, do you have the resources (land and financial capital), do you have the skills and machinery things like that?

The above characterisation of contextual dynamics and challenges faced within the sector as highlighted by lecturers at FCATI in the case study context, mirrors those identified in the ASSAF (2016) report, in accordance to the National Development Agenda 2030 aspirations in regards to the agricultural sector aimed to “create close to 1 million new jobs by 2030” (2012, p. 219). Therefore, there appears to be a need to support AET sector innovation mechanisms premised on “climate smart approaches” (ASSAF, 2016, p. 52) geared towards economic inclusivity.

According to Greenberg (2013), the context of Southern African agri-food systems defined as the “social structures and mechanisms of regulations that enable the accumulation of capital through production and distribution” (p. 4) has undergone similar changes to a corporate regime. The concept of a regime according to Greenberg is used to explain and discuss “the connections between the social structure of accumulation in the agri-food system and broader processes of capital accumulation at a global level” (ibid) that has implications for national agri-food processes of change and structure. Thus, the concept in use ‘regime’ “defines the global context in which national level agri-food system change and restructuring takes place” (Greenberg, 2013, p. 4). Unfortunately, Raidimi and Kabit (2017) argue that the AET public sector in South Africa has been embattled by “inefficiencies and the inability to meet rapidly growing market demands” (p. 49). This Greenberg (ibid) has attributed to ambiguous policy directives initiated by state that have often been catalysts to “instability and contradictions” (p. 4) within the sector, as also stated by the agricultural lecturers in the above citations.

Therefore, in order to bridge the information gap and simultaneously increase the operational functionality and quality in service delivery of the AET public sector, change is immanent, so

that it can provide “up-to-date relevant materials on key subject areas where there is a current lack of knowledge and/or relevant accessible materials” (Chancellor et al., 2012, p. 4). This will demand vertical and horizontal integration(s) aligning the sector’s stakeholders for the purpose of strengthening the sectors capabilities (Raidimi and Kabit, 2017), thus cultivating a teaching and learning environment geared towards strengthening the “capacity of intermediaries to respond more effectively to the demands from farmers on how to improve their farming systems” (Chancellor et al., 2012, p. 2), if the AET is to address the silo effect and contextual dynamics raised above. Additionally, there is need to give adequate attention to the contextual dynamics, which include dealing with risk, outlined in the citation below,

So, you’d find that it can be a very viable business enterprise to venture into but it will depend on your strategies, how you approach it. Also, it can be an economically viable enterprise but have lots of risks in the sense that, there can be a drought anytime, pests and diseases are a serious problem, there is a lot of theft in that industry. A lot of these things that are unpredictable that you can encounter. It is a high-risk terrain so you must also tread softly. (L1)

In such a context, it is important to understand that the different enterprise models “operate in different ways with different effects” (Yaro et al., 2017, p. 539) that translate into diverse business models and dynamics. Furthermore, Hall et al. (2017) argue that “commercial farming has taken different forms - varying in scale as well as in institutional arrangements and labour regimes - with fluctuating political significance in different places and times” (p. 517). However, it is important to note that Cotula et al. (2015) and Smalley (2013) indicate that “little research and analysis is available on the implications and outcomes of different models of agricultural commercialisation” (Hall et al., 2017, p. 518). Furthermore, Collier and Dercon (2014) argue that differentiation however happens “simultaneously across different scales, with diverse factors impinging outcomes” (Hall et al., 2017, p. 518).

In addition to the complex dynamics cited above, consequently, there is a clear need for AET curriculum reform, design, development and innovation aimed at addressing issues pertaining to cost of information challenges, and access barriers to markets pertaining to “limited access to factors of production, credit and information; and markets are often constrained by inadequate property rights and high transaction costs” (Ortmann and King, 2007, p. 220; Lyne, 1996; Matungul et al., 2001). These have proven detrimental to the ability of emerging BSMFs to effectively and efficiently participate within markets. Therefore, the ability of the AET

sector to reframe its curriculum to engage with the dynamics surfaced above, can facilitate a more conducive environment that will assist emergent farmers and BSMFs in their attempts to “overcome access barriers to production resources, information, services and markets for high-value products” (Ortmann and King, 2007, p. 220; Delgado, 1999; Holloway et al., 2000)

5.2.3 Diagnostic: examining the reasons for what exists

In co-defining the reasons behind the dynamics raised above, the agricultural lecturers noted the relationships between unemployment and the potential for agriculture to help address this issue(s)

The way I see agriculture to date, it is one the pillars of the economy in terms of improving one’s lifestyle economically. Since now many people really, if you look at South Africa we are sitting at 27% unemployment and the only way for us as the people of the Eastern Cape to succeed such challenges is for us to maybe try and improve in our agriculture systems (L2).

Alongside these issues, Ndhleve et al. (2017) highlight that despite a declining GDP, agriculture “continues to play an important role in the economy” (p. 24), in regards to overall economic growth and poverty reduction considering the estimated four million South African’s that engage in agriculture in relative capacities (Baiphethi and Jacobs, 2009). Therefore, as L2 mentions, agriculture must be premised on economic development that is simultaneously accompanied by “quantitative changes in the structure of production and employment” (Szirmai, 2005, p. 7) that ultimately result in structural change (Kunznets, 1966).

As a result, there is need to understand and study the “linkages between agriculture and agricultural growth and consequent reductions in poverty” (Ndleve et al., 2017, p. 24). It is also important to find alternative systems and mechanisms to “improve food security at household level” (Tshuma, 2012, p. 4017), considering that agriculture contributes 15% of the total household income in South Africa “but the for the poorest quintile the contribution is estimated at 35%” (Tshuma, 2012, p. 4016).

This is supported by L1 when he highlights the following,

Agriculture has changed. It has evolved. Therefore, what we teach our students needs to be aligned with industry needs if we are to ensure the successful employment of

students. This means studying closely the value chain(s), identify gaps, opportunities and more importantly, be able to anticipate change of industry operations. That is also another way to do agriculture. We must just look at AgriSA that is a perfect example of how things can be done. We, and the broader community of practice must change the way we do, see and practice agriculture.

Therefore, there is a need to understand agribusiness economics of the agricultural landscape aimed at acutely understand “how institutions, organisations, and market affects vertical and horizontal coordination within the food system” (King et al., 2010, p. 555). This will actively assist in generating innovative systems approaches in attempts to buffer emergent BSMFs from market fluctuations, an imperative that needs to be supported through implementation of “monitoring and evaluation systems” (Aliber and Hart, 2009, p. 455).

Continuing with this line of reasoning, the lecturers had this to say,

That way we can end up succeeding in reducing unemployment and address financial challenges that many families are facing currently (L1)

In further elaborating on challenges in the landscape L 1 and L2 has this to say,

Agriculture was not their first choice and also studying at a TVET college. Most come here as a last resort. (L2)

In terms of qualification requirement, I would say a lot of our students meet the minimum entrée requirement and in some instances, this results in pro-longed output rates that in some instances go beyond the 3 to 4 years expectation of diploma completion. (L1)

... the lack of interest in the sector subsequently impacts student interest and performance in FPTs and this has a trickle effect on ability to apply knowledge. (L2)

This relates to the earlier point about the stigmatisation and the status of agriculture in community perception. This is further supported by Breja et al., (2000) who highlight that the “image of agriculture, image of local agriculture programmes and the quality” (p. 510) continue to be challenges that face the FET and VET sector and the ability to attract and retain high quality students. As of consequence, Dyer and Breja (2000) highlight that AET continues to experience challenges in recruiting and retaining quality student cohorts. Breja et al. (2000) argue that despite progressive reform developments within the AET sector “anecdotal evidence

suggests that program structure the remains focused around traditional production agriculture subject matter” (p. 510) impeding the ability of the sector to engage effectively and efficiently with same of the contextual dynamics highlighted above.

Table 5.3 below provided by Dyer and Breja (2000) provides an acute identification of the challenges facing the FET sector in regards to student perceptions of the agricultural sector and colleges. More importantly, Dyer and Breja (2000) provides solutions to the identified solutions as shown in Table 5.3 below.

Table 5.3 Recruitment challenges and potential solutions (Dyer and Breja, 2020)

Issues	Solutions
Teacher quality and commitment	• Increase the quality of teacher preparation through more effective in service and pre-service programs • Professional development of teachers • Recruit quality students into teacher certification programs and certify only quality teachers
Program quality	• Curriculum changes (agri-science focus) • Certify only quality teachers • Provide in-service programs for teachers on program quality issues
Agricultural education is equation to “farming”	• Update teacher preparation programs • Provide in-service education programs on scientific nature of agriculture • Focus on agricultural education curriculum on agri-science • Focus on FFA- agriculture background note needed for success • Public relations- convey agriculture’s scientific/technological image to public • SAEs- expand to include non-traditional SAEs
Perceived career opportunities for teachers	• Maintain records of student placements and promote those statics • Develop placement program that focuses on high quality careers
Image of agriculture	• Education local administrators

	• Curriculum-focus on agri-science and technology • Public relations- develop a public relations program that targets parents, students, administrators, teachers, counsellors and community
Image of department- students and teachers	• Increase expectations • Quality of students
Program not offered/students not aware of agricultural education	• Public relations- promote need for literacy in agriculture • State staff and teachers' organisations work to get new programs funded • Target schools without agricultural education programs- educate administrators about agriculture
Scheduling problems	• Block schedule where applicable • Multiple teacher programs- seek to expand programs
Student are busy with other programs/classes/interests	• Build program into something in which students want to be involved • Focus program on needs/wants of client • Develop new SAEs that attract students • Promote benefits of involvement with agricultural education
Competition from other programs	• Recruit- focus on quality (students follow quality) • Develop public relations program • Seek cooperation rather than competition • Build success quickly
Subject matter not of interests	• Change curriculum to focus on "consumption agriculture" rather than "production agriculture" promote new focus to clients
Poor facilities/not maintained appropriately	• Instruction/in-service programs on facility management • Promote organisation
Administrative support	• Public relations- target administrations • Professional development of teachers • Quality curriculum that focuses on scientific nature of agriculture-show how curriculum addresses state/national standards

	• Beginning teacher workshops that require teacher to bring an administrator
Narrow recruitment focus	• Expand recruitment to include representatives of all groups (gender, academic ability, background, race, etc) • Focus recruitment efforts on non-farm students (farm students enrol in Ag Ed anyway- waste of time to recruit those who will enrol anyway)

Lecturers also reflect that there has been some successes, despite these challenges, as outlined below:

We have some students who are doing very well. We are graduating students here in numbers every year. We have through-put rate above 65% or so in the three-year timeline. Some drop-out along the way some repeat. So those are some of our successes. (L1)

Despite these there are also wider challenges for those who are successful in the AET sector,

The jobs are scarce and the opportunities for students to start their own business are slim in the sense that they don't have access to funds. (L2)

This raised further questions on how current programmes address the needs of small-scale farmers,

There is meant to be value in it but you find that there isn't because of the challenges that have been mentioned. It's not like everything about the system is bad. You see like if we say for instance, we talk about the awarding of grants there is nothing wrong about awarding a grant. But how we do it, the conditions to which we award those grants and the follow-up systems and things like that needs to be interrogated. I mentioned something about skills, instead of us talking land expropriation without compensation why don't we try and push for a more inclusive system? (L1)

Okunlola et al., (2016, p. 1) argues that state policies geared towards the development and reform of BSMFs “do not appear to be effective” in regards to the development, growth and transition of BSMFs into the commercial sector. Cousins (2013) and Hall (2015) highlight that the commercial sector continues to be privileged, perpetuated by structural residue of “post-apartheid policies and institutional arrangements” (Okunlola et al., 2016, p. 6) as discussed in Chapter 2 and 3. What has resulted I argue has been the continuation in bias towards “large-

scale commercial farming, and government extension programmes do not meet the needs of smaller-scale, black farmers” (Okunlola et al., 2016, p. 1; Aliber et al., 2011) a point also highlighted in Chapter 3. This occurs, despite BSMFs featuring prominently in the developmental agenda and political rhetoric, and there continues to be “little clarity about how to support them in practice” (Okunlola et al., 2016, p. 1) thus resulting in a lethargic developmental trajectory that cannot be attributed to colonial and apartheid policies only.

Therefore, the need as mentioned by participant L1 and L2 to focus more on skills competencies, capabilities and capacity in farmer support programs geared towards to development. It is within this particular context that Ashby et al., argues that “farmer’s capacity to manage business-oriented groups as a major hurdle but passes over the role of skill formation as a factor affecting success” (2011, p. 130, Shepherd, 2007). This is supported by Mcelwee in highlighting that there has been a shift in government geared towards cultivating and supporting a “more entrepreneurial culture in the farming business” (2006, p. 187; de Lauwere et al., 2002). This is in alignment with recognition that “farmers are becoming more entrepreneurial and developing new skills and functional capabilities in order to be competitive” (Mcelwee, 2006, p. 190). Therefore, the need to cultivate the following skills (Ashby et al., 2011),

- Financial skills;
- Basic marketing;
- Basic experimentation and innovation skills for accessing new technology; and
- Basic sustainable production and natural resource management (NRM) skills.

Therefore, within the context of South Africa as it pertains to the historical-contemporary development trajectory of BSMFs there is urgent need to reduce risk due to the global market that demands intensification production and “diversifying away from the production of crops and livestock as raw commodities for transformation further up the supply chain” (Warren, 2004, p. 372).

Thus, in attempts to respond to the contemporary socio-economic landscape in which BSMFs find themselves in, the sector must start investing in farmers who embody “the mind-set and process to create develop economic activity by blending risk-taking, creativity and or innovation with sound management, within a new or an existing organisation” (European

Commission Green Paper, 2003, p. 7). As De Lauwere et al. (2002) argue, this requires the need to engage key characteristics such as “business planning, sale increases, formulation of policy, information about management, time strategy, measuring of performances” (McElwee, 2006, p. 195).

It is important to note according to McElwee and Bosworth (2010) that BSMFs are barely viable, and as a result the “agricultural landscape is at risk of losing the classic figure of the farmer” (p. 819). As of consequence McElwee and Bosworth (ibid) argue that BSMFs need to “compete effectively and efficiently by utilising commercial strategies to ensure business survival”. McElwee and Bosworth (ibid) highlight further that the success of BSMF is largely dependent on farmer skills and the ability to “employ those skills in optimising the use of available resources” (p. 820).

Moreover, L2 highlights in addition to L1 that,

As a sector, we have yet to think innovatively about the development policies and practices aimed at BSMFs. One of the key issues that continues to be a barrier to development, is lack of monitoring and evaluation of programmes for example, if government is failing to reach intended milestones, we need to understand why? So, policy developers cannot afford to be too far away from the practitioners (us) who have daily experience, of the elements of success, challenges and most importantly failures. There needs to be a closer link to how we operate from government, practitioners and policy developers and other key stakeholders to constantly feed into the evaluation and monitoring (L2).

Tapela (2008) notes that post 1994 the common wisdom within the government sector in regards to the development BSMFs has been premised on cultivating a conducive environment for market access in the commercial sector for the purpose establishing a viable strategy for economic development “through multiplier effects, to local economic growth and rural development” (2008, p. 182) actively reducing unemployment and food insecurity. Hence, the Agricultural Sector Strategy (Republic of South Africa, 2001) and Tapela (2008) was primarily premised on working towards,

- Equitable access and participation in the agricultural sector,
- Improved global competitiveness and profitability,
- Sustainable resource management, and
- Food security.

Tapela (2008) argues that the state's Agricultural Sector Strategy (2001) aimed to integrate private and public investors as a means of providing support for "emerging black farmers with the requisite financial resources, technology, technical and managerial skills and access to markets" (p. 183). However, the adopted state strategy contextually failed to engage with the material conditions faced by BSMFs in regards to the following aspects, inability of BSMFs to participate effectively and efficiently in the value chains and commodification of production due to limited financial resources "technical and managerial skills and access to markets, and therefore their requirement for significant investments in farmer support" (Tapela, 2008, p. 183). These market access barriers are attributed to weak and ineffective institutional support mechanisms geared towards BSMFs support for growth and development.

The issues raised above and related questions spring from perceptions that although the South African government has demonstrated an intention to balance economic growth and development with social security, structural conditions underpinning reforms in agriculture, land and water sectors seem to favour the creation of a black farming elite.

Secondly, black farmers face significant constraints to effective participation in the highly competitive and globalised commodity production sectors owing to their lack of financial resources, technology, technical and managerial skills and access to markets, and therefore their requirement for significant investments in farmer support. Expectations that such support will be provided through joint ventures with the corporate sector must be underpinned by effective institutional mechanisms to ensure that the partnerships achieve the desired benefits for black farmers. Thirdly, the proportion of black farmers who can benefit from agricultural commercialisation is constrained by water scarcity.

According to Engela and Ajam (2010) "monitoring and evaluation (M&E) is an extremely complex, multidisciplinary and skill-intensive endeavour" (2010, p. 1). The functions of M&E are even more exacerbated by state decentralisation "with powers and functions distributed across three spheres of government" (Engela and Ajam, 2010, p. 1) consequently, it's this precise situation that demands strong M&E systems to promote effective and efficient coordination and prevent fragmentation.

Engela and Ajam (2010) point out that the decentralisation of state power produces intricate coordination demands in regards to "intergovernmental planning and budgeting cycles, as well

as in implementation of joint work across two spheres or more spheres” (p. 1) across state entities and state-owned enterprises. Thus there is need for integrating policy reform mechanisms with “early warning, data verification, data collection, analysis, and reporting” (ibid, p. 2). That will be geared towards more nuanced, contextually responsive framework(s) that enable for “better tracking of implementation, enhanced accountability of project staff, and early identification of both project problems and successes” (Bornstein, 2006, p. 52).

The aim of M&E is thus geared towards assisting sectorial stakeholders to establish “new products, human capacity, or better administrative processes share a concern to keep implementation on track and to learn from the mistakes and successes” (Bornstein, 2006, p. 53). This will actively assist in the continuous M&E policy or programme implementation, the reiterative process will highlight the challenges and successes and point to the needed adjustments “in a timely manner, and to allow for appropriate modification in the design of the overall programme” (Bornstein, 2006, p. 53).

From the above, it is clear that there is need to engage the various aspects associated with BSMFs that include land use, size, ownership, educational background, skills, capacity and capability thus, informing a reframed AES. In the next section I develop the analysis from the perspective of the BSMFs.

5.3 Black small-medium scale farmers

5.3.1 Context, historical and contemporary layout of BSMFs

As touched on in Chapter 2 and 3 and further elaborated further here, land reform in the context of South Africa aimed to respond and redress issues pertaining to a) land redistribution b) land tenure, and c) land restitution. This was with clear intent to redress historical socio-economic imbalances of the apartheid era for the purpose of fostering “national reconciliation and stability” (Kariuki, 2004, p. 6). According to Kariuki (2004) this was through broad based market-led economic policy reforms. This simply put, meant that land reform under GEAR terms of reference aimed to achieve “pro-market reforms, reconciliation and stability” (Kariuki, 2004, p. 7). The success of GEAR-led land reform policies however hinged on “strict fiscal discipline, reduction of public spending and strengthening of business confidence within the sector” (Kariuki, 2004, p. 8).

The policy direction undertaken by the state inherently protected and entrenched property rights established under apartheid, effectively limiting the scope of reform in regards to “skewed ownership patterns of land” (Kariuki, 2004, p. 8) and development of BSMFs. Sabola (2018) in response to land reform policies undertaken post-apartheid argues that the state geared its efforts more towards racial configuration than “achieving productive use of the land” (p. 3).

As of consequence, an implicit ‘dialect’ formed that in turn “defined the parameters of policy debate” (Kariuki, 2004, p. 8). The dissonance between political aspiration, the terms of reference in the ‘negotiated settlement of democracy’ and the practicability in the implementation of policies is mirrored in the “policy vision and strategies created to enforce the policies” (Kariuki, 2004, p. 8). This effectively restricted what is possible and or achievable with regards to the growth, development and transition of BSMFs into the commercial sector. As of consequence, Lahiff (2007), argues that the land reform policy in South Africa “should not be seen as a single and coherent policy approach, but rather as the outcome of competing imperatives and contending political forces.” (p. 1582)

The implicit and explicit contradictions in policy in conjecture with the “states administrative and resource incapacities” (Hendricks, 2000, p. 298) has resulted in policy continuities rather than a “fundamental break with the past” (Kariuki, 2004, p. 8). Adam et al. (1999) argues that South Africa has failed to bridge the “gap between political expectations and administrative capacity” (p. 1) with direct consequences for the developmental agenda of BSMFs as discussed in Chapters 2 and 3. Greenberg (2002) notes further that Land Reform has since become the flagship program for maintaining political and rural stability and the “consolidation the land market” (2002, p. 16). The consequence is that the Department of Rural Development and Land Reform has failed to meet its own objectives in regards to “economic growth, rural development, job creation, equity and transformation” (2016, p. 4). This has meant the role of black farmers has been reduced to that of being “unsuccessful subsistence farmers” (Sabola, 2018, p. 2), as also pointed out in Chapter 2.

It is within the context of these policy reforms that it is argued here that GEAR failed to contextually respond and redress to the material conditions faced by black farmers. BSMFs

continue to “remain underdeveloped and are characterised by failing agricultural projects, which emanate from a general lack of financial and logical support of South African farmers” (Sabola, 2018, p. 2; Aliber and Maluleke 2010; Hart and Aliber, 2012). It has therefore become imperative that South Africa find alternative mechanisms, systems and policies that are contextually relevant and responsive to the material conditions that dictate black farmer participation within the commercial sector.

It is within this background that the sector needs to critically interrogate and redefine developmental policies geared towards BSMFs, including in the AES. The need to reframe the developmental discourse is attributed according by Sabola (2018) to the failure by state to “upgrade the status of black farmers compared to commercial white farmers” (p. 2). This is despite the establishment of “new institutional arrangements to support the greater inclusion of smallholders” (Bitzer and Bijam, 2014, p. 168). Greenberg locates the state incompetency to weak state institutions that fail to give the necessary support in regards to “financing, research and development and extension services” (2013, p. 2) thus centring the AES in this dilemma. According to Sabola (2018), this reinforces the perpetual state of crisis faced by BSMFs in regards to “lack of financial intermediation, enterprise developmental services and social services” (2018, p. 2). Thus, there is urgent need for a multi-actor stakeholder engagement “in the face of single-actor failure, while allocating business a specific role in development processes” (Bitzer and Bijamn, 2014, p. 168).

Schimer (2015), argues that what distinguishes commercial agriculture from other forms of agriculture is the “processes that permit continuous, self-generating capital expansion” (p. 51) (defined as the land, buildings, machinery and other assets that can be used to generate output). It is with regards to the above mentioned that Schimer argues that market access and property rights are integral to the facilitation of conducive conditions in the “expansion of commercial farming opportunities” (2015, p. 51) hence these sectors need to be considered part of the reframed AES.

Exacerbating the situation, the transition for BSMFs to commercial status is dependent on the “acquisition of new knowledge, most of which is tacit” (Schimer, 2015, p. 53) which has profound implications for the AES and its needs to make this tacit knowledge explicit. Policy development initiatives must be geared towards a capabilities approach that evaluates the

farmer's ability to effectively and efficiently compete within the commercial sector, and access often continuities hidden tacit knowledge. Much therefore needs to be done to move away from the legacy of discrimination and exclusion and towards critical engagement with "the readiness of black farmers in that role" (Sabola, 2018, p. 2). Groenewald (2004) highlights that the selection of beneficiaries should be premised on "experience and knowledge of farming; [and that BSMFs entering the sector should] have some capital of their own' (Sabola, 2018, p. 2).

Targeting black farmers that have the "potential to make the transition to commercial farming" (Schimer, 2015, p. 7) is necessary for generating a model that is geared towards "improving the capacity and potential for black farmers to contribute agricultural development and the economy" (Sabola, 2018, p. 1). This can help to address the issue of hidden tacit knowledge. This underscores that financial support in tandem with capacity development "emerges high on the priority list for developing black farmers" (Sabola, 2018, p. 1). This will demand stringent monitoring and evaluation processes that will facilitate "institutionalised support required for a commitment to relentless accumulation" (Schimer, 2015, p. 54), of both knowledge and the necessary material capital and resources for successful farming.

5.3.2 Identifying the form and nature of what exists

This farmer's discourse shows the current situation described above in stark terms,

***BSMF above the age of 65:** ... I will not lie, there is nothing that this Mandela government has brought to us. I have been a farmer since 1975. All that I have and what you see on this farm is because of two hands that you see. At first, I had hope that after apartheid ended this government would take care of us. I believed that the Mandela government would support us black farmers as did the Boers do to the white farmers. Instead, we have been put at the bottom of the priority list in terms of development.*

The farmers discourse expresses the many years of post-apartheid policy failure. The Department for Agriculture and Land Affairs in 1998 implemented the Agriculture White Paper Discussion (see section 1.3) aimed at cultivating an enabling environment for in regards to,

1. Building an efficient and internationally competitive agricultural sector,

2. Support the emergence of diverse production (beneficiaries identified and or targeted-black farmers).

The objective of the White Paper was to generate “opportunities for higher incomes and employment for resource-poor farmers” (Hendricks, 2014, p. 1). The Integrated Food Security Strategy (IFFS) in partnership with the White Paper gave a more in-depth strategic framework that aimed to establish an “inter-sectorial action and coordination of food security interventions and information systems” (Hendricks, 2014, p. 1). Hall (2003) and Hendricks however, criticized the IFFS due its broad terms of reference instead of focusing “only on agriculture and food stock” (2014, p. 1 and NDA, 2002), thereby failing BSMFs as expressed above.

As a means of response to the IFFS shortcomings and challenges the Integrated Food Security and Nutrition Programme (IFSNDP) was established to manage and coordinate “all interventions that pertained to food production and trading strategic objectives of the IFFS” (Hendricks, 2004, p. 5). However, the information and technology transfer gap between state institutions and farmers was given little attention. Hendricks (2004) argues that this pushed emergent farmers further to the periphery thus entrenching the communication divide between farmers and the state.

In an attempt to respond to, and address the challenges highlighted in the IFFS and IFSNDP programmes the state established the Accelerated and Shared Growth Initiative for South Africa (AsgiSA, 2005). This aimed to,

- encourage growth and development of the first economy, increasing its possibilities to create jobs;
- address the challenges prevalent in the second economy; and
- strengthen existing social security net(s) to meet the objective(s) aimed at poverty alleviation

This was followed by establishment of the Priority Skills Acquisition Programme, (JIPSA, 2005) that aimed to support an AsgiSA programme focused on the ‘education and skills’ sector centering the AES in the reform process. Former President Mbeki (2005) advocated that the AsgiSA and JIPSA programme(s) be integral in redressing the socio-economic landscape of

South Africa, particularly in regards to unemployment and employment equity programmes (McGrath and Akoojee, 2007). Ndzimande (2006) however, critiqued AsgiSA and JIPSA's contextual relevance arguing that the joint initiative remained "ignorant of the complex interlinkages between the informal and formal work between microenterprises and welfare payments" (McGrath and Akoojee, 2007, p. 429). Moleke (2006) in addition lamented that the two-policy framework(s) protected and entrenched existing economic systems resulting in continued beneficiation of a small elite, the skills development interventions therefore did not materialize.

This was further compounded by a "fragmented and dysfunctional" (McGrath and Akoojee, 2007, p. 425) AES delivery system and provider institutions. Bienabe and Vermuelen (2011) argue that low education levels amongst black farmers, lack of credit access, absence of innovative production implements needed in-order to increase yield of commodity produced and poor entrepreneurial skills" (p. 494) further exacerbated the hostile conditions of upward social mobility. The contention faced by the democratic government was not that of 'access' alone but the inability to simultaneously consolidate a "national vision for education and skills development" (McGrath and Akoojee, 2007, p. 430). A contention I argue, that continues to negatively impact the developmental agenda of BSMFs in the quest for commercial status. As said by one BSMF,

Ndikhe ndizi buze ngamanye amaxesha uabana lorhulumente kwezi policy zakhe ucetyiswa ngubani? [I often ask myself sometimes, who advises this government in regards to its policies]

Additionally, and providing further perspective on the above, Aliber (2003) argues that the state's incoherent policy reform(s) and their failure to establish a vibrant cohort of black commercial farmers is attributed to the lack of understanding in the character of poverty addressed. Adato et al. (2006) characterize the two prominent components of poverty that BSMFs face on a daily basis, namely, social and economic. Economic represents "exclusion from opportunities to earn income, the labour market and access to assets" (p. 229), whereas, the social speaks to the exclusion from "decision making and social services" (Adato et al., 2006, p. 229), including adequate skills development support.

This is further reinforced Mr M (a BSMF) when he says,

Left right and center it's policies are failing. They are failing because baqale ngezoku qqibela. [these policies are failing because they are putting the horse before the cart]

Frequin et al. (2012) elaborate further underscoring that the challenges facing BSMFs within the context of their historical dispossession and current material conditions have been exacerbated rather than alleviated. As a result, Khapayi and Celliers note that the agricultural sector and economy has “little room for emerging farmers” (2016, p. 26). This Chickazung and Paradza (2012) attribute to the state’s failure to institute strong and sustainable support mechanisms as seen during the apartheid era to facilitate “accessing formal agricultural markets” (Khapayi and Celliers, 2016, p. 26). This significantly illuminates the pregnant gaps in knowledge on the “causes of poverty, and even greater gaps in knowledge of what practical measures work” (Aliber, 2003, p. 473).

The continued system failures directly impact and influence farmer perception as noted in the following quote from Mr B, a BSMF who highlighted the following,

Instead, we have been put at the bottom of the priority list. I see no development. Where do we go for help? For a farmer to be successful – one needs money, we need markets and we need mechanization. On all three accounts government has failed to deliver.

The sentiments shared by Mr B are further reinforced by Aliber (2003) when he notes that financing, training and market access remain integral to the development of BSMFs in addition to support from the AES. This has led many BSMFs in the sector to be disillusioned by the lack of “agricultural growth in poor areas despite heavy investment in agricultural development” (Dorward et al., 2004, p. 77) concluding that the state has failed to protect and advance their interests.

This is clearly articulated by Mr M, a BSMF when he states,

Inye sisi into endinokuyi thetha thina asinaye uRhulument [there is one thing that I can say, we ‘black farmers’ do not have a government], emergent small-scale farmers note, ifarming mna ndiyayi thanda. Qha urhulumente ezi programs zakhe akazi cingisis [we love farming but this government, and its programmes—they lack proper thought processes].

This has resulted, according to Bins and Nel (1999), in the entrenchment of the commercial and small-scale farmer divide rendering it almost impossible to know how it can ever be closed.

Farming is a passion. Farming is hard work. Farming demands dedication. Those three values you can never access from a distance. This government broke the umbilical cord between farmers and extension. ... Hence, the chaos we are continuous is subjected too. Our government has no clear plan. You see them talking about land redistribution without compensation. That land means nothing if there is no clear plan of using that land productively. Productive land needs a competent farmer. (BSMF)

As can be seen from the above, the history of policy marginalization has culminated in a vicious cycle perpetuated by “lack of opportunity to accumulate human and other capital” (Aliber, 2003, p. 476). The state’s ‘developmental welfare’ approach appears to be hampered by an intrinsic inability of being “ill-suited in nurturing entrepreneurs” (Aliber, 2003, p. 485). As said by another BSMF,

That then demands that we have a clear understanding on the role of a farmer. Instead, all you see Madlamini is waste of money and resources. And the farmers that really work hard, are left behind.

It is within such a context that Aliber (2003) advocates for the need to reframe the conceptual lens in which the developmental agenda of BSMFs is framed. He highlights the need to engage the multi-faceted distinctions between the varying challenges faced by this cohort of farmers and “addressing the right initiatives to the problems for which they are best suited” (Aliber, 2003, p. 485). Khayaphi and Celliers (2016) emphasize that South Africa can no longer afford the continued unmitigated risks of policy failure linked to the problem that “challenges emerging farmers face were not correctly identified” (p. 25).

The sector needs to align policies and development strategies including those in the AES, to aim towards “supporting and enhancing the transition of emerging farmers into commercial agricultural farming” (Khapayi and Celliers, 2016, p. 26). This will demand according to Barret “meso-level interventions, as a complement to the macro marketing and pricing policy” (2008, p. 313). This has implications for the extension services and how they operate, as revealed in this social learning dialogue interaction and exchange amongst BSMFs in the study site,

We used to know our extension. They (extension officers) would come twice or three times in a month. Now we are lucky even if we see them once every six months. As it stands now I do not even know who is my extension office, or should I need help which district office should I go too. The programmes are there but they seldom come to us the them who they (the programmes) are meant for as a result, you just end up not even knowing the criteria. (BSMF, Mr B)

Mr M follows up on Mr B's point to note that,

That is why, after seeing the continuous failure of the government towards us black farmers, I made a vow to myself. Farming, I love. To me it's a passion. To me its healing. It (farming/agriculture) is in my blood. As you see around, everything on this property I have worked hard for without the assistance of government. I have worked hard and we are to still work hard. Siya Qhuba Asimanga. We as black farmers work hard but this government will never recognize nor appreciate our work.

Mr N who studied and trained as an extension officer at a University, and now is a prominent poultry farmer in the Middledrift area adds to the Mr B and Mr M's discussion,

... the assistance, we as farmers receive from extension officers all over this area is very poor. Firstly, they are never available and should you be fortunate enough to be visited by one of them, the meeting is fruitless. Instead you as the farmer end up teaching the extension about their job. They only studied the information at a university and or college level but have very little practical experience in field. I am fortunate, that I studied extension services at a University level, there are many things I can do for myself without their assistance. But what about the older generation, that have low literacy levels that are dependent on good quality extension services in order to help them progress?

... I studied agriculture because I wanted to be a farmer not because I wanted to work as an extension officer. You then find that they (extension officers) do not want to align themselves with successful farmers, even us we have learned from farmers who were before us. They only come in for 15 minutes and leave. They cannot spend at least three hours here at the farm to learn what happens during the feed or when the animal is sick. Instead what they are constantly request is pictures sent through via WhatsApp, they never come and see to the symptoms displayed etc. You find that they are not in touch with the challenges faced by farmers and are not passionate about the jobs.

... As a result, the gap between farmers and extension daily continues to widen. There is absolutely no clear leadership in this regard. As a result, a lot good farmers who are doing great work in and around these areas, their work and attempts at growth and development go unnoticed because at core, our extension is detached from us farmers. Something that does not happen within the commercial sector.

Youth farmers (women and men, under the age of 35) belonging to the XX Agricultural Co-operative highlighted their challenges by noting the following,

Mr F, XX Secretary said,

The opportunities from government are there but they need an active farmer to pursue them. We as the youth, government has programmes that speak to us but sometimes we fall short because of lack of information or information not getting to us on time. As you can see, we live in remote rural areas, sometimes it is not easy to go to extension offices. You find if you do not keep a good relationship with extension over the phone and or WhatsApp with regular check-ups, you (farmer) will miss out on opportunities. For us, the need for reliable and timely information is directly linked to opportunities for development. The difference between us and the older farmers is that we do not have the production capital they have built up for years. So, we need information to apply for funding, animal or crop production support packages or services, machinery etc. We can't afford to have an extension that is far from us. Over the years we have tried to raise this with extension and the relationship has improved however, it is still not where it needs to be if we are to move quickly with us developing.

Ms S, member of the XX youth co-operative (cabbage farmer) says,

Farming I love, but also do it because post matric I did not have opportunities to go and study further. I had siblings to take care off. The only thing we had was farming and with the work of Mr F (XX Coop) were doing I realized that I could do something with my life. XX over time we have grown, even now have things we take to the market. We are very engorgised and organized. We want to develop and grow. We take everything seriously. We even bought a coop laptop so we can easily access information. Our secretary keeps it safe. But I feel that at some point our government fails us - sometimes the programmes are not clear, unsustainable and not easy implement.

Mr G, a youth farmer in the Alice Area,

Us, young farmers we need more attention. We are like small children learning how to walk. This means we need close care and attention. This cannot be done from afar. We not only need care, we also need resources. Like what a parent does when they buy an infant diaper, formula and then send them to school. Overnight we can't be independent, we need learn, experience and explore. Yes, that will come some failures, but ultimately, the success will outweigh the failures. This is the basic understanding I feel that our programmes lack. Invest in people who are willing and want to do the work, and you will see results. There are many of us who are hardworking, who have developed and who continue to develop. We are not just waiting for government to save us. But the extension must do more, I feel that extension is failing us.

A manager at the Dairy Farm, notes in agreement to the mentioned above challenges by the farmers that,

The commercial agricultural landscape is a very much a highly mechanized value chain system. The survival of your farm and farming production is premised on the understanding that agriculture is a business. We here, are fortunate that we are part of

an umbrella of commercial farmer interests. Therefore, even the extension service we get is cutting edge and speaks to the cutting-edge technologies that money can buy to put you ahead of the pack. Extension advice allows us to anticipate market change, for us to continue to maximize on production for profits. In my opinion in every sector access to good quality information translates into money. Its either you go out there and find the information and or hire someone at cost to find the information for you.

In our outreach programmes with the surrounding communities we continuously try to fill the information and technology gap left by extension. Unfortunately, initiatives such as these cannot be as intense or more sustainable, as we would like, due to human capital and financial resource constraints. But it is clear that BSMFs are facing a serious challenge when it comes to extension, and the intimate role extension is meant play.

Khapayi and Celliers (2016) surveyed rural Eastern Cape farmer education level (s). The study found that approximately 12% of the farmers surveyed had less than grade 8 education level and only 4% had completed grade 12. None of the farmers surveyed had obtained tertiary education. The systemic literacy challenges highlighted by Khapayi and Celliers (2016) speak to the material conditions faced by BSMFs and their inability to engage effectively and efficiently in formal market structures. Furthermore, it speaks to the over saturation of risk-neutral farmers who actively opt to “divide labour supply between on-farm and non-farm employment opportunities with expected marginal returns” (p. 189; Mishra and Goodwin, 1997). This is clearly demonstrated in the data provided by the BSMFs dialogue above.

What Khapayi and Celliers (2016) survey thus does, is it gives a more in-depth contextual overview of farmers in the Eastern Cape and the existing literacy gaps that then perpetuate the systematic and institutional challenges and or barriers to entry to the commercial sector that BSMFs subsequently face.

In light of the above contextual and historical reality of BSMF’s educational histories, Adomi et al., (2003) highlight that the value of dissemination of knowledge and information particularly in former homelands as 70-80 percent of the African population live here has paradoxically been undermined by national state programmes. According to the Economic Commission for Africa, ‘information poverty’ impedes developmental agendas targeting BSMFs in the following key-aspects,

- failure to access important information on time,

- low levels of literacy are a barrier to access of information,
- due to lack of technology proficiency and use, information share within rural context limited to face to face contact,
- poor linkages between researchers, farmers and extension. This resulting in extension possessing “limited access about information on communities that they are expected to serve” (Tire, 2006, p. 13), and
- the poor linkages impact the state’s ability to acutely engage and respond to material conditions.

The above-mentioned conditions according to Tire end up serving as a “major stumbling block to rural development” (2006, p. 13) and have implications for a reframed AES. Van Schalkwyk (2007) argues that the “present trade, marketing and institutional policies in this country make limited provision for the unique interest of emerging small-scale farmers” (p. 236). Furthermore, Castella et al. (2006) lament that these weak linkages continue to constrain the developmental agenda of BSMFs. This is despite, according to Lwoga et al., (2011), the extensive body of knowledge available “in research institutions, universities, public offices and libraries” (p. 384). As a result, Makhura (2000) notes that development remains stagnated. The need to close the communication and information gap via the AES appears to be significant for future success of BSMFs as clearly indicated by the farmers in the data above as key issues are experienced by them in the gaps in quality extension provisioning.

Extension as noted in the data above, a key issue are the gaps in quality extension provisioning, as also revealed in the BSMF interviewee extracts below,

Kudala iextension yayi dibana nomfarma kabini kathathu enyangeni [back in the day, extension would ensure that they visit a farmer 2 or 3 times a month],

Ngoku, andimazi negama lomlimi omelba uceda mna [now I do not even know the name of my supposed extension officer],

Umtu ehleli nje funeka aye ezi oficini [instead now we are constantly told that we, the farmers must go and seek assistance in the offices of extension officer],

Andazi noba imelba ndiya kweyiphi idistrict for uncedo. [I do not even know which district I am supposed to be receiving assistance from],

Ingqubo zikhona kodwa azizi apha kuthi thina bantu bazo [their famer assistance programmes, I am not even aware of them but I am supposed to be a beneficiary of them], and

Uvele ungayazi [you just end up not knowing, what to say and or do]

Again, the Khapayi and Celliers (2016) study further highlights the strained relationship between farmers and extension with a particular focus on *livestock rearing skills*, indicating areas where extension should provide more support to BSMFs in the AES. This study found that “in most of the items farmers perceived their level of experience to be either no experience or inadequate experience” (Khapayi and Celliers, 2016, p. 32) as seen in Table 5.4 below. Their survey indicated that “only 2% of the farmers had sufficient knowledge for calf rearing whilst only 6% indicated to have experience in calf weaning as well record keeping such as the mother of the calf and father” (Khapayi and Celliers, 2016, p. 32). The Khapayi and Celliers (2016) study and the farmer reflections provided in the above citations, depict the reality of extension services as also highlighted in the National Education and Training Strategy for Agriculture and Rural Development (NETSARD) (2008) report. Agholor et al., (2013) highlight that the challenges facing the extension sector range from ratio of extension staff to BSMFs pegged at 1,875; geo-location and distance between farmers; and farmer literacy. The challenges of the Agholor et al., (2013) study are a continuation and build up from the challenges identified in the Farmer Support Programme (1995) review report that identified “i) provision of poor quality extension support to farmers in most cases; ii) no reasonable contact between extension and research given that most research initiatives are geared towards commercial farmers; iv) extension methods are outdated and not suited to changing international extension approaches” (Agholor et al., 2013, p. 205). The extent of the lack of harmonious relationship between farmers and extension has significantly impacted in the increasing knowledge gaps and levels of production output consequently impacting the BSMFs developmental agenda.

Table 5.4. *Distribution of farmers experience on livestock skills (Source: Khapayi and Celliers, 2016)*

Farming skills (n=50)	Level of adequacy %			
	Don't know	Inadequate	Adequate	Outstanding
Calf rearing skill	44%	52%	2%	2%
Weaning skill	48%	--	46%	6%
Animal health skill	2%	46%	46%	6%
Animal hygiene	42%	52%	6%	—
Livestock breeding skill	14%	60%	24%	2%
Artificial insemination skill	88%	8%	4%	—
Animal nutrition skill	10%	20%	62%	8%

With regards to *farm management skills*, Khapayi and Celliers (2016) highlighted that business skills are needed for the success of agricultural enterprises, and that these are currently inefficient to achieve policy objectives. Only 18% of the surveyed farmers had banking skills and only 22% indicated forms of financial management (Khapayi and Celliers, 2016) as shown in the Table 5.5 below. This is in alignment with the Kebede et al., (2015) study noting that “variations by race and ethnicity, gaps between rural and urban farmers are persistent across age and different financial literacy measurements” (p. 93). Hence, Khapayi and Celliers (2016) argue that it is imperative to align education of financial management to “compliment the policies which are geared towards small scale famers’ development” (p. 33). Kebede et al., (2015) note that financial literacy among BSMFs can be genuinely achieved through implementable and sustainable “interactions with others, in the workplace or in the community of practice” (p. 93). Ultimately this could result in more inclusive financial systems that have the potential to catalyze and increase investments through BSMFs support packages by offering “... access to working capital in the form of credit, access to savings through deposits of their daily revenues which would help them to accumulate financial assets to purchase capital goods and also use the assets as collateral to access future loans and access to insurance products that would help them bear major risk(s)” (Kamanga, 2018, p. 14).

Table 5.5. Distribution of farmers by experience of management skills (Source: Khapayi and Celliers, 2016)

Management skills (n)=50	Level of adequacy %			
	Don't know	adequate	inadequate	outstanding
Labour management skill	8%	66%	20%	6%
Equipment maintenance skill	12%	38%	38%	12%
Banking skill	10%	66%	18%	6%
Entrepreneurial skill	20%	68%	8%	4%
Bookkeeping or recordkeeping (financial management)	10%	56%	22%	12%
Marketing skill	10%	74%	14%	2%
Farm planning skill	52%	40%	6%	2%

In my study, BSMFs identified insufficient market information and marketing facilities, infrastructure, and that lack of storage facilities remain a challenging factor to their agricultural enterprise. Despite quality production by BSMFs the issues mentioned above continue to hinder potential income “from their produce owing to insufficient markets being available” (Khapayi and Celliers, 2016, p. 34). These challenges are further compounded by lack of accreditation specified by supermarkets by BSMFs to sell produce in commercial markets (Khapayi and Celliers, 2016). This we clearly see Table 5.6 below that depicts the clear challenges BSMFs continue have that are further compounded by financial literacy challenges that serve as systemic impediments to the developmental agenda as it pertains to this cohort of farmers.

Figure 5.6 Marketing challenges faced by farmers (Source: Khapayi and Celliers, 2016)

Description (n=50)	Challenging factor	Not challenging factor ^a
Insufficient marketing facilities, such as sale pens and loading ramps	100%	—
Long distance from farms to markets	100%	----
Insufficient market information	100%	----
Physical infrastructure such as poor roads to markets and lack of storage facilities	100%	—
Changes in the markets such as price changes in relation to supply and demand	92%	8%
Transaction costs	94%	6%
Cheap food imports from other countries	98%	2%

Khapayi and Celliers (ibid) further note through their study that only 55.1% of the farmers had access to and / or knowledge of market information, resulting in dramatic reduction in market participation. This is attributed to insufficient knowledge as to “what is happening in the markets” (Khapayi and Celliers, 2016, p. 36). The 44.9% of the farmers that indicated having

access to marketing information indicated that the information was either accessed through self-research, family members and/or other farmers. While this was said, it was also noted by the farmers that the information sourced “was not timely, was sometimes biased and was unreliable making the usefulness of the information doubtful” (Khapayi and Cellier, 2016, p. 36).

5.3.3 Diagnostic: examining the reasons for what exists

Lwoga et al., (2011) argue that information and knowledge flow to, from and within the agricultural sector is key to “improving small-scale agricultural production and linking increased production to remunerative markets” (p. 348; Asaba et al., 2006). The provision of extension and the AES support services according to Khapayi and Celliers (2016) remains a key determining factor in the rural development and the development of BSMFs towards commercialization, by actively supporting the “ongoing decentralization of support services to agriculture” (Castella et al., 2006, p. 111). In the light of this problem, Leeuwis and van den Ban (2004) argue for integrated systems approach that is premised on “mutual learning between formal and informal knowledge/technology systems” (p. 45), which they argue is missing.

Therefore, there is a need to

1. Establish the agricultural information needs of farmers in the study area;
2. Find out how farmers access agricultural information and knowledge in local communities; and
3. Access how farmers use the agricultural information and knowledge.

There appears to be some challenges with this, and the role of extension, judging from the citation of one of the BSMF farmers as indicated below,

Madlamini, uyayibona lento ka small-scale farming confuses me. What is a small-scale farmer? How is it defined? What is the purpose of small-scale farmer? Are we meant to live and die as small-scale farmers? I have been a farmer for almost all my life. I have seen governments come and go. First being that of apartheid, the Ciskei government [former homeland under apartheid separatist development] and now the ANC government. The two previous governments in relation to farmer development programmes were much better than that of the ANC government. Programmes were clear. If you wanted to be a farmer, you just needed to be a hard worker. All the support

you needed to make your farming a success would be given. ... Now it matters who you are. It matters if you are seen or not in these endless meetings. In-fact nothing under this government has anything concerned with whether or not you possess the skill and capacity to farm. How would they know, when we hardly know who our extension personnel are? This was unheard of in the 1990's but here we are under the ANC government. We have children being given everything. And they still fail. That should tell you that something is horribly not right.

From the data and literature above, it seems that trade, marketing and institutional policies including extension and knowledge as outlined above, make limited provision for the unique interest of emerging small-scale farmers. The hostile market environment experienced by BSMFs is further exacerbated by gaps in policy implications for extension, as will be discussed further below, and with the various constraints to market access that can be addressed through a combination of public interventions and private sector involvement.

Potential solutions include overcoming infrastructure backlogs especially in the transporting sector. Small-scale farmers have limited access to transport and mobile auctioning houses should be considered, decreasing transportation cost. Other potential solutions, with specific implications for extension, are the improvement of market information, institutional reform (with specific reference to support for land tenure), supporting small-scale food processing and value-adding, and encouraging closer links between small-scale and established commercial farmers as will be discussed in Chapter 6 in terms of a reframing of the AES. Makhura and Makoena (2006) came to the same conclusions and indicated that Farmer-Public-Private-Sector Partnership with relevant extension service, is crucial in addressing the problem of market access of small-scale farmers in South Arica, as will be discussed further in Chapter 6.

In this regard, it is important that Government recognises the diverse roles that the state can play, as provider, facilitator, or partner. The state needs to use resources wisely to maximise their impact. One of the critical decisions which government needs to take is who can provide the services most cost-effectively. Currently it seems that government is providing many services that it cannot provide cost effectively. It is important to work out which are the core processes of the organisation, where the organisation can really make an impact. For other areas, the state should seek either to leave a space for the private sector or non-governmental organisations to take up those services, or if it will not happen without subsidy, then to outsource those activities. Or support better extension partnership and remedies, as argued for by these BSMFs in the social learning dialogue below,

This government is useless. What confuses me is how they do their selection for beneficiaries. You see, before you award any funding and or tender you must make sure that this person that you are giving money too has the skill, relevant capacity and demonstrates a clear intent to advance to the next level. But you can never make those assessments without knowing which farmers operate in what area specializing in what production. The biggest mistake made by this government was to cut the umbilical cord between farmers and extension services. Nowadays, you go to the offices you find so many people but little extension. Agriculture is a profession that demands one to be outside and interact with nature, the animals. We as a sector do not need so much people for administration. Take those people and convert them into extension. Then maybe will have a better chance in identifying farmers that are deserving of assistance. Look around, I can tell you of many farms in my area alone that have been left abandoned because this government has failed to support identified farmers who have capacity.

Well for me the policies are a top down approach. We are used as guinea pigs because most of the time they (government) adopt and test these policies on us before even consulting all stakeholders. Policies formulated are not in touch with the realities that are happening especially in the farmer context hence the many results failures. For example, in the Eastern Cape the policy as it stands – poultry - falls under food security. How can they expect commercial growth when policy itself has reduced it to food security? The policies are not in touch with the reality of what is happening.

The issues raised above have a long history, as will be discussed in the next section below which focusses on the situation as found with regards to the extension services, local economic development and non-profit organisations, identified as key actors in the AES in this study. I also discuss co-operatives as they are a key intervention influencing BSMF development.

5.4 Extension Services, Local Economic Development (LED), Public-Private-Partnerships (PPPs), and Co-operatives (Co-ops)

In this section I combine the three sub-themes used in the previous sections of 1) context and historicity; 2) current perspective and status, and 3) diagnostic analysis where I point to what can be considered as potential ways forward. In this section I do this *per stakeholder group* rather than in three sub-sections as in the above two categories. This is because to do it in the same detail as I have for the two main stakeholder groups in the AES above, would extend beyond the scope of this study. I also deal with these stakeholder groups together in this section as they are often closely related in practice as they all play a supportive role to the BSMFs (or should do so) and thus have an important practical supportive role in the AES in support of

BSMFs development. While NGOs also appeared to play a role in the AES it was found in this case study site that they primarily were servicing livelihood level production in ensuring safety needs for household food security. While they offer some useful training programmes at rural BSMF support level, it was found that the training was mainly small scale, and not oriented towards transitioning towards commercial farming. Hence I have not undertaken an extensive review of their practice here, but have concentrated more on those institutions that are supporting commercialization in the AES set up.

5.4.1 Extension services

Context and historicity: Agricultural Extension was established in 1925 by then Minister of Agriculture, General Kemp servicing the six regions of then apartheid South Africa (Koch and Terblanche, 2013). The operational function of extension was centralized on the dissemination of information (Labarthe, 2009, p. 194; Koch and Terblanche, 2013). However, under apartheid separationists policies, black extension developed “along their own specific knowledge pathways” (Koch and Terblanche, 2013, p. 109). Ngomane (2010) underscores that the racialized system of service delivery negatively impacted the developmental agenda of black farmers, a factor that continues to impact negatively on black farmers despite “government policy-making process” (Ngomane, 2010, p. 59) post 1994 (as pointed out in Chapter 2).

The South African Regional Commission for the Conservation and Utilisation of the Soil (SARCCUS) during the 1950’s advocated that extension shift focus towards the integration of scientific approach(es) (Koch and Terblanche, 2013). This was to generate a systems approach that aimed to strengthen and bridge the gap between theoretical and applied research (Labarthe, 2009, p. 194). Development in the conceptual operational function in extension allowed, according to Labarthe (2008), the emergence of a more nuanced understanding of extension. However, Lukhalo (2017) critiques Labarthe’s (2008, 2009) work and notes that “extension remained rooted in the top-down approach of TOT (transfer of technology)” (p. 17).

Current situation: This relates to the post-1994 changes and reforms in the extension services. As discussed in Chapter 1, 2 and 3, the democratic transition demanded radical policy transformation in terms of reconfiguring the socio-political and economic landscape of South Africa through structured organisational planning and development (Rogerson, 2011; Harrison

et al., 2008; Malefane 2009; Rogerson 2010) as there was a clear political agenda to transform the agrarian landscape and strengthen livelihoods of vulnerable communities (Worth, 2006). The prioritisation of subsistence and small-scale farming emerged as integral to socio-economic development. Therefore, the aim was to integrate pro-poor and pro-growth strategies that would enable a conducive environment for economic growth aimed at “explicitly targeting poverty” (Alex et al., 2004, p. 10). This, according to Meyer (2014) would be supported through poverty alleviation mechanisms aimed at “job creation and social-welfare safety nets” (p. 642).

The translation of the above-mentioned policy reform objectives resulted in the expansion of operational scope from six previously recognised agro-ecological regions “into the nine (inclusive) provincial services” (Koch and Terblanche, 2013, p. 112) resulting the management and services being conducted through a provincial system of governance (Worth, 2012). Furthermore, the subsequent deregulation of markets ensured the liberalisation of trade, the eradication of “certain tax concessions and reducing direct subsidies” (Kirsten et al., 2014, p. 13). The impact of consecutive policy reforms resulted in extension becoming distinctly divided into two communities of practices namely public and commercial extension services following the dualism identified in Chapter 2.

Raidimi and Kabiti highlight that due to the rapidly “changing nature of the agriculture and farming community” (2017, p. 52) the role and function of extension within resource poor communities of practice needed to change. Extension subsequently found itself in a position where it had to actively respond to and resolve issues pertaining to “organisational and management skills and practices” (Christopols, 2010, p. 3). Kidd et al. (1997) critique the state centralisation of extension as it resulted in “restrictive notions of bureaucratic organisation and meaning” (p. 203) and Worth (2012) argues that extension post 1994 has yet to be “subject to any meaningful national coordination or collective accountability” (p. 36). As of consequence, under this bifurcated system, the commercial sector detached itself from the state extension and relied instead on “non-governmental (private) sector for technical and other assistance or support” (Koch and Terblanche, 2013, p. 112) that further entrenched and widened the operational, skill capacity and human capital gap pointed to in the section above.

As discussed in Chapter 2, the NDA (2001) changed the official policy position from poverty alleviation and food security to wealth creation, presenting a challenge to critically “develop a new model for agricultural extension” (Worth, 2006, p. 181).

Table 5.7 below provides a comparative overview of the differences between state and private extension post 1994 undertaken by Terblanche and Koch in 2011, showing the stark bifurcation discussed above, and the qualification and other divisions between state and commercial extension services, with the farmer to extension ratio differentiation being a stark indicator of persistent inequality and AES representation, along with SASE and SACNASP registration figures.

Table 5.7 State Extension vs Commercial Extension (Source: Terblanche and Koch, 2011)

STATE EXTENSION		VS	COMMERCIAL EXTENSION
State Extension personnel register for the South African Society for Agricultural Extension Services (SASE).			Qualified in South African Council for Natural Scientific Professions (SACNASP) specialising namely in • Agricultural Science (including Forestry) • Animal Science and; • Soil Science SACNASP in South Africa is recognised under the 2003 Natural Scientific Professions Act No. 27
INDUSTRY PERCEPTIONS: SASE		vs	SACNASP
9.2 percent (203) state extension have a B.Sc. Agri. This enables them to be able to register for a SACNASP accreditation			53.1 percent commercial extension have a B.Sc. Agri. This enables them to be able to register for a SACNASP accreditation
6.3 percent (139) state extension hold an Honours or higher. It is however important to note that only 3.9 percent have “registered for further training in extension” (Koch and Terblanche, 2013, p. 113)			
According to Koch and Terblanche, the average years of extension practice and research in the public sector is averaged to approximately 4.9 years against the “average of 21.5 years for the non-governmental sector” (2013, p. 113). As a result, state extension officers primarily became generalists “serving commercial as well as up-and-coming farmers” (2013, p. 115)			
FARMER EXTENSION RATIO			
1,1034			1,171

A further cause for concern identified in a report compiled by the Department of Agriculture (DOA) in 2005, was that South Africa lacked “one-third of the required number of extension officers to meet its development targets” (p. 11). The report of the DOA (2005) continued to note that approximately 80% of state extension lacked adequate training. Lukhalo (2017)

expanded further on the work conducted by Terblanche and Koch (2013) and analysed the qualification status of state extension personnel during the 2014/2015 period. Table 5.8 from Lukhlo's study (2017) indicates the percentage of compliance to the Norms and Standards for Extension Services (a degree qualification) in Agriculture per province.

Table 5.8 Status of qualifications of extension officers per province (Source: Lukhlo, 2017)

Province	No. of Extension Practitioners	Qualifications		Percentage Compliance to Norms and Standards
		Less than a degree	Degree or more	
EC	680	334	346	51
FS	105	19	86	82
GP	129	4	125	97
KZN	933	244	689	74
LP	635	146	489	77
MP	173	43	130	75
NC	67	9	58	87
NW	232	42	190	82
WC	76	8	68	89
Total	3 030	849	2 181	72

Source: Research survey (2016)

Table 5.8 provided above, show the results of how DAFF (2008), through its Extension Recovery Plan (ERP) programme aimed at revitalising and capacitating state extension, increased personnel by 37% from 2210 in 2007 to 3030 in 2016 (Lukhlo, 2017). However, it is worth noting that of the 3030 active personnel only 438 had the “minimum required four-year qualification or more since the implementation of the extension recovery plan in 2008” (ibid, p. 55).

Lukhlo (ibid) attributes the DOA's institutional and operational deficits to a lack of vertical and horizontal policy integration in effective system approach(es) that has negatively impacted the conceptual understanding of “total value change and linkages” (p. 17). As of consequence, the recruitment of 820 additional extension personnel failed, according to Lukhlo (2017), to increase optimal operational functionality needed to deliver on policy objectives. Stats SA (2013) reported that the extension-farmer ratio in South Africa was estimated at 1,965 at that time. It is argued by Lukhlo in 2017 that if extension is achieve the 1,500 extension-farmer ratio as per the DAFF (2005) report recommendations using the 2014/15 data “an additional extension personnel of about 2718 should be recruited” (Lukhlo, 2017, p. 50).

From the documented insights above, I argue that the expansion in the terms of reference of extension in accordance with policy objective(s) has placed additional unforeseen demands on

the operational function of extension. Extension according to Koch and Terblanche (2013) due to material conditions are forced to mitigate issues pertaining to “land reform, financial support and other initiatives” (p. 112) geared towards the development of black farmers. The system stressors indicated in the above have strained the extension’s ability to effectively and efficiently render services in my view. Furthermore, the quality of services rendered in regards to transfer of technology and knowledge dissemination as identified by Ngomane (2003) has drastically decreased. This is impacting the state’s overall ability to deliver on policy objectives (Lukhalo, 2017; Koch and Terblanche, 2013; DOA, 2005).

In light of above mentioned challenge, Ngomane et al. (2000) underscored that state extension in its current configuration is incapable of responding to “the needs of resource-poor smallholder producers to break away from the bondage of dependency and poverty” (p. 3), as also pointed to by the farmers in this study (see section 5.3). I therefore argue that the idealistic policy propositions made in the attempt to bridge the gap between theory, applicability and practicability failed to acknowledge the more nuanced debates and conversations in regard to the material conditions of black farmers and the adoption of best practice models.

Therefore, despite vast increases in state expenditure the sector continues to face a litany of challenges pertaining to logistical capacity, institutional infrastructure, knowledge and capacity deficit and lastly “marketing structures that obstruct input supply and market access” (Ngomane, 2003, p. 3; Kotye et al., 2016, p. 60). As of consequence all of these mitigating factors, according to Ngomane (2010), have actively contributed to the negative perception(s) of public extension particularly in regards to “efficiency, accountability and sustainability” (DOA, 2014, p. 4), affecting the efficacy of the AES, as was also reflected by the BSMFs social dialogue reported on above.

Diagnostic: What can be done. South Africa can aim to actively pursue alternative systems of practice as a means of “improving the effectiveness and sustainability of agricultural extension systems” (Raidimi and Kabit, 2017, p. 55). Ngomane (2010) notes that the policy reform(s) must be geared towards cultivating a conducive environment for efficient service delivery. This therefore demands acute interrogation in regards to the pre-existing and present limits attributed to “local institutional resources and political commitment” (Ngomane, 2003, p. 5) to actively unlock the “underutilisation of the productivity and growth potential” of

BSMFs in this case (Ngomane et al., 2000, p. 11). This is necessary to establish collaborative strategies and partnerships geared towards the “optimal utilisation of limited resources” (Raidimi and Kabiti, 2017, p. 57) as per the intentions in the DAFF (2008) National Agricultural Research and Development Strategy. This can potentially help the sector identify and understand existing “constraining perceptions and assumptions” (Worth, 2006, p. 180) attributed to low extension output.

I argue here that the primary objective of extension ought to be premised on “farm productivity and to enhance farm incomes” (Ngomane, 2003, p. 4). This will demand adopting a ‘market-centred’ approach geared towards BSMFs development, thus gearing the sector towards “changing patterns of risks” (DOA, 2011, p. 1). In recent policy DAFF (2014) [now Department of Agriculture and Land Reform - DARDL) are envisioning a strong integrated systems approach premised on “joint planning and review processes; collaborative professional activities; resource allocation procedures; structural linkage mechanisms and communication devices” (Lukhalo, 2017, p. 38), which offers a reframed conceptual framework that acknowledges and understands that “the answer to fostering prosperity among smallholder farmers lies beyond mere development and adoption of technologies” (Worth, 2006, p. 180); indicating too that the AES cannot be separated from other dimensions of the wider agricultural system and its innovations and orientation.

The systems approach proposed by Ngomane (2003) and supported by Lukhalo (2017) and Worth (2006) as well as the recent DAFF/DARDL policy (mentioned above), is aimed at strengthening communities of practice by actively interrogating and understanding local institutional resources (including knowledge exchanges), as well as political commitment. Such an approach has potential for strengthening existing innovation processes that will facilitate and harness the linkages between extension and farmers and assist farmers “with bargaining for inputs and access to credit to advance their farming practices” (Khwidzhili and Worth, 2019, p. 23). Failure to do so, according to Raidimi and Kabiti (2017), has the potential to result in the continued “deterioration of extension programmes and undermine long-term credibility of extension systems” (p. 54).

Consequently, South Africa must actively pursue alternative systems of practice as a “means of improving the effectiveness and sustainability of agricultural extension systems” (Raidimi

and Kabiti, 2017, p. 55). This needs to be done by actively seeking, according to the National Agricultural Research and Development Strategy, collaborative strategies, partnerships and efforts geared towards the “optimal utilisation of limited resources” (Raidimi and Kabiti, 2017, p. 57; DAFF, 2008). Therefore, there is need to find mutually beneficial partnerships aimed at serving long term societal interests. Failure to do so according to Raidimi and Kabiti (2017) has the potential to result in the continued “deterioration of extension programmes and undermine long-term credibility of extension systems” (p. 54).

5.4.2 Local Economic Development (LED) and Public-Private-Partnerships (PPPs)

Context, history and current situation: Another key actor in the AES is the LED office of local government. State policies adopted in South Africa post 1994 introduced, and pivoted LED as a key mechanism in actively “restructuring local government during the post-apartheid period” (Rogerson, 2011, p. 149; Grant and Dollery, 2010). LED policy frameworks in the post 1994 period, have been geared towards cultivating sustainable socio-economic state-community partnerships premised on a pro-poor bottom-up approach (Monona, 2005). The purpose of this is to instigate institutional reform as means to leverage and “distribute the benefits of economic progress to the broadest sector of the population” (Meyer, 2014, p. 625), through this actively responding to systematic poverty attributed to “lack of opportunities, low levels of achievement in education and other areas of human development” (Monona, 2005, p. 13).

Section 152(c) and 153(a) of the South African Constitution established the conceptual framework for a municipality to “structure and manage its administration and budgeting and planning process to give priority to the basic needs of the community” (Rogerson, 2011, p. 151; Nel, 2001; Toerien 2005). The Local Government Transition Act of 1993 later amended in 1996, empowered local government(s) with the autonomy to generate contextually relevant Integrated Development Plans (IDP) that reflected the socio-political and economic needs of the different regions (Monona, 2005; Nel, 2001). The 1998 White Paper on Local Government expanded further and provided the legislative framework and mapped out local government strategies in improving the quality of life of constituents (Rogerson, 2009; DBSA 2000; Republic of South Africa, 1996).

The amended Local Government Transition Act of 1996 in partnership with the Municipal Systems Act 32 of 2000 consolidated and entrenched LED in the “development discourse and practice in South Africa” (Monona, 2005, p. 48; RSA, 2000) making it compulsory function of local government. The IDP provided a systematic approach in providing “mechanisms and processes necessary to enable municipalities to move progressively towards the social and economic upliftment of local communities” (Rogerson, 2009, p. 151). As of consequence LED in partnership with IDP became the flagship programs that positioned municipalities as “wardens of economic growth in their jurisdictions” (Toeiren, 2005, p. 1; Monona, 2005) geared towards the transformation agenda.

Therefore, according to Chambers (1983, 1988, cited by Kepe, 2001, p. 14) LED programmes aimed to actively address four key areas namely,

- *physical poverty proper* - a lack of adequate income or assets to generate income;
- *physical or social isolation* - due to peripheral location, lack of access to goods and services, ignorance, and illiteracy;
- *vulnerability* - to crisis and risks of becoming even poorer; and
- *powerlessness* - within existing social, economic, political and cultural structures.

The Integrated Sustainable Rural Development Strategy (ISRDS) and Urban Renewal Strategy (URS) however, advocated for the need to articulate the “differences in nature and extent of urban and rural poverty” (Monona, 2005, p. 26). Aliber (2003) argues that this allowed LED practitioners to contextually engage the “nature of the poverty they seek to reduce, as well as the appropriate measures for the different types of poverty” (Monona, 2005, p. 15).

However, Meyer (2014) argues that a failure to generate standardised practices in the implementation of LED policies across regions has proven detrimental in the effective and efficient implementation of LED programmes, with “institutional and structural problems” (Meyer, 2014, p. 625) that have impeded the developmental agenda. This is further perpetuated by ‘knowledge deficits’ that underscore that uncertainties related to the LED programs; more importantly, “what they are supposed to do and how they are supposed to organise it” (Rogerson, 2010, p. 481). As a result, Meyer (2014) highlights that despite institutional reforms many LED initiatives have failed to produce socio-economic sustainable programmes, often

resulting in collapsed projects post funding. Meyer-Stamer (2002) critiqued LED programmes, likening them to “...social work and failing in building the competitive economic base of localities” (p. 8).

The Stimulating and Developing Sustainable Local Economies Framework (2006) aimed to advance LED programs through “robust and inclusive local economies, exploiting local opportunities, real potential and competitive advantages, addressing local needs and contributing to national development objectives” (Rogerson, 2011, p. 151; DPLG 2006a). The role of national government was identified as key in cultivating and facilitating conducive conditions for state-community, state-private-community and private-community partnerships to emerge for sustainable economic development (DPLG 2006a).

In addition to the 2006 framework document, in the period of 2005-2007 six additional working documents were legislated and implemented that aimed to support and supplement LED programmes,

- The 2005 Policy Guidelines for Implementing Local Economic Development in South Africa (DPLG 2005);
- The 5-year Local Government Strategic Agenda and Implementation Plan which appeared in 2006 (DPLG 2006b);
- The Accelerated and Shared Growth Initiative (DTI 2005);
- The National Spatial Development Perspective (NSDP; The Presidency 2006);
- The Regional Industrial Development Strategy (RIDS; DTI 2006); and
- The National Industrial Policy Framework (DTI 2007).

However, as per all previous policy frameworks in regards to LED, the state failed to give standardised implementation framework(s) thus perpetuating a policy blind spot that continues to hinder the efficient and effective roll-out of programs (Rogerson, 2011).

LED and agricultural development: LED programs according to the Strategic Plan for South African Agriculture (NDA, 2003) was to align deliverables to the national transformation and development agenda. That aimed, according to Monona (2005), to cultivate “equitable access

and participation, global competitiveness and profitability, and sustainable resource management” (rp. 27). This was to include “all economic activities from provision of farming inputs, farming, and value adding” (Monona, 2005, p. 27). The policy alignment with NDA policy objective(s) was geared towards a “unimodal policy framework designed to bridge the inherent dualism” (Monona, 2003, p. 11) referred to in Chapter 2, and to maximize the contribution of the sector to economic growth and development

Despite progressive policy developments aimed at black farmer development, bias towards large farms and mechanisation still remains (Monona, 2005, p. 27), as also illuminated above. Helmsing (2003) highlights that structural adjustments have failed to facilitate “equalisation of economic conditions across regions and localities” (2003, p. 68). This perpetuated and entrenched the rising gaps between location, programme efficiencies and socio-economic sustainability of programmes. The failure to reframe the ‘second agricultural economy’ has contributed, according to Monona, to “its long-run decline” (2005, p. 67) actively contributing to a hostile market for emerging farmers, as discussed in Chapter 2 and highlighted above in section 5.3.

The PGDP (2006) identified agriculture as a key economic driver and poverty alleviation mechanism hence the policy was geared towards cultivating an “agrarian economy in support of the poor” (Monona, 2005, p. 31). Helmsing (2003) underscores that development of BSMFs is acutely dependent on understanding the “opportunities and constraints of the entire industry” (p. 64), identifying state-community, state-private and private-community partnerships as key catalysts in building economic institutions. Thus, according to Helmsing (ibid), generating “complementary investments by other economic agents” (p. 68).

Failure of LED in agricultural development: LED policies have however, failed to deliver on said objectives in regards to “proactively aiming to increase agriculture production or labour” (Helmsing, 2003, p. 119). Monona (2003) notes that LED programmes have instead perpetuated skewed socio-economic power relations. This Helmsing (2003) has attributed to some localities being able to “export goods and services to larger domestic and international markets” (p. 68). Issues pertaining to geo-isolation and lack of key market participation fail to leverage and maximise policy and programme opportunities.

As of consequence Rogerson (2008) notes that in semi-rural regions LED programmes are project based, whereas in metropolitans they are more geared towards creating appropriate institutional market enabling mechanisms. It is evident that there is a wide gap between the existing LED practices of large cities and small towns, and between those of the richer provinces and the poorer ones (DBSA, 2008; Rogerson, 2008) which actively perpetuates spatial inequalities attributed to backlogs in “infrastructure and low tax brackets” (Meyer, 2014, p. 482). Thus, LED programmes fail to proactively “increase agricultural production or labour” (Helmsing, 2003, p. 119), and instead tend supporting towards projects that are agricultural in character. This has been attributed to structural adjustment policies that have acutely failed to “make the market economy work” (Helmsing, 2003, p. 68).

Role of state institutions: Helmsing (2003) argues that state institutions must be key in establishing a conducive environment in which community stakeholders are able to actively part-take within economic programmes of development and “facilitate or enable these other actors, communities, enterprises, workers and NGOs, to make their most productive contribution” (p. 69). It is however concerning to note that LED policies and or programmes “do not proactively aim to increase agricultural production or labour” (Helmsing, 2003, p. 119).

What needs to change? Helmsing (2003) notes that for LED programmes to have successful agricultural outputs at local government level, LED practitioners need to adopt a multi-systems approach that embraces,

- **Multi-actors** - its success depends on its ability to mobilise public, private and non-profit actors
- **Multi-sectors** - public, private and community sectors of the economy
- **Multi-levels** - both as a competitive threat and as an opportunity

Helmsing (2003) proposed further that a successful LED systems approach must provide a guiding framework for socio-economic development for poorer municipalities and small towns that will determine funding and scaling of sustainable projects. This according to Nel and Rogerson (2016) will aim to respond and narrow the existing gap between “large cities and small towns or poorer municipalities” (p. 112), and establish and strengthen relationships between private and public stakeholders for the purpose of “building LED networks and knowledge platforms” (ibid) geared towards capacity-building. I turn now to a discussion of

PPPs as they appeared to be an important part of LED strategy, in support of agricultural development. This was reflected in the data from the case study site as outlined in the extracts below from the social learning dialogue where extension, LED and NGOs were in conversation, which I then discuss further:

Extension Office District Manager: *The agricultural landscape, I think it is - I can describe it that it is divided into three different spheres. We have got the smallholders-in the communal setup. Even in the communal setup we have the farmers that are pre-emerging who want to go into commercial. Then we have the commercial farmers that are well off and are making business out of agriculture.*

The first group of communal smallholders - they're struggling and they have been struggling for some time. Even the interventions of the department have not been successful in their graduation of these farmers to become commercial. The policies are there to try and assist but if you look on ground, it will take a long time to reverse the impacts of apartheid.

The capacity for us extension to deliver on the set-out objectives by the state has also seriously been hindered through various policy objectives that are aimed at helping. Instead when it comes to implementation, the policy seems to not respond to the contextual and material conditions farmers and extension officers face on a daily basis. Some really border on the verge of impracticability in regards to the available resources and capacity to implement.

Local Economic Development Manager: *Our mandate as the LED office is multi-faceted in accordance to the various policies and as set out by the objective deliverables of the office. Agriculture is one of those streams that we speak to in our objectives.*

Firstly, if you look at the geo-locality of this office. The geo-locality of this office has to a large extent determined our economic outreach programs. As pertaining to agricultural development we recognised that we are mostly dealing with subsistence farmers and small-scale emerging farmers. We then recognised that the majority of our farmers experienced challenges connecting with the established markets.

We then positioned ourselves to facilitate those partnerships, through remedial support. We have had success with a couple of our farmers in the area being partnered up with big supermarkets such as the local Spar and Fruit & Veg.

That said, there is more to be done! A lot more to be done in terms of supporting our farmers. Food security in this region being a big issue, whilst also catering to the different demands as one would wish to become commercial.

NGO Educational Project Manager: *To the best of my knowledge the agricultural landscape has a lot to be done because the model of agriculture being promoted by the government is not the sustainable one. As such our government will never be food secure nor sovereign. Simply because they relax on external inputs instead of promoting organic or sustainable agriculture that promotes an enclosed system.*

Public-Private Partnerships in agricultural development: Raidimi and Kabiti (2017) highlight that the various policy reform strategies applied post 1994 “have yet to yield positive results” (p. 49; Department of Agriculture 2002; Altman, Hart and Jacobs, 2009). As can be seen from the analysis in this chapter, this can be attributed to the inherited systemic challenges left by the apartheid regime perpetuated by “limited resource availability” (Raidimi and Kabiti, 2017, p. 50) and inadequate post-apartheid policy implementable logics and capacity. This has rendered public extension according to DAFF (2014) and Worth (2019) with inefficiencies in the ability to respond to contextual material conditions “administration related challenges, marketing and agribusiness” (Raidimi and Kabiti, 2017, p. 50). Hall and Aliber (2010) have attributed this to the sector’s inability to meet the demand and supply deficits. Phuhlisani (2008) argues that the “involvement of the public sector alone is not sufficient to address multifaceted problems” (Raidimi and Kabiti, 2017, p. 49). Therefore, the need to cultivate creative partnerships that enhance state capacity to deliver on said objectives is critical for the AS and the AES.

Challenges experienced that made government turn to PPPs: The World Bank (1997) review on extension highlighted that approximately half of the projects examined lacked in political will adversely affecting “implementation and funding” (p. 2360). This has translated into unsustainable systems of operation making the “cost recovery at the individual beneficiary level a difficulty” (p. 2361), which leaves “an overall impression of ineffectiveness” (p. 2360). This has perpetuated challenges pertaining to sustainable funding programmes and support mechanisms. This seriously impacts the ability to deliver quality extension services as pointed to across this thesis.

Public-private partnerships in South Africa: Due to the various systematic stressors experienced by state extension post 1994, there is a need according to Raidimi and Kabiti (2014) to address “service backlogs, meet developmental goals and encourage economic growth” (p. 50; Mitchell, 2008). The National Treasury PPP Unit (2007) identified PPPs as an alternative service delivery mechanism to state extension, making them a key player in the AES. Fombad (2014) identified PPPs to have potential to address the “deeply rooted socio-economic, political, fiscal and societal problems” (Raidimi and Kabiti, 2017, p. 51), stabilizing state extension services through “long term and sustainable services” (Alex et al., 2004, p. 3). This has been attributed to the understanding that the socio-economic landscape of South Africa “cannot be addressed by the public sector alone” (Raidimi and Kabiti, 2017, p. 50).

Section 217 (1) of the Constitution of the Republic of South Africa (1996) underscores that PPPs must be executed in accordance to a “system that is fair, equitable, transparent and cost-effective” (Fombad, 2014, p. 70), that was designed, according to the Department of Constitutional Development (1998), to promote the cultivate sustainable infrastructure services and ensure efficient and effective delivery of services. Section 217(1) was followed by the Municipal Systems Act (No. 32 of 2000), the Promotion of Administrative Justice Act (No. 3 of 2000), The Municipal Finance Management Act (No. 56 of 2003) and the Treasury Regulation Act (No. 16 of 2004). The Treasury Regulation Act (No. 16 of 2004) bears significance in that it defined and characterised the role of private partnerships in regards to “institutional function and or uses state property in terms of output in terms of output specification; substantial financial, technical and operational risks is transferred to the private party, which benefits through unitary payment from government budget and user fees” (Fombad, 2014, p. 68).

The PPP Manual (NT 2004a) and Standardised Public-Private Market Provision (NT 2004b) developed by National Treasury’s PPP Unit focused on implementation processes within Municipalities. Fombad (2014) however, argues that irrespective of implementation reforms, PPP regulations continue to operate within a “culture of rule-bending and the tendency to use corrupt means to avoid these rules” (p. 70). Fombad (2014) attributes this to the extensive time lapse between the bulletin and awarding of PPP tenders. Feasibility studies, according to Fombad in regards to the MFMA and MSA Acts, from inception and procurement processes take “between 24 and 36 months” (2014, p. 70). The result is that Municipalities are constantly faced with challenges with regards to satisfying “requirements of both Acts” (Fombad, 2014, p. 70). This is contradictory to the material conditions that dictate the need for immediate release of resources, indicating a policy failure or contradiction (Burger, 2004). Aiello (2010) highlighted that between 2004 - 2010 only two PPPs were passed at provincial and national level, indicating the complexities in this legislative framework.

Treasury Regulation(s) made 16 provisions in regards for regulating accounting authorities, however Fombad (2014) notes that “there are no mechanisms and procedures in place” (p. 73). Accounting deficits according to Fombad have generated a situation wherein the state has little authority over the private party in regards to “governments democratic chain of command” (2014, p. 73). This has resulted in implementation processes that are “elusive, abstract,

multifaceted and contested” (Fombad, 2014, p. 74), resulting in the inability to coordinate extension efficiently and effectively. Alex et al. (2004) argue that PPPs extension programs are not “effective for poor farmers unless they receive public or donor funding to extend services to poor farmers or to unfavourable production environments” (Alex et al., 2004, p. 6). This reduces potential AES benefits of public-private partnerships which according to Raidimi and Kabiti (2017),

- Improve the efficiency of developing locally (adapted innovation),
- Enable technology to be distributed more effectively to local farmers,
- Help farmers continuously improve and make the most of sustainable agricultural practices,
- Promote the effective and responsible application of new technologies, and
- Provide social and economic value to farmers and communities.

The continuation in the failure by National Treasury to specify PPP regulation and the extent to which risk is transferred actively perpetuates challenges pertaining to “trust, mutual commitment, or social and community obligations” (Fombard, 2014, p. 68). As can be seen from the analysis and discussion above, these key characteristics highlighted by Fombad (2014) are often undergirded by systematic challenges such as “poor planning and implementation” (Castalia, 2007) all of which contributes to the lack of trust and undermines the alignment of mutual interests (Raidimi and Kabiti, 2007). As a result, the implicit and explicit challenges flagged in the bureaucratic system that governs PPPs has negatively impacted the ability for private-public partnerships to work “together in a partnership framework” (Raidimi and Kabiti, 2017, p. 58), this significantly hampering their role in the AES.

Rein and Stott (2009) and the Minister of Economic Development (2012) highlighted that PPPs operate at their most efficient when trust and commitment are given prominence in harnessing “diverse interests for efficient delivery” (Fombad, 2014, p. 68; Creamer, 2012). These key characteristics highlighted by Fombad (ibid) are considered integral in cultivating conducive conditions in regards to “accountability considerations in the definition of PPPs” (p. 68), and ultimately also in an effective AES that can bridge the policy dualism raised in Chapter 2.

The PPP type of extension: Government expects extension to be the primary vehicle for delivering on its agricultural agenda. The concern raised by the DAFF and reinforced by research conducted by the University of Kwazulu-Natal is that extension officers are not equipped to deliver on this agenda (Worth, 2009) as also highlighted above. Not only is the size of the service a problem (Hall and Aliber, 2010), the ability to hire sufficient numbers of capable extension workers in the short to medium term is also limited. In addition to increasing the number of extension workers, government will need to ensure that they are appropriately trained and allow them the time and opportunity to gain experience — a process that cannot realistically be completed in a short period of time. The solution in the interim, thus, lies in creative partnerships with other extension service providers, with LED, with farmers who can offer peer to peer training, and with PPP type extension services partnerships, as the government develop this capacity. However, as indicated in the social learning dialogue extracts above from the Extension Officer, LED Officer and NGO Officer, this is not necessarily a panacea solution and itself is difficult to achieve.

The Growth Commission (2008) report noted that agriculture remains central to poverty alleviation mechanisms. Ferris et al. (2014), continues to note that income growth generated by agricultural production is “four times more effective in reducing poverty than growth in other sectors” (p. 2). I thus argue that the establishment of resilient market pathways for BSMSFs must be considered integral to any long-term development strategy geared towards food security, poverty alleviation and upward social mobility of farmers. It is within that contextual overview that Ferris et al (2014) argues that the traditional top-down technical support offered by extension must be conceptually recognised as insufficient in achieving “large-scale poverty reduction and resilience in rural communities” (p. 3) and that there is need for a multi-stakeholder, multi-actor and multi-levelled approach to extension provisioning nad support within a more systemic approach. As can be seen from the citations from the social learning dialogue between the extension officer, LED officer and NGO officer above, despite good intentions, and some success, overall, the system remains constrained.

Overall, this complex public-private-extension relation is difficult to implement. The structural adjustments of the 80’s, 90’s and early 2000’s catalysed the gradual decline of state expenditure resulting in the “collapse of local farm support services and a major contraction of extension services” (Ferris et al., 2014, p. 2). GEAR trade conditions according to Ferris et al. (2014),

facilitated poor conditions for growth and development competencies particularly for “subsistence farming” (p. 2). As of consequence according to Hellin state extension continues post democracy to be riddled by bureaucratic inefficacies, human capital deficits and shrinking expenditure budgets, resulting in the inability to efficiently and effectively “cope with the dynamic demands of modern agriculture” (2012, p. 142; Ajieh et al., 2008; Ogulade et al., 2009). Due to the multifaceted and interconnected institutional challenges facing state extension, attempts to bridge the gap between state and private extension have as yet failed to yield positive results. This Hellin (2012) has attributed to “high transaction costs, dispersed clientele and low (or non-existent) profits” (p. 143). Combined with the limitations of the NGO sector due to reduced funding, and the challenges faced by LED system implementation, the PPP model of extension support appears difficult to implement, whilst it does offer a promising alternative to state led only extension support to BSMFs.

It seems that attempts made to redress skewed market participation by black farmers through structural adjustment policies, has proven detrimental to the developmental agenda of BSMFs. An innovative and alternative systems approach must therefore be implemented if a shift is to be facilitated from “production to market-based investments programs” (Ferris et al., 2014, p. 3). Such a process must equally be geared towards actively bridging the knowledge gap, generating and strengthening existing strategies aimed at developing local farmers and “support of value chain investment” (Ferris et al., 2014, p. 3); in other words the current AES should be re-oriented in this direction (see Chapter 6).

The need is to generate a contextually responsive framework geared towards addressing the needs of resource-poor farmers with proven ability “on a more sustainable basis” (Hellin, 2012, p. 143), while simultaneously according to Bitzer and Bijman (2014) “recognising the interests of agribusiness to secure and expand their operations” (2014, p. 170), and via this, actively strengthening farmer capacity and resilience to “evolving market environment” (Bitzer and Bijman, 2014, p. 170) supported by concerted efforts aimed at institutional and organisational reforms appear to be sorely needed.

Here, the categorisation of Black farmers and the varied market participation options has implications for the AES in this context. According to Ferris et al. (2014) there exists three basic market categories that extension services need to understand and target when addressing

the developmental needs in regards to food security, poverty alleviation and upward social mobility,

- i) *informal markets* - little to no regulations and often no taxation,
- ii) *formal markets* – regulated by policy,
- iii) *structured public markets* – organised by public sector buyers who offer standardized contractual buying arrangements with specific conditions.

A majority of smallholder farmers operate within the ‘informal market’. Therefore, I argue that there is a need to understand i) market demand ii) local production conditions iii) business environment iv) interests of farmers and traders v) ability to access business support services in such context. Understanding the pull and push factors in the market environment will present an opportunity to “use certain filters to segment farmers and design customised intervention programs for each specific type of farmer” (Ferris et al., 2014, p. 16). Moreover, this will aim to change BSMFs market participation from ‘occasional’ and or ‘opportunistic’ “to a more consistent sale approach” (Ferris et al., 2014, p. 18). The establishment of strong sustainable market linkages must be aimed at facilitating the integration process of BSMFS into formal markets; which in turn should be reflected in the AES and how it operates and supports farmers via extension, LED and PPPs.

This is communicated clearly by the head of LED office who note that,

Ours is to facilitate conducive environments in which farmers are able to make linkages with markets. However, we have realised especially within municipal region that there are many factors that contribute towards the transition of BSMFs into the commercial sector. Key to that has been the lack of education. Most of the farmers in this region are above the age of 45. Predominately these are old men whom a majority do not have post matric qualifications. Secondly, the issue of equipment also becomes an issue. Thirdly, transport to the formal markets; the issue of providing a standardized quality and production (many factors still impeded these developments) and the rather instable relationship that these farmers have with their extension providers. So you find that we are expanding the scope and objective of the office to secure the basics first. Even when we reach the desired effective stage there is no guaranteed of sustainable contracts. We have yet to find integrated approaches to facilitate development among black farmers through institutional leverages.

As outlined in the social learning dialogue above, the LED office(s) as it pertains to agricultural development aims to be the intermediary between farmers and the market, with potential to facilitate a conducive environment geared towards economic development through structured

outreach and extension programs. The LED offices is therefore, a key factor in the AES, with capacity to help strengthen existing and new market pathways and bridge the information gap (Ferris et al., 2014). Their role is seemingly crucial for advancing BSMFs and bridging the farmer-market divide, and ultimately supporting and supplementing the work done by state extension services within a local systems orientation.

However, even if the AES were more integrated, it is important to note that credit and funding remain key to the developmental agenda of BSMFs. A majority of BSMFs with the necessary skill and capacity continue to be victims of systematic pitfalls due to the inability to “generate enough cash to finance large deals, nor do they like the risks that come with carrying large amounts of cash” (Ferris et al., 2014, p. 10). Here Ferris et al. (2014) highlight that “50% of smallholders will not be able to link to a commercial market” (p. 3). Furthermore, the challenges in establishing linkages even at local level markets continues to be rife. It is within this particular purview that I in agreement with Ferris et al. (2014) who argue for more stringent criteria selection processes that are premised on the farmer’s “capacities, production, investment and risk profiles” (Ferris et al., 2014, p. 15) in LED or PPP interventions. Ferris et al. (2014) are supported by a DAFF (2018) report that notes that there is a need to move towards classifying “farmers according to production capacity and annual financial turnover” (p. 1681). This will demand a more nuanced system approach that is premised on the conceptual understanding that BSMFs are not a homogenous cohort. Therefore, assistance mechanisms geared towards their development, and the AES, must be responsive to their needs and challenges at the different operational levels, denoting a subsequent shift in how extension “must tailor the type of support they offer to smallholders” (Ferris et al., 2014, p. 4).

5.4.3 Co-operatives

The above situation is premised on the need to integrate BSMFs into formal market structures, a task which is yet to be fully achieved, as per the Extension Officer who discussed co-operatives as a key instrument used by the state to support BSMFs in the Agriculture Sector. He said,

One of the more recent mechanisms is the cooperative ... as government we have various projects aim at the incubation and development of black commercial farmers. Due to the scope and numbers we deal with as extension on a daily basis, the most common approach to ensure that we have maximum outreach has been the Co-

operation. Through co-operations we are able to connect with more farmers who share common goals and objectives. Also with our technical assistance we are able to cluster our resources again for maximum outreach.

But co-operations in practice are more difficult to manage than in theory. The basic core principle in the management of co-operations is human relations. Ours as extension is to provide technical advice and link farmers to markets but now the management of co-operations demands that we also manage human relations to understand the different interests, the different objectives and to ensure that they all feed into the common goal in the successful function of the coops. Failure in doing so has often resulted in the failure. As of consequence many farmers feel that co-ops are a waste of time and resources but due to capacity shortages it is for us the easiest to connect with our farmers. In this situation, there are no winners and there are no losers. We need more innovative ways of aiding our farmers and key to that is addressing the issues pertaining to capacity shortages – addressing the ratio of farmer to extension and implementing stricter criteria and grading in farmer assistance packages.

The International Cooperatives Alliance (ICA, 2005) defined cooperatives as an “autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise” (Ortmann and King, 2007, p. 18). According to Ortmann and King, cooperatives are a poverty alleviation mechanism geared towards enhancing “economic opportunities” (2007, p. 18) of members. Cooperatives are generally established when markets have failed to “provide needed goods and services at affordable prices” (Ortmann and King, 2007, p. 18). The conceptual role of cooperatives as envisioned by the state, according to Barton (2000) and Ortmann and King (2007), was to help farmers to,

- strengthen bargaining power,
- gain and maintain access to competitive markets,
- capitalise on new market opportunities,
- obtain needed products and services,
- improve opportunities,
- reduce costs, and
- manage risk.

Pisese et al. (2003) and Ortmann and King (2007) note that within the farmer context of South Africa, cooperatives are geared towards three main areas of business i) the purchase and sale of agricultural inputs and equipment ii) the purchase, storage and subsequent sale of agricultural commodities iii) transport services. The National Cooperative Business

Association (NCBA, 2005) outlined the composition of cooperatives relative to other (investor-oriented) business models as,

- Owned and democratically controlled by members (board elected by members),
- Cooperatives are motivated not by profit, but by providing a service to satisfy members requirements for affordable and quality goods or services,
- Cooperatives exists solely to service their members,
- Cooperatives pay taxes on income retained for investment and reserves, nad
- Surplus revenues are returned, according to patronage, to individual members who pay taxes on the income.

According to Ortmann and King (2007) there are three cooperative categories that farmers have the options to part-take in, namely, marketing cooperatives, farm supply cooperatives, and service cooperatives. However, it is also important to note that the failures of cooperatives have had significant impacts on BSMFs development. Although the Agricultural Cooperatives Act (No. 14 of 2005) aimed at promoting socio-economic development by creating “employment, generating income, facilitating broad-based black economic empowerment and eradicating poverty” (RSA, 2005b, p. 2), they have failed in addressing issues pertaining to “limited access to factors of production, credit and information” (Ortmann and King, 2007, p. 220-221). By overcoming access barriers such as “assets, information, services and markets for high-value products” (Ortmann, 2007, p. 221), cooperative failure(s) particularly among BSMFS are to be attributed to the “lack of management experience and knowledge and lack of capital resources” (Ortmann and King, 2007, p. 22). According to Ortamann and King (ibid) agricultural cooperatives “have generally not been successful in promoting agricultural development and members’ economic welfare” (p. 230). Machethe (1990) identified key factors that have contributed to cooperative failures among BSMFs as outlined below,

- member’s lack of understanding of their cooperatives’ role,
- failure of cooperatives to compete with other businesses,
- failure of cooperatives to involve members in policy decision-making, and
- inability of cooperatives to provide sufficient credit.

Ortmann and King note that the Agricultural Cooperatives Act should be “seen in the context of other laws and regulations that were implemented by the SA government in support of (white) commercial farmers” (2007, p. 24) through various legislative policies such as the Land

Acts of 1913 and 1936, Cooperatives Society Acts of 1922 and 1939 and Marketing Act of 1937. The Marketing Act of 1936 amended in 1968 (Act 59) “enabled use of various policy instruments (such as single channel schemes, pool schemes and export monopolies) to manage the marketing of agricultural commodities through 23 marketing (control) boards, which were established under the Act” (Ortmann and King, 2007, p. 24). As of consequence, commercial farmers were subject to subsidized interest rates and the state “used cooperatives to channel disaster assistance to farmers, usually in the forms of debt consolidation” (Ortmann and King, 2007, p. 24).

Various structural policy reforms in the 80’s through to the early 2000’s resulted in the “removal of subsidies and tax concessions and deregulation of agricultural financing and marketing” (Ortmann and King, 2007, p. 24). These reforms came into full effect during when the Marketing Act of 1968 was repealed by the Marketing of Agricultural Products Act, No. 47 of 1996 officially ending “state control of agricultural commodities” (Ortmann and King, 2007, p. 25), drastically limiting the intermediary role agricultural cooperatives played between state-farmers-markets that subsequently led to the “demise of the marketing boards” (Ortmann and King, 2007, p. 25). This resulted in cooperatives moving out of the public arena towards privatisation of services which “made them less dependent on government support” (Ortmann and King, 2007, p. 24).

By the end of 2004, Ortmann and King (2007) highlighted that of the 3751 registered agricultural cooperatives only 459 passed for good governance. Van der Walt (2005) further notes that even amongst those that were registered, it has been “difficult to ascertain how many of these are actually active and thriving” (Ortmann and King, 2007, p. 26). In a study conducted in 2005, van der Walt highlights that “65% of these were not operational” (Ortmann and King, 2007, p. 26). Ortmann and King (2007) continue to highlight that the reason attributed to such failures was poor management, lack of training, conflict among members, and lack of funds. The study indicated that poor management was highlighted as “the most important reason for cooperative failure” (Ortmann and King, 2007, p. 27).

Significant to a discussion on the AES, education, training and mentoring was earmarked as key to the successful operation and development of cooperatives. However, Ortmann and King (2007) argue that these are factors appear “not sufficient requirements for the establishment

and operation of successful cooperatives” (p. 27) indicating again that the AES must be viewed more systematically. Therefore, the need according to Ortmann and King (ibid) is to develop “new institutional economics approach to cooperative organisation in order to gain a deeper insight into the role of institutions in organisational design” (p. 27).

Sykuta and Chaddad highlighted that most challenges have been attributed to “incentive vs. risk-sharing trade-off of contracts aimed at aligning the interests of the agent with those of the principal” (1999, p. 72). According to Ortmann and King (2007) the “following internal requirements are considered to be crucial for the success and sustainability of agricultural cooperatives in developing areas” (p. 237), with implications for the AES,

- Strong leadership among cooperative members. Community leaders should fully understand cooperative principles and respect the views of potential members, who would have the power to make or influence decisions in a cooperative,
- Basic business skills for all members so that they can be informed participants in strategic decisions and management oversight. (A general lack of education among potential members in rural areas could be a major constraint at present),
- Access to a labour market for capable managers. As cooperatives grow, it is often necessary to hire managers with experience and expertise beyond that which can be provided by cooperative members.

5.5 Conclusion

This chapter provided insight into some of the critical dimensions emerging from the social learning dialogues as these pertain to the felt and lived nature of the dynamics of the AES as experienced by key stakeholders in the AES at ‘grassroots’ level as explored in the Raymond Mhlaba district context. As indicated in Chapter 3 the research is constituted as a policy literature review study but with a co-engaged social learning component that helped to progressively focus the literature review work in the study. In this chapter I have therefore probed the social learning dialogue discourse and key points further through seeking a deeper and broader understanding of the issues raised in the social learning dialogues. The social learning dialogue discourse helped me to further search for literature that I would not otherwise have considered for the in-depth understanding / questioning phase of the study (e.g. the focus on co-operatives as mechanism / strategy to support BSMFs in a context of an over-extended

extension services condition). I discussed the Agricultural Colleges and BSMFs from a carefully considered historical and contextual, current situation and evaluative perspective to point to what needs to be done. I similarly discussed extension services, and LED offices for their important role in the AES in supporting BSMFs with training and with value chain and marketing system development. This led me to discussing PPPs and Co-operatives as these emerged as being significant to the support of BSMFs in the current context, and thus also has significance for a reframed AES. As discussed in this chapter there are many deep seated challenges embedded in the AES as it currently stands, which reach back to the dualist nature of policy and the paradoxical developments surrounding policy intentions in the post 1994 period. This chapter offers an empirically rooted perspective on issues that were opened up more theoretically in Chapters 1, 2 and 3, and thus offers a richly textured and grounded view for this policy review study.

The chapter has offered insight the historical as well as the current status quo, and has delved into some diagnostics explaining why the situation is the way it is. This has revealed a complex system, that requires a systemic response from the AES, which in itself should be viewed in a systemic, more integrated manner, as was also pointed to in the social learning dialogue data, as well as in the literature review materials. In the next chapter I consider the implications for starting the third step in the social learning process, which is to provide recommendations for reframing the AES; modelling potential solutions for the way forward.

Chapter 6:

TOWARDS A REFRAMING OF THE AES: RECOMMENDATIONS FOR MOVING FORWARD

6.1 Introduction

Chapter 2 and 3 of this study offers a reiterative historical-contemporary conversation between the political policy development that in turn informed economic policy development in regards to agricultural development in South Africa. The analytical conversation spoke to the policy evolution that birthed agricultural dualism and more importantly, for the purpose of this study outlined the systematic marginalisation, hostile markets and barriers to access that black farmers have endured pre and post 1994.

As a reminder to the reader, chapter 2 and 3 aimed to answer the following questions related to the study,

- how the agricultural expert system (AES) has been configured out of a policy and programme history and how has this structure the AES, and
- how have black small to medium scale farmers (BSMFs) been operating to date within the AES.

It is clear as outlined in chapter 2 and 3, that legislative policy was a mechanism strategically used to advance racial segregation that aimed to monopolise the agricultural economy of white farmers through land rights, ownership and market participation, key proponents of growth and development. I argue in chapter 2 and 3 that the successive and consecutive implementation of legislative policy laid the foundation for skewed market participation and simultaneously legitimised the crude emergence of white commercial agriculture to the detriment of black farmer development. As a result, in the period of 1910 to 1935 approximately 87 agricultural development Acts were passed positioning agriculture as a key driver for economic reform under the apartheid regime, consequently solidifying the monopolisation of white farmers in the commercial sector and further entrenching dualism.

The chapters also covered changes in policy post 1994, with reference to the BSMFs. The state aimed to achieve the restructure the agricultural sector through establishing

- economically viable, market directed commercialisation,
- broadening access to agriculture to include the previously marginalised, and
- provide resource assistance to resource poor farmers.

However, the implementation in policy undertaken by state spoke to providing socio-economic security to achieve political stability but failed to respond address BSMFs material conditions and support services necessary for growth, development and transition into the commercial sector. The analysis in preceding chapters shows the state use of an (un)reframed AES post 1994, and how this entrenched a culture of practice that reinforced long standing strategies and developmental theories that are contrary and a direct proponent of a developmental agenda geared towards the growth, sustainable development and transition of BSMFs into the commercial sector thus, continuing to incorrectly to define the role of BSMFs post 1994. Failing to reframe the AES meant that the post democratic state adopted the conceptual, epistemic and conceptual lenses that came to inform community practice institutional routines however, widening the scope to incorporate the formally disadvantaged with moderate capital funding and some attempts to address shortages in skill, and information capacities.

However, subsequently market led reforms failed due to incoherent policy direction and implementation and continues to fail to align developmental policy objectives to material conditions. As a result, developmental policies aimed at BSMFs continue to face challenges in regard to skills, knowledge and information gaps and shortages as pointed out in Chapter 5. The consequence of incoherent policy formulation and implementation can be clearly seen in the subsequent implementation in regards to,

- **PLAS**, which failed to give farmers timeous support post land released by state to the farmer and failed to engage in contextual realities of the kind of farmer support needed,
- **BATAT**, aimed at transitioning BSMFs into the commercial sector. However, this failed due to state decline in resources,

- **CASP**, aimed to respond to the challenges experienced in PLAS and BATAT programmes particularly in regards to ‘post-settlement support’. Key areas of support identified in the CASP programme were as follows,
 - On and off farm infrastructure,
 - Advisory and regulatory services,
 - Capacity building,
 - Information and training,
 - Market development, and
 - Financial services.

CASP focused primarily on infrastructural development but failed to focus on comprehensive development and growth of BSMFs.

- **LARP**, was launched in response to failures and challenges met in the CASP programme through inclusive comprehensive support. However, the intended aim to engage BSMFs into the commercial sector failed as of consequence 29% of the 1260 farms transferred under LARP failed and subsequently failure was attributed to post-settlement issues.

As subsequently argued in Chapter 2 and 3, GEAR led policies limited state intervention in markets through the removal of state subsidies that acted as a buffer to hostile markets as discussed in Chapter 2 and 3 to incubation farmer development strategies. As a result, MLAR approaches further advanced the monopolisation of commercial farmers in the commercial sector due to their already existing buying power and ability to navigate the markets subsequently perpetuating dualism and more importantly, the inability to reconcile business incentives between the market, state and BSMFs. This I have attributed to thematic and evolving policy continuities and discontinuities embedded in the design and knowledge repertoires despite them have emerged from paradoxical governance regimes and political ideologies that continue to influence and shape the contemporary agrarian landscape. That has lacked in transformative pedagogy divorced from reality and the aspirations of BSMFs as shown in Chapter 5. Chapters 1-5 focussed on producing the foundation for the first and second steps of the social learning process outlined in Chapter 3.

With this as background, I now turn to addressing the other two questions of the study which focus on towards step 3 of the social learning process in which I, drawing on the insights and experiences of farmers and respondents in the social learning dialogue reported on in Chapter 5, and the progressive literature review that emerged iteratively in response to this dialogue, offer proposals for the reframing of the AES. The questions addressed in this chapter are,

- what are the aspirations of BSMFs for commercialization, and what implications does this have for reframing the AES as it currently operates, also viewed with a sustainable development lens; and
- how can multi-actors in the AES potentially help to reframe current AES practices in support of BSMFs informed by an in-depth policy literature analysis and social learning dialogue?

6.2 Existing knowledge and implications for a reframed AES

Sheth argues that emerging markets “suffer from inadequate infrastructure and chronic shortage of resources” (2011, p. 166). As a result, the agrarian sector according to Rheba has been marked “by a gradual disintegration of functions and specialization” (1998, p. 2) a key feature of the commercial sector. Khanna et al. (2015) note that poor infrastructural development in emerging markets has resulted in institutional voids that has resulted in “unskilled intermediaries and less effective legal systems” (p. 4). Institutional voids as identified by Khanna et al. (p. 5) are also reflected in Chapter 5 particularly in regards to information gaps as it relates to marketing, technology, market participation, and business management.

This is further perpetuated by market segmentation that continues to have a significant impact on BSMFs developmental agenda due to the often contradicting “odds with the realities of emerging markets” (Seth, 2011, p. 166). Chapter 2, 3 and 5 have clearly demonstrated the need for the sector to think innovatively in regards to BSMFs market integration therefore, the need to critically engage the challenges and opportunities, all of which demand a shift in a mindset that changes the “way we perceive emerging markets” (Seth, 2011, p. 166).

Currently, the majority of BSMFs market participation mirrors “characteristics of market heterogeneity” (Seth, 2011, p. 166) that is less driven by aspirations, diversity of need and or wants but instead by economic, skills, knowledge and market constraints. Seth attributes this to lack of “market access, poor infrastructure, and higher costs of doing business” (2011, p. 167). Therefore, the reframing of the AES must clearly speak the revitalization, strengthening and development of value chains (Khanna et al., 2005) that will assist BSMFs in their ability to effectively and efficiently “exploit their competitive advantage” (p. 45).

Key to reframing the AES for the purpose of strengthening the holistic value chain as it pertains to BSMFs growth and development is the need for a clear separation between the BSMFs developmental agenda from socio-political institutions that have up and until now dominated policy agendas that have introduced reforms “less by competition” (Seth, 2011, p. 166) and more as a social security mechanism that has actively contributed to the sector subsequently being characterized by “access labour exacerbated by resource and skills capacity shortfalls” (p. 186). The continuities and discontinuities prevalent in the resource and capacity shortfalls has created unreasonable and economically unsustainable policy and government expenditure programmes; this is clearly highlighted in Chapters 2, 3 and 5. This has resulted in risk-neutral farmers who opt to “divide labour supply between on-farm and non-farm employment opportunities with expected marginal returns” (ibid, p. 189; Mishra and Goodwin, 1997) instead of actively pursuing economic growth and development. Visvanathan, Rosa and Ruth (2010) argue that these closed-loop systems effectively self-sustain “local sub monopolies with affective continuance, and normative commitments between producers, merchants and consumers” (Seth, 2011, p. 169) making it rather difficult for farmers operating outside this flow of formal and informal relationships to gain market entry.

Therefore, the reframed AES must speak to the revitalization and strengthening of BSMFs value chains, understand clearly the pull and push factors that influence keys to the growth, development and transition into the commercial sector. Part and parcel of these reformist measures must be the establishment of contextually responsive “social safety nets and interventionist policies to mitigate the short run negative effects that sometimes accompany reform implementations” (Seth, 2011, p. 195) thus cultivating enabling and conducive environments for BSMFs development.

This entails taking active steps towards maximization of production through the intensified investments of agricultural inputs that include a combination of “labour, capital and skills” (Hussain and Hanisch, 2014, p. 497). The focus should be on developing farmer adaptation strategies and skills that are acutely able to strategically respond to the “constraints and limitations created” (Hussain and Hanisch, 2014, p. 497; Sharp and Smith, 2003) and as a result, actively identify gaps in the systems approach in regards to stakeholder engagement, knowledge and regulatory-financial barriers (Egea et al., 2018). Furthermore, the reframed AES must be able to speak to BSMFs capacities to tap into market creation capabilities that range from making to buying. I argue that this can transform the barriers to market entry discourse through multifaceted forms of “economic integration” (Seth, 2011, p. 169) geared towards the exploitation of competitive advantage of local markets.

6.3 What we need to know for reframing the AES

As can be shown by the analysis in this study, the state has yet to establish a coherent national policy that articulates a clear multi-sectoral and multi-stakeholder structure that speaks to the developmental agenda of BSMFs. Therefore, there is a clear demand for a comprehensive vision and the object of success needs to be premised on the need to work together to achieve a common goal. The subsequent and much needed reframed AES must actively challenge, transgress and transform the silo mentality, the parallel (and largely ineffective) programmes and models that create inefficiencies in the public sector as it pertains to the developmental agenda of BSMFs as shown in Chapters 2, 3 and 5.

Therefore, there is a need to understand and conceptually recognize that the agro-industry in South Africa is primarily premised on a “credit structure of the various role players” (Boshoff et al., 2018, p. 4). In striving to achieve a conducive environment for the transition of BSMFs into the commercial sector, Shihlobo and Nel (2016) argue that there should be “an appreciation of the fact that South Africa’s agriculture is dualistic, consisting of a commercial sector and a smallholder subsistence sector” (p. 69). Therefore, as indicated in Chapter 2, 3 and 5, concerted efforts must be made in elevating previously disadvantaged farmers into economically viable partnerships that speak to their development and growth particularly in regards to BSMFs integration into commercialized “agricultural value chains” (Shihlobo and Nel, 2016, p. 70). As identified in Chapter 5, market access was identified as “one of the

foremost factors influencing the performance of small-scale producers in developing countries” (Sihlobo, 2020, p. 2).

Therefore, clear policy interventions must be made in regards to market reforms particularly in regards mitigating market access barriers of BSMFs in regards to “inadequate farm level resources and from-to-market logistical bottlenecks” (Sihlobo, 2020, p. 2) as mentioned and highlighted in Chapter 5. These mitigation strategies will need to be in direct conversation with global market trends as it pertains to “commodity price volatility, exchange rate fluctuations and stock level (world and domestic market) influences, amongst others” (Sihlobo and Nel, 2016, p. 69). Here the positioning of the state as a mitigating force between markets and farmers activating as buffer insulator to hostile market volatility is important to facilitate the incubation of BSMFS (Seth, 2011). This has implications for the reframing of the AES as it is inclusive of state institutions such as extension services, and especially the training and re-orientation of extension services, which in turn has implications for the AETs.

This will, according to Levitt (1983), assist in achieving economies of scale through standardization in the active reduction of “aggregating demand to achieve scale efficiency and better returns on investments” (Sheth, 2011, p. 172). Moreover, this process will assist industry reform in acutely understanding the function of existing competitors, elasticity to market in regards to new entrants and the push and pull factors in the simultaneous bargaining power of consumers and suppliers. It is therefore, in that regard, that I argue for strong public-private partnerships that focus their interests towards understanding the value chain system “both primary and support activities to offer a superior value chain in its chosen strategy” (Sheth, 2011, p. 172). This has implications for the reframing of the AES in that it would need to reframe towards the value chain system and its advancement.

The multi-layered and multi-system approach to BSMFs development proposed above, in the light of the multi-faceted complexities highlighted in Chapter 2, 3 and 5 indicated the systematic challenges pertaining to BSMFs has since post 1994, been “amplified, and in some cases, surpassed by a new set of challenges associated with compliance with product and process standards” (Sihlobo, 2020, p. 2). Therefore, if the sector is to promote inclusive economic and transformative growth as per national reform agendas the sector must actively interrogate and work towards the integration of BSMFs in the commercial economy. The

failure to reform the market system according to Sihlobo will result in BSMFs failure to access markets either through the inability to “meet emerging regulatory and private standards or the high compliance and certification costs involved” (2020, p. 2). This too has implications for the reframing of the AES.

As per discussions in Chapter 2, 3 and 5 it is clear that the sector must confront challenges pertaining to “capacity shortages, administrative complexity, bureaucracy and fund mismanagement” (Sihlobo and Nel, 2016, p. 69) if BSMFs are to at least have an equitable opportunity to transition into the commercial sector aimed at addressing “historical inequities continue to lag behind” (Sihlobo and Nel, 2016, p. 69). Raikes et al. (2000) points out that the agri-sector is rapidly evolving “with increased emphasis on product safety and quality attributes” (ibid). Busch and Bain (2004) highlight that the structural design of agri-food and subsequently value chains are structured to be quality-based and are simultaneously institutionally rooted which provide the legitimacy of the quality attributes in the value chains.

Therefore, there is need for skill capacitation that will enable BSMFs to participate within the agri-economy value chain(s), integrating “the share of communities existing and participating in new markets” (Sihlobo and Nel, 2016, p. 70) thus actively bridging the dualistic sector.

Sihlobo and Nelb (2016) estimate that for BSMFs to become fully fledged self-sustaining farmers within the commercial sector it would take approximately 30 years. I therefore argue that the reframed AES should take on a targeted incubation systems approach that will scale developmental programme roll-out in alignment to farmer capability, skill and proven record of growth and development; and productive and potentially high return value chains. The possibilities according to Sihlobo and Nel (2016) range from resource pools for region-specific support aimed at facilitating dynamic public-private partnership systems approach aimed at acutely identifying the “needs and challenges” (p. 80) that prove to be determinants to development. This will allow for the determination of security and support in alignment that has direct impact on changes in the “treatment of farming as a means of subsistence and survival, to an opportunity for the social development of those who wish to engage in agriculture as a commercial venture” (p. 70).

6.4 Value chains and how they are currently understood and operate, and how BSMFs could be integrated

As indicated above, a core of my argument for reframing the AES centres around value chain development and associated systemic interventions. It is therefore helpful to probe the concept of value chains a bit further. Existing knowledge on value chains according to Mishra and Dey has been focused predominantly on export-systems and processes that speak to the “various aspects of strategic decisions related to the need for vertical integration, the controlling role of lead firms in the value chain, and scope for smallholder participation” (2018, p. 135). As of consequence, the transaction-cost economic framework approach has given prominence to governance of contractual relations (Williamson, 1979) to the detriment of “stakeholder interests and power relations, aspects like contracting and vertical integration” (Mishra and Dey, 2018, p. 135). As a result, knowledge production of how value chains operate has been primarily geared mainly towards understanding high-value markets at the exclusion of sub-sector “agricultural value chains” (Mishra and Dey, 2018, p. 135; Trebbin and Frans, 2010). Mishra and Dey consequently highlighting in BSMFs lacking in “bargaining power, to wield power, they need support from the state” (2018, p. 136), This, according to Trebbin and Franz (2010) is attributed to said big retailers devoidance of BSMFs producers. This Jones et al., (1997) attributes to BSMFs relations within the value chain being considered to being characterized “by informal social systems rather than by bureaucratic structures within firms and contractual relations between them” (p. 911).

From a reframing of the AES perspective, I argue that this has created a knowledge deficit gap attributed to the conceptual understanding that the high-value chains and sub-sectors governance and operational systems are different and that the “latter includes many more actors and complex transactions” (Mishra and Dey, 2018, p. 135). The difference in systems of governance and operations according to Geretti (1994) thus influence pricing systems, quality standards, and regulatory compliance. Mishra and Dey (2018) attribute this to sub-sector value chains that are “dispersed and decentralized and are unlikely to confirm to classification of value chains as either being buyer-driven or producer driven” (p. 135). Poulton et al. (2010) note however, that the incorporation of BSMFs in the commercialized value chains gives a competitive advantage which “brings in local knowledge, lowers transaction costs, achieve

economies of scale, and also offers varying degrees of incentives to the private sector” (Mishra and Dey, 2018, p. 136).

Sub-sector value chains have had a proven history of decentralization and high concentration of ‘informal market’ as of consequence, BSMFs have experienced difficulty in regards “to set the price or quality benchmarks, unless such a push comes from the regulator” (Mishra and Dey, 2018, p. 135). It is with this as background that Koopmans et al. (2018) argue for the need to conceptually understand BSMFs informal networks as they “provide an opportunity for small farm development and formation of social capital at the local level” (Mishra and Dey, 2018, p. 136). The analytical review of the systems network and or framework can potentially highlight adopted strategies by BSMFs that have assisted in attaining relative sustainability and stability in regards to formal and informal “market integration strategies” (Palmioli et al., 2020, p. 45). I argue that understanding these intricate and often inter-dependent survival strategies will to be imperative in building and strengthening “new narratives and reshaping flows and relationships between producers and local market structures” (Palmioli et al., 2020, p. 45). This points to network and relational sensitivity in the AES.

Trebbin (2014) suggests that the survival of BSMFs is predicated on the ability of the sub-sector to transition from localized value chains to more vertical integrations, this is supported by Goodman and Watts (1997) and Reardon et al., (2004) in their respective argument(s) advocating for the need to develop BSMFs market opportunities through the active internationalization premised on vertical integration identified as a key driver for “structural change in developing countries” (Hussain and Hanisch, 2014, p. 496). Consequently, according to Mishra and Dey, for Hussan and Hanisch (2014), Reardon et al. (2004) and Goodmand and Watts (1997) analysis to materialize a clear systems approach needs to be established which is geared particularly towards acutely understanding and targeting “contracts, producer-buyer relations, and degrees of vertical integration” (2018, p. 135) to the support the developmental agenda of BSMFs. This is for the purpose(s), according to Palmioli et al., (2020) to work actively towards objectives such as “profit maximization, financial stability and market integration” (p. 46).

Significant to this study on the reframing of the AES is the point made by Bargawri (2015) who argues that key to vertical integration of BSMFs into the commercial value chain is a

reframed conceptual systems approach that will need to be targeted in regard to “access to storage, transport, market niches, closer linkages, elite producer and information” (Mishra and Dey, 2018, p. 137). More importantly this will need to interrogate within context, lead institutional firms, the realignment of practices and the coordination of actors for the purpose of understanding “how agricultural value chains are governed differently in (in)formal and transitory markets” (Mishra and Dey, 2018). As of consequence, the reform of governance system and centralization in systems approaches aims to address information and skills gaps associated with “high transaction costs, and the substantial presence of extra-level channels” (Mishra and Dey, 2018, p. 137).

Also important for a centering of agricultural value chains discourse within a systemic approach outlined above, as being proposed here for a reframing of the AES, is that agricultural value chains, as noted by Mishra and Dey (2018), are characterized as dynamic and are seldom “confined to a single channel” (p. 136) understanding that value chains are iterative; and may also be iteratively related to other value chains in a given context or set up. Therefore, the governance systems proposed by Mishra and Dey (2018) are multi-faceted and speak to the various production outputs of BSMFs governed by “interdependence in restructuring of power relations, and greater efficiency of state administration” (p. 137; Rhodes, 1997; Kooiman, 1993). It is with this as backdrop that I argue that the development of value chains for BSMFs geared towards the integration of and into the commercial sector must not be limited to contractual arrangements, but must include “coordination, control and safeguarding” (Mishra and Dey, 2018, p. 137) to ensure appropriate insulation buffers that will be able to withstand the socio-political and economic macro- as well as micro- level hostile influences.

Therefore, the following questions can be used to be interrogate the integration of BSMFs into the commercial sector and can guide expansive social learning in the actual reframing of the AES in the context of diverse value chains (i.e. step 3-6 of the social learning cycle presented in Chapter 3).

- Information asymmetry in coordinating the actions of multiple actors in any decentralized sub-sector can lead to market failures. *How do the actors coordinate their actions in the absence of an adequate and appropriate information regime?*

• The existing framework suggests that value chains are buyer-driven or producer-driver. <i>Who controls or drives the value chains in informal economies?</i>
• Unlike the export-oriented global value chains, there are issue of power dynamics and lack of bargaining power among smallholders in agricultural value chains. <i>How are the interests of such stakeholders looked after?</i>
• How do value chains behave during the process of transition from localized value chain to global value chain?

In order to realise this orientation to reframing the AES, there is need to cultivate strong public-private partnerships for the purpose of addressing challenges pertaining to centralization of governance, systems approach, vertical and horizontal integration strategies (Gordon et al., 2014, p. 268). The system approach proposed by Gordon et al., (2014) is premised on the strategic role and integration of farmers in decision making underscoring that as of present there is still no clear in-depth analysis with regards to “factors influencing the farmer’s decisions to adopt sustainable practices” (2014, p. 269). The farmer-market-consumer push and pull factors will assist in the identification of key macro drivers that continue to act as inhibitors to development as it pertains to “structural (technologies, market forces, industry, retail structures, consumer preferences) or institutional (public and private regulation)” (Gordon et al., 2014, p. 270) drivers.

Alternatively, the sector ought to explore the contract farming mechanism as a means facilitate BSMFs “easier access to credit, input, information, technology and markets for small scale farming structures” (Rheba, 1998, p. 22). This Rheba describes as a quasi-integration as a means to “agro-industry integration for developing economies” (Rheba, 1998, p. 18). The successful facilitation of contract farming is premised on principals of trust and ethics between farmers and market partnerships emphasizing collaboration instead of rivalry. The economic sustainability of contract farming is subsequently premised on the “efficiency of the firm’s activity directly impacting efficiency of contract farming” (Rheba, 1998, p. 21) facilitated by integrators who determine according to Rheba (1998) “the production and marketing practices and measures” (p. 21).

However, Rheba (1998) argues that the use of contract farming holds a particular history of skewed benefit that unfairly positions the farmer, this he attributes to the farmer’s weak

position and the lack of market power. That is in line with the history of agricultural producers which demonstrates that “growers have been seldom rewarded appropriately in the market place due to weakness in their states as farm entrepreneurs compared with other participants in the food industry” (Rheba, 1998, p. 21). Hence, the need according to Rheba for BSMFs to start investing in acting in “an organized manner” (1998, p. 21). Scheid (1991) and Moore (1994) argue that the organization of collective bargaining will assist BSMFs in navigating the contractual terrain, which again has implications for the AES and how it is constituted in terms of the type of support it provides to BSMFs.

Von Braun and Puetz (1991) argues that “access to financial and insurance markets improves the ability of smallholder farmers to access agricultural markets”, and “the linkages involved are complicated by parallel markets” (von Braun et al. 2004, p. 45). Moreover, von Braun et al. (ibid) note that “there is increasing consensus that credit constraints are at the base of the weak response of smallholders to market liberalization” (2004, p. 45), an issue that was clearly highlighted in Chapter 5.

Therefore, there is a need for comprehensive policies that “facilitate the economic advancement of small farmers” (von Braun et al., 2004, p. 45), and this requires taking note of the heterogeneity of small farmers, i.e., distinctions between

- Small subsistence farmers,
- Small local market orientated farmers, and
- Small globally competitive market orientated farmers.

6.5 Key recommendations for a reframing of the AES

For the purpose of ensuring that a reframed AES speaks to the holistic value chain investment necessary to bridge “the access and market gaps” (von Braun et al., 2004, p. 45) I make the following recommendations, based on the study’s analysis:

6.5.1 Recommendation 1: The AES must be reframed to address the holistic value chain of BSMFs to help address underlying policy dualism

In a general overview from the first round of interviews conducted in this study, I noted there were distinct implicit and explicit characterisations of BSMFs that are determinants in what kind of farmer is needed to be recognised in order to advance and develop black farmers. This is particularly visible in the age variation in farmers of practice. Key questions that emerged relevant to the reframing of the AES in ways that will be oriented towards viable value chains and redressing the dualism of the system are related to the balance needed between farming practice, skills capacity and funding models.

Philipson et al. (2004) argue that the agricultural sector in South Africa has been led and governed by separate policy objective(s) due to various state and market reform failure(s). Consequently, BSMFs developmental agenda and support post 1994 according to Lowe and Tolbot (2000) has been riddled by incoherent, inadequate state and market support as revealed across this study. The exceptionalism approach to agricultural development undertaken by the state has since demanded a radical shift that according to Philipson et al. (2004) actively pursues “reorientation of farming to a more entrepreneurial model, that is both competitive and sustainable” (2004, p. 31). Realigning state subsidies with sustainable “business aspirations and decisions” (Philipson et al, 2004, p. 31) premised on strong, resilient and contextually responsive farmer business strategies and planning is clearly needed. The Policy Commission on the Future of Farming and Food (2002) noted that concerted efforts would be needed from the sector in order to enhance “generic business skills and the development of appropriate forms of business advice provision for the sector” (Philipson et al., 2004, p. 33; Smallbone and North, 1999; Smallbone et al., 1993).

London and Hart (2004) underscore that “low-income markets in emerging economies present both opportunities and unique challenges” (p. 351), and note further that the majority of BSMFs primarily operate in informal economies therefore, there is need to integrate this cohort of farmers into the mainstream market economy. This is for the purpose of actively bridging the gap between “informal and formal economies” (London and Hart, 2004, p. 352). Stiglitz (2002) argues that the failure to facilitate economic development for BSMFs will prove to be detrimental to the developmental agenda of the sector in transforming and reconfiguring the agricultural landscape, with a risk of perpetuating the reliance on “traditional players and their limited views of what is appropriate and effective” (London and Hart, 2004, p. 352). Therefore, the active pursuit of innovative and contextually responsive mechanisms and systems in

gaining entrée to markets will subsequently defragment existing monopolisation of markets and provide greater access for BSMFs participation through clear information systems (Vorley et al., 2009).

In response, Coen (1998) has argued for the need to integrate and “counterbalance the concentration of economic, financial, and political power within the corporate sector” (Philipson et al, 2004, p. 34). Philipson et al. (2004) and Ritchie et al. (1989) propose the development of business link network(s) geared towards the incubation and development BSMFs. For the AES, this means providing “tailored advice, in order to help them respond to changing market demand and policy reform” (Philipson et al., 2004, p. 38). This means concerted efforts must be made in identifying and exploiting “opportunities for niche production and markets, meaning adding value to their products, or enhanced systems of cooperation” (Philipson et al, 2004, p. 31). However, according to van Huylenbroeck and Durand (2003) a concerted effort in strengthening farmer capacity with regards to entrepreneurial skills for the purpose of improving competitiveness “commercialisation, promotion and organisation” (Philipson et al., 2004, p. 31) will be imperative.

Key factors for integrating BSMFs into the market economy according to Hanf and Gagalyuk (2018, p. 184) should ensure the following aspects,

- (1) income stability (to reduce risk compared to other ways of selling on traditional marketing channels);
- (2) improved efficiency (management decisions are transferred to the farmers);
- (3) market security (entering the contract provides a certain security in that the product will be sold if it meets with the requirements);
- (4) access to capital (contractor often provides inputs for farmers, which reduces the usage of credits).

6.5.2 Recommendation 2: PPPs are need to support BSMFs development and these should adopt as a social learning approach that is reflexive of complex realities

I found in the interviews and in the social learning dialogue that across the board there is a vibrant farmer production system at work. That said, there seems to be a lack in the fundamental understanding in the agrarian commodity chain beyond the standard recognition

of the market in order to effectively compete competitively. This particular observation pertained to all but one of the interviewees who competes at commercial level. Therefore, I have recognised that in order for black small-medium farmers to compete competitively in the commercial sector, there needs to be a clear understanding in the economies of scale, cost to information and clear business models.

As reported in Chapters 2, 3 and 5, BSMFs continue to face hostile market conditions particularly in regards to “institutional and infrastructural support, and unbalanced trade relationships” (Trieneken, 2011, p. 66). This is further exacerbated by the information and literacy gap prevalent in the BSMFs cohort as discussed in the previous Chapter, which impacts their ability to compete competitively and participate efficiently in the value chain. Trieneken highlights that the information asymmetries between stakeholder engagements lack in “communication infrastructure” (2011, p. 66) negatively affecting ability to efficiently and effectively distribute market information as indicated in Chapter 5. De Janvry and Sadoulet (2005) and Daviron and Gibbon (2002) note that the barriers to market entrée have actively hindered BSMFs upward market mobility as also pointed out across the chapters in this thesis.

Significant for recommendations towards a reframed AES, is the point made by Chamber (1983) and Kumba (2003) who propose a bottom-up social learning approach in the integration, growth and development of BSMFs value chains (Etwire et al., 2013). This, according Kumba (2003), enables an environment in which farmers are placed at the forefront “in identifying farming problems as well as solutions for sustainable development” (Etwire et al., 2013) simultaneously actively generating the systems and process in which to actively identify factors that act as barriers to BSMFs “participation in agricultural projects” (p. 36). Active farmer participation is therefore being posited as a central component without which there would be no “no program and no development” (Etwire et al., 2013, p. 37).

Furthermore, according to Coles and Mitchell (2011), applied value chains have the potential to be geared towards “pro-poor development” (p. 2). The pro-poor application of value chains according to Coles and Mitchell is a “strong qualitative diagnostic tool that is capable, if employed skilfully, of identifying critical issues and blockages for specific target groups and then generating robust and effective policies and development strategies” (Coles and Mitchell, 2011, p. 2).

Therefore, Gereffi (1999) notes that BSMFs must be geared towards “a process of improving the ability of a firm or an economy to move to more profitable and/or technologically sophisticated capital and skill-intensive economic niches.” (cited in Trienekens, 2011, p. 68). Thus, Grunert et al. (2005), Scott (1995) and Porter (1990) outline the challenges pertaining to value chain development as being related to BSMFs giving the sector key pertinent areas of consideration in the growth, development and market integration in the Table 6.1 below,

Table 6.1 Challenges pertaining to value chain development that can inform a social learning model for value chain development in the AES (Source: Adapted from Trienekens, 2011)

Market access (local, regional and international)	Market orientation	Available resources and physical infrastructures (conditions)	Institutions (regulative, cognitive and normative)
A-system Small or emerging producers with traditional production system(s) Value chain is long, implying limited availability of (end) market information, distribution of value added over a larger number of actors, and longer transportation distances (both in distance and time) B-system Local middle to high income chain Target market, emerging supermarket(s) (developing countries) Producers, small/medium size producers organized in cooperatives and or linked in subcontracting arrangements Although the production volume produced by B-systems is smaller than	Market access is dependent on technological capabilities of producers, available infrastructures, bargaining power and market knowledge and orientation Access to market information cultivates enabling environments for BSMFs to translate into targeted profit driven decision-making Defined by Grunert et al. (2005) “chain members’ generation of intelligence pertaining to current and future end-user needs, dissemination of this intelligence across chain members and chain wide responsiveness to it” It is however, important to note according to Trienekens that market access alone is insufficient for BSMFs to access the “value chains to be able to sell their products” (2011, p. 55). Concerted efforts must be made in	Key factors that need to be considered for the development of BSMFs value chain(s) (Trienekens, 2011, p. 55) <i>Physical resources</i>, input materials for production and other input supplies (i.e. energy and water) constrain value chain upgrading <i>Geographical location</i>, gives a competitive advantage <i>Knowledge capacity</i>, influences production, distribution and marketing is an important condition for innovation behaviour of value chain actors Availability of Technology, leveraged for profit driven decision making	Mair and Marti (2008) highlight that BSMFs development in regards to value chain(s) has been characterised by institutional voids. Trienekens notes that institutional arrangements that are meant to supporting BSMFs are “weak or fail to accomplish the role expected from them” (2011, p. 56). Therefore, the need to create state legislation and policy that is geared towards cultivating conducive environments for trade. Adopting a network approach is imperative in integrating BSMFs into the complex “horizontal, vertical and business support relationships with other companies and other organisations supporting inputs and services (such as advisory services, credit facilitators and transportation companies” (Trienekens, 2011, p. 59).

that of A-systems, the value generated is larger Quality standards, national and international standards C-system <i>Target market</i>, export chain aimed at increasing economies of scale(s) and direct foreign investment Export chains tend to become more integrated with fewer actors. With high value added	developing skills capacity, infrastructure and technology. In overcoming lack of skills and difficult access to technology, inputs, market, information, credit and external services” (Trienekens, 2011, p. 55)		Actively building on concepts such as <i>trust, reputation and power</i> key influencers according to Trienekens in regards to “structure and durations of intercompany relationships” (2011, p. 59). Coleman (1990), Burt (1997) and Humphrey and Schmitz (2002) highlight that these attributes assist in creating “easier access to information, technological know-how and financial support and by encouraging knowledge transfer between network partners thereby reducing transaction costs and improving access to markets” (Trienekens, 2011, p. 59)
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Therefore, there is need to change and or reframe “institutional environments or the competitive base or ensure enabling infrastructure and availability of resources” (Trienekens, 2011, p. 60) thus, actively transforming the performance and function of the system, and the AES by implication. Table 6.1 can provide a useful starting point for curriculum innovation in the AET system, and for research that can inform and complement curriculum innovation. It can also offer a tool for extension services to re-frame their current approaches to working with farmers, and can also be a useful tool for deliberation with NGOs, LED, PPPs, and government agents responsible for supporting and contributing to the AES. At the core of this lies the need to strengthen the business orientation of BSMF practices, in which PPPs offer a good potential starting point around relevant value chain development in particular contexts, hence I have included this as a key recommendation for reframing the AES.

6.5.3 Recommendation 3: *There is need for better understanding on roles and contributions of stakeholders in the AES to avoid duplications*

As indicated across this thesis, the contemporary agrarian landscape demands farmer development programmes be anchored in systems approach that emphasizes simultaneous

multi-skills development. As shown in Chapter 5 the AES involves a range of different role players who each have an important role to play in supporting BSMFs and their development, including the farmers themselves and their networks. These include the more formal AET institutions (lecturers and researchers), the extension services of government and the commercial sector, and other supporting stakeholders such as LED officials, PPP partners, NGOs amongst others. As shown above, the overall reframing of the AES will affect all of these actors, and all will have to re-orient their roles in brief as follows:

- AETs will need to address the dualism that permeates their curriculum and programmes, by embracing value chain and systemic thinking and strengthening business dimensions of the training and research on offer,
- Extension services will also need to address the dualism that permeates their practices and the types of services offered by them, by embracing the proposed value chain and systemic thinking discussed above,
- LEDs will have a stronger role to play in mediating and facilitating value chain partnerships for value chain construction and linking extension with farmers and other partners.
- NGOs have an important role to continue to support the smaller farmer's transitioning into medium and larger scale commercialisation options and thus also orientation into value chains.
- PPPs and other business platforms such as contract farming and co-operatives should also re-orient towards value chain development thinking and praxis, and create a wider range of opportunities for BSMFs and youth along the value chains.

With regards to ***research and the AET system overall***, scientific knowledge has been central to the evolution and adaptation of farming practices “through design of material technologies whose use enables efficiencies in farming practices” (McCown, 2001, p. 549) geared towards maximisation of production. Therefore, Tepic et al., (2012) emphasize the use of “knowledge and collaboration with actors in development of new market concepts” (p. 23) aimed at BSMFs integration into the commercial sector and the research process itself. Tepic et al., (2012) further lament that “financial capacity and the general economic situation needs to be taken into account as determinants of innovativeness” (2012, p. 24), pointing to a role for economic research also being core to the value chain development research and AET practice that would need to be developed to support the reframed AES.

With regards to **extension**, as indicated in Chapter 5, the extension services is hampered by the same dualism that emerges from the policy historicity. McCown (2001) along with others mentioned in Chapter 5, including the farmers, advocates for the need to strengthen and capacitate extension services. This shift towards strengthening extension services is motivated by the need to bridge the gap between farmers and support structures, and especially market access within viable value chain development. This should be aimed at better understanding the “intermediary between applied scientific research about farm management and farm choices and changes” (McCown, 2001, p. 550). As argued across the thesis, a more nuanced and comprehensive approach to the AES support provided by extension services is needed. It is with this in mind that Bigen et al., (2003) assert that skills development and the generation of social capital be incorporated into “self-help capacity building” (p. 410). Gill et al., (2017) in alignment with McCown (2001) and Bigen et al. (2003)’s points, emphasises the ability to improve the “capacity of the parts (dimensions) of a system”, but also to enhance “the interaction of the parts” (2017, p. 35; Jackson, 2003; Meadows, 2008).

With regards to the **farmers**, farmer literacy programmes should be the cornerstone in which economic developmental pathways are designed and implemented (Bigen et al., 2003). Literacy programs have the potential to be catalysts in the cultivation of conducive environment for economic orientated investment, networking and the “emergence of diverse, expanding and community orientated activities that might result in changes to local social relationships as new economic opportunities arise” (Bigen et al., 2003, p. 410) and the decentralisation of a broader set of opportunities. Clark further indicates that an increase in economic literacy and knowledge production (tacit, implicit and explicit) amongst the “different techno-economic agents and associated networking arranges the non-linear properties of relevant and knowledge flows” (2002, p. 359), indicating that the knowledge flow being discussed here in relation to farmers empowerment is non-linear, and needs to be developed in social learning interactions with them as argued earlier.

Clark warns that the “capability to learn and build new competencies will depend on how well the parts fit together and on the strength of these connections” (2003, p. 363) therefore, emphasizing good quality education and literacy programmes becomes imperative. Furthermore, PPPs will need to be harnessed and strengthened in order to advance BSMFs

interests in “agricultural marketing functions, the reduction or elimination of public subsidies for agricultural input and product marketing, and agricultural export diversification” (Bigen et al., 2003, p. 406), and through this, capacitating BSMFs with the skills and capacity to assume more responsibility in regards to “agricultural production and marketing programs” (Bigen et al., 2003, p. 406). This points to a supportive co-learning environment in the PPP environment that puts the farmer and their learning at the centre, as also recommended by ASSAF (2016).

With regards to **policy actors**, there is need to give more attention to the link between “policies (what ought we do?), strategies (what can we do?), and operations” (Jantsch, 1972, p. 9) as the efficacy of this relation will determine (how in implementation) and facilitate the vertical integration between planning and action. Cultivating enabling environments in which BSMFs are able to identify “target, absorb and deploy external knowledge necessary to feed the internal innovation process” (Tepic et al., 2012, p. 4) is essential to the reframing of the AES in which connections between farmers and other actors are ensured, including policy actors so that policy can be more rooted and grounded in farmers emerging needs.

There is also need to consider the positioning of **youth** in the context of the reframed AES. The New Growth Path (2010) highlights that youth participation within the mainstream economy has been negatively impacted by “joblessness, poverty and inequality” (Swart and Aliber, 2013, p. 23). It is therefore, within context of an ageing farming population, high levels of unemployment and the continued advancements in developing and restructuring of the rural economy, that Swart and Aliber emphasise the need to make links between “young people and agriculture” (2013, p. 23). This, according to Sumberg et al. (2012) instead “essentially places the problem of young people and agriculture from a perspective of either ‘youth in peril’ or ‘agriculture in peril’ (Swart and Aliber, 2013, p. 23; National Development Plan, 2030), and this problem will need to be addressed in launching a reframed AES that will hold attraction for young and prospectively successful BSMFs.

Timmer (1998) notes that the development and evolution of the agricultural sector and “the process through which a country’s agricultural sector shrinks relative to other sectors” (Swart and Aliber, 2013, p. 24) has actively encouraged people out of the sector. This and other contributing factors demand that the integration of youthful BSMFs into the agricultural landscape be critically reviewed to align with maximisation of production practices that are

sustainable. The Youth in Agriculture and Rural Development (YARD) posits agriculture as the “main engine of economic growth in rural communities” (Swart and Aliber, 2013, p. 25). However, Swart and Aliber critique programmes such as YARD in that they fail to construct development programmes geared towards the youth, rather they just ensure that “the youth get their share” (2013, p. 25) as indicated in Chapter 5. As of consequence Swart and Aliber argues that the “extent the numbers of youth targeted are reported, these numbers are of doubtful value given the often-arbitrary manner in which ‘beneficiaries’ are defined” (2013, p. 25).

As a result, according to Sumberg et al. (2012), progressive policy reformists have argued for a more “business-like agriculture to paint a picture of either ‘agriculture as the saviour of young people’ or ‘young people as the saviour of agriculture’” (2012, p. 2). This according to Sumberg et al. (2012) highlighting the “complexities, contradictions, struggles, fears, hopes and befuddlement that so often characterises relations between generations” (p. 4).

Akosa (2011) notes that the youth in particular are potentially an “ideal catalyst to change the poor image of agriculture given their greater possibility to adapt new ideas, concepts and technologies” (p. 387). Here the 2012 Farmers’ Forum of the International Fund for Agricultural Development (IFAD) emphasized the “need to invest in the rural youth of today, the farmers of tomorrow” (Sukanya, 2016, p. 387; Anonymous, 2012a). Therefore, as argued across this thesis, there is need to develop a new, more attractive progressive paradigm for BSMFs into the future, and hence also reframe the AES in support of this. This needs to involve strengthening “on-farm, as well as off-farm” agricultural opportunities across the value chain, hence adding further impetus for the argument made in this chapter towards value chain and systemic thinking as basis for reframing the AES. Adoption of a social learning orientation to this process, as recommended above, can also involve young people in actively and acutely contributing to researching, and exploiting and creating new opportunities in addition to expanding the various existing opportunities in the sector.

6.4 Conclusion

This chapter has put forward a proposal for reframing the AES based on the analysis that was conducted through the extensive literature review conducted in iterative relationship to the social learning dialogue in the case study site. At the heart of the proposal lies the need for

adopting a more systemic, value chain development orientation to the AES, with implications for all actors involved in the AES as outlined above. I indicated in the methodology chapter that this offers a ‘step 3’ in the Wals (2007) social learning approach, and a potential platform for further expansive learning with stakeholders in the Engestrom et al., (2010) expansive learning framework. I indicated that this proposed reframing of the AES put forward in this Chapter (Chapter 6) could offer tools for engaging stakeholders in further social learning dialogue(s) going forward, potentially as a PhD study or with the support of other researchers and actors in the AES.

As argued throughout this thesis, capacitating BSMFs with the skill to “assimilate and exploit knowledge” (Cohen and Levinthal, 1989, p. 567) is crucial, therefore there is need for proposed literacy reform programmes that include formal literacy as well as economic and system literacy which, according to Tepic et al. (2012, p. 6) will assist BSMFs in the following identified aspects,

- Identify, understand and learn new information and knowledge;
- Interpret and understand information to enhance transformative and innovative capacity; and
- Leveraging existing competencies to create new ones through the incorporation of acquired and transformed knowledge into operations.

This would help to strengthen BSMFs “capacity to translate new information and knowledge into changes, adaptations or innovations” (Tepic et al., 2012, p. 7) increasing their exploitative capacity and market participation. The proposed systems approach surfaced through this study aims to establish farmer orientated developmental pathways that facilitate “network cohesion (overlapping ties among mutual third parties) and network range (relationships that span multiple knowledge pools)” (ibid, p. 2; Reagan and McEvily, 2003). The above mentioned will assist in a developing strong business acumen that will help BSMFs recognise and understand “technical, legislative and business-related knowledge” (Tepic et al., 2012, p. 21) used to maximise opportunities in market-related competition, production and demand.

As can be seen across this thesis efforts to integrate BSMFs within the value chain should include at least the following:

- *Learning, sustainability, and development (networks)* aimed towards the cultivation and generation of an active learning environment and transformative pedagogy. More importantly according to Boshkoska et al. (2018) there is need for the establishment of “cross-border networks and interactions which aim to guarantee the sustainable development of the obtained knowledge in the projects” (pg. 91)
- *Cross-boundaries education and knowledge sharing, teams* with these processes being aimed “identification, coordination, reflections and transformation” (Boshkoska et al., 2018, p. 91) to cultivate an environment for knowledge sharing through learning that deals with “the contradiction among distributed knowledge in boundary-spanning collaborative processes” (Boshkoska et al., 2018, p. 91; Gasson, 2005).
- *Innovation, and boundary objects* which are geared here towards focusing on knowledge exchange and skills development “across knowledge boundaries in activities of different organisations, which aim to provide an innovation” (Boshkoska et al., 2018, p. 91; Rehm and Goel, 2015; Smith, 2016), and as shown in this study this should be between extension, farmers, AETs, PPPs, LEDs, and youth groups amongst others.

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Appendix 1

Rhodes University
Grahamstown
6139

Dear participant

Re: Invitation to participate in a research study

You are cordially invited to part-take in a Master's research study entitled: : How can the Agricultural Expert System (AES) be reframed with the use of Social Learning for the purpose of black small to medium capitalist farmer (BSMCF) development for commercialisation? Please take the necessary time to thoroughly read and understand the information provided in the below, which will explain in detail what the study is about, aims and objectives. Please, do not hesitate to ask the principal investigator about any questions and or concerns about the study that you might to be explained more in-depth or that you do not understand. For the purpose of this study to ensure that it has been conducted in an ethical conduct it is important that you as a participant are fully in agreement to what the study entails and your role within the study. More importantly, please note that your participation within the study is voluntary and should you wish at any point to no longer participate within the study, it will be your prerogative to do so.

What is this research study all about?

The aim of the study is through the reframing of the AES is to find sustainable modal of how best to incorporate the needs of BSMCFs for the purpose of growth and development in transitioning into the commercial sector. Your participation in the study will give the much needed in-depth core contextual understandings and challenges faced in the agrarian landscape by BSMCFs more importantly, provide a unique opportunity of holding joint discussions on how best to find socio-economic sustainable development models. Co-generating solutions that are contextually situated simultaneously actively seeking to redress the imbalanced commercial landscape through the potential alternative markets.

- The research questions are:

1. How is the Agricultural Expert System (AES) configured; what roles are discernible and how has the AES been constructed?
2. How have the small-scale farmer (SSF's) been operating to date within the AES and what needs to they have for support from the AES?
3. What are the aspirations of SSF's aspirations for commercialisations, and what implications does this have for reframing the AES as it currently operates?
4. How do/can multi-actors in the AES potentially reframe current practices in support for SSF via a dialogical social learning engagement process?

As a participant you will be asked to participate in a series of semi-structured interviews and social learning dialogical focus groups that will occur periodically throughout the span of six months. It is within these particular spaces that you will be asked to your work-in experience of your current position within the agrarian landscape.

The project is being undertaken by the Environmental Learning Research Centre (ELRC) at Rhodes University. The study will be written up as part of Lwanda Maqwelane's Environmental Education Master's thesis in the Education Department, Rhodes University. Furthermore, some of the work might be used for publication purposes, with your permission.

What will your responsibilities and or role within the study be?

- You will engage in a series of semi- structured interviews and social learning dialogical focus groups that will range in time depending on the content matter being discussed and how you as the participants are responding to it particularly responding to how you have experienced through work-in experience the agrarian landscape short comings and successes and how best to incorporate the development of BSMFs into the commercial sector.
- It is important however, that you note at any point that you feel uncomfortable in answering the you are more than welcomed in not answering and or abstaining from questions that might put you at risk in any shape and or form.

Who will have access to your records?

The data will only be accessible only to me the principal investigator and my supervisor Professor Helia Lotz-Sistika. Any data collected through audio, writing and digital form will be all filed in google file that will be password protected and will only be used for the purpose of the study and any potential publications that might come out of the study.

Will you be paid to take part in this study and are there any costs involved?

Unfortunately, there will be no payment related to the participation of this study.

Your participation within this study will be greatly appreciate in cultivating dynamic and innovative ways of thinking in producing solution based outcomes in the quest for a more equitable commercial sector.

Kind Regards

Lwanda Maqwelane

Contact details:

Email address: maqwelane25@gmail.com

Phone number: 081 392 9250

Or alternatively Professor Heila Lotz-Sistika

Email address: h.lotz-sisitka@ru.ac.za

Office number: 046 603 8111

Appendix 2

INFORMED CONSENT FORM

Research Project Title:	How can the Agricultural Expert System be reconfigured with the use of Social Learning for the purpose of black small to medium capitalist farmer development for commercialisation?
Principal Investigator(s):	Lwanda Maqwelane

Participation Information
• I understand the purpose of the research study and my involvement in it • I understand the risks and benefits of participating in this research study • I understand that I may withdraw from the research study at any stage without any penalty • I understand that participation in this research study is done on a voluntary basis • I understand that while information gained during the study may be published, I will remain anonymous and no reference will be made to me by name or student number • I understand that other data collection requirements particular to this research, e.g. test results, personal information, video recording) may be used • I understand and agree that the interviews will be recorded electronically • I understand that I will be given the opportunity to read and comment on the transcribed interview notes • I confirm that I am not participating in this study for financial gain • I have read and understood the invitation letter and consent form, and all my questions have been adequately answered

Information Explanation
The above information was explained to me by: Lwanda Maqwelane
The above information was explained to me in English and IsiXhosa and I am in command of this language:

Voluntary Consent	
I, _____ hereby voluntarily consent to participate in the above-mentioned research.	
Signature: Place: Witness's signature	Date: / /

Investigator Declaration	
I, Lwanda Maqwelane, declare that I have explained all the participant information to the participant and have truthfully answered all questions ask me by the participant.	
Signature:	Date: / /

Should you wish for further information please do not hesitate to contact my supervisor, Professor Heila Lotz Sistika should the need arise at:

Email: h.lotz-sisitka@ru.ac.za

Appendix 3

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT (INSTITUTION)

To whom it may concern

My name is Lwanda Maqwelane, and I am an Environmental Education Master's student at Rhodes University in Makhanda, South Africa. The research I wish to conduct for Master's full thesis requires me to request members of your organisation to part-take in my research study in the format of groups discussions and interviews. The participation of your representative will provide nuanced contextual data that is necessary for the purpose of providing a study that is grounded in contextual layout of the contemporary agrarian landscape. This research will be conducted under the supervisor of Professor Heila Lotz-Sistika.

This letter serves to seek formal consent approach members of your organisation to part-take in our research. I attach a copy of my research proposal which includes the consent and assent forms to be used in the research process. Once I have received ethical clearance from Rhodes University, I will provide you with the ethical clearance letter. The research will protect participants through the use of pseudonyms, more importantly; the data will only be accessible only to the principal investigator and my supervising Professor, Heila Lotz-Sistika.

Upon the completion of the study, I undertake to provide you and all my participants with access to the research findings. If you require further information, please do not hesitate to contact me on 081 392 9150 and maqwelane25@gmail.com

Thank you for your time and consideration in this matter.

Yours sincerely

Lwanda Maqwelane

Appendix 4

Social learning focus groups and semi-structured interviews questions (to guide the interactive process of data generation). Note the questions may be slightly adapted once tested in the field.

1. Please explain what you do and what your involvement in the Agricultural Sector is.
2. Who has supported you, and how have they supported you in your agricultural practices to date?
3. To the best of your ability how would you describe the agricultural landscape in your context
4. As a practitioner within the agricultural landscape, are there any experts who have assisted you?

Who are they

Who do they work for How did they help you

5. What would you identify as the challenges and the successes of the agricultural landscape to date?

6. To the best of your ability, how would you define the agricultural expert system (AES)

In your opinion do current programmes address the needs of BSMF (explain- How)?

What gaps if any have you identified?

7. What do you understand as the importance of the AES in the agricultural landscape
8. How has the AES in your opinion shaped and or influenced the contemporary agrarian

landscape? Especially for BSMFs?

9. In your opinion, what has been the impact of AES policy application on the growth and development of black small to medium farmers (BSMFs) to date?

10. How, in your view, can the AES facilitate a conducive environment for agricultural and rural development in regards to BSMF transition into the commercial sector

what is working? what is not working? what needs to change?

11. In your opinion, how can a reframed AES guide the extension and research institutions to provide mechanisms that determine change for development and growth of BSMF?

12. How do we, through the AES, create strategic responses to improve agriculture and extension educational practices?

13. As a facilitator, critically reflect on core values and academic curricula that have traditionally shaped agricultural and extension education through AES?

14. How best can these be reconfigured in order to include the needs of AES?

15. What do you identify as the key areas of concern that need to be addressed for reframing the AES for the purposes of BSMF development and growth into the commercial sector?
16. What is the importance of BSMF within the agricultural sector and should these farmers transition into the commercial sector (give reasoning)?
17. How would you improve the effectiveness of the AES in an environment of increasing economic, social and ecological risk for the purpose of sustainability?
18. How best can agricultural institutions working with appropriate government agencies and NGOs be reframed through the use of AES be developed in order to address the needs of BSMF?

Signature (researcher) : Lulu Maqwelane

Signature (supervisor): 

Date: 16 January 2019 Place: 20 January 2019