



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

**Empowerment of black farmers and
effectiveness
of empowerment initiatives in the
South African potato industry**

by
Nonie Moliehi Mokose

Submitted in partial fulfilment of the requirements for the degree
M Agric (Rural Development)

in the

Department of Agricultural Economics, Extension and Rural Development
Faculty of Natural and Agricultural Sciences
University of Pretoria
South Africa

Supervisor: Professor Johann F. Kirsten
Co-Supervisor: Professor Charles Machethe

2018

DECLARATION

I, Nonie Moliehi Mokose, student number 15403221, hereby declare that this dissertation, “*Empowerment of black farmers and effectiveness of empowerment initiatives in the South African potato industry*”, submitted in accordance with the requirements for the Magister Agric (Rural Development) degree at the University of Pretoria, is my own original work and has not previously been submitted to any other institution of higher learning. All sources cited or quoted in this research paper are indicated and acknowledged through a comprehensive list of references.

.....

Nonie Moliehi Mokose

11 July 2018

DEDICATION

This dissertation is dedicated to the memory of my father, Dr Cohen Ntlenyana Mokose.

Further, I dedicate this dissertation to the black potato farmers whose challenges persist but who strive to overcome them to contribute to this important industry. You have all played a part in my scholarly education – the greatest gift anyone could ask for.

ACKNOWLEDGEMENTS

In reaching this milestone, I would like to express my sincere gratitude to a number of people: I would first like to thank my supervisor, Professor Johann Kirsten, for his encouragement and support throughout my studies and for instilling in me the importance of adopting an academic approach to addressing empowerment in the South African potato industry. In particular, he provided constructive criticism on the content and technical aspects of my dissertation which would have been so much the poorer without his guidance. I will forever be grateful for his dedication, insights and enthusiasm, which gave me the courage and inspiration to complete this study. My appreciation also goes to Professor Charles Machethe for the keen interest that he took in the study and for throwing valuable light on many aspects of the research.

I acknowledge with gratitude the National Research Foundation (NRF) for funding my master's studies and the National Agricultural Marketing Council (NAMC) for providing the financial assistance that enabled me to conduct the fieldwork.

I also wish to acknowledge and thank Professor Victor Mmbengwa (NAMC) and Mashudu Daniel Rambau (NAMC). Furthermore, I bestow my gratitude on the team of enumerators for their dedication and commitment, as well as information specialist Sam Mudau. In addition, I wish to thank Meghan Ellis of the LIMA Rural Development Foundation, all the farmers in the different provinces who participated in the study and allowed me to give them a voice, representatives from the various Departments of Agriculture and the numerous potato industry role players – all of whom gave so generously of their time and were so keen to see me succeed. Lastly, I would like to thank the cartographer, Ingrid Booyens, from the Geography Department

Acknowledgements

at the University of Pretoria for the maps, and Ali Parry for her assistance and extra effort with editing the dissertation.

Finally, I would also like to take the opportunity to thank my family for their encouragement and support during the time it took me to complete this study. The encouragement and love of my mother, Seleke Ngakane Mokose, and my partner, Professor Sifiso Ndlovu, not only instilled within me a passion for excellence, but gave me the strength and motivation that I needed to complete this project.

ABSTRACT

Empowerment of Black Farmers and Effectiveness of Empowerment Initiatives in the South African Potato Industry

By

Nonie Moliehi Mokose

Degree: MAgric (Rural Development)
Department: Agricultural Economics, Extension and Rural Development
Supervisor: Professor JF Kirsten
Co-Supervisor: Professor Charles Machethe

One of the biggest challenges gripping the South African economy and society as a whole is the dualism that has arisen as a result of previous regimes' disempowering legislation and attitudes towards black people. This is particularly evident in the agricultural sector which is characterised, on the one hand, by large commercial farms (mainly in white hands) and, on the other, by much smaller subsistence farms (mainly in black hands) which lack the physical and financial resources as well as the expertise to develop profitable and sustainable operations.

The potato industry in South Africa is a notable casualty of this historically induced dualism and today lags behind several other industries in the agricultural sector in terms of empowerment-related activities and results. What has exacerbated the situation is that although a great deal of money has been invested since 1994 in empowerment initiatives in this industry through the collection and allocation of statutory levies, the benefits of such levies (a proportion of which must be channelled into empowerment activities) are reserved for the members of Potatoes South Africa (PSA), the non-profit commodity organisation representing the potato industry. However, of the estimated 2000 to 3000 black potato farmers in South Africa, just over 30 are members of PSA and are therefore entitled to PSA's development programmes and service offerings. The others have not been given serious consideration by institutional role players and have been effectively side-lined at the policy-making level. Nevertheless, judging from

rising sales of potato seeds to black farmers, the numbers of black potato farmers continue to grow. This signals an underlying drive and momentum that needs to be better understood and harnessed.

The purpose of this study was to examine the state of empowerment among black potato farmers and the effectiveness (or otherwise) of empowerment initiatives in the South African potato industry. The study used a cross-sectional and mixed-method research design which involved the use of a survey questionnaire (to which 132 farmers responded) as well as qualitative and quantitative research approaches. The data collected were analysed with a view to arriving at descriptive and inferential research outputs.

Among the key findings was that empowerment is narrowly defined and applied in South Africa, with the focus on economic empowerment only (largely through the national B-BBEE strategy). Yet such an approach is inherently limiting, since the state of disempowerment of many black smallholder farmers has complex origins which call for well-rounded solutions. In particular, the exclusion of non-PSA members from PSA's empowerment support services serves to perpetuate most black farmers' under-performance and economic marginalisation. Though many farmers are valiantly trying to go it alone, potato farming is a complex undertaking which requires conducive climatic conditions and specialised equipment and skills. Without technical support in some form or another, access to finance for operational and/or expansion purposes and access to viable markets, the chances of black smallholder potato farmers improving their livelihoods are very poor.

The question of land tenure lies at the heart of the problems experienced by black smallholder potato farmers as most operate under a permission-to-occupy (PTO) arrangement in which a tribal authority allocates land for use by black farmers but the latter do not own the land. In the absence of collateral, many farmers do not qualify for loans or credit facilities from formal financial institutions. They therefore get trapped in a cycle of under-investment and under-performance. However, over and above finance, the development of skills and capacity are also crucial elements in the effective farming mix. These, however, are in short supply among the black smallholder potato farming community.

Experiences and lessons to date make a strong case for black smallholder potato farmers to be given sharper attention at the policy-making level, since potatoes, being a staple food in South Africa, should be making a significant contribution to food security in vulnerable or neglected communities. Among the recommendations made is that a conceptual framework for the empowerment of black potato farmers should be developed and endorsed by all role players, with the primary focus areas being transformation, capacity-building and entrepreneurship. Entrepreneurship is an essential ingredient in becoming and remaining competitive in a constantly changing world. It also creates more and better job opportunities and can be a magnet for investment and trade – areas in which South African agriculture is currently deficient.

TABLE OF CONTENTS

Declaration	I
Dedication	II
Acknowledgements	III
Abstract	V
List of Figures	XII
List of Tables	XIII
Acronyms and Abbreviations	XIV
List of Footnotes	XVI
CHAPTER 1: INTRODUCTION	1
1.1 Background to the Study	1
1.2 Contextualisation of the Study	2
1.2.1 Historical disempowerment in the potato industry – the Bethal experience	2
1.2.2 Post-apartheid challenges	3
1.3 Theoretical Background to the Study	4
1.3.1 Resource-based theory	4
1.3.2 Transformation and black empowerment theories	5
1.4 Problem Statement	5
1.4.1 Context of the problem	6
1.5 Research Purpose and Objectives of the Study	10
1.6 Conceptual/Theoretical Definition of Terms	10
1.6.1 Dualism	10
1.6.2 Affirmative action	10
1.6.3 Empowerment	11
1.6.4 Transformation	11
1.6.5 Broad-Based Black Economic Empowerment (B-BBEE)	11
1.7 Contribution of the Study	11
1.7.1 Practical significance	11
1.7.2 Theoretical significance	12
1.8 Organisation of the Study	12

CHAPTER 2: THE SOUTH AFRICAN POTATO INDUSTRY	14
2.1 Introduction	14
2.2 Importance of the South African Potato Industry	14
2.3 The Potato Industry in Perspective	15
2.4 Low Numbers of Black Potato Farmers in PSA’s Membership	16
2.5 South African Potato Production	16
2.6 Supply-Side and Demand-Side Considerations	18
2.7 Transaction Costs	19
2.8 Marketing Channels 14	20
2.9 Statutory Funding Of Empowerment Initiatives	21
2.10 Conclusion	22
CHAPTER 3: LITERATURE REVIEW	24
3.1 Introduction	24
3.2 The Real Meaning of “Empowerment”	24
3.3 Power Theories	26
3.4 Defining Empowerment in the Context of the Study	29
3.5 Operationalising Empowerment	31
3.6 Relevant Definitions in the South African Context	35
3.7 Conceptual Framework for Measuring Empowerment	36
3.8 Empowerment in the South African Context	38
3.8.1 Transformation	39
3.8.2 Broad-Based Black Economic Empowerment (B-BBEE)	41
3.8.3 AgriBEE Sector Codes of Good Practice	41
3.8.4 Farmer Support Programmes (FSPs) as a means of empowerment	42
3.9 Empowerment Trends in the Potato Industry	47
3.10 The Marketing Act and the Institutional Environment	48
3.11 Deregulation of Marketing Control Boards	49
3.12 Conversion of Control Boards to Trusts	50
3.13 Marketing of Agricultural Products (Map) Amendment Act	53
3.14 Public Goods for Private Use	54
3.15 Conclusion	55

CHAPTER 4: RESEARCH METHODS AND PROCEDURES	57
4.1 Introduction	57
4.2 Study Locations	58
4.3 Research Design	59
4.3.1 Research philosophy	59
4.3.2 Research strategy	59
4.3.3 Population and sample size	60
4.3.4 Research instrument	63
4.3.5 Pilot study	65
4.3.6 Questionnaire design	65
4.4 Data Collection	65
4.4.1 Editing of the data	65
4.5 Data Analysis and Interpretation	66
4.5.1 Descriptive analysis	66
4.5.2 Inferential analysis	67
4.6 Validity of Research	67
4.6.1 External validity	67
4.6.2 Internal validity	67
4.7 Limitations of the Study	68
4.8 Ethical Considerations	68
4.9 Summary	68
CHAPTER 5: DATA ANALYSIS, RESULTS AND DISCUSSIONS	69
5.1 Introduction	69
5.2 Descriptive Analysis	69
5.3 Inferential Analysis	71
5.3.1 Empowerment status of black smallholder potato farmers	71
5.3.2 Commodity-driven transformation among black smallholder potato farmers	75
5.3.3 Investment in transformation pillars for individual smallholder potato farmers and different industries	81
5.3.4 Status of enterprise development among black smallholder potato farmers	85

5.3.5	Factors affecting investment in transformation and research in the smallholder potato farming community	87
5.4	Summary of the Findings	89
CHAPTER 6: ANALYSIS AND DISCUSSION OF THE EMPOWERMENT STATUS OF BLACK SMALLHOLDER POTATO FARMERS APPLYING WEAI AND 5DE		
		91
6.1	Introduction	91
6.2	Presentation and Discussion on the WEAI And 5DE Results	91
6.2.1	Production domain	93
6.2.2	Resources domain	100
6.2.3	Income domain	103
6.2.4	Leadership domain	107
6.3	Summary of the Findings	111
CHAPTER 7: CONCLUSION AND RECOMMENDATIONS		113
7.1	Introduction	113
7.2	Key Findings from the Study	114
7.2.1	Empowerment is narrowly defined and applied by institutional actors in the potato industry, limiting its impact	114
7.2.2	Few black smallholder potato farmers benefit from PSA empowerment programmes	115
7.2.3	Sustainable potato farming is complex, requiring strong technical and management skills	116
7.2.4	Land, finance and skills challenges lie at the root of limited empowerment among black smallholder potato farmers	117
7.3	Conclusions	119
7.4	Recommendations	121
7.5	Suggestions for further Research	125
References		127
Appendix A		141
Appendix B		144
Appendix C		145
Appendix D		149
Appendix E		150

LIST OF FIGURES

Figure 3.1:	Relationship between outcomes and determinants of empowerment	30
Figure 3.2:	A model of operationalised empowerment	32
Figure 3.3:	The Power Cube levels, spaces and forms of power	35
Figure 3.4:	Empowerment conceptual framework	38
Figure 4.1:	Methodological choices or strategies	60
Figure 4.2:	Sampling methods	62
Figure 5.1:	Support for smallholder potato farmers	76
Figure 5.2:	Investment in transformation	80
Figure 5.3:	Rankings according to expenditure on employment equity in the agricultural sector	82
Figure 5.4:	Actual expenditure on skills development for smallholder farmers	83
Figure 5.5:	Rankings according to expenditure on skills development in different industries	85
Figure 5.6:	Expenditure on enterprise development for smallholder potato farmers	86
Figure 5.7:	Rankings according to expenditure on enterprise development in different industries	87
Figure 6.1:	Decisions on input use	93
Figure 6.2:	Potato yields (t/ha)	94
Figure: 6.3:	Participant classification by land ownership type	96
Figure 6.4:	Total land size availability	98
Figure 6.5:	Land assigned to potato production	99
Figure 6.6:	Pack house at Swayimane, KwaZulu-Natal	101
Figure 6.7:	An example of neglected state-funded tractors in Lusikisiki, Eastern Cape	101
Figure 6.8:	Information extension support and frequency	102
Figure 6.9:	Attained income from farming, 2015	104
Figure 6.10:	Income vs. land size	105
Figure 6.11:	Decisions on revenue use	107
Figure 6.12:	Membership of organisations (indicating social capital)	108
Figure 6.13:	Perceptions of leadership effectiveness	109
Figure 6.14:	Capacity to influence change by province	110
Figure 7.1:	Conceptual framework for empowerment of black potato farmers	124
Figure E1:	Map of Mpumalanga province study area	151
Figure E2:	Map of KwaZulu Natal study area	153
Figure E3:	Map of Eastern Cape study area	154
Figure E4:	Map of Free State study area	156
Figure E5:	Map of Limpopo study area	160

LIST OF TABLES

Table 2.1:	PSA statutory levy income and empowerment funding, 2004 to 2015	21
Table 3.1:	Empowerment structures within the South African wine industry	45
Table 4.1:	Sampling ratios for study areas	61
Table 5.1:	Demographic representation of black smallholder potato farmers	69
Table 5.2:	Participation of black smallholder potato farmers	72
Table 5.3:	Average income generated by black smallholder potato farmers	75
Table 5.4:	Percentage of land ownership types among black smallholder potato farmers	77
Table 5.5:	Quality of financial management in potato farming enterprises	78
Table 5.6:	Factors affecting expenditure on transformation and research for smallholder potato farmers	88
Table 6.1:	WEAI and 5DE methodology summary: results by province	92

ACRONYMS AND ABBREVIATIONS

%	Percent
5DE	Five Dimensions of Empowerment
AEASA	Agricultural Economics Association of South Africa
Agri-BEE Act	Agricultural Broad-Based Black Economic Empowerment Act
ANC	African National Congress
ARC-VOPI	Agricultural Research Council – Vegetable and Ornamental Plants Institute
B-BBEE	Broad-Based Black Economic Empowerment
BEE	Black Economic Empowerment
DAFF	Department of Agriculture, Forestry and Fisheries
DRDLR	Department of Rural Development and Land Reform
DTI	Department of Trade and Industry
EC	Eastern Cape Province
ED	Enterprise Development
FAO	Food and Agricultural Organisation of the United Nations
FAOSTAT	Food and Agricultural Organisation Statistics
FPM	Fresh Produce Market
FS	Free State Province
Govt	Government
GPI	Gender Parity Index
GrainSA	Grain South Africa
Ha	Hectare
HDI	Historically Disadvantaged Individuals
HIV	Human Immunodeficiency Virus
IFPRI	International Food Policy Research Institute
ITAC	International Trade Administration Commission
KZN	KwaZulu-Natal Province
LDA	Limpopo Department of Agriculture
LIM	Limpopo Province

LIMA	LIMA Rural Development Foundation
MAP Act	Marketing of Agricultural Products Act
MP	Mpumalanga Province
n	Frequency
NAMC	National Agricultural Marketing Council
n.d.	No date
NGO	Non-Governmental Organisation
NTK	Northern Transvaal Kooperasie
NWK	North West Kooperasie
OPHI	Oxford Poverty and Human Development Initiative
PDI	Previously Disadvantaged Individual
PIDT	Potato Industry Development Trust
PSA	Potatoes South Africa
PTO	Permission to Occupy
R	Rand
ROSCA	Rotating Savings and Credit Association or Stokvel
SD	Standard Deviation
SET	Supporting Economic Transformation
SMAT	Smallholder Market Access Tracker
SME	Small and Medium-Sized Enterprise
STATA	STATA Statistical Software
StatsSA	Statistics South Africa
t	Ton
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VAT	Value-Added Tax
VKB	Vrystaat Kooperasie Beperk
WEAI	Women's Empowerment in Agriculture Index

LIST OF FOOTNOTES

- 1 Discussion with Mr. Gerhard Posthumus of Wesgrow at Christiana, Western Free State, on 5 July, 2016.
- 2 Information received from Mr. Rudolf Badenhorst, Marketing Manager PSA, dated 15 April, 2016.
- 3 PSA, Van Zyl, telephonic conversation January 2017.
- 4 Bakkie refers to a van, used by informal traders in South Africa to collect and transport produce directly off farm for resale into informal and other markets.
- 5 ROSCAS/ *stokvel*: a rotating savings club forming a type of informal finance, also referred to as a stokvel in South Africa.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

A key challenge confronting economic policymakers in South Africa and society as a whole is how to address the injustices and inequities that have prevailed against the black majority, arising from policies implemented in the past (Iheduru, 2004). The need is particularly pressing in the agricultural sphere. There is ample literature exposing the dualism and inequality of South African agriculture, stemming from the historical legacy of the previous dispensation implementing policies and acting in ways that promoted racial segregation and discrimination (Vink & Kirsten, 2003; Aliber & Hart, 2009).

The effect of the government's apartheid policies was the institutionalisation of a system of racial capital, which empowered whites while effectively and systematically suppressing the entrepreneurial abilities of black farmers through their exclusion from commercial and free landholding. This led to their disempowerment (Bundy, 1979; Vink & Van Zyl, 1998). Vink and Van Zyl draw specific attention to the inherent historical abilities of black or African farmers to produce agricultural surpluses on a regular basis.

The apartheid government introduced deliberate affirmative empowerment policies that benefited white South Africans, with white agriculture being established and supported and allowed to grow through numerous pieces of legislation and other measures. These included black farmers and communities being dispossessed of their land and the corresponding increase of landholding by white farmers, which boosted the latter's commercial shareholding and activities. Specific examples of support given to white farmers included the grant of more than R3 billion in the name of drought relief, the payment of R640 million to cooperatives against accrued farmer debts, and the operation of the land conversion scheme from October 1987 to May 1993.

The Land Act of 1913 was one of the pieces of legislation that in many respects favoured white farmers. Other legislation that affirmed the status of these farmers through the provision of grants, such as the Marketing of Agricultural Products (MAP) Act of 1937, contributed to the creation of a white commercial agricultural sector, at the expense and to the detriment of Africans. Appendix A details some of the legislation that had the effect of affirming whites and/or dispossessing black individuals and communities.

1.2 CONTEXTUALISATION OF THE STUDY

One cannot isolate the disempowerment of black potato farmers, which is the focus of this study, from the effects of apartheid and colonialism. Like other black farmers in South Africa, potato farmers experienced the brutal impact of apartheid in their torrid working conditions and daily lives.

Apartheid was a political system “predicated on a racially exclusive institutional framework”, eroding social, economic and political rights and freedom of the majority black population of South Africa (Fedderke *et al.*, 2001). The legacy left by the system of apartheid was the legal and institutionalised disenfranchisement of black South Africans through their exclusion from any political and economic participation. This manifested as discrimination in terms of skills development, employment opportunities, access to and ownership of property, and access to infrastructure and services. Notably, social security systems were for the exclusive benefit of the white population.

1.2.1 Historical disempowerment in the potato industry – the Bethal experience

The Bethal experience, as described by Muller (2011), highlights the treatment of blacks in the potato industry and their systematic disempowerment. The story was not unique to Bethal and the potato industry, but it typifies the farming realities of the Eastern Transvaal (now Mpumalanga province) in the 1950s. One of the negative effects of apartheid policies was the regulation of the labour supply in a farming environment that, according to Muller (2011), had become increasingly capitalist in outlook.

The Bethal area was characterised by a high demand for labour, illegal and coercive recruitment practices, child labour, the extensive use of convict labour (with prison farms being established by farmers from which they sourced cheap labour) and prison-like farm living conditions (Muller, 2011). The labour abuses at the time – which took place under the watch of the Minister of Bantu Administration and Development, M.D.C. de Wet – were validated by labourers, Jacob Makfela and Samuel Sebhedi, who recounted the treatment they received on Mr H. Bledden’s potato farm (Muller, 2011):

“... and the potatoes we are reaping we just take them out with our fingers and they don’t take them out with a plough then when working we are thrashed ...”

The Potato Board (a commodity organisation) instituted a “stabilisation scheme” whereby white commercial farmers were granted a subsidy for selling third-grade potatoes in black areas and reserves, thereby alleviating the problem of the main consumer market being awash with high volumes of third-grade potatoes. The resulting potato boycott directly impacted this government strategy, with the Board later encouraging farmers to manage their resultant glut by using these third-grade potatoes as animal feed (Muller, 2011). The potato effectively became the symbol of resistance against the oppression that blacks suffered, uniting urban and rural blacks in a common cause.

1.2.2 Post-apartheid challenges

With the ending of apartheid and the democratisation of South Africa in 1994, the country was confronted by the reality of having to create a stable society for the benefit of all South Africans. This led to the democratically elected African National Congress (ANC) government formulating and implementing policies that focused on the ideals of preserving human dignity, excluding racialism and sexism, and ensuring the universal right to a free vote and prosperity for all citizens – all of which are enshrined in the South African Constitution. Development therefore became the fundamental focus of the new government.

Gumede (2012) posits that the public policies and legislative interventions implemented by the government since 1994 can be described as specific efforts to broaden the ideal of liberty

to include social justice, which relates to human development and socio-economic justice (Gumede, 2012). In the agricultural context, such efforts have included the adoption of various pieces of legislation designed to promote agrarian reform and correct the injustices of past legislation, notably the disempowering legislation outlined in Appendix A which has since been overturned in amending legislation such as the Water Act and Land Reform Act (Sandry & Vink, 2007).

1.3 THEORETICAL BACKGROUND TO THE STUDY

This study was guided by two sets of theories (i.e. the resource-based theory and transformational/black empowerment theories). Although these theories were not designed specifically for a study of this nature, the context of and variables contained in the theories are relevant to the study and make it possible to measure the empowerment status of the black smallholder potato farming sector in South Africa.

1.3.1 Resource-based theory

It is through no coincidence that smallholder farmers in South Africa are associated with resource poverty (Mmbengwa, 2009) and are often referred to as resource poor. Black potato farmers are no exception. In fact, the problem is amplified in the case of South African black potato farmers because of the asset specificity of potato production and the associated input costs. Smallholder farmers lack the essential assets and requisite capabilities to function effectively and efficiently in commercial potato production. Therefore, the relevance of the resource-based theory is questionable. Wickham (2004) reflects on the importance of resources and resource allocation tactics in facilitating microenterprise growth. Scholars have primarily examined the resource-based theory in developed economies (Webb *et al.*, 2013).

The way in which the internal characteristics of the smallholder farming sector determine the sector's performance, as per the resource-based theory, is the subject of ongoing research. However, the concept of what a resource is in the context of smallholder farming is not in line with the resource-based theory. The smallholder farming sector in South Africa often receives inputs and infrastructure from government in the hopes that these resources will assist them in improving their performance. The resource-based theory suggests that resources should be

viewed collectively as services that support production (resource bundles). The theory also asserts that firms have different resources available to them (resource heterogeneity). This is true in the case of smallholder farming.

1.3.2 Transformation and black empowerment theories

The focus of several empowerment initiatives in South Africa has been on black economic empowerment (BEE) and have been introduced through the application of the national strategy of Broad-Based Black Economic Empowerment (B-BBEE) (DTI, 2004a, 2004b, 2012, 2017), as shown in Appendix B. “BEE aims to undo the economic damage of apartheid thus facilitating equitable economic participation by all” (Van Zyl & Kirsten, 1997). Yet the complexities and diverse impacts of empowerment cannot be adequately addressed by focusing on only one dimension. B-BBEE is based on a single dimension of empowerment, i.e. economic empowerment, and does not address the multi-dimensional character of empowerment (McEwan & Bek, 2006). An example of a multi-dimensional approach is the Women’s Empowerment in Agriculture Index (WEAI) methodology, which is reviewed in the literature and was applied in this study.

As mentioned above, BEE in South Africa is operationalised through the application of B-BBEE codes. Compliance with the B-BBEE codes is voluntary and encouraged, and is not mandated through legislation. This has been criticised as rendering BEE mechanistic, rather than transformative, which in turn has produced limited outcomes (Herman, 2013). Southall (2007) argues that this limited impact is merely a “front for maintaining the historical status quo”, a view also put forward by McEwan & Bek (2006).

1.4 PROBLEM STATEMENT

Transformation and the fostering of inclusivity in South African agriculture are crucial for the unity and prosperity of the sector (Department of Agriculture, Forestry and Fisheries/DAFF, 2011). Currently, the agricultural sector is experiencing transformational challenges, with the rate of change varying across different industries. To accelerate the transformation process, the government has been sponsoring the sector by allocating different statutory levy amounts to different industries. The National Agricultural Marketing Council (NAMC) has been mandated

to oversee transformation-linked changes and the impact of investment on transformation through its statutory levy and trust division.

There has been no (or at best little) research on the empowerment of black potato farmers in South Africa. This has contributed to a lack of information about the state of transformation and empowerment, the impact of investment on transformation, and the factors that could influence transformational progress in the sector. Yet the sector makes a substantial contribution to South African agriculture and the economy as a whole since potatoes are a staple food. While statutory measures in respect of potato farming have been in place since 2004, this study considers data from 2012 in order to make useful comparisons with other industries in the agricultural sector.

1.4.1 Context of the problem

Historically, black farming in South Africa was undermined by the systematic disempowerment of black farmers, while the white farming community was empowered through legislation that gave them access to subsidies and other forms of support. This gave rise to the (often-cited) highly dualistic agricultural sector in the country, with black farmers mainly producing on small pieces of land with insufficient infrastructure and inputs due to a lack of institutional support. In contrast, white commercial farmers, who benefited from various forms of subsidisation and affirming legislation, were able to expand their farming units and enhance their commercial productivity. Sandry and Vink (2007) describe South African (white) commercial farmers as technologically advanced, particularly in the areas of mechanisation, crop technology and agrochemicals, for which they receive government support. Black farmers, in turn, enjoy little or no support. Not being able to benefit from institutional support or investment has resulted in their marginalisation. Given this background it is not surprising that the South African agricultural sector (and indeed the economy as a whole) has developed a dual structure.

The potato industry is a prime example of how historical imbalances are today plaguing the economy. The low visibility of black farmers who are able to participate in and make a meaningful contribution to the economy, while also sharing in the country's economic gains, is painfully evident in the potato industry. The potato industry is characterised by a lack of integration of the black majority into the agricultural economy. According to the commodity

organisation, Potatoes South Africa (PSA) (previously the Potato Board), this is highlighted in the relatively low numbers of black farmers and hectares (ha) under their control, and the limited volumes produced and accounted for. However, PSA, which is mandated to represent the potato industry in South Africa, admits to having limited information on black potato farmers, particularly those who are not their members (PSA, 2015b).

Black South African farmers are disabled when it comes to access to large-scale resources and markets. Black farmers started their farming operations when they lacked basic financial resources, property and human capital. Because of this, they have tended to run small-scale operations, but they nevertheless have an interest in growing potatoes and other crops on a commercial scale (NAMC, 2012a). One of the most significant challenges facing agriculture in South Africa, and specifically the potato industry, is how to quicken the pace at which viable, economically sustainable and competitive, black-owned and -operated agricultural enterprises are developed and integrated into the sector, thereby contributing to economic growth (NAMC, 2012a). Despite evident growth trends in the potato industry, as pointed out by Yzel (PSA, 2015a), there is a perception (*Ibid.*) that black farmer participation remains insignificant and that dominant white farmers are responsible for delivering value and stimulating growth.

Although PSA has, since 2004, been investing in the development and empowerment of black farmers in the industry, the extent to which this has impacted their visibility and inclusion in the industry appears to have been insignificant. This finding, however, has not been critically evaluated. Specifically, no attempts have been made to determine the impact of the empowerment programmes initiated by PSA that have targeted black farmers. According to McEwan and Bek (2006), the diversity of definitions (see Appendix C) and interpretations of, and implementation strategies surrounding, empowerment exacerbate the problem. This points to a research gap that needs to be addressed.

McEwan and Bek further argue that confining the concept of empowerment to economic empowerment serves to reinforce the apartheid era's structures of domination. This legitimises the suppression of the black majority and fails to transform (and therefore leaves intact) the power relations created by the apartheid system – the antithesis of the intended outcomes

of empowerment strategies. This has given rise to a trend, observed in some empowerment transactions in the agriculture sector (including in the potato industry), towards the introduction of employee equity participation schemes. Despite the incorporation of black equity into these types of partnerships, the fundamental power dynamics still prevail.

While PSA acknowledges the presence of small black potato producers, it does not have much validated information on or insights into the sector. This highlights another research gap. Given the general dearth of empirical evidence relating to smallholder potato growers, there has been a growing need for a benchmark study that thoroughly investigates their needs and proposes appropriate interventions that will positively impact their commercial livelihoods. This is consistent with the view expressed by Aliber *et al.* (2009) and Aliber *et al.* (2011) that existing surveys and statistics have not captured the nature and extent of small-scale and subsistence agricultural production, leading to a lack of reliable information (Aliber *et al.*, 2009; Aliber *et al.*, 2011). The current research study was conducted for the purpose of creating an industry profile of black potato producers (large, small and subsistence) in the provinces of Mpumalanga, KwaZulu-Natal, Eastern Cape, Free State and Limpopo – all of which have been identified by Statistics South Africa (StatsSA) as having a strong agricultural presence (Stats SA, 2017).

The potato industry has to date not embarked on a comprehensive study to review the empowerment initiatives impacting the industry or their effectiveness in integrating black farmers through an Enterprise Development (ED) Programme into the commercial farming sector and mainstream economy. This is a weighty matter which has social, political and economic implications. Furthermore, the empowerment status of black potato farmers is unknown within an industry context.

Of the 566 commercial potato producers registered with PSA (PSA, 2017), the organisation supports fewer than 40 black farmers through an ED Programme who together produce less than 180 ha of potatoes, with each farm receiving seed support of between 5 ha and 8 ha for potato production (PSA, 2016b). This figure does not reflect producers who are not participating in the PSA ED Programme as data in this regard are not available. The fewer than 40 named

farmers represent only those that PSA has engaged with through its empowerment programmes. However, the reality – which is supported by rising sales of seed potatoes to black farmers¹ (Wesgrow, 2013) – is that a higher number of black farmers are producing potatoes. What is not known is how many there are, their locations, farming systems, empowerment status and whether they require support, and the types of support they might need. They might be empowered and commercially integrated into the industry, but PSA is unaware of the specific details.

Although statutory levies fund the industry body, PSA, ostensibly for the public good (Ntsebeza & Maenetje, 2009), an arrangement that was brought into effect through the passing of the Marketing of Agricultural Products Act No. 47 of 1996, the application of these levies is only (rightly or wrongly) for the direct benefit of registered members of PSA (i.e. for private use). As a result, most black farmers do not have access to the programmes funded through the levy system, which PSA – acting as the approved service provider – manages and coordinates on behalf of the Potato Industry Development Trust (PIDT) (PSA, 2015d). Several commercial farmers and enterprises in the industry have, though, embarked on independent empowerment initiatives aimed at black potato producers, which include empowering black employees through a variety of equity schemes and other forms of support.

There is very low visibility of black potato producers in the industry, despite evident commitment over the past 24 years to empowerment through the Agricultural Broad-Based Black Economic Empowerment (Agri-BEE) scheme and other forms of legislation (DTI, 2004a, 2004b, 2017). This has created the perception of limited inclusion of black farmers (including those in the potato industry) and slow progress towards their empowerment (NAMC, 2012a). This perception of the potato industry needs validation, though, which was one of the triggers for this study.

1 Discussion with Mr Gerhard Posthumus of Wesgrow in Christiana, western Free State, on 5 July 2016.

1.5 RESEARCH PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study was to examine the state of empowerment of black potato farmers and the effectiveness of empowerment initiatives in the South African potato industry. In addressing this purpose, the study identified the following research objectives:

- i. To determine the empowerment status of smallholder black potato farmers;
- ii. To assess the status of commodity-driven transformation among black smallholder potato farmers;
- iii. To assess the commodity organisation's (PSA's) investment in transformation pillars for smallholder potato farmers individually and at industry level;
- iv. To determine the status of enterprise development among black smallholder potato farmers;
- v. To establish the factors affecting investment in transformation and research in the black smallholder potato farming community.

1.6 CONCEPTUAL/THEORETICAL DEFINITION OF TERMS

The study used the following theoretical definitions to articulate and achieve its aims and objectives:

1.6.1 Dualism

South African agriculture is dualistic in nature, characterised by a commercial sector that is largely white, and a subsistent smallholder sector that is largely black. Pienaar (2013), quoting Vink and Van Zyl (1998), explains how a dualistic structure was created through the interplay of land, labour and capital markets over time, which in turn were influenced by public policies introduced by the apartheid regime.

1.6.2 Affirmative action

Affirmative action refers to the democratisation of the economy. According to Van Zyl and Kirsten (1997), terms such as affirmative action, black economic empowerment, black advancement, integration and inclusivity are applied interchangeably.

1.6.3 Empowerment

Empowerment is a complex and multi-dimensional concept centred on the transformation of power relations between groups of people or entities.

1.6.4 Transformation

The term transformation is applied in the context of the South African economy and refers to activities aimed at redressing the negative effects of disempowerment which has been inflicted on the black population.

1.6.5 Broad-Based Black Economic Empowerment (B-BBEE)

Although it is the foundation of many government and private sector strategies in South Africa, B-BBEE is based on only a single dimension of empowerment, i.e. economic empowerment, and does not address the multi-dimensional character of empowerment (McEwan & Bek, 2006).

1.7 CONTRIBUTION OF THE STUDY

The study contributes to the field of research by providing insights into how to bring about the more efficient and effective assessment and measurement of the empowerment status of black potato farmers – a hitherto neglected area. The study's contribution has both practical and theoretical significance.

1.7.1 Practical significance

The study provides a valuable foundation for the formulation of policies aimed at increasing black farmers' participation in and contribution towards the potato industry. Such a vision can be achieved if empowerment outcomes are enhanced, evidenced in more sustainable production and market access and increased volumes of potatoes being produced by black farmers. These activities can be monitored, measured and evaluated over time.

The study offers practical insights into how to enhance empowerment initiatives and also highlights the gaps that exist in terms of black farmers' participation in the industry. Furthermore, by creating an empirically derived and validated database of smallholder potato farmers, the study should help to mobilise support for (and thus the empowerment of) excluded

farmers, which will enable them to progress to commercial production levels. Not only will this positively impact the livelihoods of black potato farmers, it will add to food security generally. According to Machethe (2004), De Janvry and Sadoulet (2009) and Irwin *et al.* (2010), agriculture has a vital role to play in developing the rural economy and in addressing poverty. According to Jooste, the potato industry is particularly important given its contribution to horticulture in South Africa and its significant direct and multiplier effects in the area of job creation (PSA, 2015b).

1.7.2 Theoretical significance

The theoretical significance of the study emanates from the fact that it lends clarity to the multiple and diverse definitions and interpretations of empowerment, as applied to the agricultural sector, while also introducing a measurable definition of the term which can be monitored over time. Furthermore, the structured, conceptual approach adopted in the study assists the analysis of the fieldwork findings and facilitates easier comparability across different industries in the agricultural sector.

1.8 ORGANISATION OF THE STUDY

The study comprised a number of stages, which have been systematically set out in this dissertation. The general approach adopted was to work from the general to the specific, with the early chapters providing the rationale for and context of the study and the later chapters providing details on how the descriptive and quantitative analyses were carried out as well as the key findings and conclusions.

More specifically, the introductory chapter, while providing the background to the study, looks at the purpose and objectives of the research, some key definitions and the theoretical and practical value of a study of this nature. The next two chapters examine the historical and current dynamics in the potato industry in South Africa, with particular reference to the challenges faced by black smallholder farmers and the evident inadequacy of empowerment initiatives to date.

The remaining chapters provide the practical content of the study, including the empirical analysis, covering aspects such as the methodology used in conducting the survey among black smallholder farmers, the key findings from the investigation, what the results say about the state of empowerment among black potato farmers and the overall implications from a policy perspective both in the short and longer terms.

CHAPTER 2

THE SOUTH AFRICAN POTATO INDUSTRY

2.1 INTRODUCTION

This chapter provides an overview of the South African potato industry and describes the relative importance of potatoes to the agricultural sector, both in the economic value that they deliver and in the contribution they make to job creation. The chapter then discusses potato production, focusing mainly on the commercial sector since the potato industry largely represents and supports commercial producers across 16 different regions. As established earlier, there is little validated information on and insights into black potato farmers who are not PSA members. It is this information gap that the study seeks to fill.

2.2 IMPORTANCE OF THE SOUTH AFRICAN POTATO INDUSTRY

Potatoes (*Solanum tuberosum L.*) are described as the fourth most important food crop globally (Food and Agricultural Organisation Statistics/FAOSTAT, 2016), with Egypt producing the largest volumes on the African continent, followed by Algeria, Malawi, South Africa and Rwanda (*Ibid*). According to Devaux *et al.* (2014), more than half the world's potato production takes place in developing countries.

South Africa is described by Hanekom *et al.* (2010) as having a well-developed and self-sufficient fresh produce and processing sector, with potatoes representing the single most important horticultural crop. PSA see potatoes as being a serious role player in the South African agricultural economy. The importance of the potato industry is reflected in the value of its gross annual production, accounting for more than 3% of all agricultural commodities and 58% of vegetable production. In the 2015/2016 financial year, the potato industry yielded an impressive gross farm-gate value of R6.61 billion (PSA, 2017; DAFF, 2016).

According to known statistics, commercial potato production in South Africa accounts for the smallest production area on the African continent, with between 50 000 ha and 54 000 ha of potatoes produced annually by 566 commercial producers registered with PSA (PSA, 2017).

This volume does not take into consideration production by non-PSA registered potato farmers. While not accounting for a significant growing area by African standards, the South African potato industry is the most productive, accounting for the highest yields on the continent – averaging 43 t/ha (PSA, 2017).

2.3 THE POTATO INDUSTRY IN PERSPECTIVE

The South African agricultural sector broadly comprises commercial and small farmer sectors (Kirsten & Van Zyl, 1998; May & Carter, 2009). According to Kirsten and Van Zyl (1998), Fanadzo *et al.* (2010) and Bernstein (2013), small-scale farming in South Africa is often equated with non-commercial, non-productive and backward subsistence agriculture – typically found in black rural areas that used to be part of the apartheid-era homeland system.

Commercial potato farms in South Africa cover, on average, areas of less than 200 ha (PSA, 2017). Although the potato industry acknowledges the presence of the small farmer sector, PSA concedes to having insufficient information on these farmers and estimates that between 2000 and 3000 smallholder farmers grow potatoes in South Africa (PSA, 2015b).

The industry experienced consistent growth in commercial production from 1990/91 (1 311 000 t) to 2011/12 (2 215 000 t), with sales on Fresh Produce Markets (FPMs) increasing from 804 800 t in 2003 to 1 005 400 t in 2011 (DAFF, 2016). These numbers represent volumes from commercial potato production. Producer numbers have in fact declined due to consolidation, from 2031 producers in 1993 to 566 producers in 2016; yet commercial productivity has increased (PSA, 2017). The commercial sector is made up of producers farming on hectares of varying size, illustrated in the following analytical breakdown: 9% of farmers produce on more than 200 ha; 14% of farmers produce on 101 to 200 ha; 24% of farmers produce on 51 to 100 ha; and 53% of farmers produce on less than 51 ha. Commercial producers are predominantly white, with an insignificant representation of black commercial producers accounted for by PSA. The importance of incorporating black farmers into the mainstream economy therefore cannot be overstated.

2.4 LOW NUMBERS OF BLACK POTATO FARMERS IN PSA'S MEMBERSHIP

Potatoes South Africa (PSA) states in its Industry Report of 2015/2016 that of the 31 black farmers participating in the organisation's empowerment Enterprise Development (ED) Programme, a total of 162 ha of potatoes are commercially produced through industry-supported initiatives (PSA, 2016a). The industry is, furthermore, affected by a paucity of validated information relating to black and small-scale farmers producing potatoes, with most of these farmers not falling within PSA's membership. These farmers are consequently not supported by the empowerment Enterprise Development (ED) and Small Grower Development Programmes, nor do they enjoy any of the services provided by PSA. The stated numbers of smallholder black potato farmers are an estimate, still to be empirically validated. While PSA admits to a constraint in terms of reliable information, the industry is supplying increasing volumes of seed potatoes to small black potato farmers (De Klerk, 2013; Wesgrow, 2016). This signals a significant growing trend towards potato production among black farmers.

2.5 SOUTH AFRICAN POTATO PRODUCTION

According to PSA, potatoes are grown in 16 geographic, climatic and edaphically diverse regions, thereby taking advantage of the different climatic and agro-ecological zones in the country (Steyn *et al.*, 1998). Potatoes are grown over 12 months of the year, resulting in the continuous availability of fresh potatoes. The potato is a temperate crop sensitive to water and high temperature stresses (Steyn *et al.*, 2014). Steyn *et al.* (2014) note that with higher temperatures and changes in rainfall patterns potentially contributing to crop stresses, some of the production regions are relatively less suitable for potato production. Such sub-optimum conditions result in lower yields and lower tuber quality, thereby making these regions less suitable for sustainable and profitable potato production (Steyn *et al.*, 2014). Temperature increases, for example, can result in a higher risk of crop diseases (Van der Waals *et al.*, 2013).

The above-mentioned risk factors necessitate enhanced technical and management experience and support in the form of agronomy services – specifically plant and potato pathology input with an increased focus on crop protection. These interventions, though, add to input costs. Sustainable potato production requires optimised output, achieved by increasing productivity

through enhanced crop yields and quality output which in turn are made possible through the careful management of input costs.

In keeping with the need for optimum production conditions as described above, over 80% of commercial production in South Africa takes place under irrigation conditions due to low and increasingly unreliable rainfall. The balance of commercial production takes place under dry-land conditions (PSA, 2017).

The main production regions are located in Limpopo province, where irrigation production largely takes place, and the Free State province (the largest production area), with most production occurring in the eastern part of the province under dry-land conditions while in the western part of the province production mainly occurs under irrigation conditions. The Sandvelt region in the Western Cape is also a significant production region, particularly for seed potatoes. Production in South Africa is mainly limited to the summer season due to the prevalence of winter frost, with Limpopo province, however, experiencing two production seasons. Diversity in planting times and growing regions accounts for a generous marketing window for producers, resulting (as mentioned above) in the continuous availability of fresh potatoes throughout the year.

Optimum potato production delivering high crop yields requires the timely application of inputs, access to production and asset capital, production knowledge, and potato-specific and general mechanisation and management skills. All these factors have a direct impact on the marketable yield potential realised (influencing volumes, tuber quality and size distribution) which directly impacts economic output and the financial sustainability of the enterprises in question. Potato yields, consumption and sales have grown over the past decade (PSA, 2014; PSA, 2015a; Stroebel *et al.*, 2012), with input costs (electricity, fertiliser, chemicals) also rising (Strydom & Van Zyl, 2015). This scenario has resulted in producers and the industry as a whole experiencing a cost–price squeeze, with market prices not keeping abreast of production cost inflation (*Ibid.*).

The commercial potato industry is extremely labour-intensive, relying on both permanent (10 000 in 2015) and seasonal (40 000 in 2015) labour inputs (PSA, 2015b). With the introduction of the minimum wage bill for the agricultural sector in 2013, the industry saw an increase in the use of mechanisation with a resultant decline in permanent labour. For example, a single mechanised planter has the potential to replace between 20 and 30 permanent jobs while an automated harvester is capable of replacing between 40 and 80 units of labour (*Ibid.*). According to PSA, the labour coefficient for potatoes is 1.2 persons per ha⁻¹² (PSA, 2015b), suggesting how important the industry is to the livelihoods of many individuals.

2.6 SUPPLY-SIDE AND DEMAND-SIDE CONSIDERATIONS

The potato industry is responsible for producing seed potatoes, table or ware potatoes and processing potatoes. In an analysis conducted across the various categories in 2015, it was found that seed potatoes represented 7% of total volumes produced, processing potatoes represented 18% (which comprised crisps and frozen French fries, with a small proportion of output being used for canning and the production of mixed vegetables), potatoes destined for export represented 7%, formal markets represented 37% and informal markets represented 31% (PSA, 2017).

On the demand side, the informal sector is seen by Stroebel *et al.* (2012) and Wesgrow (Anceriz, 2016) as demonstrating good growth prospects which will positively benefit the industry's competitiveness. This view emanates from changing consumer trends in the South African economy resulting from the growth of convenience foods and a rise in the black middle class, which in turn portends significant growth in the potato market. This has already manifested in an increase in the per capita consumption of potatoes (PSA, 2014).

Processing potatoes, in particular, have benefited greatly from the increase in demand experienced over the last decade. This increase in demand comes in the wake of the growth of the quick-service restaurant industry which offers convenience foods, particularly French fries (Strydom *et al.*, 2012; PSA, 2014; Van Zyl, 2017),³ and the quick pace of demographic

2 Information received from Mr Rudolf Badenhorst, Marketing Manager of PSA, 15 April 2016.

3 Telephone conversation with Mr Pieter van Zyl of PSA, January 2017.

transition resulting from urbanisation and economic growth in South Africa. French fries and crisps account for a significant share of the industry's growth rate, with both becoming increasingly important as final consumer products and for providing producers with contract markets (which offer price certainty, unlike Fresh Product Markets) (PSA, 2014). These factors, according to PSA, have been contributing to an upward shift in the demand curve for potatoes (Jooste, 2017).

2.7 TRANSACTION COSTS

The potato industry is often said to have high transaction costs which then create high barriers to new entrants. Kirsten *et al.* (2009), citing Williamson (1991), identify three main factors influencing transaction costs: the specificity of assets, the level of uncertainty associated with the transaction and the frequency of occurrence of the transaction. Strydom *et al.* (2012) indicate that transaction costs include temporal and asset specificity of production. In addition to requiring general agricultural production implements, mechanisation and infrastructure, commercial potato production requires specific assets, which may only be applied to potato production.

Asset specificity has been defined as “relating to the specific physical asset which may be transferred to alternate uses” (Strydom *et al.*, 2012), citing Williamson (2000). In commercial potato production, such assets include potato planters and harvesters, and a pack house with washing and sorting infrastructure, all of which are essential for serving specific market sectors. Temporal specificity relates to the fact that potato production requires specific agro-ecological conditions, such as summer rainfall, certain temperature and heat units, relative humidity, senescence, good soils and the practice of soil health management through adherence to recommended industry standards and best practice (including one-in-four-year crop rotation.)

Potatoes may be produced and harvested within a specific window period across the various potato production regions of South Africa. This impacts both frequency of production within a season and the types of potatoes that can be produced, and therefore the markets that can be accessed using the different marketing channels described in the next section. The availability of sufficiently productive land is directly impacted by the temporal specificity characterising

commercial potato production. Furthermore, the main marketing channel accessed by the majority of commercial farmers is the price-forming spot market. As suggested below, the spot market gives rise to pricing uncertainties.

2.8 MARKETING CHANNELS

The main marketing channel in the potato industry is broadly classified as the fresh market and typically called the spot market. This is due to the application of a price-forming mechanism where conditions approach those of the perfect market comprising many buyers and sellers of homogeneous products.

The second marketing channel comprises fully integrated operations, including the processing industry that comprises crisp and frozen French fry markets. These markets follow a fixed-contract pricing structure. They are also more stable and have proven to be less risky, particularly for new producers, as they offer producers price certainty. This marketing channel does not require that a farmer initially has specific infrastructure (including a pack house with washing and sorting facilities) to service the fresh markets, or transport logistics to transport produce to these markets.

A further marketing channel serves the *informal market*, which falls outside the traditional retail and FPM sectors. The informal market comprises “bakkie”⁴ traders and has been described by the industry as fast-growing (Stroebele *et al.*, 2012; PSA, 2014). In addition to the bakkie trade, there are local informal markets within communities, with hawkers bringing potatoes directly to the many black traders in such communities, who together have attracted a growing consumer market. This marketing channel primarily serves markets that the Stabilisation Fund, instituted by the former Potato Board, was set up to assist, i.e. subsidies provided to white commercial farmers to sell third-grade potatoes to black townships and native reserves.

4 A bakkie refers to a van used by informal traders in South Africa to collect and transport produce directly off a farm for resale in informal markets.

2.9 STATUTORY FUNDING OF EMPOWERMENT INITIATIVES

With the democratisation of South Africa in 1993 and the deregulation of the agricultural sector in 2003, PSA operations were funded through a statutory levy that became effective through an Act of Parliament, the Marketing of Agricultural Products Act (MAP Act of 1996) (No. 47 of 1996). In terms of the Act, a minimum of 20% of the levy is mandated to be used to empower black individuals and entities to participate in the potato industry. This levy is paid by all industry participants and is collected by PSA on behalf of the PIDT from potato bag manufacturers, processors and the seed industry. Effectively, every farmer selling potatoes in a potato bag contributes to the statutory levy and should therefore have access to the services of PSA. This issue is raised again in the review of literature in Chapter 3.

Table 2.1 provides a summary of levy income collected on behalf of the PIDT, with appropriated funds allocated towards empowerment activities for the period 2004 to 2015.

Table 2.1: PSA statutory levy income and empowerment funding, 2004 to 2015

LEVY PERIOD	PERIOD 1 2004-2006 (2 years)	PERIOD 2 2006-2009 (4 years)	PERIOD 3 2010-2013 (4 years)	PERIOD 4 2014-2018 (2 of 4 years)
Total income	R30 514 078	R87 915 406	R125 741 079	R78 035 846
Appropriation(Appr.)	R20 933 093	R89 907 236	R117 547 715	R82 310 135
Transformation (Tr.) Actual	R2 066 027	R16 557 136	R 24 989 734	R17 160 298
Transformation as % of total	9,9%	18,8%	19,9%	22%
Transformation as % of appropriation	6,7%	18,4%	21,3%	20,9%

Source: PSA (2017)

Note: Empowerment (transformation) funding is legislated at a minimum of 20% of total levy income

Empowerment initiatives in the potato industry have been implemented since 2004 through the allocation and application of a statutory levy by PSA across four different periods (see Table 2.1). The industry is currently in the fourth statutory levy period. During the four statutory levy periods (note that Period 4 represents two years of a 4-year statutory cycle), a total levy of R322 206 409 was collected, with R310 698 179 appropriated and R60 773 195 applied to empowerment activities. Although the levy system requires a minimum of 20% to be allocated

towards empowerment activities and initiatives, the initial levy period saw 6.7% of total levy income being applied to empowerment activities. This increased in the subsequent periods, with a total of R60 773 195 being applied to empowerment activities across the four periods. This amount, however, should have been R64 441 282 if the rule of 20% of total levy income had been adhered to.

Despite the introduction of the statutory levy system and the money spent on empowerment activities to stimulate market access for, and the development of, black potato farmers, the industry has observed little impact in the form of increased numbers of black farmers or tangible outcomes on the production side. Because of a misinterpretation of the requirements of the MAP Act, the breadth of coverage of PSA support through its empowerment programmes has effectively resulted in a public good being limited to private use. This has prompted the industry to acquire a myopic view of the contribution and value of many black potato farmers, which has resulted in support being limited to farmers in PSA's direct radar and the exclusion of others unknown to PSA.

2.10 CONCLUSION

The South African potato industry makes a significant contribution to the horticultural segment of the agricultural sector, particularly in stimulating employment creation and food security which positively impact the development of the rural economy. The industry has experienced growth over the years and is seen by various industry role players as being not only economically lucrative but, because it is labour-intensive, also an important stimulant to job creation. However, potato production takes place in an environment characterised by high input and transaction costs, which are often presented as one of the reasons for low numbers of new, and particularly black, farmers in the industry.

As outlined in the problem statement (Chapter 1), the potato industry continues to be dominated by commercial farmers who are mainly white, which is a legacy of past policies. Black commercial farmers who are acknowledged by and visible to PSA are few in number, with an insignificant representation of black farmers receiving support via the state-funded PSA empowerment programmes. Despite substantial investments having been channelled into

empowerment initiatives for black farmers since 2004, no meaningful outcomes have been observed.

Potatoes are produced in 16 geographically, edaphically and climatically diverse regions and fresh potatoes are available for 12 months of the year. Water is critical at various stages of the production process and most commercial production occurs under irrigation conditions due to persistent rainfall constraints. The eastern Free State, a region characterised by commercial dry-land potato production, has been significantly impacted by drought over the past few seasons.

PSA delivers a range of services to farmers who form part of its membership base. With industry funding derived from statutory levies paid by farmers and other industry participants, and collected from potato bag manufacturers and other sources, a case might be made that several black farmers contribute to this levy, but do not receive services from PSA to which they are entitled. This view is derived from the review of the literature in Chapter 3, i.e. in terms of an expressed legal opinion previously excluded black farmers – whom PSA does not acknowledge as being part of its membership – are nevertheless entitled to PSA services.

Chapter 3 reviews the empirical and theoretical literature on empowerment theories and power analysis, and examines how the legislative environment influences disempowerment and therefore runs contrary to empowerment requirements. These issues are reviewed to give context to the phenomenon of disempowerment and the complexities surrounding empowerment dynamics in the South African potato industry.

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

In this chapter, the related literature and empirical secondary data are reviewed in order to identify the theoretical gaps that exist in the current body of knowledge. The specific purpose of this chapter is to review the theoretical and empirical literature on empowerment, beginning with a discussion on power theories, various approaches to power analysis as applied to the interplay between power and power relations, and the dimensions of power that are key to empowerment, and then exploring the philosophies and many (and often complex) definitions of empowerment in the international and South African contexts. In reflecting on these topics, specific legislation governing the potato industry, which influences empowerment, is also examined.

The ensuing discussion covers various applied concepts, including transformation and B-BBEE (as it addresses one dimension of empowerment) and its links to empowerment. In addition, a conceptual framework on empowerment, as proposed by Narayan (2002), is presented which was applied to and guided the study. This was deemed to be the most appropriate empowerment framework, from a South African perspective, in the reviewed literature. With a view to showing how empowerment affects the potato industry, the chapter also looks at the history of the South African potato industry against the backdrop of disempowerment, as well as agricultural market reforms, marketing acts and empowerment initiatives targeting black potato farmers.

3.2 THE REAL MEANING OF “EMPOWERMENT”

Empowerment is a complex and multi-dimensional concept centred on the transformation of power relations. According to Ibrahim and Alkire (2007), it has multiple definitions (see Appendix C). Some authors, such as Luttrell *et al.* (2009), describe it as an emancipatory process whereby the disempowered and disadvantaged are enabled and empowered to exercise their rights in decision-making, and to gain access to resources and skills that will enable them

to participate actively in those activities that will positively improve their livelihoods. Despite the multiplicity of definitions of empowerment, San Pedro (2007) identifies the common feature of these definitions as the quest to change power structures and relations in a bid to achieve greater equality (San Pedro, 2007).

Empowerment invariably has different meanings in different contexts, and also according to different groups of people. In particular, definitions vary by discipline, from social work (a process that allows individuals and communities to increase personal, social and socio-economic strength to improve their quality of life) and education (the development of a critical awareness on which to act) to business management (employing the distribution of power, enabling greater autonomy and productivity by employees within the workplace) (Gough, 2006). In the agricultural context, Alkire *et al.* (2013) have described empowerment as “one’s ability to make decisions on matters related to agriculture as well as on one’s access to the material and social resources needed to carry out those decisions”.

Different dimensions of empowerment receive attention in the literature, with economic empowerment said to “ensure that people have appropriate skills, assets, capabilities and resources to secure sustainable livelihoods” (Luttrell *et al.*, 2009). According to Page and Czuba (1999) and Alkire and Deneulin (2009), human and social empowerment is focused on enabling people to gain control of their lives by developing the capacity to implement and act on things they deem important, and also to act on their desires. Empowerment is thus seen to address the issue of social transformation, enabling excluded groups to collectively define and claim their legitimate entitlements. Political empowerment focuses on giving the power to act through collective effort against oppressive social relations for the benefit of several, achieving political emancipation and rights. Cultural empowerment deals with the norms and behaviours as well as cultural practices governing both formal and informal institutions. The term empowerment has further been associated with race. The racial dimension of empowerment was first presented by Salomon (1976) when he spoke of the emancipation of marginalised African American communities in the United States of America.

3.3 POWER THEORIES

To appreciate the various meanings of empowerment, it is necessary to examine some theories of power that go to the heart of empowerment. Authors like Rowlands (1995) view empowerment as being both a process and an outcome. Empowerment as a process follows an instrumentalist approach, focusing on organisational capacity-building to increase the participation of previously excluded groups through various development activities. Empowerment as an outcome adopts a transformative approach, focusing on increasing access to economic resources (Rowlands, 1995).

The fact that empowerment has multiple meanings and outcomes is due to the fluidity of the concept of power. Allen (2003) acknowledges that power emerges through relations between individuals and is exercised in various spheres of life. He sees power relations as being dynamic in nature. The author contends that power does not equate to resources and assets, which are both a means and an end through which power is exercised. This outlook is diametrically opposed to Rowlands' transformative approach to power since, in Allen's view, empowerment is not simply the ability to exert power over resources. Rather, it involves the strengthening of entitlements and the ability or the capacity to make practical use of them.

Based on the principle of the fluidity of power, Rowlands and other authors present an analytical framework that identifies four dimensions through which power is exercised and expressed (see Appendix D). The first two dimensions relate to *power over* and *power with* and in relation to self, while the second two dimensions relate to *power to* and *power from within* (Rowlands, 1997, 1995).

Power over is described by Rowlands as a zero-sum game where increasing power at one end means decreasing power at the other. This power is conventionally associated with influence over others or power being exerted by one group or individual over another in a domineering manner. This amounts to the exercising of authority and coercion over another. Power is therefore an instrument of domination which can be used in a subtle or overt manner. In the South African context, power took the form of racial domination of black individuals by white individuals through legislative and other forms of repression. In this context, empowerment

refers to marginalised groups gaining power at the expense of the already empowered by being given the opportunity to participate fully in society from an economic, social, cultural and political vantage point.

Herman (2013) views this interpretation of power as not being radical enough to shift power relations away from those already in power because it maintains the status quo and keeps existing social structures intact. This is the case with power relations in the potato industry in South Africa and is evident within PSA where power was deliberately and purposefully retained in white hands.

The other three dimensions of power, i.e. *power with*, *power to* and *power from within*, as proposed by Rowlands, are positive and value-driven since an increase in power enhances the power of all. These alternate forms of power allow power to be expressed through more equitable relationships. *Power to* is the ability to act in a specific way and to see possibilities for change in relation to the self. In other words, enhancing the power of the disadvantaged does not take power away from those already in power. *Power with* is concerned with building collective strength and self-esteem, thus promoting equitable relations.

Power is also related to knowledge. In this regard, Allen (2003) and Alkire and Deneulin (2009) see capacity-building through skills development initiatives as pivotal to increasing individuals' and communities' access to and control over resources, which in turn puts them in charge of their livelihoods. Rowlands (1997) views *power from within* as the ability to develop self-belief, confidence and worth (also referred to as internal or psychological power). This is of particular significance in the case of black South Africans who have endured debilitating oppression due to centuries of colonialism and subsequently apartheid. McEwan and Bek (2006) describe this as *self-hood*, with some individuals being incapable of viewing the world as anything other than oppressive, which simply entrenches the power of the structures established to exercise such oppression. Internalising the oppression is tantamount to colluding with the oppressor.

Rowlands (2016) proposes a more contemporary framework for analysing power. She asserts that despite the lives of several individuals having improved radically, the dynamics and

structures of power remain in place and are evident in the large numbers of individuals still living in poverty and inequality. The same holds true for large numbers of black South Africans who after 24 years of democracy still experience severe inequality, as is evident from the Gini coefficient (Stats SA, 2017; Adesina, 2016; Gaventa & Runciman, 2016). Rowlands contends that much still needs to be done to arrive at an understanding of power and its manifestations. This will help to ensure that power imbalances are not reinforced and empowerment can advance beyond simple participation in decision-making towards more meaningful control.

Longwe (1991) developed an empowerment framework that provides for degrees of empowerment. She stressed the importance of adopting a progressive, hierarchical approach to empowerment which would allow people to gain control over resources and decisions, both key determinants of quality of life. Longwe proposed a five-step process, starting with lower forms of empowerment and moving progressively to higher levels of empowerment. The five progressive steps towards empowerment are (Longwe, 1991):

- Attending to general welfare and basic needs;
- Providing access to education, assets, credit;
- Conscientisation and awareness-raising, addressing institutionalised and structural discrimination;
- Ensuring participation and equality in decision-making;
- Ensuring recognition given to decisions taken by individuals.

Sen (1999), in contrast, views empowerment as having three degrees and being a function of the interplay between agency and opportunity structure or capabilities. According to Sen, these degrees are the:

- Existence of choice;
- Use of choice; and
- Achievement of choice.

Power is an integral element in the empowerment process, which can be applied to confront power imbalances and support those who are powerless. Being multi-dimensional in nature and an outcome, empowerment has implications for all spheres of life – from the personal level (individuals taking control of their lives) to the political level (policymakers recognising human rights and social justice). The latter is highly relevant in the case of South Africa where much needs to be done to undo the damage of long-term oppression and the marginalisation of the black majority.

3.4 DEFINING EMPOWERMENT IN THE CONTEXT OF THE STUDY

Sen and Alkire and Deneulin, describe capability or opportunity structure as the institutional context that influences one's ability to transform agency into action, i.e. the freedom to do and be what one values as measured by the laws, rules and regulations, culture, norms and behaviours of formal and informal institutions in a society. This includes the contextual factors influencing the extent to which choices can be transformed into effective action (Sen, 1992, 1985; Alkire & Deneulin, 2009). According to Sen, such action is in turn dependent on formal institutions or "rules of the game" (laws and regulatory frameworks that govern behaviour) and informal institutions (unofficial rules that inform cultural practices, value systems, and norms and behaviours in households, individuals and groups). Alkire and Deneulin concur with this and further propose that effective empowerment is dependent on whether institutions can allow people to be the main actors of their own destiny (Alkire & Deneulin, 2009).

Sen defines agency as "what a person is free to do and achieve in pursuit of whatever goals and values they regard as important" (Ibrahim & Alkire, 2007; Sen, 1985, 1992). Agency and capability are interdependent, with Sen proposing that "the purpose of development is to expand capabilities and to support an individual's agency" (Sen, 1985). Sen further suggests that agency is intrinsically valuable and is an effective means of reducing poverty. He goes on to say that agency and opportunity structure therefore define three degrees of empowerment: the existence of choice (dependent on geographic location, social and economic position and the opportunity to make a desired choice), the use of choice (using existing opportunities) and the achievement of choice (measured by the extent to which one realises desired outcomes).

The process of empowerment (increasing power among those without) is therefore the result of the interaction between agency and opportunity structure or capabilities.

Figure 3.1 illustrates the relationship between outcomes and determinants of empowerment and constitutes the framework informing the study.

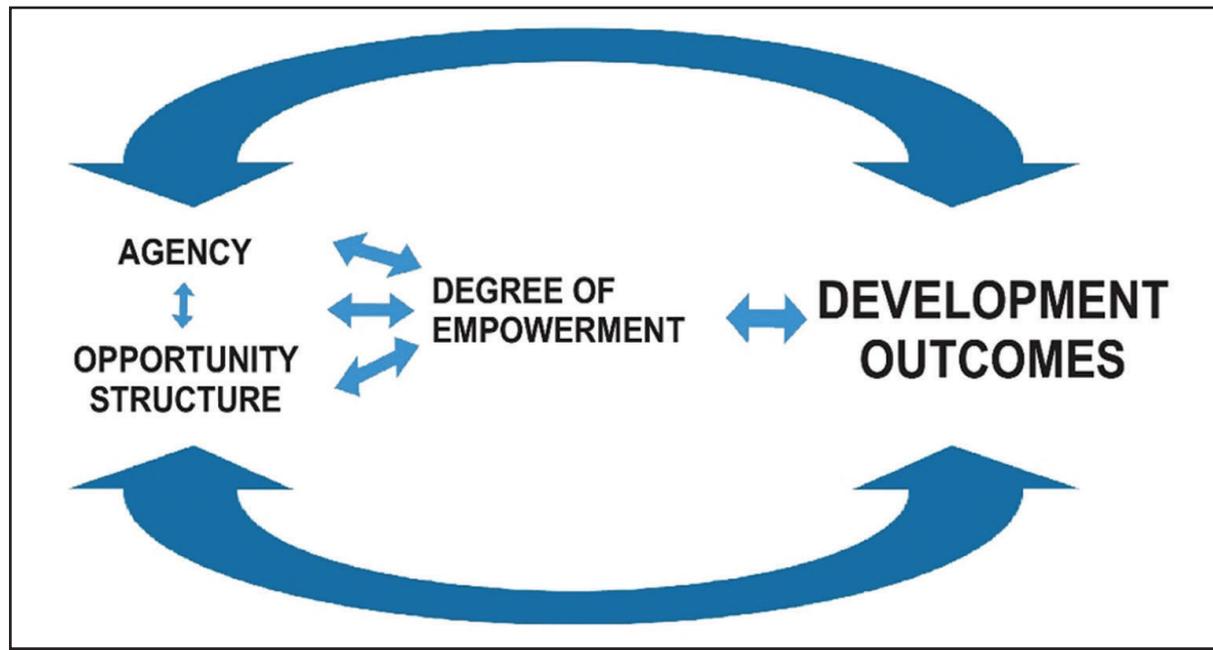


Figure 3.1: Relationship between outcomes and determinants of empowerment

Source: World Bank (2007); Alsop and Heinsohn (2005)

Agency is largely determined and influenced by the asset endowment enjoyed by individuals and groups. Assets serve as proxies through which empowerment is indirectly measured. Such assets include:

- Financial, including sources of income and savings, employment, debt and savings;
- Human, including education (literacy and numeracy), skills, health status;
- Informational, including access to information and formal sources of information, e.g. radio, television, newspapers, the Internet;
- Material, including individual and collective ownership of land, equipment, housing, infrastructure;
- Organisational, including membership of local organisations;

- Social, including personal relationships and networks, social capital;
- Psychological, including sociability, self-confidence and capacity to envision change, and happiness.

In the multiplicity of definitions presented in the literature, authors Alsop and Heinsohn define empowerment as “the capacity to make effective choices, the capacity to transform choices into desired actions and outcomes” (Alsop & Heinsohn, 2005). This definition aligns with Sen’s (1999) and Alkire & Deneulin’s (2009) capabilities approach to empowerment which focuses on capabilities that contribute to the quality of one’s life and produces positive results through the expansion of agency; in other words, it is the ability to convert capabilities to utilisable value.

The process of empowerment as addressed in the literature can thus be interpreted and applied as “enhancing the capacity of an individual or group to make intentional choices and to transform those choices into desired actions delivering outcomes” (Narayan, 2002). This includes having the capacity to make effective choices. Narayan further posits that empowerment implies control over resources and decisions. Powerlessness is therefore defined in the context of formal and informal institutions, with an unequal institutional culture aiding and abetting such powerlessness. Narayan offers an institution-based definition as follows: “Empowerment is the expansion of assets and capabilities of poor people to participate in, negotiate with, control and hold accountable institutions that affect their lives”. This definition, the author asserts, is valuable for understanding and tracking changes over time in the unequal relationships between the dispossessed and the state, markets and the wider economy.

3.5 OPERATIONALISING EMPOWERMENT

As discussed in previous sections, the fundamental basis of empowerment is framed within and centred on power theories. To operationalise and ‘live’ empowerment, different scholars have proposed and applied a power analysis approach. Rowlands (1995, 1997, 2016), Foucault (1982), McGee (2016) and Gaventa (2006) describe power analysis as a methodology used to understand and analyse the nature of power and power relations within social, political and institutional realities. It categorises power in various ways. One way, proposed by Rowlands

(1995, 1997), concerns expressions (over, to, with and within) while others deal with realms (public, private or intimate), forms (visible, hidden, invisible (Pettit, 2013, ‘below the waterline’)) and dimensional categories, such as agency and structure as proposed by authors such as Gaventa (2003a) who applied the *Power Cube* method of analysis (discussed later in this section).

The various power analysis approaches presented in the literature have strengths and weaknesses, according to McGee (2016), citing Mejia Acosta and Pettit (2013) and Pettit and Mejia Acosta (2014), who further proposes that these different approaches indicate alternative uses which may in fact be complementary.

Bartlett (2004) presents a model of operationalised empowerment, as depicted in Figure 3.2 below. It entails transformation through empowerment of individuals from a lower point to a higher point, resulting in significant changes in individuals’ lives. Three aspects are involved:

- Means (enabling factors, such as property rights, resources, capabilities and opportunities);
- Decision-making processes which, importantly, include self-responsibility or internal empowerment capabilities; and
- Ends of empowerment, explained in the definitions above as acquiring greater control of one’s life.

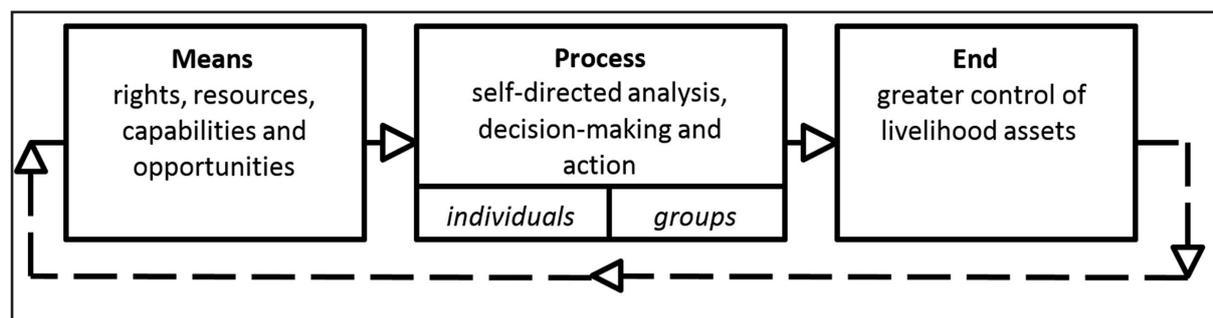


Figure 3.2: A model of operationalised empowerment

Source: Bartlett (2004)

Further to Bartlett's model of operationalised empowerment, the model developed by Gaventa (2006) provides an overview of how power operates, which is useful for effecting empowerment. This model is referred to as the Power Cube which proposes that power dynamics be addressed across three continuums: spaces, places and the degrees and visibilities of power. Gaventa puts more emphasis on creating the ability to exercise power than on merely the possession of power.

Spaces addresses the locus within which power operates; specifically it seeks to address shifts in power dynamics at the points at which change can occur. Decision-making occurs in various spaces at which change can occur. Gaventa suggests that addressing change is necessary in closed spaces, controlled by an elite group in power. In the case of the South African potato industry, this is the white commercial farming sector whose affairs are managed by PSA on behalf of the PIDT. The focus is thus on opening spaces to increase transparency and accountability in the interests of a broad public, enhancing the latter's involvement in and access to the industry. Invited spaces exist where external pressure is exerted on power structures to increase the legitimacy of power.

In the case of the potato industry, the NAMC can be considered the external force holding PSA to account for the use of the statutory funding acquired through the legislative powers of the MAP Act. Gaventa (2006), however, states that this is unlikely to create long-term change. Claimed spaces constitutes the third space where power can be addressed; here the less powerful and dispossessed can adopt advocacy measures to amplify their voices to those with power. Gaventa (2006) further stresses that addressing power dynamics occurs over a continuum with power gained in one space acting as an entry into another power space.

Once again, having the NAMC oversee the application and use of statutory funds is a way in which black potato farmers could claim more space in the potato industry. However, because of a misinterpretation of industry entitlements, many remain excluded from the PSA's services. It will require more effort on the part of black farmers currently denied these services to correct this misinterpretation. PSA can be considered the party responsible for advocacy in the potato industry. The question to be posed is: does PSA effectively fulfil this role for the benefit of all black farmers?

Places addresses places of power engagement at an international, national or local level. This is useful in addressing issues such as the markets accessed by or closed to marginalised individuals and how empowerment initiatives could address these issues, including the impact thereof, e.g. trade regulations, import tariffs and duties as recorded by the International Trade Administration Commission (Visser, 2014) and safeguard and anti-dumping measures in the case of the potato industry.

The final continuum through which power can be attained, according to Gaventa's Power Cube, is understanding how laws and institutions can be addressed to amend social norms and values. Gaventa (2006) focuses on the degree of *visibility of power*. Visible power is effected through institutions in the form of legislation, rules and procedures, from which empowerment strategies may be derived. With visible power being unavoidably overt, some institutions in the industry are inclined to be more inclusive. However, other aspects, such as organisational culture, could remain hidden and have an exclusionary effect.

Hidden power can also exercise control over decision-making, with control structures often excluding and devaluing the issues of importance to the disempowered. In the operation of the potato industry this is exemplified, for example, in the racial profile of PSA's employees and management, the use of the Afrikaans language which excludes the majority, the lack of balance in racial and gender representation on the board and in the PIDT, and the different standards applied to black and white interests in terms of the continuity of board representation.

Invisible or internalised power represents the internal or psychological dimension of power as exercised over the disempowered. As it has a psychological and ideological foundation, invisible power results in some people's reluctance or inability to question the prevailing status quo regarding the existing power relationship. Using the Power Cube, Gaventa (2006) seeks to operationalise the empowerment of disenfranchised individuals and communities by shifting the power dynamics at various continuums of power.

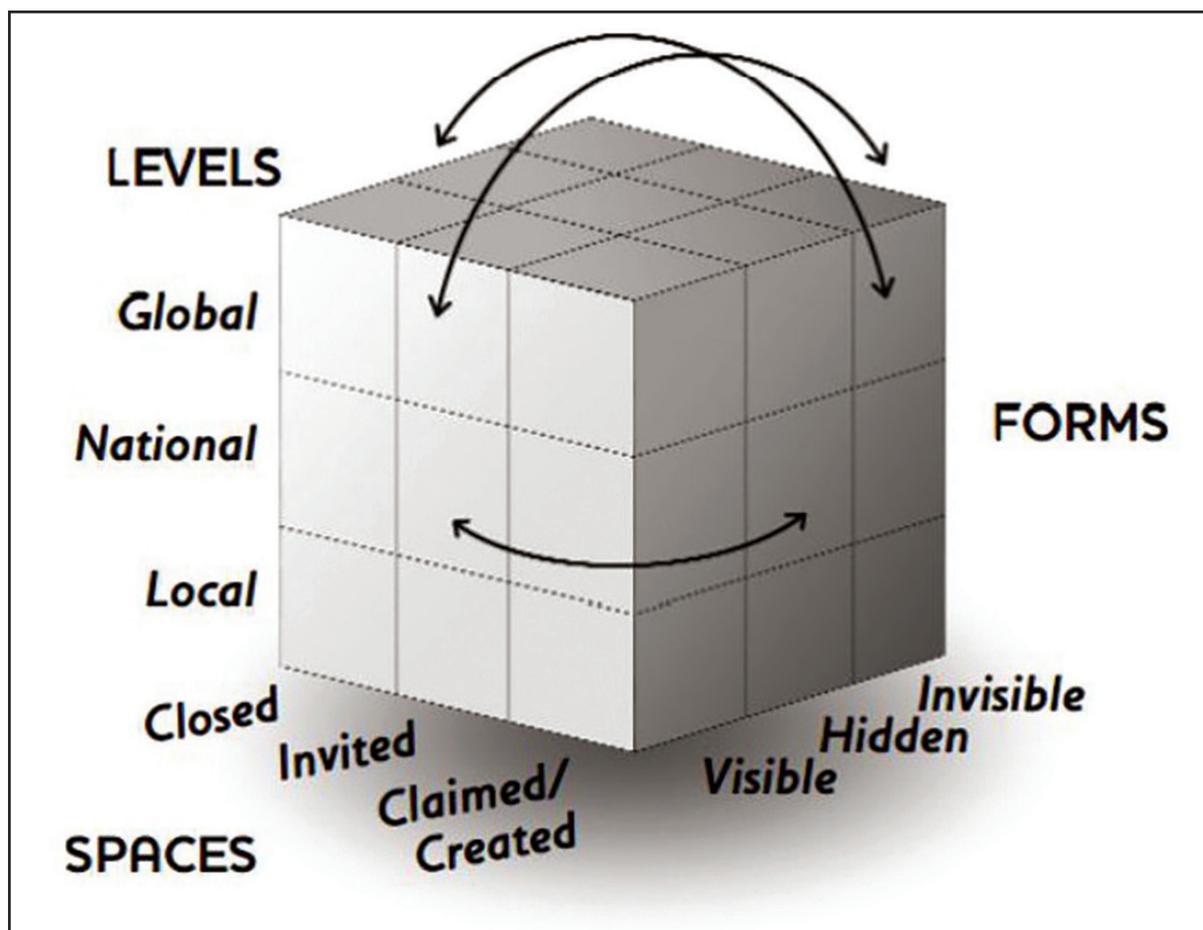


Figure 3.3: The Power Cube levels, spaces and forms of power

Source: Gaventa (2003b)

3.6 RELEVANT DEFINITIONS IN THE SOUTH AFRICAN CONTEXT

Empowerment broadly refers to individuals being able to take care of their own lives, which is a key intended outcome of the potato industry in South Africa. With reference to the multiple definitions of empowerment proposed by Ibrahim and Alkire (2007) (see Appendix C), the definitions provided by a number of authors listed below are particularly relevant to empowerment in the South African context.

Development can be seen as a process of expanding the real freedoms that individuals enjoy beyond financial indicators. This requires the removal of the major sources of un-freedom: poverty and tyranny, poor economic opportunities and systemic social deprivation, neglect of public facilities and intolerance or over-activity or repressive states (Sen, 1999).

A human rights approach to development means empowering people to make their own decisions, rather than be passive objects of choices made on their behalf. It focuses on empowering all people to claim their right to opportunities and services made available through pro-poor development (Appleyard, 2002).

Empowerment means that people, especially poorer people, are enabled to take more control over their lives and secure a better livelihood with ownership and control of productive assets as one key element (Chambers, 1993).

Empowerment means individuals acquiring the power to think and act freely, exercise choice and to fulfil their potential as full and equal members of society (DFID, 2000).

Empowerment ... refers to the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them (Kabeer, 2001).

Empowerment is the expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives (Narayan, 2002).

Empowerment is one's ability to make decisions on matters related to agriculture as well as on one's access to the material and social resources needed to carry out those decisions (Alkire *et al.* 2013).

Considering the definitions of empowerment offered by several authors, the specific definition applied in this study and applied in the conceptual framework outlined in section 3.7 is Narayan's 2002 definition.

3.7 CONCEPTUAL FRAMEWORK FOR MEASURING EMPOWERMENT

Empowerment lacks a single definition, as previously mentioned and further highlighted by Ibrahim and Alkire (2007) (Appendix C). The definition adopted for this study considered the South African context in which there was deliberate and systematic disempowerment of blacks and purposive empowerment of whites (typically Afrikaners). This subsequently led to

the need for black farmers to become more integral and sustainable contributors to the potato industry.

Empowerment initiatives in the potato industry began in 2004 with PSA applying and allocating the first statutory levy. Although the industry is now in the fourth statutory levy period, little impact has been made, implying challenges in effecting successful empowerment initiatives.

Variations in definition have compounded the lack of progress to date, with a fragmented understanding and therefore application of empowerment practices and initiatives throughout the South African economy, including the agricultural sector. Despite several attempts by both government and private sector partners to empower black potato farmers, outcomes remain poor. While various government institutions have provided assets to individual farmers and communities, with the potato industry specifically investing resources for the development of black farmers, there is little to show from such investment. Furthermore, institutional structures have not evolved to any significant extent since the apartheid era, thus reducing the chances of black farmers being successfully integrated.

To measure empowerment outcomes, it is important to arrive at a suitable definition of empowerment and to work within a conceptual framework. Narayan (2002) proposes a framework that links empowerment to improved development outcomes and identifies a number of determinants of empowerment, as outlined in Figure 3.4. Implicit in his definition is: “freedom of choice and action to shape one’s life and control over resources, decisions and power over institutional influence”, all of which are lacking among the dispossessed.

Narayan’s institutional definition presented in the previous section is also relevant: “Empowerment is the expansion of assets and capabilities of individuals to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives”.

In the proposed framework, empowerment can be interpreted as a gain in agency which enables individuals to pursue goals they deem valuable to their livelihoods. Alkire & Deneulin (2009) view agency as both valuable and instrumental in promoting human development and reducing

poverty. Such a view is essential when considering the South African situation, which reinforces its relevance to this study.

In applying the quantitative WEAI methodology that informed this study, the intended outcome was to create a deeper and more detailed understanding of the socio-demographic profile and empowerment status of black potato farmers as well as build a benchmark profile of these farmers (which has not been done to date).



Figure 3.4: Empowerment conceptual framework

Source: Narayan (2002)

3.8 EMPOWERMENT IN THE SOUTH AFRICAN CONTEXT

While it might have been interesting to undertake a holistic review of empowerment in the South African context as it applies to race and gender, the focus of this study is limited to the racial dimension of disempowerment as it affects black South Africans in the potato industry.

While the gender factor is noted and acknowledged to be important, the scope of the study does not permit specific consideration thereof.

Empowerment is interpreted differently in different economic and social contexts in South Africa, which has not helped its cause, particularly when applied to the vulnerable agricultural sector. The following discussion looks at two commonly applied dimensions of empowerment in South Africa: transformation and B-BBEE policy.

3.8.1 Transformation

The term transformation is applied in an economic sense and refers to activities aimed at redressing the negative effects of disempowerment experienced within the black population. Collins (2017) defines economic empowerment in the South African context as “a national strategy aimed at attaining national unity, promoting reconciliation through a negotiated settlement” (Collins, 2017). Transformation has been further defined as corrective measures designed to right the wrongs of past racial oppression through the promotion of equality in the economic domain (De Vos, 2010). Friedman (2017), in turn, sees economic transformation as the change required to speed up black people’s access to the economy through the promotion of greater economic inclusion – something that was stripped away in apartheid’s disempowering policies and practices (Friedman, 2017). What is missing from these definitions, however, is reference to other forms of exclusion to which the majority were subjected – that is, over and above economic exclusion.

De Vos (2010) argues further that transformation, as stated in South Africa’s Bill of Rights, considers the need for equality to be attained in ways beyond those envisioned in the Constitution. The latter focuses on taking corrective measures to restore to disempowered blacks access to the social and economic rights that were removed under apartheid. It should be noted that the Bill of Rights requires that corrective action be taken, when interpreting legislation, against the state and individuals and institutions that both benefited from apartheid and were complicit in the enforcement of its policies. De Vos states that this vision of transformation has yet to be realised but one could argue that calls for inclusion of the majority in the mainstream economy support this vision. The structures that perpetuated racial, social and economic inequality and

injustices in society are still in place, with little having been done to bring about inclusivity for the majority in the economy and society as a whole.

In a development context, the term economic transformation refers to development where economic growth is accompanied by economic transformation and where this growth is dependent on the use of productive resources and the efficient use thereof (Maddison, 1970). Economic transformation has been defined by Worrall *et al.* in Supporting Economic Transformation (Worrall *et al.*, 2015) as: "... a continuous process of moving labour and other resources from lower to higher productivity sectors (structural change) and raising within-sector productivity growth applying technology to enhance efficiency".

The term transformation was conflated with empowerment when referring to the legacy left by apartheid in South Africa, adding to the confusion in meaning. Thus, most initiatives to tackle disempowerment have been driven by a BEE strategy which, as mentioned, focuses on the economic domain alone – ignoring the need to address empowerment across five domains, as revealed in the WEIA and 5DE methodological approach that informed the study (McEwan & Bek, 2006; Herman, 2013).

Although several contemporary transformation strategies have been implemented, structural constraints have tended to result in inadequate empowerment outcomes, as reflected in the potato industry in South Africa.

The meaning of empowerment is complex, contested and loosely applied across different industries and commodity groups in the agricultural sector. As stated by McEwan and Bek (2006), empowerment is central to the broader transformation of South Africa, which involves moving from a racialised, discriminatory system to one characterised by greater social, political and economic equity. The authors further assert that the use of the term empowerment is confined to a single dimension of disempowerment, economic disempowerment. However, this alone is insufficient to undo the structures of domination so that true transformation can be realised. Power relations remain intact and untouched. The multiplicity of definitions, perceptions

and interpretations of empowerment has led to mixed expectations and poor empowerment outcomes, which is all too apparent in the potato industry in South Africa.

Given the limitations surrounding the interpretation of transformation, as presented and argued above, it is proposed that in future, when addressing issues pertaining to the potato industry, the term empowerment should be applied above transformation, as the former has been adequately defined and rationalised with clear outcomes and expectations.

3.8.2 Broad-Based Black Economic Empowerment (B-BBEE)

Engagement in several empowerment initiatives in South Africa has largely focused on Black Economic Empowerment (BEE) through the application of the national strategy of Broad-Based Black Economic Empowerment (B-BBEE) (DTI, 2012, 2004). Yet BEE's complex and diverse effects cannot be adequately addressed if only one dimension (economic empowerment) is given attention. The multi-dimensional approach may be addressed in agriculture through, for example, the WEIA methodology, applied in this study.

BEE in South Africa is operationalised through the application of codes. However, compliance with the B-BBEE codes is voluntary rather than mandatory. This has prompted a number of critics to say that BEE lacks teeth and has not had the transformative influence that was originally envisaged (Herman, 2013).

3.8.3 AgriBEE Sector Codes of Good Practice

The AgriBEE Sector Codes of Good Practice emanate from the core objective of the agricultural industry, which is to ensure equitable participation and equal access for all in the agricultural sector. The Sector Codes are informed by the vision of agriculture in the Agricultural Strategic Plan for South African Agriculture (the 'Sector Plan') which calls for a "united and prosperous agricultural sector designed to meet the challenges of constrained global competitiveness and low profitability, skewed participation, low investor confidence, inadequate support and delivery systems, and poor and unsustainable natural resources" (DTI, 2017). The inclusion and empowerment of blacks in the sector are central to the sector's empowerment goals.

The AgriBEE Sector Charter Council was established in December 2008 and was followed in December 2012 by the establishment of the AgriBEE Sector Codes, which are an endeavour to encourage empowerment. They have taken into account the Department of Trade and Industry's (DTI) amended Codes of Good Practice for B-BBEE and are operationalised through AgriBEE scorecards (DTI, 2004 a, 2012). The Sector Codes were further amended in December 2017 in terms of section 9(1) of the Broad-Based Black Economic Act (Act No. 53 of 2003) as amended by the B-BBEE Act 46 of 2013.

3.8.4 Farmer Support Programmes (FSPs) as a means of empowerment

Farmer support and development is an activity aimed at empowering farmers with a cross-section of capabilities and resources in an effort to progress agency, build resilience and promote equitable development (Herman, 2013). Narayan (2002) and Alkire *et al.* (2013) add a further dimension, i.e. of holding accountable those individuals and organisations that impact on one's life (Narayan, 2002; Alkire *et al.*, 2013). Authors such as Allen (2003), Bartlett (2004), and Diener and Binswar-Diener (2005) suggest that internal or psychological empowerment is key to achieving meaningful and sustainable empowerment outcomes and overcoming internal and structural constraints. This form of empowerment also helps to reduce dependency on initiatives and programmes – a criticism levelled at the CASP programme (Business Enterprises, University of Pretoria, 2015) and PSA's Farmer Support Programmes (Plaas, 2013; De Klerk, 2013).

Farmer Support Programmes are delivered to farmers by private sector role players, both as statutory levy-funded and non-statutory levy-funded initiatives for particular commodities, and by public sector entities. As an enabler of farmer empowerment, FSPs have been described by the Western Cape Department of Agriculture as part of a broad developmental agenda designed to provide support primarily to smallholder farmers, so as to create institutional capacity through various mechanisms and thereby contribute to the strategic objectives of the sector (Western Cape Department of Agriculture, 2017). Support programmes include developmental assistance for farmers, extension and advisory services, food security initiatives and project implementation assistance through Casidra, an institution that specialises in that field (*Ibid.*).

The broader agricultural sector has engaged in assorted empowerment initiatives which have delivered varied outcomes. Van Niekerk *et al.* (2011) assert that there is an urgent need to apply a systems approach to the provision of farmer support, thereby stimulating more commercialisation opportunities for black farmers (Van Niekerk *et al.*, 2011). McEwan and Bek (2006) strongly advocate that fundamental relational and structural power constraints that are still in place be addressed since they reinforce the dual economy that, being a legacy of apartheid, is urgently in need of redress throughout the agriculture sector (McEwan & Bek, 2006). FSPs include, but are not limited to, empowerment initiatives in the sheep and wool, mohair, pork, deciduous fruit and lucerne industries. Owing to the concentrated nature of this study, however, these were not specifically probed in the literature review.

3.8.4.1 Historical policy perspective impacting FSPs

Vink *et al.* (2012) posit that a lack of support is the main factor contributing to South Africa's lacklustre land reform programme to date (Vink *et al.*, 2012). Policies adopted by the government since 1994 have recognised the importance of agriculture as a driver of economic development but there have been many implementation challenges. The authors discuss the launch of the Reconstruction and Development Programme (RDP) in 1994, which placed agricultural development and land reform as "central to and a vital driving force to development" (Van Rooyen *et al.*, 1994), and the Broadening Access to Agricultural Thrust (BATAT), a programme targeting black farmers "intended to kick-start a shift away from white dominance in agriculture, and attempt to assess the needs of black agriculture – existing and new – black farmers, and identify development priorities and strategies to improve their access to agriculture" (Oettle *et al.*, 1998). Both these programmes were seen as key policy instruments driving an integrated agricultural sector. In the wake of the limited impact of BATAT, the Comprehensive Agriculture Support Programme (CASP) was introduced to "enhance the provision of support services to promote and facilitate agricultural development targeting beneficiaries of the Land Reform and Agrarian Reform programmes" (Vink *et al.* 2012, citing the Minister of Agriculture, 2004).

3.8.4.2 CASP initiative

CASP, a public sector FSP, is not without its limitations. The main limitation stems from the fact that it is an initiative of the National Department of Agriculture, with implementation

being the responsibility of provincial departments of agriculture. As a result, the programme's effectiveness has been hampered by policy and implementation misalignment (Vink *et al.*, 2012; Business Enterprises, University of Pretoria, 2015). Furthermore, in a review of the impact of CASP on livelihoods, market access, commercialisation of smallholder farmers, capacity-building and food security, it was revealed that the programme had limited effect in the 2004–2013 review period (*Ibid.*). A further obstacle was a lack of coordination and collaboration with other government departments (including DAFF) and provincial departments of agriculture, the Department of Rural Development and Land Reform (DRDLR) and the Department of Water and Sanitation. The authors also indicated that inadequate resources, including budgetary constraints, had contributed to the programme's ineffectiveness.

3.8.4.3 Commodity-driven farmer support: Potato industry

The potato commodity organisation, Potatoes South Africa (PSA), provides farmer support through its Enterprise Development Programme, an initiative within its empowerment portfolio. PSA receives statutory levies, with 20% of these funds allocated to empowerment programmes. Farmer support is delivered to a select and limited number of farmers over a five-year funding period reducing annually by 20%. The financial support covers a single input, seed potatoes. In addition, the programme provides some mentorship. Apart from assistance under the programme not being delivered to the stated target of 50 farmers by 2015 (Plaas, 2013), the programme has prompted some questions and concerns: the sustainability of the 5 ha production scale, the relevance of the development programme to farmers' actual needs, and whether the programme creates meaningful empowerment or dependency (Plaas, 2013).

3.8.4.4 Commodity-driven farmer support: Wine industry

The literature on empowerment in the wine industry was also examined as the industry presents some similarities to the potato industry. As the two industries' goals and circumstances differ in a number of respects, it would be inappropriate to draw too many parallels. However, the strategic imperative to meaningfully empower black farmers is common to all farming entities, which take their cue from the agricultural sector as a whole. Among the commonalities shared by the potato and wine industries are that they both operate in the horticulture sub-sector; they

both face high transaction costs; and barriers to entry for new industry players include limited resources, know-how and capacity (McEwan & Bek, 2006).

Farmer support initiatives in the wine industry have been informed by industry contextual issues resulting from the legacy of disempowerment, with farmworkers being the most socially excluded group in South Africa (Ewert & Du Toit, 2005; Kruger *et al.*, 2006). Social deprivation has manifested as poor working conditions, limited worker rights, low wages, inadequate housing and worker abuse evidenced in practices such as the ‘dop’ system (where workers were paid with cheap wine instead of wages) (Ewert & Du Toit, 2005). DAFF notes that the wine industry has remained almost exclusively white in terms of ownership and control (DAFF, 2011), with the status quo still reminiscent of the apartheid era (McEwan & Bek, 2009).

Against this backdrop, various empowerment models have been applied in the wine industry with the focus on farmer support in the context of industry challenges and a difficult economic environment. These are outlined in Table 3.1 below.

Table 3.1: Empowerment structures within the South African wine industry

Approach	Description	Example
LAND-BASED		
Ownership	A group or individual owns a wine farm.	M’Hudi, Sexwale
Contract farming	A business relationship between black farmers and a central processing facility.	
Joint ventures	A new farm or brand initiated between a commercial farmer and black farmers or black farmworkers.	Tukulu/Distell
Employee/share equity schemes	Portions of existing farms are sold to the workers who gain voting rights, dividends and management experience.	
Cooperatives	A collective operating entity.	
Socio-economic development	A farmer provides employees with housing or land for building houses.	Reyneke
NOT LAND-BASED		
Wine brands or virtual wine companies	A brand which contracts out its wine production.	Mia Cara (Seven Sisters)
Service SMEs	Organisations which provide contracted services (e.g. harvesting, logistics, etc.) to the industry.	

Source: Adapted from Van Rooyen (2008) and Sato (2013)

The varied empowerment approaches would infer varied farmer support approaches adopted by different role players in the wine industry. These support programmes have been criticised for not addressing the objectives of BEE but focusing instead on technical and management issues (McEwan & Bek, 2009). Van Rooyen (2008) points out that capacity-building initiatives and employee equity schemes, which focus on the provision of funding for the purpose of acquiring equity in commercial farms, are the most popular empowerment initiatives adopted in the wine industry. However, McEwan and Bek (2006:2009) have criticised them on the basis that they perpetuate existing power structures and relationships.

3.8.4.5 *The DBSA approach to farmer support*

The Development Bank of South Africa (DBSA) adopted a comprehensive FSP focusing on small-scale farmer development through the provision of technical and marketing support as well as various assets and resources (including production inputs, infrastructure and credit). The programme, which was first launched among small-scale farmers in the previous homelands in South Africa in the 1980s, has benefited from a coherent policy framework, effective project implementation and focused funding efforts. The DBSA's often-cited approach reflects a successful development strategy that has used large-scale and commercially oriented agricultural projects to address goals associated with social development, economic development, poverty alleviation, rural development, food production and unemployment (Singini & Van Rooyen, 1995).

Vink *et al.* (2012) contend that notwithstanding the success of the DBSA approach (which at the outset recognised that black farmers lacked the capabilities and resources to farm efficiently due to South Africa's apartheid legacy), sometimes the lessons of the past continue to be ignored. The authors cite Lipton (1977) who compares the "two agricultures", resulting in the dualism that characterises the agricultural sector to this day. Lipton, they say, argues for policies that will create an integrated farmer support system, i.e. one that integrates agricultural production with the agribusiness sectors into supply chains for the benefit of all farmers (*Ibid*). This was not possible when the DBSA first implemented its FSP.

According to Vink *et al.* (2012), in designing FSPs today, two spatial distortions not considered in the DBSA FSP approach must be addressed. These relate to land distortions created by the Land Acts of 1913 and 1936, which gave rise to the dualism phenomenon. Typically, in the former homelands, black farmers held land under traditional communal tenure arrangements, while commercial agricultural entities enjoyed individual title over their land. Some land reform beneficiaries, however, have come to hold land in commercial farming areas, but under a less-than-freehold-title arrangement. Land settlement patterns that were created and governed by the Native Administration Act of 1927 provided the legal framework that defined land rights, such as ‘permission to occupy (PTO)’ and betterment planning involving the allocation of residential and arable land to households. However, arable land was located far from households, resulting in its underutilisation.

A further anomaly was that commercial farmers enjoyed a host of supportive policies, such as the provision of land, subsidies and access to resources (including finance, roads, fencing, dams, irrigation and other infrastructure), and an enabling marketing policy, the Marketing Act of 1937, which was specifically geared towards supporting the commercial farming sector. Since 1994, however, there has been a void in terms of the delivery of farmer support, particularly to the smallholder farming sector. The decline in public sector investment in technical services (including extension services) has been a contributing factor. Initiatives such as CASP were designed to provide farmer support, but only to land reform beneficiaries (Vink *et al.* 2012, citing the Minister of Agriculture, 2004).

3.9 EMPOWERMENT TRENDS IN THE POTATO INDUSTRY

Chapter 1 discussed some characteristics of the South African agricultural marketing system in place between the 1920s and the 1980s which benefited the white commercial agricultural sector. The system contributed to the marginalisation and disempowerment of the black farming sector. A few pieces of legislation, such as the Marketing Act of 1937, the Marketing Act of 1968, the Land Bank Act of 1912 and the Co-operatives Act of 1922, had a number of social and economic consequences which, because of the way they were interpreted and implemented, served to benefit white farmers at the expense of black farmers. In this way, the white farming sector set the tone for the quality of the industry.

The high levels of state support on offer included various forms of subsidies for co-operatives and the broader white agricultural sector, which served to benefit both indebted and other white farmers. This was effected through various measures, including the channelling of drought relief through cooperatives and the provision of direct financial support by government. For example, the Northern Transvaal Cooperative (NTK) received R103.7 million in government funding between 1986/7 and 1996/97 (Bayley, 2000). Farmers also received state subsidies, via the Land Bank, which allowed them to acquire land at more affordable prices (Bayley, 2000).

3.10 THE MARKETING ACT AND THE INSTITUTIONAL ENVIRONMENT

Over and above the discriminatory measures discussed above, the Land Act of 1913 marginalised black individuals by confining them to the unproductive, over-populated and resource- and infrastructure-poor 13% of agricultural land in what became known as the homelands. As black farmers could not rely on agriculture as their main source of income and livelihood, they were forced to become more dependent on non-farm sources of income.

The potato industry, like other industries in the agricultural sector, was governed by the Marketing Act of 1937. This Act facilitated the establishment of a system of white farmer-dominated Control Boards which managed production, processing, marketing and pricing of various agricultural commodities. This provided a legal framework for statutory interventions in agricultural marketing, effective until 1996 (Bayley, 2000). The Potato Board (later to become PSA) was one such board.

Organised (white) agriculture in South Africa could use the Marketing Act to its benefit from the late 1940s, with Control Boards applying measures covered by the Act to promote their own interests and become self-serving. Some farmers regarded the powers conferred on these Control Boards under the Marketing Act as their established right (Bayley, 2000) and they put pressure on their representatives to act accordingly. The Potato Board entrenched this concentration of power by implementing various measures in the interests of its white farmer membership. One such measure was the amendment of organisations' trust deeds during the one-year phase-out period of the Control Boards, effected through a sunset clause. The sunset

clause was put in place to establish a clear timetable for closing the Control Boards through the Marketing Act of 1996 (Bayley, 2000). This concentration of power is still effective in some commodity organisations, including the potato commodity organisation, PSA, where power is concentrated with the mainly white farmers.

The power concentration in PSA is evident in the actions taken by the Potato Industry Development Trust (PIDT), which is responsible for governing PSA's affairs through the management of statutory levies applied in the industry. The PIDT amended the trust deeds, further entrenching its power and ensuring that the Trust's power over the affairs of the potato industry superseded those of the Minister of Agriculture. The trust deeds confirmed the trustee rules and numbers, which were skewed in favour of white commercial farmers. The trustees currently representing the PIDT are, with one exception, the same as those in place at the initial signing of the trust deeds (PSA, 2015) and the drawing up of the Certificate of Incorporation (PSA, 2005). The exception is the single ministerial trustee who is appointed by and represents the interests of the Minister of Agriculture. Power relations effectively remain intact, with real empowerment not having taken place in the potato industry.

These actions are described by Bernstein in several publications as having been taken by the commercial agricultural sector to secure its position in the post-democratisation era, thereby maintaining the status quo (by largely overlooking black interests) and adopting a 'business as usual' attitude (Bernstein, 1993, 1996, 1998, 2013). Bayley (2000) adds that even the appointment of an ANC Minister of Agriculture in 1996 and the introduction of the amended MAP Act of 1996 did not deter commercial agriculture from reducing the influence of government over statutory assets (Bernstein, *Ibid*; Bayley, *Ibid*). The PIDT implemented measures in a similar manner, as described by Bernstein (2013) and Bayley (2000).

3.11 DEREGULATION OF MARKETING CONTROL BOARDS

Agricultural reform began in the early 1980s. One of the focus areas was the dismantling of various types of commodity-based state marketing schemes. The intention was to move away from the hitherto regulated system of commercial farmers receiving concessional interest rates on agricultural finance extended by the Land Bank as well as other forms of state support. This

move was largely driven by increased pressure on the government's budget, which now had to support the black majority in addition to the white farmers who were previously the primary beneficiaries of apartheid policies and resources. The government eventually withdrew the subsidies to the Control Boards during the 1980s through to the early 1990s.

The democratic government closed the Control Boards for several reasons. Firstly, there was a contradiction between the Boards' policies and the government's mandate to address poverty and inequality through economic growth and job creation strategies. In this regard the government intended to create a more equitable and representative agricultural sector which was at odds with the presence and operation of the Control Boards (Bayley, 2000). Secondly, there was a perception among the various commodity bodies that the Control Boards were not efficient vehicles for supporting the large numbers of black small-scale farmers (Bayley, 2000; Ntsebeza & Maenetje, 2009).

3.12 CONVERSION OF CONTROL BOARDS TO TRUSTS

According to Bayley (2000) and several other authors, Control Board assets – valued at approximately R630 million – were transferred to 11 commodity trusts. The Potato Board was closed in 1993 and was replaced by the Potato Industry Development Trust (PIDT), which was established to receive and manage the assets (i.e. including interest and other income) of the Potato Board (Ntsebeza & Maenetje, 2009; Bayley, 2000; Bernstein, 1993).

The process of establishing trusts in place of Control Boards was dominated by farmer representatives who wished to maintain control and exercise discretion over Control Board assets (*Ibid*). This exercising of control was effected through clauses written into the trust deeds. For example, in the case of the PIDT, such clauses covered the appointment of trustees, the aims and beneficiaries of the Trust, and the manner of disposal of assets on termination of the Potato Board (PSA, 2004). With the assets of the Potato Board being placed in the PIDT, the Potato Producers Organisation secured and subsequently enjoyed autonomous discretion over the use of such assets. The trust deeds were written in such a way as to maintain the status quo and to minimise the influence of both the Minister of Agriculture and the government in furthering the interests of a broader community of black potato farmers (Bayley, 2000).

In 2006 several reviews were conducted on the impact of the deregulation of the 21 Control Boards, the results of which were formalised in reports. A part of these reviews focused on determining the Control Boards' effectiveness in including more black farmers in mainstream agricultural activities through improved market access and infrastructure development. The reports concluded that deregulation was generally considered to have produced positive outcomes for several commodity organisations. However, when it came to the empowerment of black farmers, few positive results were noted. Several commodity organisations, such as those for citrus and mohair, expressed the view that the process had missed an opportunity to deliver meaningful empowerment outcomes through the fast-tracking of programmes designed to support black farmers. Such farmer support, previously available only to white farmers, was withdrawn in the wake of deregulation (Bayley, 2000; Karan *et al.*, 2006).

The potato industry, together with several other agricultural industry organisations, indicated in the reports that more attention was being given to supporting industries than to actual farming, with several more commodity organisations deciding to adopt more proactive approaches to empowerment (Karan *et al.*, 2006). PSA reported that the impact of deregulation was that it had created more awareness of the importance of BEE, particularly with respect to black potato buyers' purchasing power in FPMs – thus revealing a self-serving and opportunistic attitude.

It was envisaged that the newly established trusts would receive and administer statutory levies and other funds, thereby ensuring that the funds and assets previously enjoyed by the Control Boards would continue to be used to serve the interests of the entire agricultural sector (Ntsebeza & Maenetje, 2009). However, the potato industry has not acted in accordance with this thinking, as access to its services is restricted to PSA members through specific terms appearing in the organisation's constitution (PSA, 2015d). This is clearly at the expense of black farmers and aspirant farmers.

The aims of the trusts vary by industry, with most including objectives to fund activities that improve market access, fund research and disseminate information. The PIDT has five trustees with only one appointed by the Minister of Agriculture. While the ministerial trustee is appointed on a two-year term, the remaining trustees have held their positions since deregulation

in 1993 (when the PIDT was established) on the basis of an undemocratic, revolving and self-appointment process (PSA, 2004, 2005).

There were conflicting views about how the assets of the Control Boards should be disposed of. Buyer groups argued that as money was obtained from consumers, the assets belonged to consumers. Producers felt the assets belonged to them as funds were collected from them through the levy system. The government, in turn, was of the view that the funds belonged to them as they had given the mandate for statutory levies to be collected (Grain SA, n.d.). Eventually it was agreed that different trusts would be established for the different industries, whose main responsibility was to administer the assets from the various Control Boards in order to pursue various objectives.

PSA squandered its assets and fell into bankruptcy due to poor investments and the misappropriation of the Potato Board assets, including financial resources and buildings. This resulted in the need for PSA to apply to the Minister of Agriculture for a statutory levy (which other commodity organisations were also afforded) to fund the organisation's activities. A statutory levy was granted with one of the conditions being the empowerment of black farmers through development initiatives and enhanced market access (transformation). An initial minimum of 10% of collected levies was ring-fenced to be used for empowerment (transformation) purposes, which was later revised to a minimum of 20% (the precise figures not being available due to a non-disclosure agreement between the PIDT and the NAMC). The PIDT and two other trusts continue to receive and administer statutory levies.

As described earlier, over the years different interpretations regarding ownership (and therefore application) of assets and levy funds have prevailed and continue to do so. PSA believes the levy funds belong to the growers, as it is from them that the funds are collected. This reflects a perpetuation of the practice of funds designated for empowerment initiatives, particularly farm-based training (including first aid, HIV Aids and forklift training) being for the benefit of commercial white potato farmers and their business enterprises. According to Herman (2013), this is not empowerment of the previously disenfranchised, but rather the creation of business efficiency.

One of the objectives of the MAP Act that holds particular relevance for the empowerment of black farmers is “to increase market access for all market participants and aspiring participants” (Ntsebeza & Maenetje, 2009). The authors state the MAP Act and the work of the NAMC are clearly aimed at achieving transformation (empowerment) of the agricultural sector by stimulating market access for all participants, including aspiring participants. As such, limiting access of PSA’s services to members only contradicts the legal mandate of making a public good accessible to the broader community of potato farmers.

3.13 MARKETING OF AGRICULTURAL PRODUCTS (MAP) AMENDMENT ACT

The Marketing of Agricultural Products Amendment Act, No. 59 of 1997, known as the MAP Amendment Act, made provision for the assets, liabilities and contractual obligations of Control Boards to be regulated with the approval of the Minister of Agriculture. Prior to the passing of the Amendment Act, trusts were subjected to the regulations under the MAP Act and the Trust Property Control Act, No. 57 of 1988, and so the MAP Amendment Act needed to be consistent with the provisions of the earlier MAP Act (Ntsebeza & Maenetje, 2009). The amendments to the MAP Act introduced new aims and objectives that the trusts needed to incorporate into their trust deeds. Among these was the transformation of the agricultural sector, in line with government policy. Karan *et al.* (2006) also recommended this to the NAMC.

The MAP Amendment Act contained two significant changes: the trusts would no longer be subject to any regulation under the MAP Act and would enjoy control over large amounts of money. The trusts were not statutorily required to account to the Minister or the NAMC in terms of the money and its utilisation, which had been a requirement of the MAP Act of 1968. The transfer of funds was effected in terms of Sections 46A and 84A of the repealed 1968 Act. The MAP Amendment Act also removed all references to trusts.

In addition, NAMC guidelines were adopted in 1997 in which trusts were defined as institutions entrusted with safeguarding and utilising the former Control Boards’ assets for the benefit of all, with the Minister having a representative in the trust. It was stated that benefits must be for anyone or any entity that complied with the trust’s objectives which needed to be sufficiently

broad as to benefit anyone involved in the industry. Funding of the trust's activities would be derived from income, not from capital accruing from the assets and accumulated funds of the Control Boards. In the case of the potato industry, this capital base was (as mentioned above) carelessly destroyed.

Trust deeds are aligned to the objectives of the MAP Act with provision for both industry and ministerial representation in the trusts. In the case of certain trusts, such as the Maize Trust, this representation is balanced (Grain SA, n.d.) but in the case of the PIDT and other trusts, a single trustee represents the Minister, which essentially means that power is slanted in favour of the trust, dominated by commercial farming interests. Neither the Minister nor the NAMC is considered a beneficiary of the trust and, in accordance with the trust deeds and the MAP Amendment Act, they are therefore not entitled to see the accounts of the trusts. As the trusts are not public entities, they are under no statutory obligation to report on their finances to the Minister and the NAMC. Furthermore, there are no statutory requirements for the trusts to incorporate their particular industry's (empowerment) transformation objectives and therefore to engage in practical empowerment initiatives targeting black individuals. This is all in stark contrast to the previous Control Boards which were required to report to the Minister of Agriculture under Section 40 of the (repealed) 1968 Marketing Act (Bayley, 2000).

3.14 PUBLIC GOODS FOR PRIVATE USE

A contentious issue that arose in relation to trusts, and the PIDT especially, was the entitlement and access to statutory funds and therefore the services provided by PSA. A major source of trust funding is of a statutory nature (Ntsebeza & Maenetje, 2009). The funds and assets that were managed by the Control Boards were acquired and levies were collected in terms of the provisions of Section 41 of the (repealed) 1968 Marketing Act (*Ibid*). The monies previously collected by the Control Boards were required to be used, with the approval of the Minister, for public purposes. The funds were therefore public funds and not private funds, as interpreted by the PIDT. It is for this reason that the NAMC stated that these funds could not be distributed to private entities. However, a situation arose in which assets, though public, were used to support private interests instead of benefiting the broader agricultural sector. The same applied to funds collected through statutory levies under the MAP Act.

Clearly, statutory levies are public funds that should not be allocated simply for private use, and the benefit should extend beyond members of a particular commodity organisation. Yet in the potato industry the PSA has behaved differently, always insisting that its services are for its members only (PSA, 2015d).

3.15 CONCLUSION

The literature on the South African potato industry is largely limited to issues of crop production, pathology and marketing, with little available information on how empowerment is being addressed in the industry or the effectiveness of transformation initiatives. Empirical studies have, though, considered some aspects of disempowerment as it has affected the potato industry, with reference being made in Chapter 1 to the plight of farmworkers in the Bethal area of Mpumalanga province. This provided an important backdrop to the history of deliberate disenfranchisement of black individuals in the agricultural sector through legislative means as well as the bias of state institutions.

Today new thinking is needed on how the agricultural sector in South Africa, and the potato industry in particular, can address the empowerment needs of black farmers. With the benefit of hindsight it is important to appreciate, but not affirm, the practices of the previous order which unfortunately are still evident in the “dominant symbolic structures” that remain intact (McEwan & Bek, 2006). Of particular importance in the literature are the recurring accounts of whites being empowered and blacks being disempowered, helped by various pieces of legislation and the deregulation of the industry which helped to institutionalise black disenfranchisement.

The review of the literature (both empirical and theoretical) included an analysis of the phenomenon of power and its various manifestations. This constituted a useful foundation for exploring the nature of power relations in relation to empowerment and disempowerment. The insights derived informed the definitions, conceptual framework and methodology applied in the study. Of particular interest and importance was the view articulated by Herman (2013) who sees empowerment as the need to understand the present by revisiting the past and adopting a rehabilitative and preventative mind-set, and ensuring that the negative aspects of the past never repeat themselves in the future.

Empowerment, as applied and practised in South Africa, was discussed with reference to the term's usage both internationally and locally. It was emphasised that empowerment in South Africa has largely come to mean economic empowerment, whereas it should have a much broader meaning. A recommendation emanating from the discussion was that empowerment should not be referred to as transformation, particularly as the Department of Trade and Industry's primary transformation vehicle – B-BEEE policy – addresses a single dimension (the economic dimension) of empowerment, which has taken root across a broad range of industries.

The literature review also revealed how encroaching disempowerment of black farmers came to characterise the potato industry in South Africa. Key influencing factors were the dismantling of the Potato Board and other deliberate actions taken by institutional structures in the potato industry to maintain the status quo and affirm the position and power of white farmers. One such action was the passing of the MAP Amendment Act which put more power into the hands of private industry.

Disempowerment also continued to prevail due to what Scott (1989) calls non-material forms of power which typically elude observation. This manifested subtly in the potato industry in, for example, deliberate exclusion on the basis of language (both verbal and written), exclusion of black farmers from key technical study group events, insignificant participation of black individuals in operational committees responsible for driving industry activities, and the exclusion through a biased approach to membership criteria, to name a few.

CHAPTER 4

RESEARCH METHODS AND PROCEDURES

4.1 INTRODUCTION

The purpose of this chapter is to present the methodological framework that was used for the empirical investigation. The chapter provides details on the research design, philosophy, and strategy, the target population and study areas, as well as the research instrument, approach to data analysis, limitations of the study and ethical considerations. Finally, it comments on the the validity and reliability of the study.

Empowerment has been described by authors such as Mahmut *et al.* (2012) as a “latent phenomenon” which is often difficult to observe and measure. In the review of the literature in Chapter 3, it became evident that empowerment is a complex, dynamic and multi-dimensional concept impacting multiple facets of people’s lives. Clearly, one domain alone is incapable of explaining empowerment (Alkire *et al.*, 2013).

In the South African context, empowerment aimed at addressing the historical legacy of racial discrimination is mainly operationalised through the DTI’s B-BBEE policy which incorporates a number of pillars. The policy applies to the agricultural sector by way of the application of the Agri-BEE sector codes. BEE has been criticised by authors such as McEwan and Bek (2006), Herman (2013), De Vos (2010) and Friedman (2017) for addressing only one aspect of empowerment, i.e. the economic aspect. Unfortunately, the terminology commonly associated with transformation has been conflated with empowerment, causing confusion in many circles.

Chapter 3 looked at several ways in which empowerment can be operationalised. With reference to the first objective of this study, secondary data in the form of NAMC data sets were analysed to measure empowerment outcomes. Considering the acknowledged limitations of this approach (i.e. single dimensional), together with the aggregated nature of the data, it is difficult to formulate a specific view or impression of the empowerment status of farmers across regions, their demographic profile, the social groups to which they belong, and so on.

The study also applied the WEAI and 5DE methodology to assess the empowerment status of black potato farmers across four of the five domains of the WEAI. The advantages of this methodology are:

- It allows for measurement;
- It makes it possible to track progress over time (*what gets measured gets done*);
- It can assess the state of empowerment while also trying to identify barriers to and progress towards empowerment;
- It can identify and target key strategies and programme areas where empowerment needs to be strengthened;
- It presents a disaggregation of farmer data (demographics, provinces, wealth, etc.), thereby enhancing the analysis and proposed targeted interventions.

The methodology provides the added benefit of being able to formulate policy interventions based on empowerment outcomes across different domains (Alkire, 2013). This is not to say that the process should stop there; rather it serves as a first attempt in addressing the complex nature of empowerment. The study applied a two-pronged approach to addressing the first objective:

1. The application of the NAMC guidelines (addressing a single economic domain);
2. The application of the WEAI and 5DE qualitative methodology (addressing four of the five empowerment domains).

4.2 STUDY LOCATIONS

This study was conducted in five provinces (Mpumalanga, KwaZulu-Natal, Eastern Cape, Free State and Limpopo). These provinces straddle the 16 potato-production regions, as defined by PSA. The provinces also have a strong agricultural profile (StatsSA, 2017; Atkinson, 2014) and have been prioritised by the government for poverty alleviation through agricultural development (DAFF, 2016).

The study was exploratory in nature since little relevant research has been conducted to date. The research included a benchmark study on black small-scale potato-producing farmers across five provinces, providing an understanding of the farming systems, land and property regimes and the factors affecting these, the socio-demographic and socio-economic profile of farmers, the markets they access, their production practices and the impact on their livelihoods, and the levels of empowerment among farmers. Only the analytical approach and findings relating to the objectives of the study are presented in this dissertation. A detailed discussion on the study areas, including maps, is contained in Appendix E.

4.3 RESEARCH DESIGN

This study adopted (in the main) a cross-sectional and mixed-method research design. The cross-sectional aspect of the research design involved the use of a survey questionnaire, while the mixed-method design used qualitative and quantitative approaches. These designs were carefully selected to provide accurate and informative inputs that would aid the meeting of the research objectives.

4.3.1 Research philosophy

The study followed an epistemological research approach which is underpinned by the ontology (objective realities) and anti-foundationalist research philosophies (Mancosa, 2016). These research philosophies were chosen because they are objective and bring valuable context to the research design. They are also more relevant to a study of this nature because empowerment dimensions and dynamics have proved to be difficult to measure and so proxy asset indicators are applied as intermediate indicators of empowerment and agency (Alkire *et al.*, 2013; Mahmud, *et al.*, 2012; Narayan, 2002). It was felt that the chosen research philosophies could help to unravel important dimensions of the empowerment status of the potato farming industry.

4.3.2 Research strategy

The research strategies employed in this study comprised a survey and focus sessions (i.e. the Agricultural Economics Association of South Africa/AEASA workshop in 2016 and a number of Smallholder Market Access Tracker/SMAT reference group meetings). The preliminary results and the methodologies were interrogated in those sessions with a view to refining the research

instrument. The methods were then operationalised on the basis of sequential explanatory mixed-research choices. According to Saunders *et al.* (2016), sequential explanatory mixed-research choice means that quantitative methods were conducted first followed by qualitative methods (see Figure 4.1). The quantitative methods involved the collection of primary data while the qualitative method involved gathering secondary and primary data to fast-track the interpretation of the results. This was to ensure that the epistemological research philosophies were taken into account in order to realise the objectives of the study.

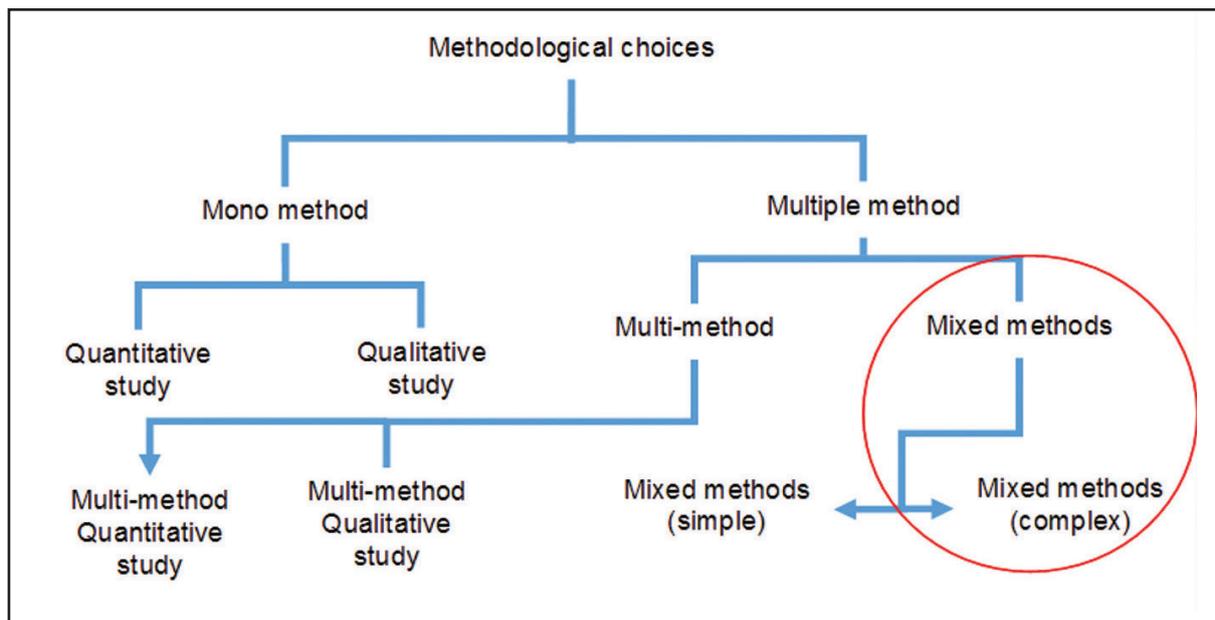


Figure 4.1: Methodological choices or strategies

Source: Saunders *et al.* (2016)

4.3.3 Population and sample size

The study population refers to the totality of entities that are of interest (Diamatopoulos & Schlegelmilch, 2005). The population was determined for each of the provinces surveyed and computed by multiplying (sample/Population) by 100 to get the sample size. The sampling ratios for individual provinces are shown in Table 4.1.

Table 4.1: Sampling ratios for study areas

Province	Total farmers surveyed	Sampling frame (population)	Ratio (as a per cent)
Mpumalanga	28	79	35.4%
KwaZulu Natal	30	116	26.0%
Eastern Cape	35	137	25.5%
Free State	11	44	25.0%
Limpopo	28	88	31.8%
TOTAL	132	524	25.2%

(Source: Survey 2016 fieldwork)

The total numbers of farmers surveyed (see Table 4.1) were determined from both qualifying and completed responses. Of the five surveyed provinces, KwaZulu-Natal, the Eastern Cape and the Free State did not reach the 30% representation threshold. Five and seven farmers were excluded from KwaZulu-Natal and the Eastern Cape, respectively, due to non-compliance with the participation requirement of having planted potatoes within the past two seasons. This condition was designed to increase the accuracy of the data collected from farmers as it was likely that they would recall key production information during this fairly recent period. The number of respondents who completed the survey in the Free State fell short due to adverse weather conditions experienced on the scheduled fieldwork dates. Because of time and budgetary limitations, the Free State sample was limited to 11 respondents.

4.3.3.1 Target population

The target population was black farmers who had planted certified, virus-free seed potatoes within the previous two planting seasons. These black potato farmers were identified by various NGOs, provincial Departments of Agriculture, the Department of Rural Development and Land Reform (DRDLR), role players in the potato value chain, organisations and PSA farmer databases. From this, an attempt was made to derive a representative target population.

4.3.3.2 Sample and sampling method

The data collected were obtained from a cross-section of purposively selected respondents. Non-random sampling (also called judgement sampling) of n =132 respondents was applied in order

to study participants from different parts of the potato value chain and located across various potato-production regions, all of whom were participating in empowerment initiatives. Non-probability sample (see Figure 4.2) selection criteria were applied to known and deliberately targeted industry players based on their involvement in empowerment initiatives (Saunders *et al.*, 2016; Ritchie & Lewis, 2013).

A semi-structured questionnaire was used to gather data and gain insight into empowerment initiatives in the industry. Data were collected by means of note-taking and audio recordings (obtained with respondents' consent). Using the audio and written responses from the interviews, a five-phase analysis cycle was conducted involving compiling, disassembling, reassembling (establishing patterns and differences), interpreting (presenting descriptions, explanations and calls to action) and finally presenting the data in a descriptive manner (Yin, 2009; Tellis, 1997; Yin, 1994). A systematic review was then carried out to critically evaluate the evidence. Such an approach is described by Collins and Fraser (2005) as being suitable for coordinating the views of diverse respondents on a very focused topic as it allows the same rigour to be applied in the generation of evidence.

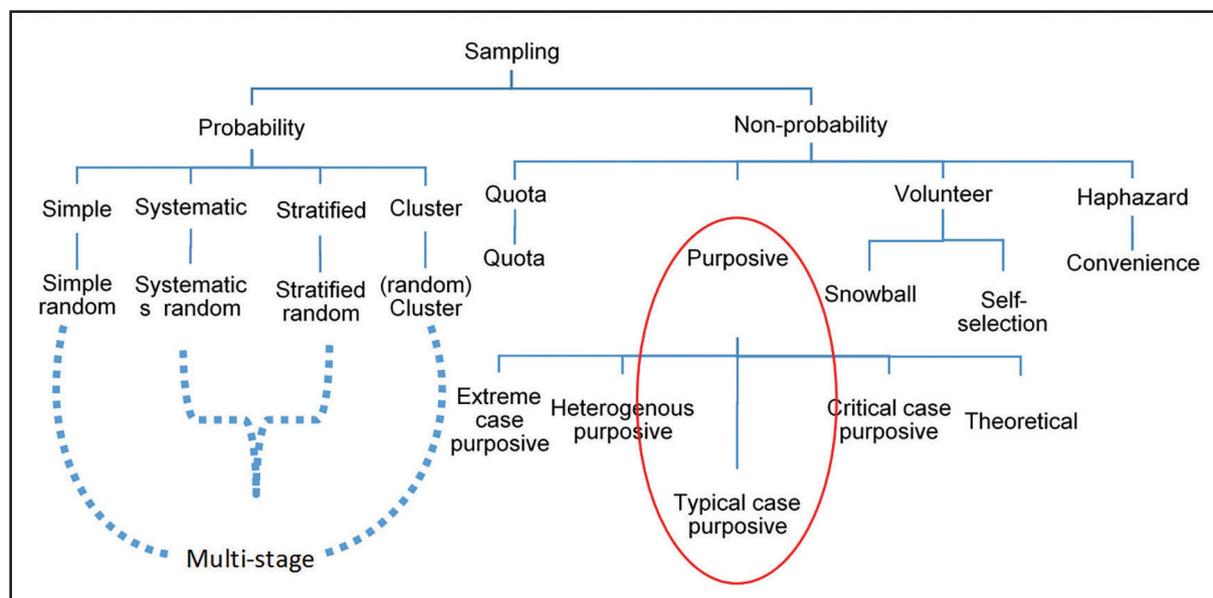


Figure 4.2: Sampling methods

Source: Saunders *et al.* (2016)

4.3.3.3 *Sampling frame*

The sampling frame for the study was drawn from the potato farmers who were involved both full-time and part-time in agricultural production. The sampling frame comprised the following sources of potential and verified certified seed-planting respondents:

- LIMA Rural Development Foundation (LIMA) and SaveAct;
- Potato farmer databases secured from NGOs, the LIMA Rural Development Foundation (LIMA) and SaveAct;
- PSA Enterprise Development (ED) Programme participants;
- Lists of farmers from provincial Departments of Agriculture and local and district municipalities;
- Potato seed suppliers; and
- Potato value chain role players who engaged with black potato farmers.

4.3.4 **Research instrument**

The study used a semi-structured questionnaire which was developed and subjected to a peer review panel of critics. These critics were meant to improve the quality of the questionnaire, its reliability in measuring the attainment of the set research objectives and its appropriateness for the respondents (Christeinsen *et al.*, 2015). The study also used an in-depth questionnaire derived and adapted from the WEAI and 5DE methodological framework which addresses the multi-dimensional and complex nature of empowerment.

The WEAI is the first comprehensive measure to directly determine the inclusion and empowerment of women specifically in the agricultural sector. It was developed by the United States Agency for International Development (USAID), the International Food Policy Research Institute (IFPRI) and the Oxford Poverty and Human Development Initiative (OPHI) to monitor and track changes in empowerment levels of women in agriculture as a result of interventions undertaken (Alkire *et al.*, 2013). The WEAI is regarded as an innovative means of measuring the extent of women's empowerment across several dimensions (social, economic, political and psychological) and five domains of farmers' lives, namely:

- Production domain, investigating decisions about agricultural production, attained yield and tenure arrangements (Domain 1 of 5DE of WEAI);
- Resources domain, assessing access to productive resources (represented by a tractor and extension services) (Domain 2 of 5DE of WEAI);
- Income domain, assessing control over the use of income and income generated (Domain 3 of 5DE of WEAI);
- Leadership domain, investigating leadership effectiveness and capacity to influence change (Domain 4 of 5DE of WEAI);
- Time allocation domain (Domain 5 of 5DE of WEAI).

Alkire (2005) confirms that empowerment measures are domain-specific, as stated above, with only four of the five domains interrogated in this study. The study did not include the time allocation domain as the focus was on the empowerment of black farmers in the potato industry and did not include a gender-specific objective, which would be addressed through the time allocation module. The research instrument can appropriately be applied in measuring empowerment beyond gender, as reflected in other research, such as Alkire *et al.* (2013) and Tromlerova *et al.* (2013).

The WEAI further comprises two sub-indices. The first sub-index is the degree to which women are empowered in five domains of empowerment (5DE). Empowerment within a domain means adequate achievement in respect of that domain. Empowerment does not need to be achieved in all domains at the same time. The second sub-index is the Gender Parity Index (GPI). This was not applied in the study because the focus was not on women's empowerment specifically, but rather on the empowerment of all previously disempowered black potato farmers.

The expected outcomes from applying the quantitative WEAI methodology was to arrive at a deeper and more detailed understanding of the socio-demographic profile and empowerment status of black potato farmers and to develop a benchmark profile of these farmers, which the potato industry currently lacks.

4.3.5 Pilot study

During the initial phase of the study, farmers in Mpumalanga province were involved in a pilot exercise. The results of the pilot helped in refining the questionnaire, which took place after the research team had conducted a critical review.

4.3.6 Questionnaire design

The first page of the questionnaire showed the title of the study and provided guidelines on how to respond to the questions. Also provided was an assurance that all responses would remain confidential as well as a place where respondents could give their consent. The respondents remained anonymous, which not only served an ethical purpose but was an attempt to ensure a high response rate and more reliable information.

The questionnaire consisted of the following five sections:

- Section A Covering demographics;
- Section B Covering land and agricultural farming systems;
- Section C Covering marketing and selling arrangements to markets;
- Section D Covering intermediate indicators of agency;
- Section E Covering psychological aspects.

4.4 DATA COLLECTION

The data were collected using the following methods:

- Collection of data by trained enumerators under the supervision of the researcher;
- Collection of data via the semi-structured questionnaire.

4.4.1 Editing of the data

The procedures involved in data editing were of two main types:

4.4.1.1 Field editing (i.e. editing done during interviews)

- The editing of the data commenced in the field. This involved collecting and verifying the contents of the completed questionnaires.
- The editing also involved validating the participants' responses to all questions in the questionnaire.

4.4.1.2 Central editing (in-house or in-office editing)

- The purpose of this editing was to thoroughly scrutinise the (draft) questionnaire in the office prior to the fieldwork to ensure its accuracy and high standard.
- The editing of the (draft) questionnaire was based on relevance, completeness, consistency, uniformity and accuracy of the questions.

4.5 DATA ANALYSIS AND INTERPRETATION

Both primary and secondary data sets were collected. According to Saunders *et al.* (2016), primary data refer to data that are collected by the researcher himself or herself at the actual point where such data are generated. Secondary data, on the other hand, refer to data that already exist, such as in the NAMC databases, research reports, conference papers and journal articles. Primary data were collected using face-to-face interviews together with a semi-structured questionnaire. The study used Microsoft Excel and STATA 14 for the data analysis.

4.5.1 Descriptive analysis

The descriptive analysis in the study entailed arriving at a description of the characteristics of the population in the sample. Descriptive statistics form the basis of the analysis that generates the description or summarises the research data (Christiansen *et al.*, 2015). According to these authors, descriptive analysis allows a researcher to make sense of the data set and to allow the straightforward comparison of key characteristics. The descriptive output provided the means, standard deviation, frequencies and percentages of variables of interest, which all helped to characterise the population or sample.

4.5.2 Inferential analysis

Inferential analysis goes beyond the immediate data set and infers characteristics of the population based on the sample data (Saunders *et al.*, 2016; Christensen *et al.*, 2015; Tustin *et al.*, 2010). The study used the chi-squared test to test the difference in the proportions of variables of interest. It also used multivariate analysis to test the factors that influence transformation and research expenditure variables in the black potato farming sector in those areas applicable to the study.

4.6 VALIDITY OF RESEARCH

According to Diamatopoulos and Schlegelmilch (2005), validity refers to the extent to which a particular measure is free of both systematic and random error. The authors define reliability as the extent to which a particular measure is free of random error. If the measure is not reliable, then it cannot be valid (Diamatopoulos & Schlegelmilch, 2005). The study focused on both external and internal validity to ensure the quality of the research outcomes.

4.6.1 External validity

Cooper *et al.* (2006) define external validity as the degree to which the results of a study can be generalised to other circumstances and to other studies. It was assumed that the selected sample in this study could be generalised throughout the investigation to black smallholder potato farmers. The external validity of the research was determined from the relative size (number) of the selected sample's questionnaires that were completed by respondents.

4.6.2 Internal validity

Internal validity is the degree to which a study can rule out doubtful alternate explanations for the results (Cooper *et al.*, 2006). Threats to internal validity were effects other than the independent variable revealed in the research results. In this study, the internal validity was determined by analysing the internal consistency of the questionnaire. The results of the internal validity test pointed to a satisfactory internal consistency rate among the questionnaire items.

4.7 LIMITATIONS OF THE STUDY

The study was cross-sectional in nature and a limited sample was used. Furthermore, the study solicited the views of black smallholder potato farmers and commodity organisations (NAMC annual Status Reports, 2012 to 2016). Owing to limited resources and time constraints, the study did not fully test the WEAI methodology but it nevertheless applied the methodology. This application represented a first attempt to measure the empowerment status of farmers beyond the economic domain.

4.8 ETHICAL CONSIDERATIONS

The study adhered to universally accepted ethical considerations, as described by Christensen *et al.* (2015) and Tustin *et al.* (2010). According to Saunders *et al.* (2013), ethics is defined as a standard of behaviour that guides the conduct of a researcher in relation to the rights of those who are the subject of research activities. The acceptable and appropriate conduct in a research endeavour is to insist on adhering to prescribed rules and regulations regarding research obligations (Tustin *et al.*, 2010). Informed consent was sought (and acquired) from all respondents after the purpose of the study was explained to them (Scheyvens & Storey, 2003).

4.9 SUMMARY

The study used a cross-sectional and mixed-method research design, which incorporated both qualitative and quantitative research approaches. A total of 132 respondents participated and the sampling frame was drawn using a non-probability sampling method. Primary data were collected on the strengths of a survey in which a semi-structured questionnaire was used. In addition, focus sessions were conducted to collect secondary data as part of the qualitative research component. These data were then analysed for the purposes of producing descriptive and inferential research outputs.

Chapter 5 will present the research results and a discussion on the overall findings in the light of the research objectives.

CHAPTER 5

DATA ANALYSIS, RESULTS AND DISCUSSIONS

5.1 INTRODUCTION

The research methodology and related aspects were dealt with in Chapter 4. In this chapter, the results, accompanied by a supporting discussion, are presented in the light of the research objectives articulated in Chapter 1. The data used in providing these results were analysed using Microsoft Excel and STATA Statistical Software Version 14, and were presented to reflect the results of two distinct subsections of the broader analysis: first a descriptive analysis of the black potato farmers (participants) followed by an inferential analysis showing the degree of empowerment of the farmers and the factors contributing towards the improvement (or otherwise) of empowerment initiatives undertaken. Finally, the chapter presents a summary of the study's findings.

5.2 DESCRIPTIVE ANALYSIS

The descriptive analysis was essential for assessing the representativeness of the sample in this study. The sample profile comprised three aspects: gender, age and educational achievement (see Table 5.1).

Table 5.1: Demographic representation of black smallholder potato farmers

Description n (%)	MP	KZN	EC	FS	LP	Pearson Chi ²
Gender						
Male	20 (71.43)	14 (46.67)	14 (40.00)	10 (90.91)	24 (85.71)	X ² (21.85) Pr=0.00
Female	8 (28.57)	16 (53.33)	21 (60.00)	1 (9.09)	4 (14.29)	
Total	28 (100)	30 (100)	35 (100)	11 (100)	28 (100)	
Age						
<35	4 (3.03)	2 (1.52)	3 (2.27)	-	5 (3.79)	X ² (217.72) Pr=0.07
36-58	16 (12.12)	20 (15.15)	20 (15.15)	8 (6.06)	16 (12.12)	
>59	8 (6.06)	8 (6.06)	12 (9.09)	2 (2.27)	7 (5.30)	
Total	28 (21.21)	30 (22.73)	35 (26.51)	11 (8.33)	28 (21.21)	
Education achievement						
No education	-	-	-	1 (0.76)	-	X ² (66.35) Pr=0.00
Primary	-	-	1 (0.76)	1 (0.76)	-	
Secondary	7 (5.30)	9 (6.82)	11 (8.33)	-	1 (0.76)	
High school	14 (10.61)	11 (8.33)	7 (5.30)	2 (1.52)	2 (1.52)	
Technikon	3 (2.27)	9 (6.82)	14 (10.61)	6 (4.55)	16 (12.12)	
Postgraduate	4 (3.03)	1 (0.76)	-	1 (0.76)	4 (3.03)	
Tertiary	-	-	2 (1.52)	-	5 (3.79)	
Total	28 (21.21)	30 (22.73)	35 (26.52)	11 (8.33)	28 (21.21)	

Source: Survey fieldwork (2016)

Notes: M= means, SD= standard deviation, n = frequency

In the demographic outcome relating to gender, it is clear that gender was represented by two categorical variables (i.e. male and female) which were measured using frequency and percentages across five provinces. In the study, it was found that gender differed significantly within various provinces ($X^2(21.85)$, $P<0.00$).

According to the results, males had greater representation (62.12%) in the sample than their female (37.88%) counterparts. The results of the gender representation seem to mirror a study done by Chisasa (2014) who found a 65% male representation in a sample of farmers in the North West and Mpumalanga provinces of South Africa (Chisasa, 2014). However, the FAO reported that globally, females are generally better represented in agricultural activities throughout the world and are responsible for producing over 50% of the world's food (FAO, 2013; UNDP, 2016). Results in this study, however, did not reflect such a trend, possibly because the study specifically called for respondents who were household heads with knowledge of potato and other agricultural production.

Age was measured as a continuous variable and was presented by the means (M) together with the standard deviation (SD), and its significance was found to be low ($X^2(217.72)$, $P<0.10$). The study revealed that youth (34.74%) and economically active adult farmers (35.21%) constituted the majority of the sample, rather than the elderly. This was interesting as one can infer that agriculture is dominated by an economically active and productive class but slightly under-represented by the youth across all the provinces surveyed. This observation is supported by the assertions made in the Chisasa (2014) study on the North West and Mpumalanga provinces.

The respondents' educational achievements were measured against seven categorical variables, with the results revealing significant differences among respondents ($X^2(66.35)$, $P<0.00$). These differences were found to be particularly pronounced in respondents from the provinces of KwaZulu-Natal and the Eastern Cape.

Thirty-six per cent (36%) of the respondents had a Technikon-level qualification, 27% had high school education, 21% secondary school, 9% postgraduate, 4% tertiary, 2% primary school and 1% had no formal education at all. The farmers in the sample can therefore be described

as literate if considered against a high school-level benchmark. However, this literacy level did not relate to a post-matric qualification in agricultural production or knowledge offered by institutions such as Glen and Elsenberg Colleges of Agriculture which includes experiential learning. This supports the evidence that most farmers are functionally literate and possess adequate numeracy skills; therefore, it is likely that formal potato-specific skills development initiatives may further enhance productivity levels and empowerment outcomes. The literacy levels of the sample differed from those found in a study conducted in the Eastern Cape by Raleting and Obi which revealed lower levels of formal education than those found in the current study (Raleting & Obi, 2015).

5.3 INFERENCE ANALYSIS

In this study, the inferential analysis sought to establish the degree of variance explained by the independent variable. Five objectives were formulated to provide specific answers to the research questions.

5.3.1 Empowerment status of black smallholder potato farmers

Arriving at an assessment of the empowerment status of black smallholder potato farmers is critical for the growth and inclusiveness of this sector and its ability to make an economic contribution to the agricultural economy. The study sought to determine the empowerment status of smallholder potato farmers on the basis of their participation level (e.g. full- or part-time, or seasonal) and the income that they generated in different provinces of South Africa, as shown in Tables 5.2 and 5.3 respectively.

Table 5.2: Participation of black smallholder potato farmers

Description n (%)	MP	KZN	EC	FS	LP	Pearson Chi ²
Participation						
Full-time	11 (8.33)	30 (22.73)	26 (19.70)	11 (8.33)	25 (18.94)	X ² (49.79) Pr=0.00
Part-time	17 (12.88)	-	6 (4.55)	-	2 (1.52)	
Seasonal	-	-	3 (2.27)	-	1 (0.76)	
Total	28 (21.21)	30 (22.73)	35 (26.52)	11 (8.33)	28 (21.21)	
Experience						
Farming M (SD)	4.57 (5.53)	5.30 (3.46)	7.36 (6.73)	3.82 (3.09)	6.07 (3.90)	X ² (115.35) Pr=0.00
Household status						
Head	26 (19.70)	29 (21.97)	31 (23.48)	11 (8.33)	26 (19.70)	X ² (14.34) Pr=0.28
Spouse	2 (1.52)	1 (0.76)	4 (3.03)	-	2 (1.52)	
Total	28 (21.21)	30 (22.73)	35 (26.52)	11 (8.33)	28 (21.21)	
Household size						
M (SD)	5.43 (2.38)	6.10 (1.68)	7.83 (3.93)	9.82 (16.87)	4.04 (1.57)	X ² (87.11) Pr=0.01

Source: Survey fieldwork (2016)

Notes: M = means, SD = standard deviation, n = frequency

Various authors describe empowerment as a complex and transdisciplinary construct that straddles decision-making rights, access to resources (assets), power relations and skills endowment (capabilities) (Alkire *et al.*, 2013; Alkire & Deneulin, 2009; Luttrell *et al.*, 2009; San Pedro, 2007; Gogch, 2006). Allen (2003) acknowledges that power emerges from relations between individuals and is exercised in various spheres of life. He also describes power relations as dynamic in nature. Empowerment in this context represents marginalised groups gaining power from the already-empowered by participating more fully in society in an economic, social, cultural and political sense (Stats SA, 2017; Adesina, 2016; Gaventa & Runciman, 2016; Herman, 2013).

5.3.1.1 Participation of black smallholder potato farmers

In this study, the participation of smallholder farmers was measured using four variables, i.e. participation, experience, household status and household size.

Participation and household status are categorical variables while experience and household size are continuous variables. According to the results shown in Table 5.2, the participation of smallholder farmers in five provinces was found to differ significantly ($X^2(49.79)$, $P < 0.00$). Notably, the majority (22.73%) of full-time smallholder potato farmers were found in KwaZulu-Natal, followed by the Eastern Cape (19.70%) and Limpopo (18.94%). This seems to imply that these provinces act as hosts to smallholder farmers who are active participants in potato production.

In the light of these results, it is clear that potato industry empowerment programmes would benefit the participants in the respective provinces. The allocation of bundles of resources to these active farmers may be enough to enhance human and social empowerment, and indeed economic empowerment (Page & Czuba, 1999). These authors suggest that empowerment in the form of facilitating access to assets and capabilities that develop human capital could enable farmers to gain control over their development prospects and livelihoods.

It is also clear from the results in Table 5.2 that the farming experience trends also favour those provinces deemed to be actively participating in this type of farming. It should be noted that the farming experience did not reflect potato-specific production knowledge. This suggests that an opportunity exists to provide potato-related technical support and business skills training through government- and private sector-supported programmes, such as extension and agronomy support. Furthermore, it appears that the active participants in this type of farming are heads of households, which means that the households are dependent on the revenue generated by these farming operations. Moreover, the results for household sizes seem to confirm the assertion that those that are actively involved in farming have large households, except in Limpopo where they are a bit smaller. Enterprises in the Free State have the largest households.

5.3.1.2 Income generation for black smallholder potato farmers

According to various reports (StatsSA, 2016; Raleting & Obi, 2015), smallholder agricultural enterprises have been found to be the major source of income in rural households, and potato enterprises are no exception. This study investigated the average income generated by black smallholder potato farmers in South Africa, with reference to five provinces (see Table 5.3).

The results shown are only for income derived from potato production and sales, although farmers did engage in farming of other crops and livestock.

The results seem to suggest that Free State farmers have the highest average income followed by Limpopo, KwaZulu-Natal and the Eastern Cape. It can also be observed that Limpopo farmers generate the highest minimum average income, followed by those in the Free State, Mpumalanga and the Eastern Cape. These results suggest that at a micro level poor households are benefiting from the income generated by these enterprises, confirming the view that such enterprises have a propensity to alleviate food insecurity, malnutrition and unemployment (Ferris *et al.*, 2014).

The income generated by farmers is intrinsically linked to transaction costs, which depend on land availability and the institutions governing land access, production, capital assets and infrastructure, and human capital in the form of technical and entrepreneurial skills. The insecurity created by the predominant permission-to-occupy (PTO) land tenure institution, together with most of the sampled farmers' lack of collateral, precludes financial inclusion and renders many farmers credit constrained (Besley, 1994; Chisasa & Makina, 2012; Chisasa, 2014).

The various assets and facilities mentioned above are resources that Allen (2003) views as means of empowering individuals and communities. Notwithstanding the high transaction costs associated with potato production (Kirsten *et al.*, 2009; Strydom *et al.*, 2012; Steyn *et al.*, 2014), the temporal specific nature of potato production requires optimum production conditions, including land of a suitable quality and the ability to engage in land rotation to ensure that production is sustainable.

Without the right conditions, farmers are unable to capitalise on production inputs (both general and those specifically required for potato production) (Strydom *et al.*, 2012). This leads to operational inefficiencies, which ultimately impact both absolute and marketable yields attained (Steyn *et al.*, 1998; Steyn *et al.*, 2016; Van der Waals *et al.*, 2013). More fundamentally, it erodes farmers' income and negatively affects their livelihoods.

Technical and management skills development and experience in the forms of extension and agronomy support have been described by Van der Waals *et al.* (2013) and Steyn *et al.* (2014) as key requirements for sustainable potato production because they help to increase productivity which in turn optimises output. As far as income generation is concerned, there is an important interrelationship between resources (which are represented in property rights), access to finance (which facilitates access to infrastructure and production inputs) and skills and capabilities (represented in improved production and productivity).

With the Narayan’s 2002 definition of empowerment informing the study (“empowerment is the expansion of assets and capabilities of the poor to participate in, negotiate with, control and hold accountable institutions that affect their lives”), it is possible to use this definition to assess how income generation impacts the empowerment of farmers.

Table 5.3: Average income generated by black smallholder potato farmers

Provinces	N	Average income	SD	Min income	Max income
Eastern Cape	35	R 31 032,86	R 48 584,09	R 1 000,00	R 250 000,00
Free State	11	R 4 670 000,00	R 15 035 496,16	R 10 000,00	R 50 000 000,00
Kwa-Zulu Natal	30	R 37 203,33	R 54 987,52	R 300,00	R 270 000,00
Limpopo	28	R 466 928,57	R 589 659,41	R 20 000,00	R 2 200 000,00
Mpumalanga	28	R 25 000,00	R 35 118,85	R 2 000,00	R 150 000,00
Grand Total	132	R 510 198,86	R 4 352 752,76	R 300,00	R 50 000 000,00

Source: Survey fieldwork (2016)

Notes: $z = 6.26$, $Prob > |z| = 0.00$, $SD = \text{standard deviation}$

5.3.2 Commodity-driven transformation among black smallholder potato farmers

DAFF introduced transformation measures that led to the collection of statutory levies by the NAMC. Since 2004, these statutory levies (see Table 2.1) have been collected from industry and disbursed for transformation purposes in line with the NAMC transformation guidelines (NAMC 2012b, 2016). In the potato industry, these levies are collected and managed by PSA on behalf of the PIDT. The most recent statutory measures for potatoes are referenced in PSA 2015c. This study reviewed statutory levies collected from 2012 onwards as comparable secondary data were only available from this date.

5.3.2.1 Support for black smallholder potato farmers

The study set out to assess commodity-driven transformation efforts among black smallholder potato farmers. Figure 5.1 presents the results of the investigation into support provided by the potatoes commodity organisation through the NAMC’s statutory measures.

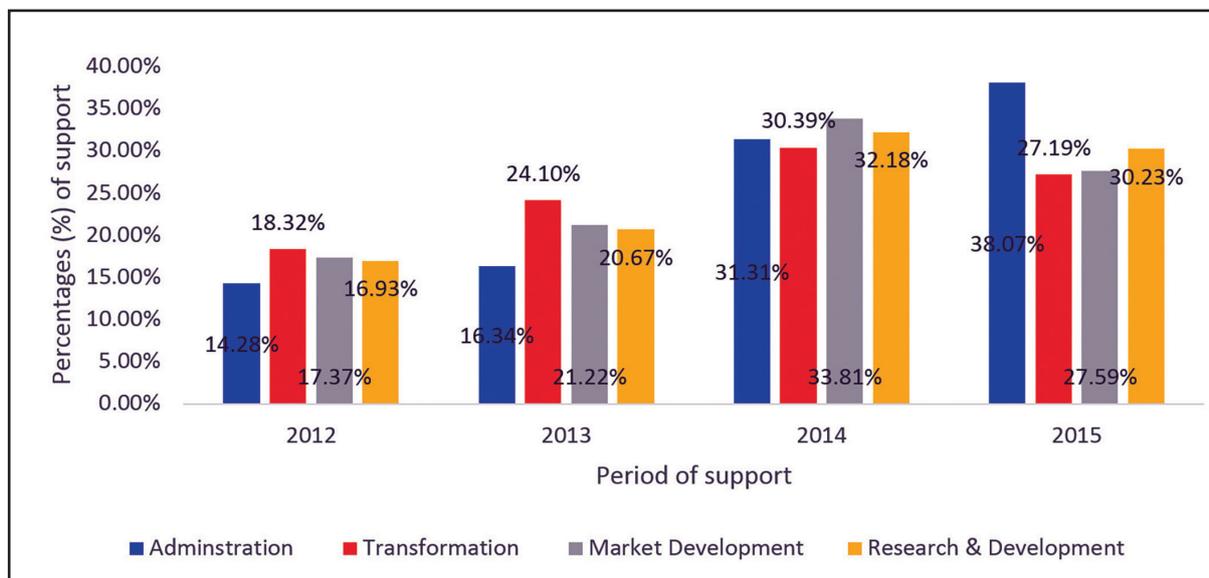


Figure 5.1: Support for smallholder potato farmers

Source: NAMC (2012b, 2016)

The results show that statutory support for transformation grew consistently from 2012 to 2014 before declining in 2015 (see Figure 5.1). Support for market development and research showed a similar growth–decline trend. In contrast, administrative support for transformation showed consistent growth during the period. These results seem to indicate that more funds are allocated to administration than to the core components of transformation. This may also suggest that the implementation of transformation initiatives is becoming more and more costly as time goes by.

From the results it can be deduced that administrative costs are now overtaking transformation activities in terms of importance. This is a worrying trend since transformational activities are supposed to be well resourced so that previously disadvantaged, resource-poor black South Africans can be empowered for the purpose of developing the rural economy and reducing poverty (Malhotra *et al.*, 2002; World Bank, 2007). Given the current downward trend in

transformational support, there is a growing likelihood that the transformational gains made between 2012 and 2014 will be reversed. This could result in racially based economic prejudices increasing at the expense of economic transformation and empowerment (Friedman, 2017; De Vos, 2010).

5.3.2.2 Land ownership types for black smallholder potato farmers

In this study, ownership of land was assessed on the basis of indicators such as private land ownership or lease arrangements, permission-to-occupy (PTO) arrangements, title deeds and other land ownership institutions. These land ownership types were assessed across five provinces. The results of the analysis of land ownership by black smallholder potato farmers are reflected in Table 5.4.

Table 5.4: Percentage of land ownership types among black smallholder potato farmers

Ownership n (%)	MP	KZN	EC	FS	Limpopo
Private land Lease	9 (32.14)	1 (3.33)	1 (2.86)	0 (0.00)	2 (7.14)
PTO – Tribal land	18 (64.29)	28 (93.30)	34 (97.14)	1 (9.09)	13 (46.43)
Private land title deeds	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	2 (7.14)
Other	1 (3.57)	1 (3.33)	0 (0.00)	10 (90.91)	11 (39.29)
Total	28 (100.00)	30 (100.00)	35 (100.00)	11 (100.00)	28 (100.00)

Source: Survey fieldwork (2016)

Notes: Pearson $\chi^2 = 94.18$, $Pr = 0.00$, $n = \text{frequency}$

From these results it is clear that the majority of black smallholder potato farmers own land through a tribal authorities (PTO) institution, while there is an acute lack of private land ownership and leasing arrangements. This suggests that black smallholder potato farmers enjoy no tangible land ownership and operate under weak and insecure property rights, as discussed in the previous section dealing with farmers’ income. Consequently, these farmers may not be able to obtain credit from formal financial institutions which require security (Chambers, 1993; Chisasa, 2014). The PTO land tenure institution, which manifests in uncertain and/or poorly defined property rights, does not qualify as collateral in the eyes of formal financial institutions and therefore serves as a key constraint to farmers’ ability to access capital to acquire assets and fund production (Besley, 1994). As is the experience of a large proportion of the farmers surveyed, this renders them financially excluded and credit constrained (Chisasa & Makina, 2012; Chisasa, 2014).

The land ownership results are consistent with the views expressed by Kirsten *et al.* (2009) regarding the main institutional challenges facing large numbers of farmers in South Africa and other developing countries. The situation appears to mimic historical land ownership patterns which, according to DAFF (2011) and Ewert and Du Toit (2005), placed the agricultural sector almost exclusively in the hands of whites. The new era could see the historical disempowerment of black farmers remaining unchanged since they lack the necessary levers to acquire ownership of agricultural assets such as land or to access finance and other means of production which would put them on a positive transformation path (UNDP, 2016).

5.3.2.3 Quality of financial management in potato farming enterprises

The transformation of the black potato farming sector cannot be effected without an assessment being made of the preparedness of farmers to manage and control their debts. In addition, how they invest any profits from their farming operations could determine their long-term profitability and sustainability. Table 5.5 shows the ability of the surveyed enterprises to repay loans as well as their propensity to invest and/or save.

Table 5.5: Quality of financial management in potato farming enterprises

Management n (%)	MP	KZN	EC	FS	LP	Pearson Chi ²
Ability to repay the Loan						
Yes	1 (2.70)	-	-	-	-	X ² = 25.35 Pr = 0.01
Little ability	2 (5.41)	8 (21.62)	-	-	2 (5.41)	
No ability	-	3 (8.11)	-	6 (16.22)	15 (40.54)	
Total	3 (8.11)	11 (29.73)	-	6 (16.22)	17 (45.95)	
Investment/ saving						
No	19 (67.86)	28 (33.33)	22 (62.86)	10 (90.91)	20 (71.43)	X ² = 10.57 Pr = 0.03
Yes	9 (32.14)	2 (6.67)	13 (37.14)	1 (9.09)	8 (28.57)	
Total	28 (100.00)	30 (100.00)	35 (100.00)	11 (100.00)	28 (100.00)	

Source: Survey fieldwork (2016)

Notes: n = frequency

The results regarding the ability to repay a loan were found to be highly statistically significant (X²(25.35); P<0.00) within the different loan repayment categories. It is clear that only those

farmers who are based in Mpumalanga are in a position, relative to their counterparts in other provinces, to repay their loans. From this it can be inferred that loan repayment records were not kept by the farmers in question. However, it can be deduced that these farmers are not bankable and would not qualify for loans from formal financial institutions, rendering them financially excluded. Consequently, they might have secured a loan from sources other than commercial financial institutions, such as Rotating Savings and Credit Associations (ROSCAs) or *stokvels*.⁵ Their lack of creditworthiness could be due to their reliance on insecure land tenure (PTO) institutions. This seems to be in line with the view of Page and Czuba (1999) that human and social empowerment enables people to gain control over their means of production and livelihoods. In this case, it appears that the surveyed farmers have dubious control over their cash flow and finances, casting doubt on the financial sustainability of their enterprises.

The study also investigated farmers' capacity to invest or save the proceeds of production. According to the results in Table 5.5, it appears that farmers' investment and saving capabilities are highly significant ($X^2(10.57)$; $P < 0.05$) across the different provinces, with the majority of farmers not being able to invest or save. This is not surprising given that these are farmers who, having been marginalised during apartheid, are still operating under the PTO system and have not benefited from private investment in their farming operations – unlike established white commercial farmers. Considering their lack of investment and difficulty in repaying loans, it is likely that the surveyed farmers are running uncompetitive operations (Johansson & Malmstrom, 2013).

5.3.2.4 Investment in transformation

Investment in transformation translates into social cohesion, political transformation and economic reforms (Heynig, 1982). The South African government has invested in a range of activities with a view to reaching transformational milestones. This study seeks to establish the level of investment in such activities, which include enterprise development, skills development, research and farm-based training. The results of this investigation are presented in Figure 5.2 below.

5 ROSCAs or *stokvels* (singular: *stokvel*) refer to rotating savings clubs or types of informal finance.

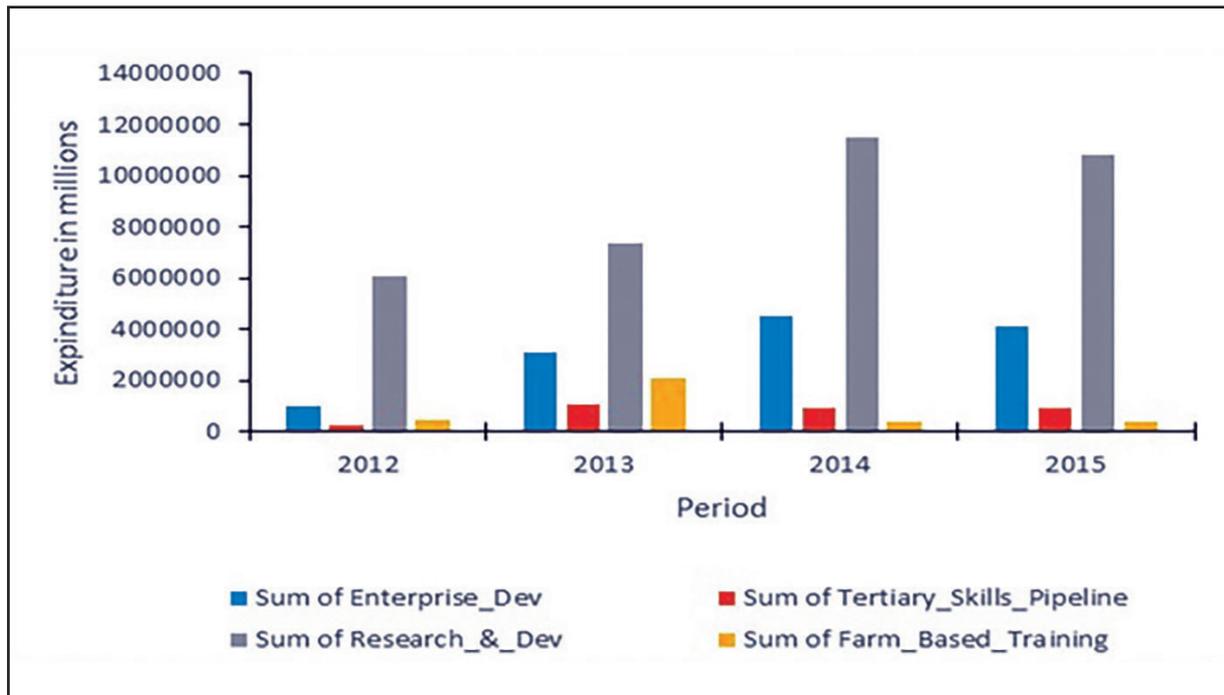


Figure 5.2: Investment in transformation

Source: NAMC (2016)

The results provided in Figure 5.2 suggest that research and enterprise development have received the most investment relative to other intended milestones. It also appears that farm-based training is declining because it is no longer considered by the NAMC to be an empowerment activity but rather a means to enhance operational efficiency (McEwan & Bek, 2006). On the other hand, the tertiary skills development pipeline seems to be attracting some support, although – compared with the research and enterprise development milestones – it is inadequate.

Given the positive investment trends in the areas of research and enterprise development, an impression is formed that farming operations should have benefited from new innovations and technology. Furthermore, this increased investment activity (and thus interest) should be a sign that more enterprises should be actively supported and developed. Unfortunately, as previously discussed, PSA support services – which should be for the public good – are limited to members only who are but a microcosm of the industry (Ntsebeza *et al.*, 2009). In some people’s view, the potential of the industry is therefore being throttled.

The results of the survey seem to be an anomaly in today's post-transformation era in which privatisation and restitution should have led to more significant enterprise formation and development, especially since most of these enterprises were formed in line with the co-operative and collective theories (Hagedorn, 2014). For instance, in KwaZulu-Natal co-operative formation is a pre-requisite for government support. In addition, agrarian transformation requires that a structure be introduced which can advance the cause of transformation. In the case of South Africa, the required transformational structure seems to be cooperatives, which are designed to ensure that the majority of poor farmers benefit from rural development programmes (Oberfield, 2012; Heynig, 1982).

De Janvry (2010) warns that the underperformance of agriculture might be due to continued under-investment and mis-investment in the sector by governments and international donors. This author further indicates that according to the classical development paradigm, which is strongly anchored both in history and theory, agricultural growth is seen as the engine of industrialisation, structural transformation of the economy and aggregate growth. It should therefore follow that increased empowerment expenditure has the potential to give stronger impetus to transformation in the South African potato industry.

5.3.3 Investment in transformation pillars for individual smallholder potato farmers and different industries

Assessing the impact of the different pillars of transformation makes it easier to evaluate and monitor transformation as a whole and to devise additional measures to fast-track its implementation for the benefit of disempowered farmers. In this regard, the study assessed progress against various transformation pillars: employment equity, and expenditure on skills development for potato farmers specifically and across different industries in the agricultural sector. The purpose of the assessment was to establish if such investments have helped to reduce the socio-economic challenges faced by the smallholder farming community. It is important to point out, though, that the transformation pillars derived from the Agri-BEE Sector Codes do not adequately measure progress towards the empowerment of farmers specifically therefore, the need for agriculture specific empowerment measures. Thus, for example, employment

equity and enterprise and supplier development initiatives focus mainly on the management and empowerment of the agri-industry as a whole.

5.3.3.1 Employment equity

According to the Agri-BEE Act of 2007, the objective of employment equity is to increase the representation of black people, women and HDIs in the management ranks of enterprises. This is a way of ensuring that the agricultural sector engages in proactive employment of members of the black designated groups in management positions. The study compared the performance of different industries in addressing employment equity as a transformational measure. It ranked (on a scale of 0 to 9) expenditure in employment equity in each industry, using secondary data from the NAMC. The results are presented in Figure 5.3.

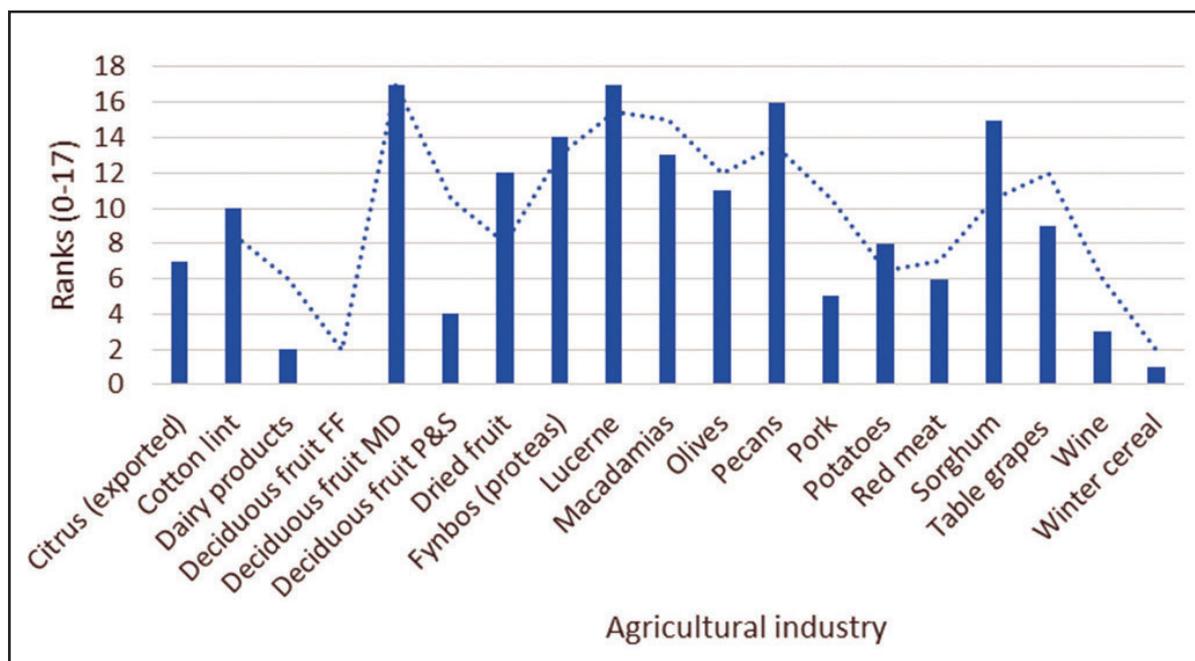


Figure 5.3: Rankings according to expenditure on employment equity in the agricultural sector

Source: NAMC (2016)

The results show that citrus, cotton, dairy, deciduous fruit, fynbos, lucerne, macadamias, olives and pork are the leaders when it comes to expenditure on employment equity initiatives. Potatoes, wine, winter cereal, pecans and some deciduous fruits lag behind on the employment equity expenditure front. It would appear that those industries that are lagging behind are

missing the opportunity to introduce and benefit from diversity in the workforce and at the management level. This suggests that transformation in such industries is a challenge, with management attitudes and practices probably characteristic of the old political order.

5.3.3.2 Expenditure on skills development for smallholder farmers

The Agri-BEE Act of 2007 contextualises skills development in the agricultural sector as a tool to enhance the commercial viability of farming enterprises such that they attain high levels of entrepreneurial commitment, technical and business acumen, adequate resources and sustainable productivity. This study determined trends in expenditure in skills development for the period 2012 to 2015, as per the NAMC’s statutory levy reports. The results are presented in Figure 5.4.

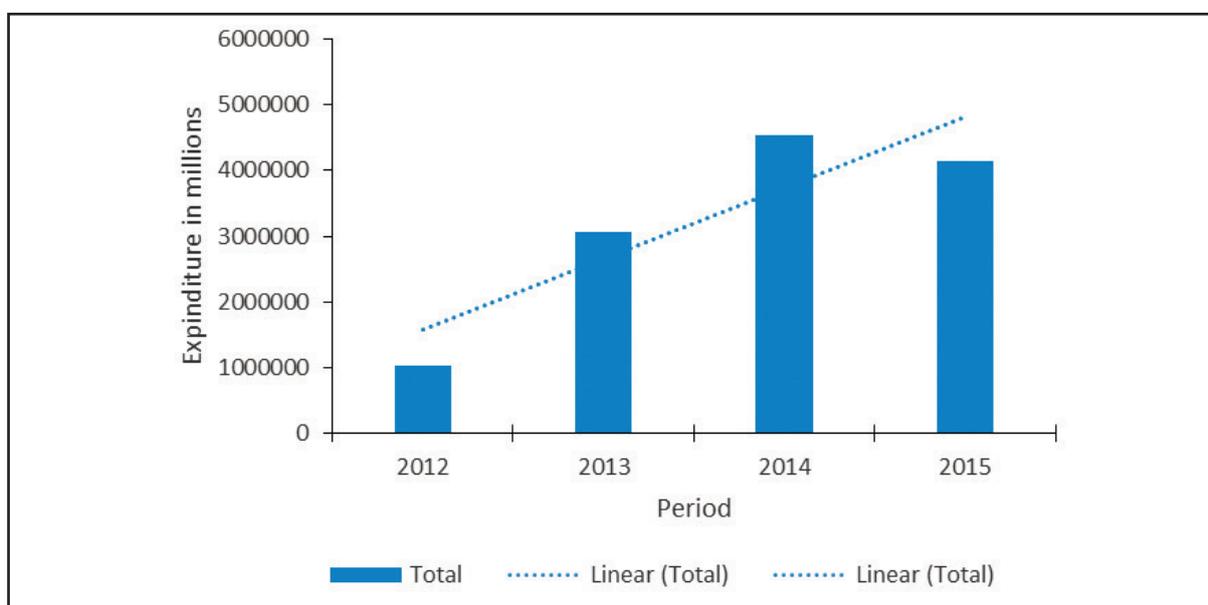


Figure 5.4: Actual expenditure on skills development for smallholder farmers

Source: NAMC (2016, 2012b)

The picture that the results paint is that skills development expenditure increased dramatically from 2012 to 2013, slowed in 2013 and 2014 and then declined in 2015. This implies that skills development is no longer receiving the same level of support as it was in 2013. This could be due to difficult economic conditions in South Africa, and exacerbated by climate change and the global economic downturn (at the time).

It would be interesting to see if expenditure has increased in more recent years. If not, it would imply that black farmers could have been deprived of the opportunity to acquire the requisite skills to ensure greater competencies and competitiveness. Such a scenario would not auger well for the pace of transformation, particularly in the face of escalating, politically charged demands for more land to be expropriated for disadvantaged communities in South Africa, which would include black farmers and potato farmers in particular.

5.3.3.3 Expenditure on skills development across different industries

According to DAFF (2011), smallholder potato farmers' access to markets is directly influenced by the effectiveness of skills (capability) development. For the potato industry to carry out its transformational mandate, skills development is therefore critical. Such skills include both practical and technical skills for farmers on the ground as well as academic skills at a tertiary level (often supported by bursaries) which enable individuals to make a more substantial contribution at different points in the potato value chain. Webb *et al.* (2013) view business skills as a leading source of competitive advantage for any business venture. When it comes to potato production, which is technology-intensive, the importance of technical skills should not be downplayed.

The study's results do not specifically account for the integration of black individuals per industry sector. However, it can be deduced from the results for employment equity in section 5.3.3.1 (see Figure 5.3) that the potato industry has not fared well in terms of skills development across most industries. The study ranked (on a scale of 1 to 19) the different industries in terms of expenditure on skills development. The respective rankings appear in Figure 5.5.

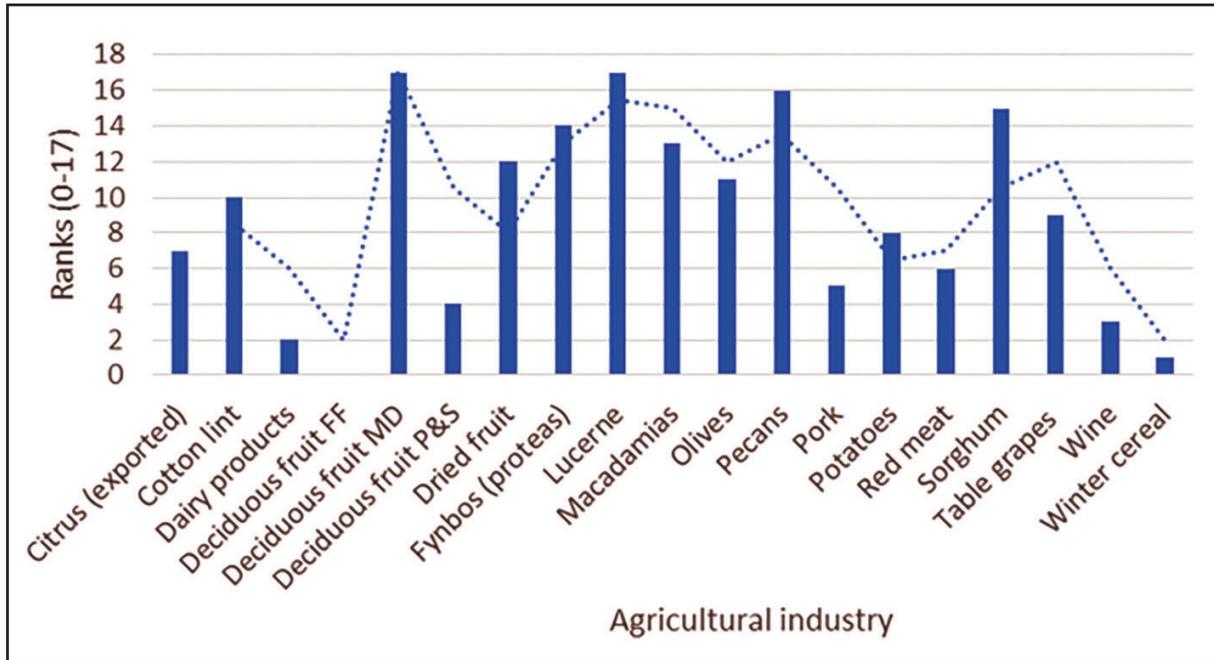


Figure 5.5: Rankings according to expenditure on skills development in different industries

Source: NAMC (2016, 2012b)

According to the results, deciduous fruit, lucerne, pecans and sorghum were the top industries in the agricultural sector for skills development. Unfortunately, the potato industry did not fare particularly well in terms of expenditure on skills development, implying significant challenges in building skills and capacity in the industry. Consequently, transformation and empowerment would likely have been adversely impacted.

5.3.4 Status of enterprise development among black smallholder potato farmers

The Agri-BEE Act of 2007 defines enterprise development as the establishment of support for and the integration of black entrepreneurs into mainstream business activities. According to the Act, support services such as the facilitation of access to finance, the provision of infrastructure, the supply of information and the creation of knowledge systems are core pillars of sustainable empowerment initiatives. Active enterprise development among black smallholder farmers is critical if higher levels of empowerment and the transformation of the industry are to be achieved. It is against this backdrop that the study sought to assess the empowerment status of enterprises.

5.3.4.1 Enterprise development among black smallholder potato farmers

Figure 5.6 presents the results of enterprise development status of black smallholder potato farmers. The results suggest that enterprise development increased consistently from 2012 to 2014 and then declined in 2015. It should be noted that the results reveal only the trends in the enterprise development construct and not the specific indicators of development. Although a picture is painted of enterprise development growing between 2012 and 2014, there is no evidence of the growth in numbers or the development of black potato farmers, as would be evidenced in ha and volumes produced, degree of commercialisation, improved operational efficiency through mentorship schemes, contribution to poverty alleviation and employment creation.

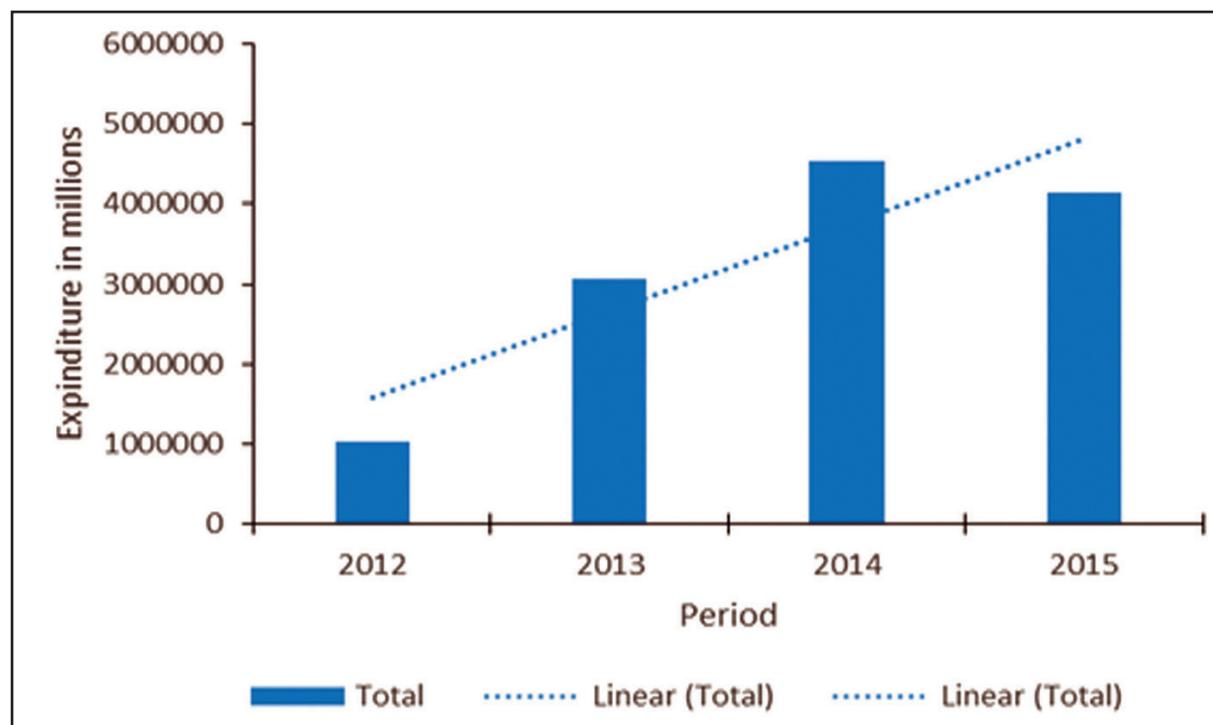


Figure 5.6: Expenditure on enterprise development for smallholder potato farmers

Source; NAMC (2016, 2012b)

5.3.4.2 Expenditure on enterprise development across different industries

Figure 5.7 presents the results of expenditure on enterprise development among smallholder farmers in various industries. With each industry assessed on a scale of 0 to 15, the potato industry fares poorly alongside its counterparts in terms of expenditure on enterprise development. This

is not an encouraging result considering the fact that the potato industry provides the country with an important staple food (Vermeulen, 2015; Van Niekerk *et al.*, 2016).

Greater investment in enterprise development in the potato industry could make a significant difference to food security, particularly among poor households in South Africa. However, the current trend is very discouraging (to say the least) and offers little reassurance that serious attempts are being made to assist historically disempowered potato farmers to develop sustainable enterprises.

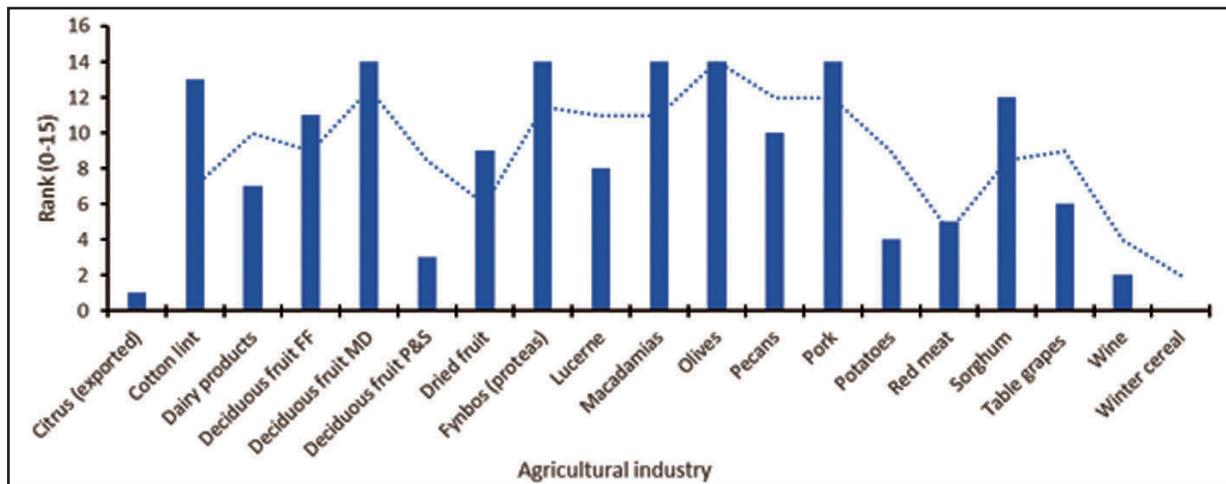


Figure 5.7: Rankings according to expenditure on enterprise development in different industries

Source: NAMC (2016, 2012b)

5.3.5 Factors affecting investment in transformation and research in the smallholder potato farming community

Okunlola *et al.* (2016) and Amin and Bernstein (1996) discuss the importance of investment for transformation, providing empowerment-related examples in South Africa of farmers’ co-operatives having been turned into private companies such as Afgri, Senwes, North West Kooperasie (NWK) and Vrystaat Kooperasie Beperk (VKB). These companies have played a significant role in both upstream activities, in the provision of agricultural inputs, and downstream activities, in the storage, processing and marketing of outputs (Greenberg, 2010).

This study investigated the determinants of both transformation and research expenditure for smallholder potato farmers in South Africa. According to the results presented in Table 5.6, levy payments were highly significant (coef. = 0.19, $P < 0.00$) in increasing transformation expenditure. This implies that a unit increase in levy payments could result in a 0.19 increase in transformation expenditure in South Africa, suggesting that the statutory levy reinforces the attainment of the transformational milestone. However, the NAMC reports on statutory levy expenditure are silent on the impact of the levy payments on transformational outcomes (NAMC, 2016; 2012b). It is of concern that evidence has not been acquired on how transformational expenditure is positively impacting the transformation of the industry in question where previously disadvantaged individuals are concerned.

Table 5.6: Factors affecting expenditure on transformation and research for smallholder potato farmers

Variables	Coef.	Std. Err.	Z	$p > z $
Transformation expenditure				
Levy payments	0.19	0.02	8.40	0.00
Constant	444206.8	646840.5	0.69	0.49
Research expenditure				
Information	1.26	0.41	3.09	0.00
Consumer education	0.22	0.09	2.44	0.02
Constant	-1117626	2319559	-0.48	0.63
Equation	RMSE	“R-sq”	Chi ²	$P > z $
Transformation expenditure	811944	0.86	70.56	0.00
Research expenditure	1079329	0.74	31.64	0.00

Source: NAMC (2016, 2012b)

Notes: $n = 11$

The study also investigated the determinants of research expenditure. It appears that information supply and consumer education were significant determinants of research expenditure. The results indicate that while both factors have had a positive influence on research expenditure, information supply has had a greater influence (coef. = 1.26, $P < 0.00$) compared with consumer education (coef. = 0.22, $P < 0.02$). In confirming the importance of information and consumer education, the results support the resource-based theory which states that resources such as information supply and training are critical as resource bundles, both of which could constitute major cost items in terms of enterprise development (Wickham, 2004). However, it must be

noted that the review of research expenditure did not specifically reveal how black potato farmers have benefited or their particular needs.

5.4 SUMMARY OF THE FINDINGS

The purpose of this chapter was to analyse both secondary and primary data obtained from the NAMC and the survey questionnaire. The analysis and interpretation were undertaken in terms of the stated research objectives, using a process of inferential analysis:

- i. To determine the empowerment status of black smallholder potato farmers;
- ii. To assess the status of commodity-driven transformation among black smallholder potato farmers;
- iii. To assess the commodity organisation's (PSA's) investment in transformation pillars for smallholder potato farmers individually and across different industries;
- iv. To determine the status of enterprise development among black smallholder potato farmers;
- v. To establish the factors affecting investment in transformation and research in the black smallholder potato farming community.

The study has achieved these objectives by determining the status of black smallholder farmers in terms of participation in empowerment initiatives, income generated, state-funded transformational support against various transformational pillars, support for enterprise development and transformation expenditure (including the determinants thereof).

In a nutshell, the study has found that there are significant differences in the participation levels and income-generating capacity of black smallholder potato farmers, who also display varying degrees of empowerment. Although the extent of empowerment is not satisfactory, it could be concluded that the empowerment processes introduced thus far have created a useful foundation, which needs to be nurtured and developed further if fundamental transformation is to take place in the potato industry. In particular, state support for transformation has been shown to be biased towards administrative support at the expense of the core transformational milestones, an unfortunate reality that needs to be corrected.

Land ownership, and specifically the predominance of the land tenure institution, is another challenge that needs to be addressed since a significant proportion of farmers are still operating on traditional communal lands with weak property rights. The pursuit of more and better management control and investment, and more focused and effective employment equity, skills development and enterprise development do not seem to be at the centre of the NAMC's objectives; on the contrary, expenditure in respect of these areas has been simplistically viewed as indicators of transformation. This approach could well have shortcomings in future.

Chapter 6 presents and discusses the research results derived from primary data, through the application of the WEAI and 5DE methodology. These results are presented to illustrate the inherent limitations of focusing on a single (i.e. the economic) domain in terms of empowerment initiatives, which is often the case in South Africa with the emphasis on BEE.

CHAPTER 6

ANALYSIS AND DISCUSSION OF THE EMPOWERMENT STATUS OF BLACK SMALLHOLDER POTATO FARMERS APPLYING WEAI AND 5DE

6.1 INTRODUCTION

This chapter addresses the first research objective, i.e. to determine the empowerment status of black smallholder potato farmers, by applying the WEAI and 5DE methodology. It addresses the limitations of operationalising and measuring empowerment outcomes on the basis of a single economic domain, i.e. with the focus simply on BEE. Using the WEAI and 5DE is a first attempt at applying an agriculture-specific empowerment methodology to quantitatively determine the empowerment status of black potato farmers in South Africa. This is in line with Alkire's (2005) assertion that it is important to identify and compare agency or empowerment achievements across different domains, and not just one. This further supports Alkire *et al.* (2013) who also support this and the application of an agriculture –specific empowerment methodology.

Empowerment has been described earlier as a complex and multi-dimensional concept. Its multi-dimensional character is explored in this study across four of the five domains presented in the WEAI, enabling the impact of agricultural interventions to be assessed over time. With the results presented in a disaggregated form displaying provincial, demographic and other categories of data, it is possible to more effectively identify and implement appropriate services and programmes. This chapter concludes with a summary of the empowerment status of farmers measured across four domains of empowerment.

6.2 PRESENTATION AND DISCUSSION ON THE WEAI AND 5DE RESULTS

Table 6.1 presents a summary of the results pertaining to farmer empowerment across four domains: production, resources, income and leadership. As an initial way of demonstrating the value of the approach, selected indicators are included in the discussion on the results.

The desired outcome from the review of the quantitative data derived from the WEAI and 5DE methodology was to gain more insight into black potato farmers and to build a benchmark profile of such farmers, which is currently not available in the potato industry.

Table 6.1: WEAI and 5DE methodology summary: results by province

Domain	Selected Indicators	Responses	MP	KZN	EC	FS	LP	Total
Production	Who makes decisions on input use?	Government or other institution	0%	0%	0%	0%	32%	7%
		Outside household female	14%	13%	20%	0%	4%	12%
		Outside household male	39%	20%	31%	27%	7%	25%
		Household jointly	46%	67%	49%	73%	57%	56%
	Potato Yield per hectare	0-4t/ha	32%	30%	31%	0%	21%	26%
		4-10t/ha	57%	50%	46%	0%	21%	48%
		10-20t/ha	11%	17%	17%	27%	25%	20%
		Over 20t/ha	0%	3%	6%	73%	32%	5%
	Land tenure	Not certain	17%	18%	10%	29%	0%	18%
		Private land-title deeds	2%	0%	0%	3%	0%	4%
Tribal land –PTO		71%	68%	80%	68%	82%	64%	
Resources	Tractor ownership	Private land lease	10%	14%	10%	0%	18%	14%
		No	100%	83%	91%	45%	11%	70%
		Yes	0%	17%	9%	55%	89%	30%
	Information through Extension	No	54%	50%	71%	18%	21%	48%
		Yes	46%	50%	29%	82%	79%	52%
	Extension Frequency	Never	54%	50%	71%	18%	21%	48%
		Once a season	18%	33%	14%	9%	33%	23%
		Twice a season	29%	3%	12%	73%	46%	27%
		More than 2 times a season	0%	7%	3%	0%	0%	20%
	Income	<R42000	69%	87%	38%	9%	50%	56%
R42000-R100000		17%	3%	18%	36%	7%	14%	
R100001-R150000		10%	7%	21%	27%	4%	12%	
R150001-R200000		3%	0%	0%	0%	0%	1%	
Who makes decisions on revenue use?	Over R200000	0%	3%	24%	27%	39%	17%	
	Family outside household	0%	0%	0%	0%	11%	2%	
	Outside household female	14%	7%	26%	0%	0%	9%	
	Outside household male	39%	10%	20%	18%	11%	20%	
Leadership	Leadership effectiveness	Within the household	46%	83%	54%	82%	79%	69%
		Not effective	46%	13%	54%	54%	9%	32%
		Fairly effective	18%	10%	9%	9%	9%	4%
	Capacity to influence change	Very effective	36%	77%	37%	37%	82%	64%
		Yes but with great difficulty	0%	10%	6%	18%	0%	5%
		Yes but with great difficulty	0%	30%	0%	9%	29%	14%
	Yes fairly easily	0%	23%	3%	45%	50%	20%	
	Yes very easily	100%	37%	91%	27%	21%	61%	

Source: Survey fieldwork (2016)

6.2.1 Production domain

The analysis of the data in the production domain addressed three indicators that have an influence on production decisions and agricultural production: autonomy, yield and prevailing land tenure arrangements.

6.2.1.1 Input use decisions (addressing production domain of 5DE [D1:I1])

Table 6.1 provides a breakdown of the responsible party for decisions regarding the use of inputs for potato farming purposes, which is one of the indicators in the production domain, as derived from the survey. The first indicator presented in Figure 6.1 and reflected in Table 6.1 provides disaggregated data on autonomy in agricultural production by province.

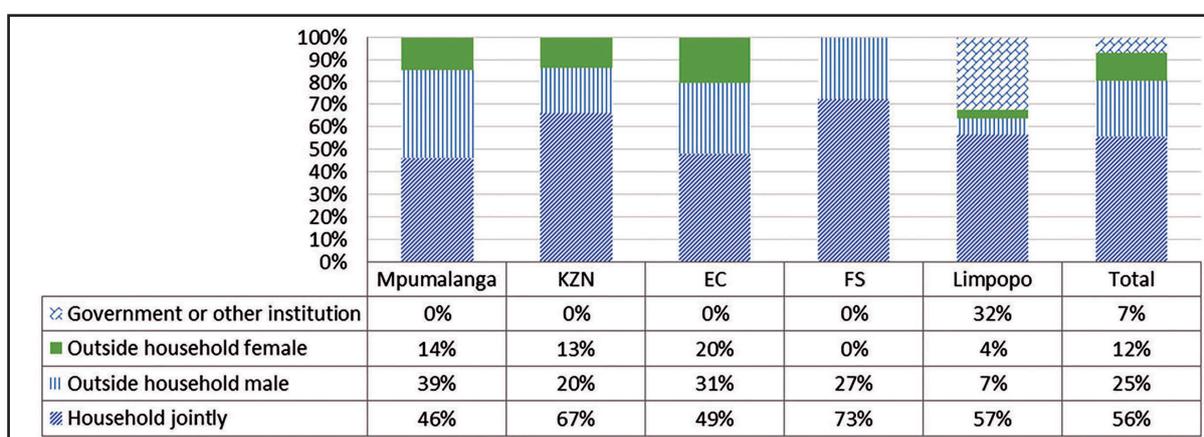


Figure 6.1: Decisions on input use

In the total sample, over 50% of households reported making joint decisions on input use (56%). Empowerment in terms of input use decisions was highest in the Free State with 73% of farmers indicating that decisions were made jointly within the household. In Limpopo, 57% of farmers indicated joint decision-making within the household. The other provinces revealed lower – but not insignificant – percentages for this indicator. The results therefore show that households are moderately empowered in decision-making regarding input use.

6.2.1.2 Potato yields (addressing production domain of 5DE [D1:I2])

Yield is a measure of productivity in agricultural, including potato, production. A number of factors impact both absolute and marketable yields attained by potato farmers (Steyn *et al.*,

1998), with skills, knowledge, access to infrastructure, production and management systems, and the appropriate application of inputs, cited as being among the factors affecting yield (PSA, 2017). Empowerment in term of this indicator was deemed important in establishing the productive efficiency of farmers. The yields as stated by the sampled farmers are shown in Figure 6.2 and broken down by province in Table 6.1..

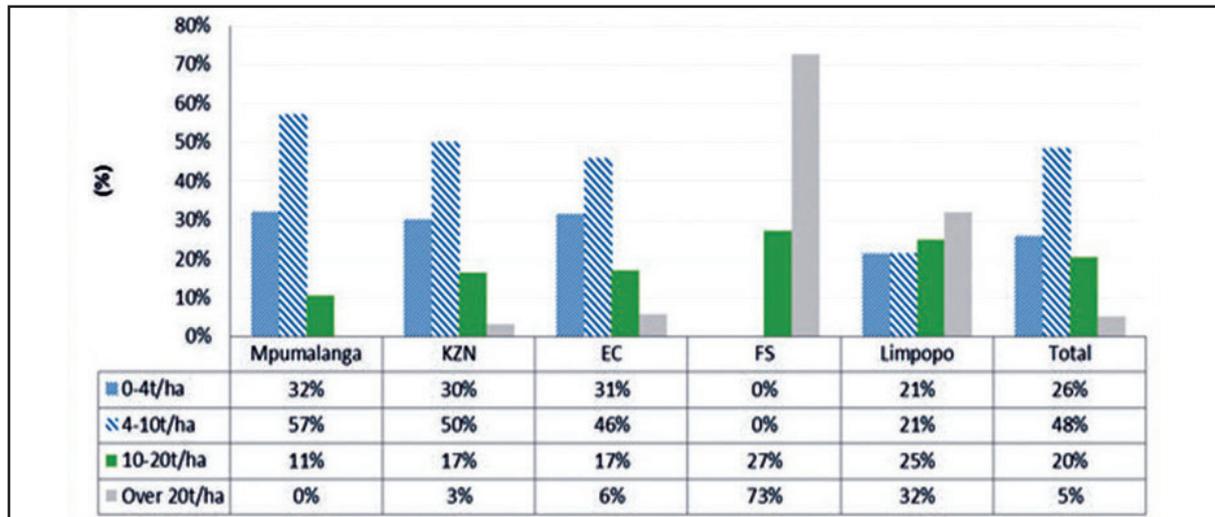


Figure 6.2: Potato yields (t/ha)

Yields for the 2015 season reflected the following: 26% of farmers in the national sample produced yields from 0–4 t/ha, 48% from 4–10 t/ha, 20% from 10–20 t/ha and 5% over 20 t/ha. While the majority farmed under dry-land conditions in Mpumalanga, KwaZulu-Natal and the Eastern Cape where lower yields can be expected (average commercial dry-land yields in the eastern Free State are approximately 28-32 t/ha (PSA, 2017)), the majority of farmers surveyed in the Free State and Limpopo farmed under irrigation production. Provincially, farmers from the Free State were found to be the most productive of all provinces, with 73% of them producing average commercial irrigation yields of over 20 t/ha (the average commercial yield being 43 t/ha (PSA, 2017)). It is important to note that the stated yields may not be accurate as the information was not tested; therefore, it is best to use these as an indication and not an absolute reflection of yields. Yield calculations differ, as was stated by some respondents interviewed. As many interviewed farmers did not document their production inputs, it follows that productivity-linked yields cannot be precisely determined.

As indicated by Steyn *et al.* (2014), the potato is a temperate crop sensitive to water and heat stress. The majority of farmers produced under dry-land conditions, with some areas considered by Van der Waals *et al.* (2013) to be relatively less suitable for production. The drought experienced during the production seasons under review (Oosthuisen, 2016) would suggest that farmers were adversely affected by this phenomenon, with many reporting as much. Other factors impacting yield are technical and management capabilities and support in the form of agronomy and extension support (Van der Waals *et al.*, 2013; Dorward *et al.*, 2009; Singini & Van Rooyen, 1995). Relevant data for and discussion of the results relating to technical support in the form of extension are covered under the resources domain.

6.2.1.3 Land tenure (addressing production domain of 5DE [D1:I3])

Security of land tenure or ownership was the third empowerment indicator measured in the production domain. Property rights have been described by Kirsten *et al.* (2009) as an important institution governing who can do what with resources. These range from well-defined and secure (private property) to poorly defined and insecure institutions (including tribal authority and PTO). Surveyed farmers who owned land through a more secure institution of full title deeds were considered to be more empowered than those with alternate and less secure land tenure arrangements.

The land tenure and property rights indicator revealed the type of institution for land accessed and used by farmers. Figure 6.3 and Table 6.1 shows that 64% of the total sample occupied land under the administration of the tribal land authority (PTO institution extending usufruct rights), 14% held private government leases, 18% occupied land whose ownership status could not be ascertained, and 4% were owners of the private land they occupied with full title deeds. Figure 6.3 shows the classification of participants by type of land ownership.

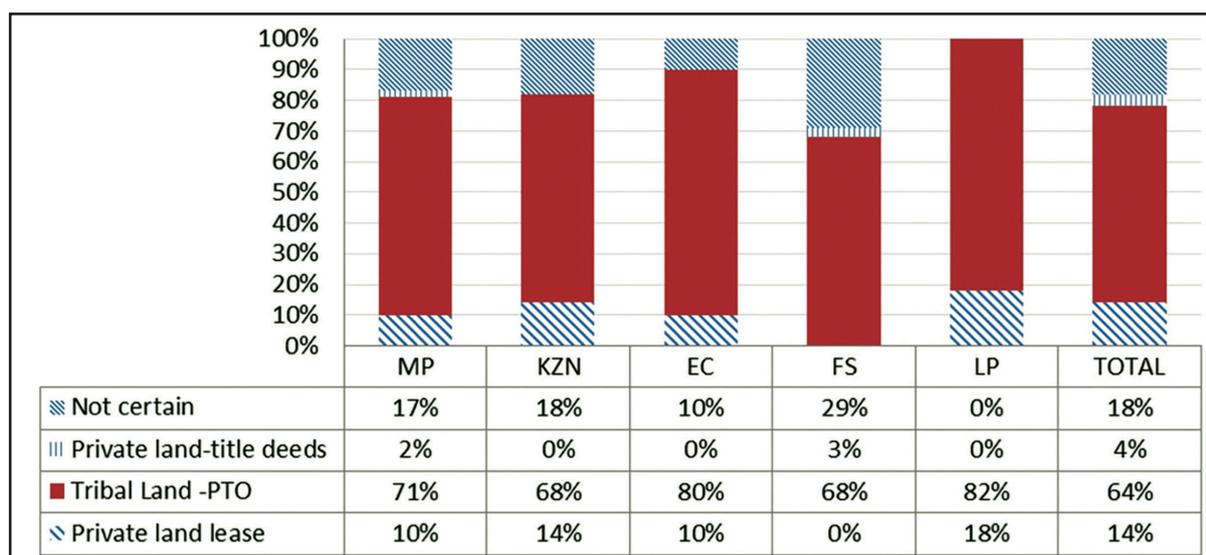


Figure: 6.3: Participant classification by land ownership type

Provincially, 10% of the interviewed households in Mpumalanga held private leases, 71% occupied tribal lands, 2% held the land under title deeds and 17% had “other” land occupation arrangements. In KwaZulu-Natal, 14% occupied privately leased land, 68% tribal lands and 18% had “other” land occupation arrangements. In the Eastern Cape, 10% had private leases, 80% had permission-to-occupy tribal lands and 10% occupied land as “other”. In the Free State, 0% occupied privately leased land, 69% tribal lands, 3% private land under title deeds and 29% had “other” land occupation arrangements. In Limpopo, 18% had private leases and the remaining 82% occupied tribal lands.

The most secure and thus the ideal land ownership institution is private land owned on the basis of full title deeds. This increases the probability of farmers accessing debt finance as the land can act as security, while also encouraging infrastructural development. However, the majority of surveyed farmers were not empowered in this area, with only 4% enjoying full ownership of land. In KwaZulu-Natal, the Eastern Cape and Limpopo, there was not a single farmer with title deeds. Additionally, a disturbing phenomenon was noted – the existence of a large group of farmers whose land tenure could not be ascertained (18% of the total sample). This was most pronounced in the Free State where it was observed among 29% of the farmers. It is difficult to imagine farmers going to the trouble and expense of physically developing land that they are not sure about, and this can also be expected to affect production.

In view of formal financial institutions' requirements that those seeking credit provide collateral, it can be inferred that the ideal type of land tenure institution for farmers is ownership under full title deeds. This results in financial inclusion which in turn increases the probability of farmers accessing credit with land acting as collateral. Such access encourages and facilitates the acquisition of inputs and assets as well as infrastructural development. It must be noted, however, that while secure property rights improve the prospects of accessing formal credit, credit is still not guaranteed, according to Mwangi and Meizen-Dick (2009), citing Toulmin and Quan (2000). This is consistent with Kirsten *et al.* (2009) who say that land tenure arrangements influence the ability to secure production and asset credit, as a step towards greater financial inclusion. Mwangi and Meizen-Dick (2009) assert that tenure security increases the likelihood, in the long term, of farmers realising returns on their investments in land improvements and infrastructure required for potato and other crop production. This has a direct, positive impact on productivity and ultimately the ability to make inroads into more lucrative markets.

Considering the temporal specificity of potato production, as described by Strydom *et al.* (2012), secure access to productive land is essential for successful potato production, which adds to the high transaction costs associated with such production, according to the authors. Investment in insecure land is likely to be less productive than investment in land characterised by a more secure property rights regime.

6.2.1.4 Land size

Figure 6.4 shows a breakdown of land sizes available to survey respondents by province.

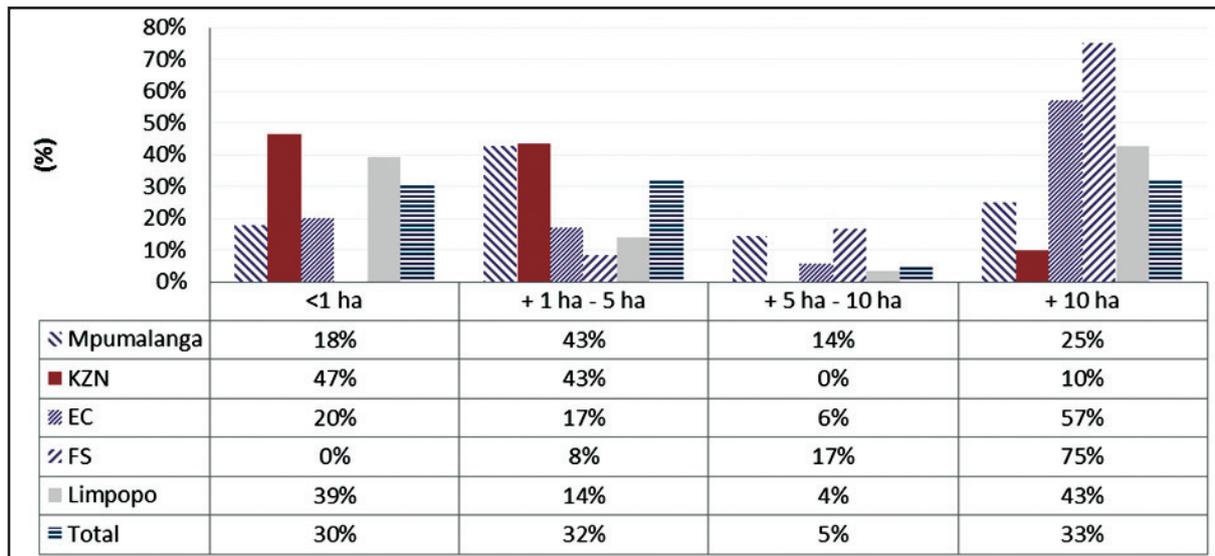


Figure 6.4: Total land size availability

Of all the farmers interviewed, 30% farmed on land that was less than 1 ha in size, 32% on land that was between 1 ha and 5 ha, 5% on land that was between 5 ha and 10 ha, and the remaining 33% on land that was larger than 10 ha.

Eighteen percent (18%) of households in Mpumalanga farmed on land with a size of less than 1 ha, 43% on land of between 1 and 5 ha, 14% on land of between 5 ha and 10 ha, and 25% on land of over 10ha. In KwaZulu-Natal, 47% farmed on land with a size of less than 1 ha, 43% on land of between 1 and 5 ha, 0% on land of between 5 and 10 ha, and 10% on land of over 10 ha. In the Eastern Cape, 20% farmed on land with a size of less than 1 ha, 17% on land of between 1 and 5 ha, 6% on land of between 5 ha and 10 ha, and 57% on land of over 10 ha. In the Free State, 20% farmed on land with a size of less than 1 ha, 17% on land of between 1 ha and 5 ha, 6% on land of between 5 h and 10 ha, and 57% on land of over 10 ha. In Limpopo, 39% farmed on land with a size less than 1 ha, 14% on land of between 1 ha and 5 ha, 4% on land of between 5 ha and 10 ha, and 43% on land of over 10 ha.

6.2.1.5 Land size for potato production

Figure 6.5 shows the proportion of total land reported to be assigned to potato production across various provinces.

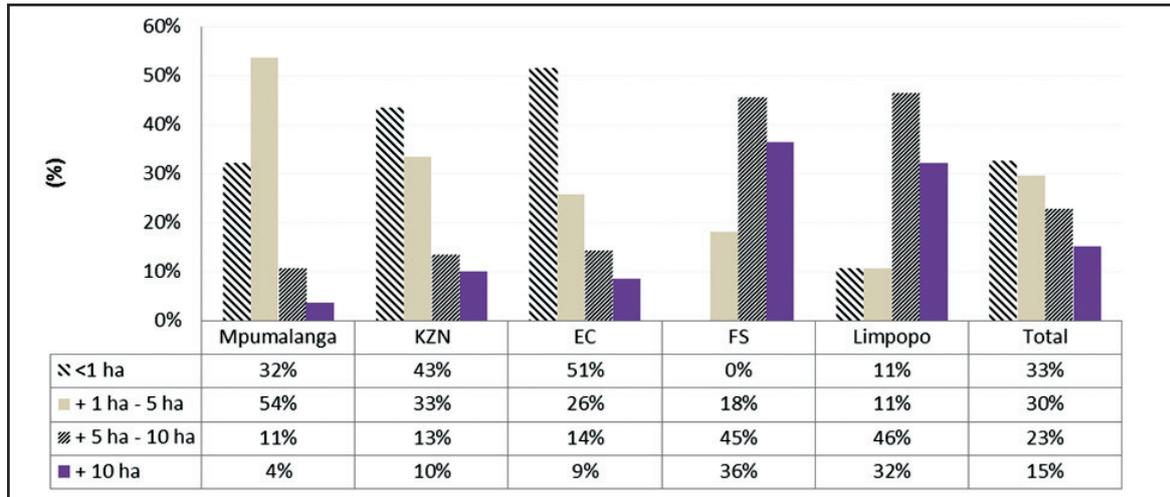


Figure 6.5: Land assigned to potato production

In terms of the proportion of land assigned to potato farming, a total of 33% of farmers assigned land of less than 1 ha, 30% assigned land of between 1 ha and 5 ha, 23% assigned land of between 5 ha and 10 ha, and 15% assigned land of over 10 ha.

The provincial breakdown is as follows: (1) Mpumalanga: less than 1 ha assigned to potato farming: 32% of farmers; between 1 ha and 5 ha: 54% of farmers; between 5 ha and 10 ha: 11% of farmers; and over 10 ha: 4% of farmers. (2) KwaZulu-Natal: less than 1 ha assigned to potato farming: 43% of farmers; between 1 ha and 5 ha: 33% of farmers; between 5 ha and 10 ha: 13% of farmers; and over 10 ha: 10% of farmers. (3) Eastern Cape: less than 1 ha assigned to potato farming: 51% of farmers; between 1 ha and 5 ha: 26% of farmers; between 5 ha and 10 ha: 14% of farmers; and over 10 ha: 5% of farmers. (4) Free State: less than 1 ha assigned to potato farming: 0% of farmers; between 1 ha and 5 ha: 18% of farmers; between 5 ha and 10 ha: 45% of farmers; and over 10 ha: 36% of farmers. (5) Limpopo, less than 1 ha assigned to potato farming: 11% of farmers; between 1 ha and 5 ha: 11% of farmers; between 5 ha and 10 ha: 46% of farmers; and over 10 ha: 32% of farmers.

The size of available productive land impacts the economic viability of enterprises and their farming operations. For example, the limited availability of productive land precludes farmers from achieving economies of scale which are needed to achieve productive, viable and sustainable potato production, bearing in mind the temporal specificity of this particular crop

(Strydom *et al.*, 2012) and the recommended practice of a minimum of one-in-four-year crop rotation.

6.2.2 Resources domain

The provincial breakdown and associated discussion indicate a low level of production among the greater proportion of farmers. When the scale of production is limited, it impedes development, including the provision of infrastructure. To justify investment in infrastructure, a case needs to be made for the viability of businesses in the area, with potato production clearly needing to be augmented at an individual level and/or through collective or cooperative production arrangements.

6.2.2.1 Tractor ownership (addressing resources domain of 5DE [D2:II])

Tractor ownership was the first empowerment indicator measured in the resources domain with Limpopo and Free State provinces accounting for the most significant access levels (Table 6.1). Doward *et al.* (2009) indicate that African agriculture is characterised by a range of subsistence-level production systems, with the more technology that is used, the better the result. In this regard tractor usage suggests a reasonable level of mechanisation. However, only thirty percent (30%) of respondents across the provinces surveyed reported either owning or having access to a tractor (although admittedly this average concealed some highs [e.g. Limpopo] and lows [e.g. Mpumalanga]). The generally limited access to tractors (a non-specific type of mechanisation) and – one can assume – more specialised potato-specific equipment, such as potato planters and harvesters, negatively affects productivity and income generation in the sector, and renders the likelihood of commercial production very remote. The results thus show that on the whole black potato farmers are weakly empowered in the mechanisation/technology arena.

Van Zyl (2016) suggests that to achieve an efficient level of production, a farm needs to be a minimum of 3 ha, which naturally calls for tractor usage. This view resonates with the experience of farmers in Gcumisa Co-operative at Swayimane in KwaZulu-Natal whose pack house, which was funded by government, is still not operational after seven years (see Figure 6.6). This is due to insufficient mechanisation on the farms to support the level of production required to operationalise the pack house.



Figure 6.6: Pack house at Swayimane, KwaZulu-Natal

Where farmers do have access to mechanised farming equipment, made available through provincial and municipal government departments, such equipment is often in a state of disrepair. This has been observed in Lusikisiki in the Eastern Cape where funds that should be channelled into the upkeep of, for example, tractors are often allocated elsewhere – including ensuring that dry-land farmers have access to mechanisation when rains occur, enabling planting (see Figure 6.7). In other words, limited resources are spread too thinly.



Figure 6.7: An example of neglected state-funded tractors in Lusikisiki, Eastern Cape

6.2.2.2 Extension support and frequency (addressing resources domain of 5DE [D2:13])

In this study, access to information was considered to be an important indicator that measures the empowerment status of potato farmers. The information in question pertains to agricultural production, with potato production being the primary focus. Extension support, particularly

technical and market knowledge, has been described by Poulton and Lyne, cited in Kirsten *et al.* (2009), as exhibiting characteristics of a public good. This implies that this form of support is provided by public institutions. However, in the study, it was found that where farmers had access to extension support services, these were provided by public and by private institutions, including NGOs and commercial entities. The results reflected in Table 6.1 indicate that 48% of respondents had no access to extension services from any source. The 52% who did have access to extension services reported that the access was infrequent and was not specific to building knowledge and skills in potato production. With the potato industry being very technologically driven (Strydom *et al.*, 2012; Van der Waals *et al.*, 2013), research and ongoing technical support are essential if sustainable production is to be attained (*Ibid.*).

As part of the assessment of information assets, respondents were asked whether they received any information-related extension support from government or other forms of information that helps them with potato production. They were also asked to indicate the frequency of access to such information during each production season. Figure 6.6 shows the extension support and frequency by province.

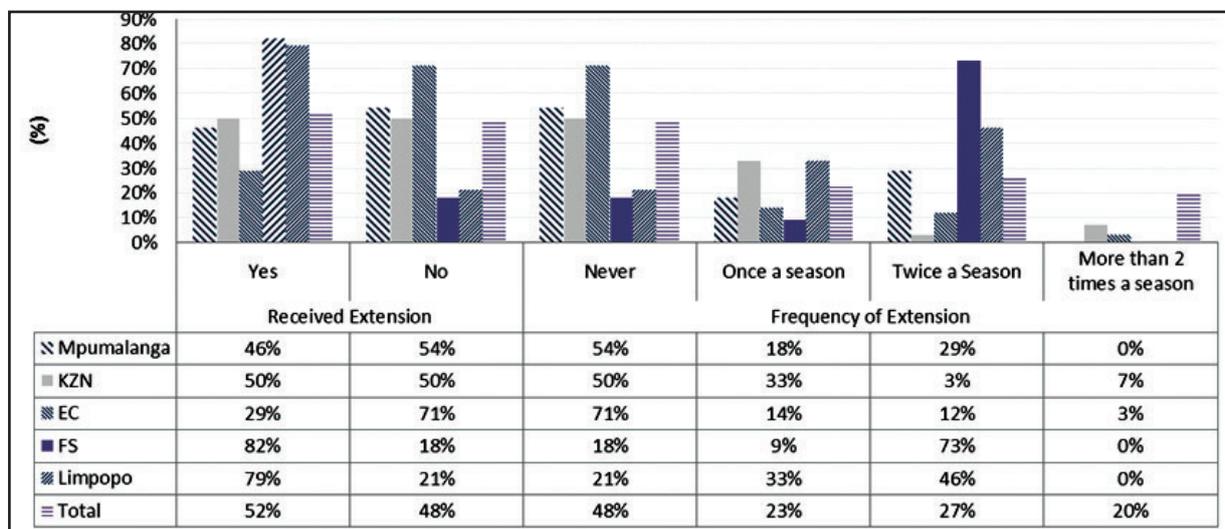


Figure 6.8: Information extension support and frequency

Nationally, 52% of the sample received extension support and 48% of the sample did not. At the provincial level, Limpopo had the highest number of farmers who received extension support

(79%), with 23% of these indicating that they received extension support once a season, 27% reporting twice a season and 20% reporting more than twice a season. Information received from government extension personnel at the local district and municipal level who facilitated the study within the Eastern Cape (two municipalities) and KwaZulu-Natal (two municipalities) indicated their lack of specific potato production knowledge, resulting in the need to rely on general Internet searches for information with which to assist farmers.

Extension support frequency has been described as critical throughout the production season, which is often provided by private technical experts (agronomist- and input supplier-driven). For example, Van der Waals *et al.* (2013) posit that extension support is essential for optimum production. Evident among the majority of farmers surveyed was a high incidence of non-support (48%), with support that did occur characterised by infrequent visits per production season. According to Van der Walls *et al.* (2013), this has a direct impact on productivity and income, influencing both the absolute yield and the marketable yields attained.

6.2.3 Income domain

The income domain was addressed by examining data on incomes derived from potato production as well as analysing autonomy over use of income. Improved livelihoods are attained through income generation which is an important part of agricultural development. Rising incomes play a critical role in achieving food security and reducing hunger in many parts of the world (World Bank, 2011). This study considered sources of income for agricultural production and access to formal finance to be important indicators of farmers' financial empowerment and financial inclusion. These two indicators were classified as financial assets. However, they were not included in the 5DE analysis. The incomes attained by farmers and the decision-making surrounding the use of income from agricultural production were applied for the purpose of assessing this domain.

6.2.3.1 Attained income (addressing income domain of 5DE [D3:11])

Figure 6.7 shows the farmers' reported annual income levels by province. The accuracy of the income levels was not empirically tested due to low levels of record-keeping by the majority of farmers; therefore, the information should be viewed as indicative only.

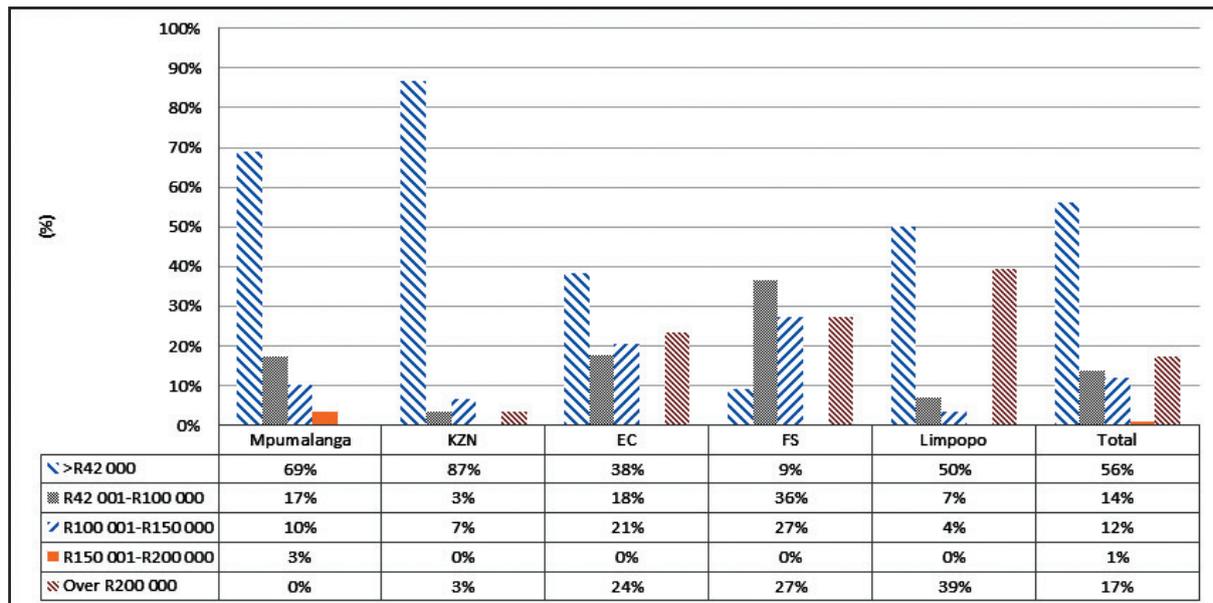


Figure 6.9: Attained income from farming, 2015

As outlined in Table 6.1 fifty-six percent (56%) of farmers interviewed earned incomes below R42 000 for the 2015 farming season, 14% earned between R42 001 and R100 000, 12% earned between R100 001 and R150 000, 1% earned between R150 001 and R200 000, and 17% earned over R200 000. Limpopo had the highest number of farmers earning more than R200 000 (39%), followed by the Free State (27%), while Mpumalanga had 0% of farmers in this category. The results show that farmers were less empowered in terms of income generation, with the majority of them earning less than the minimum monthly wage of R3 500. As shown in Figure 6.8, income generation is positively correlated with land size (and secure land tenure arrangements). This finding (significance) does not, however, form part of the objectives being interrogated in this study.

6.2.3.2 Income and land size

Access to land has been described by Doward *et al.* (2009) as a limiting factor to agricultural productivity and intensification in many developing economies. The authors further describe access to land as key to income generation through agricultural production. Limited access to land is characteristic of traditional or subsistent agricultural production, which represents 30 % of sampled farmers producing on land below one ha, and 32 % of sampled farmers producing on lands ranging between one and five ha in size (refer to Figure 6.4). Additionally, due to the

temporal specificity of potato production, potential income generation is thus limited by small land size. Furthermore, transaction costs increase with low production scale resulting from limited risk, infrastructure and input cost sharing. Farmers on small tracts of land are not able to realise economies of scale. These are described by Mwangi and Meizen-Dick (2009) as integral to the reduction of transaction costs and the enhancement of productivity. However, access to land alone is not a panacea for income generation. Figure 6.10 shows attained income versus land size.

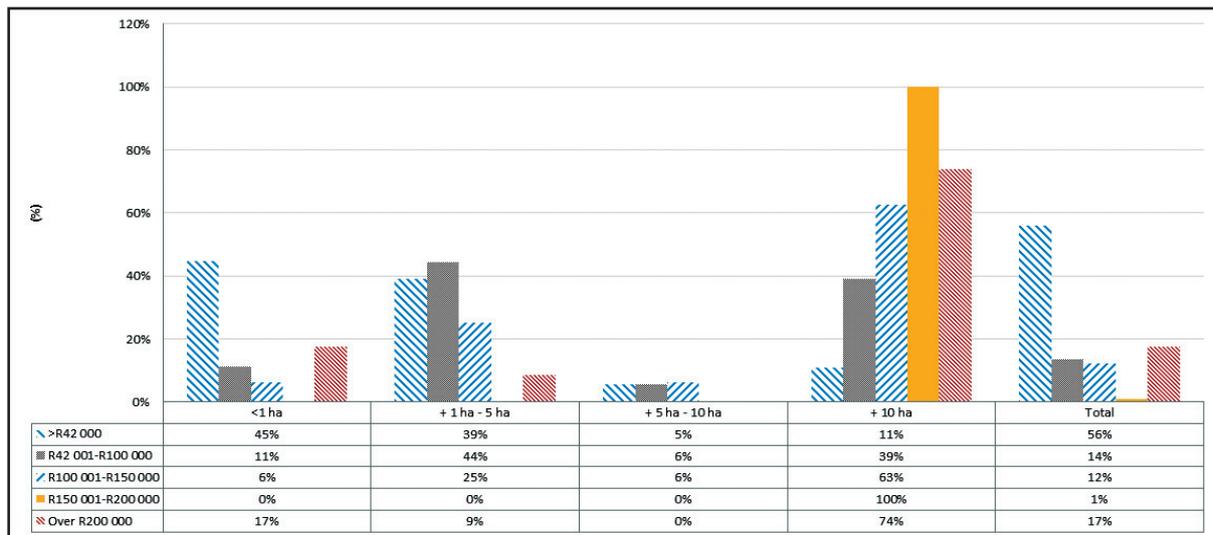


Figure 6.10: Income vs. land size

Seventeen percent (17%) of farmers who earned an income in excess of R200 000 had land sizes of below 1 ha. This statistic appears to contradict the observed positive relationship between income and land size. A possible explanation might be that the 17% of farmers represented in this category might have alternate sources of income, such as cattle farming, off-farm employment, etc. Nine percent (9%) of the farmers who reported earning more than R200 000 had land sizes of between 1 ha and 5 ha, while the remaining 74% had land sizes of over 10 ha, which suggests production on a more commercial scale. Land size has a direct impact on scale of production and therefore on economic viability. The temporal nature of potato production adds to the need for increased land size if the intention is to increase production. The relationship between land size and income was positive; however, the statistical significance was not tested.

A further negative influence on the land–income relationship stemmed from the nature of property rights under which the sampled farmers operated. Owing to the nature of the PTO land tenure institution, which does not grant farmers title deeds, farmers do not meet the collateral requirements of formal financial institutions. As a result, most farmers remain financially excluded and credit constrained, which makes it difficult for them to access production, infrastructure and asset finance. This heightens the risk of production inefficiencies because there is insufficient investment in productive inputs. This finding is consistent with that of Coetzee *et al.* (2002), Chisasa and Makina (2012) and Chisasa (2014) in relation to the extent of financial exclusion experienced by many small and black farmers in South Africa.

The results show that land size is an important empowerment indicator when it comes to income generation from potato farming. Farmers with larger portions of land generated a much higher income than those who only had access to smaller portions of land. In addition, larger land sizes meet the temporal specificity requirement of scale while also enabling the recommended one-in-four-year crop rotation to take place (Strydom *et al.*, 2012). Various authors, including Wiggins *et al.* (2011), have reflected on the relationship between income and transaction costs (including land – scale and access through property rights institution) and productivity (expressed as a function of capabilities and resources – infrastructure and productive inputs) as a positive contributor to livelihoods.

6.2.3.3 Decisions on revenue use (addressing income domain of 5DE [D3:I2])

Respondents were also asked who had made the decisions on the use of the revenue from the previous season. Figure 6.9 below summarises the responses in this regard and outlined in Table 6.1. This forms the second of the 5DE indicators that determine farmers' empowerment status in the income domain.

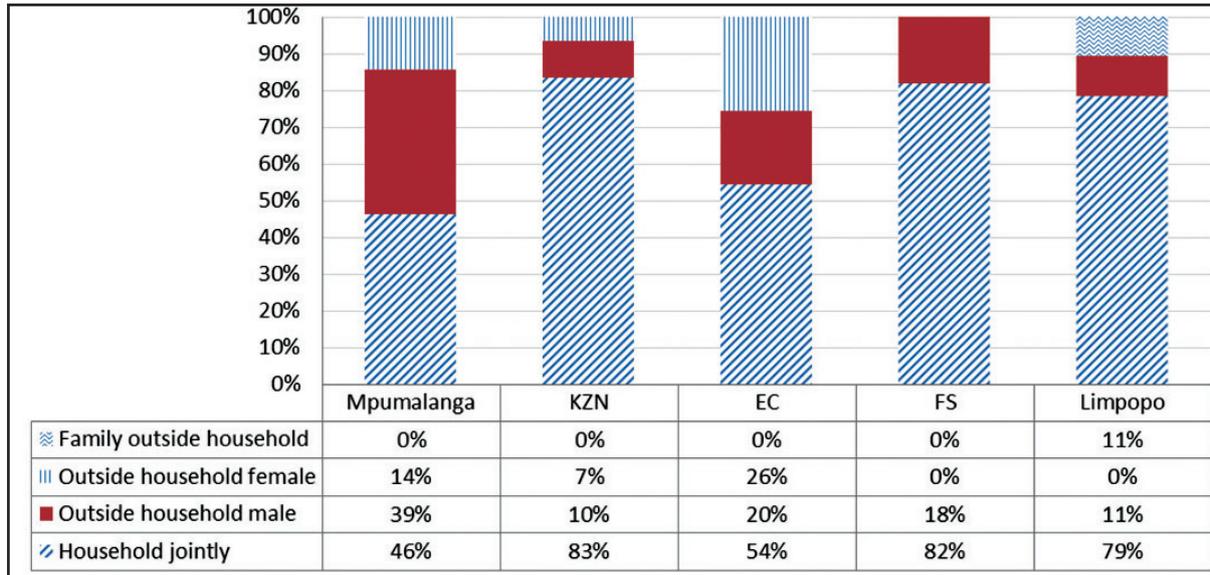


Figure 6.11: Decisions on revenue use

The highest levels of empowerment in respect of revenue use decisions were observed in KwaZulu-Natal where 83% of farmers reported to be the primary person making decisions regarding revenue use at the household level, followed by the Free States (82%) and Limpopo (79%). Mpumalanga farmers were the least empowered with only 46% of decisions regarding revenue use being made within the household. In KwaZulu-Natal, the finding needs to be interpreted with caution as, although there is a high degree of autonomy in terms of decision-making regarding revenue use, production is predominantly at a subsistence level.

6.2.4 Leadership domain

The intention behind this domain is to determine the potential for leadership and influence in the community by addressing two indicators of the WEAI: leadership effectiveness and capacity to influence change. Respondents were asked a set of questions that served as indicators of bonding and bridging (i.e. social relationships within homogeneous and heterogeneous groups respectively), community participation, influence and leadership characteristics. Social capital, in particular, is widely viewed as an important key to development.

6.2.4.1 Membership of organisations

Respondents were asked to indicate those organisations of which they were members or in which they participated. Figure 6.10 shows the total sample’s membership of various social, economic and political groupings. A broad array of groups is featured, not just agricultural groups. Membership of social and civic groups is considered by Meinzen-Dick *et al.* (2014) to offer useful insights into what drives people and how they relate to others in society.

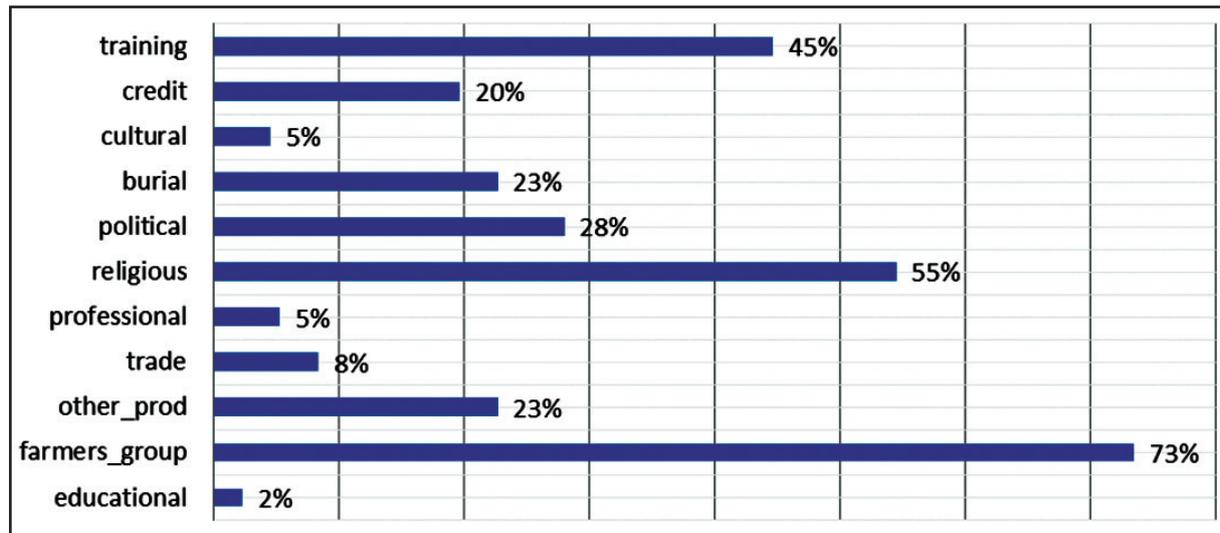


Figure 6.12: Membership of organisations (indicating social capital)

Reflected in Table 6.1 respondents tended to indicate membership of multiple groups. Seventy-three percent (73%) of respondents were members of farmers’ groups, 55% of religious groups, 45% of training groups, 28% of political movements, 23% of burial societies, 23% of other production groups and 20% of credit groups. Eight percent (8%) were members of trade associations, 5% of cultural groups, another 5% of professional groups and 2% of educational groups.

A generally high level of organisational membership was displayed in the total sample, especially in groups that matter to farming, such as credit groups (20%), training groups (45%). Similarly, the levels of social engagement through various community and civic groups were found to high among the respondents.

6.2.4.2 Leadership effectiveness (addressing leadership domain of 5DE [D4:11])

Figure 6.11 below shows the results pertaining to perceptions of leadership effectiveness by province.

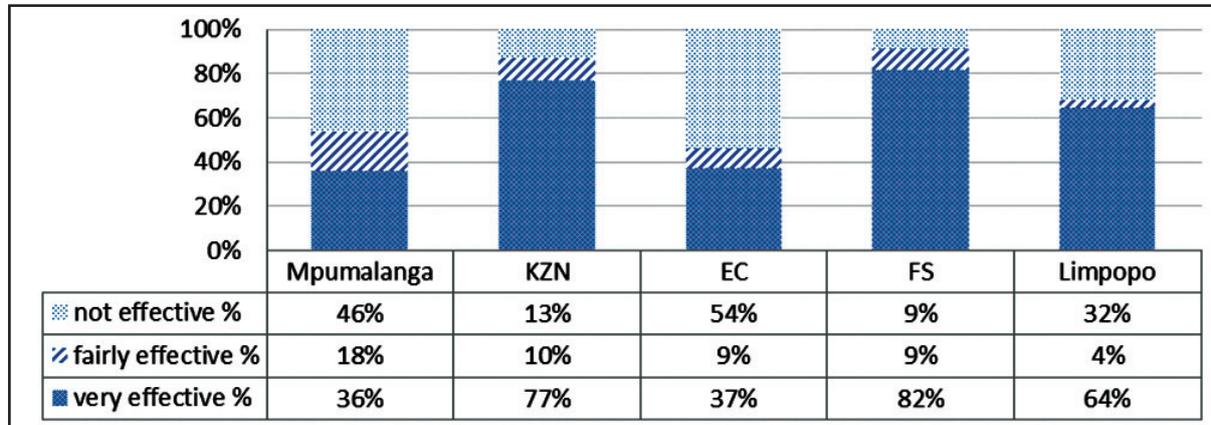


Figure 6.13: Perceptions of leadership effectiveness

Again, reflected in Table 6.1, forty-six percent (46%) of respondents in Mpumalanga believed that their leaders were not effective, while 36% believed that they were. Eighteen percent (18%), in turn, believed that their leaders were fairly effective. Seventy-seven percent (77%) of respondents in KwaZulu-Natal, however, believed that they had effective leaders, 10% believed the leaders were fairly effective and 13% believed they were not effective. Similar to the views expressed in Mpumalanga, most respondents (54%) in the Eastern Cape believed that their leaders were not effective. Furthermore, 37% believed that their leaders were very effective and 9% believed that they were fairly effective. Eighty-two percent (82%) of respondents in the Free State believed that their leaders were effective, 9% believed that they were fairly effective and another 9% believed that they were not effective. In Limpopo, 64% of respondents believed that their leaders were very effective, while 32% believed that they were not; 4%, in turn, believed that their leaders were fairly effective.

The Eastern Cape therefore had the highest number of reported cases of ineffective leadership at 54%, followed by Mpumalanga at 46%. This perceived low quality of leadership could negatively impact the success of any empowerment drive in the potato industry.

6.2.4.3 Capacity to influence change (addressing leadership domain of 5DE [D4:I2])

Psychological assets, as opposed to physical assets, represent a dimension of empowerment that are triggered by internal emotions and sentiments. Internal empowerment is viewed by authors such as Diener and Binswar-Diener (2005) as being integral to the successful delivery of empowerment outcomes. Internal empowerment in the context of this study includes farmers’ self-esteem, confidence and optimism levels in the agricultural context as well as in general. According to Allen (2003), assets and resources alone cannot drive empowerment as they merely represent a means to an end. Real empowerment involves the strengthening of entitlements and the ability and capacity to make use of them (Allen, 2003; Page & Czuba, 1999; Alkire & Deneulin, 2009). Self-efficacy drives internal empowerment which, together with externally driven asset- and resources-based empowerment, heavily influences results (Diener & Binswar-Diener, 2005).

Figure 6.12 shows how the sample responded, by province, to the question about how they perceived their ability to influence change in their communities. The responses were taken at face value as they were communicated; no tests were applied to the responses.

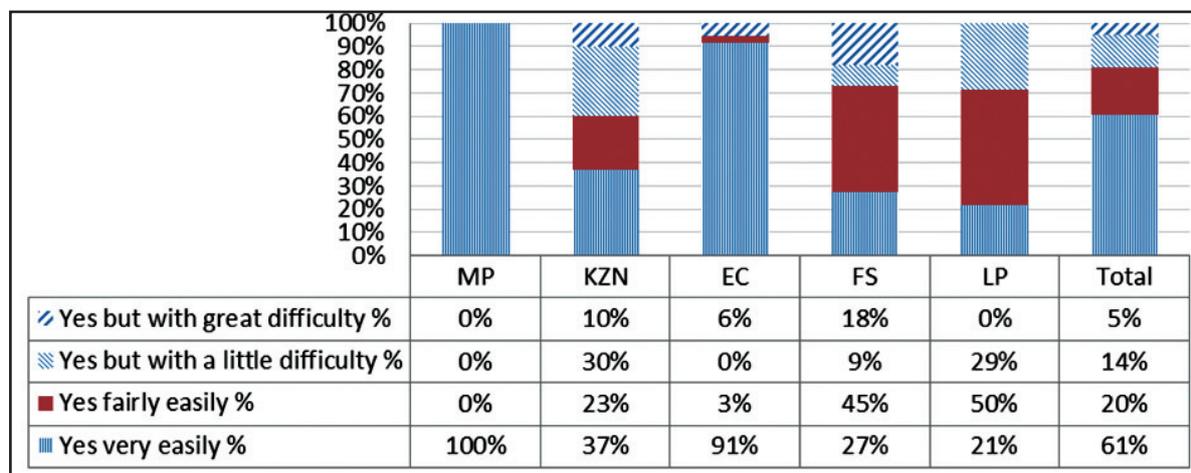


Figure 6.14: Capacity to influence change by province

All respondents from Mpumalanga said that they are able to influence change very easily, suggesting a high level of empowerment in that particular area. In KwaZulu-Natal, 37% said they can influence change very easily, 23% fairly easily, 30% with a little difficulty and 10% with great difficulty. Confidence to influence change, which draws on psychological

empowerment, is therefore comparatively lower in that province. In the Eastern Cape, 91% of respondents said they can influence change very easily, 6% with great difficulty and 3% fairly easily. In the Free State, 45% felt they can influence change fairly easily, 27% very easily, 9% with a little difficulty and 18% with great difficulty, In Limpopo, 27% of respondents said they can influence change very easily, 50% fairly easily and 29% with a little difficulty.

6.3 SUMMARY OF THE FINDINGS

The WEAI and 5DE findings reveal that black potato farmers in South Africa, as represented by the survey sample, face land size and land tenure challenges. A large proportion of farmers were found to occupy small pieces of land, thus pointing to subsistence production (e.g. 62% of respondents had access to land that is less than 5 ha in size). From this result, together with the temporal specificity of potato production, it can be inferred that there is a low level of commercial production among the sampled farmers. Concerning land tenure, only 4% of farmers sampled hold full title to their land. Such insecurity of land tenure reduces the propensity to access capital and invest in infrastructure, assets and production inputs to boost farming productivity. Furthermore, with the strenuous security requirements demanded of credit applicants, formal financial institutions do not easily extend production and asset credit to farmers, resulting in their being credit constrained. This exacerbates production inefficiencies. Ultimately, limitations in land size reduce potato production and therefore incomes, negatively impacting livelihoods.

Potato farmers clearly need operational, technical and marketing support provided by various organisations, including the potato commodity organisation, PSA, NGOs and government extension services. However, the availability, effectiveness and frequency of these outreach activities, according to the research, are very limited. Only 52% of the farmers surveyed benefited from extension support services and these were not specific to potato production. Without adequate outreach, particularly on the information side, it is difficult to envisage how potato farmers will increase their productivity.

What is encouraging, however, is that Limpopo and Free State farmers exhibited high empowerment levels in the resources and income domains across all indicators observed.

Furthermore, farmers in the different provinces demonstrated a great deal of potential as reflected in their strong organisational and leadership assets. On a cautionary note, though, the empirical evidence derived from the farmer survey indicates the attainment of empowerment adequacy in terms of a single leadership domain. Furthermore, assets are both intrinsically and extrinsically located, with the latter including financial assets, material assets and informational assets. Information, in particular, should ideally be specific to potato production and marketing.

The application of the WEAI and 5DE methodology was a first attempt at quantifying the empowerment status of farmers through the application of an agriculture-specific methodology. In this regard, it addressed the limitations and challenges of orchestrating empowerment through a single domain, as reflected in the NAMC empowerment guidelines which are informed by the Agri-BEE codes. Through the WEAI and 5DE analysis a richer picture of farmers emerged, with specific details disaggregated along many variables, including location, production size, etc. This quantitative approach to determining the empowerment status of farmers has helped to create a profile of black potato farmers by region, which will facilitate the formulation and targeting of programmes and interventions. This is not to say that the BEE approach to empowerment should be side-lined. Rather, the two approaches should be used in a complementary manner when investigating empowerment shortcoming and arriving at appropriate policies and practical interventions.

Chapter 7 will reflect on the overall purpose of the study (as articulated in the research objectives) and the findings from the analysis, and arrive at a number of final conclusions and recommendations. The latter are aimed at ensuring that the potato industry makes a more meaningful contribution to the agricultural sector in South Africa and that individual farmers' livelihoods are enhanced and made more secure. In addition, the chapter will explore opportunities for further research.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

7.1 INTRODUCTION

This study has been aimed at arriving at a better, more scientifically derived understanding of the empowerment status of black smallholder potato farmers in South Africa, as well as the factors contributing to the current status quo. Agriculture is one of South Africa's most important economic sectors as it has the potential to contribute significantly to the creation of a vibrant agro-processing industry in the country and to stimulate job creation. Yet, 20 years after the advent of democracy, the legacy of colonialism and apartheid (which were characterised by large numbers of black South Africans being dispossessed of their land and their freedom of movement) has not been eradicated, with land ownership and commercial agricultural production still largely in the hands of whites. Black farmers' access to land is tenuous at best and in many respects their hoped-for empowerment has not come to pass.

Until now, little concrete research has been conducted on the nature or level of empowerment (or lack of empowerment) among black smallholder farmers in South Africa – a shortcoming that provided the rationale for this study. The potato farming sector was chosen as the specific focus area because potatoes are a staple product in South Africa and, with sufficient resources and momentum, could make a valuable contribution to food security, particularly in the rural areas. It also represented a useful target for an investigation of this nature because the limited research that has been conducted to date points to empowerment deficiencies among black smallholder farmers. In many ways the dynamics in the potato industry serve as an effective lightning rod for the state of empowerment in the agricultural sector as a whole.

This chapter summarises the key findings from the study (drawing on both secondary and primary research data), arrives at a number of overarching conclusions in the light of the research objectives outlined in Chapter 1, and makes certain recommendations aimed at enhancing the

empowerment landscape for black smallholder potato farmers. It also looks at possible areas of future research which should aid the policymaking process.

7.2 KEY FINDINGS FROM THE STUDY

The key findings are presented below, with the surrounding discussion based on secondary data relating to members of the commodity organisation, PSA, and on primary data derived from the survey, including farmers that are not PSA members.

7.2.1 Empowerment is narrowly defined and applied by institutional actors in the potato industry, limiting its impact

Empowerment has many dimensions, from the enhancement of one's asset-based livelihood to the ability to boldly speak one's mind and influence attitudes for the better. In South Africa, given its long history of dispossession and economic deprivation within the black population, empowerment is generally associated with economic empowerment. While important, this is nevertheless just one discernible outcome of a multifaceted and complex process.

At government level, engagement in empowerment initiatives has largely focused on BEE through the application of the national B-BBEE codes. This has helped to level the economic playing fields in some quarters but adherence to the B-BBEE codes is not mandatory (other than for government) which dilutes their intended impact on society as a whole. Furthermore, economic empowerment does not necessarily restore people's dignity, confidence, social standing or 'voice', where these were stripped away during the years of oppression. When it comes to institutional structures in the potato industry, the power still tends to reside in white hands. This is evidenced, for example, in the white-dominated board of PSA and the predominance of a single Afrikaans language in the midst of South Africa's eleven official languages used in the daily running of both PSA and the PIDT.

'Empowerment' has attracted many definitions and in South Africa is often used interchangeably with 'transformation'. Yet transformation should strictly be seen as one of the steps towards empowerment, with the latter being gender-neutral and referring more expansively to control over resources and decisions. Although some industries and commodity organisations have

been quite proactive in driving well-rounded empowerment agendas, the institutional actors in the potato industry (particularly PSA and the PIDT) have shown little appetite for embracing a progressive empowerment mind-set. As a result, whites still largely hold the power when it comes to making decisions about the affairs of the industry. Much of this power is a throw-back to legislation passed decades ago, the legacy of which has become entrenched. For example, the Marketing Act of 1937 facilitated the creation of white farmer-dominated Control Boards (like the Potato Board) while one of the actions taken by the PIDT was to amend the trust deeds so that the Trust's power over the potato industry superseded those of the Minister of Agriculture.

7.2.2 Few black smallholder potato farmers benefit from PSA empowerment programmes

The operation of the potato commodity organisation, PSA, is funded by a statutory levy, 20% of which must be used to empower black individuals and entities to participate in potato production. The number of black potato farmers seems to be rising, as evidenced in increasing purchases of seeds for potato production. However, this does not appear to be the result of PSA support. While PSA has, since 2004, strongly supported the transformation of black potato farmers, its support programmes are reserved for its own members, with black members being few in number (under 40). An estimated 2000 to 3000 black smallholder potato farmers, who are not members of PSA, do not have access to PSA's empowerment Enterprise Development (ED) or Small Grower Development Programmes.

Such denial of levy-driven services to non-members of PSA (which amounts to the use of public money for private use) has impacted productivity among the majority of black potato farmers and constrained the potential of the industry. It flies in the face of the MAP Act No. 47 of 1996 (Ntsebeza *et al.*, 2009) and runs contrary to the spirit of the Agri-BEE codes (DTI, 2017) and the South African Constitution which advocate economic opportunity for all. Because most black potato farmers are not members of PSA, the nature of their activities is neither understood nor acknowledged and is not documented in NAMC reports. From a policy-making perspective, they have effectively been side-lined.

The fact that there is little to show for the money that has been spent on empowerment initiatives among black potato farmers over the years is perhaps not surprising considering that so few have been able to benefit from the formal support programmes on offer, which carry sizeable budgets. In addition, a lack of capacity at the farmer level to keep meaningful records of how empowerment initiatives might have assisted has not helped the situation.

A warning light has come on in another area. Even among those black PSA members who do have access to PSA's empowerment support programmes, there are signs that core transformation activities have recently begun to decline while administrative costs have risen. This could indicate that the priority attached to actual transformation by PSA structures is waning.

7.2.3 Sustainable potato farming is complex, requiring strong technical and management skills

Potatoes are widely consumed as a staple food in South Africa while the demand for potato-based convenience products like French fries is rising due to urbanisation and the growth of the black middle class. Despite these positive trends, it is mainly the large commercial entities that cater to the various potato markets in South Africa since potato farming is inherently challenging.

Potatoes are temperature sensitive and require good rainfall and soil. In this regard, 80% of commercial potato farms in the country are under irrigation due to increasingly erratic rainfall patterns. Furthermore, for potato production to deliver sufficient yields to be profitable and sustainable, specialised knowledge and technical and management skills are required. These factors make it difficult for small black potato farmers to develop viable operations, with the lack of access to irrigation and know-how invariably being major impediments to success. Potato production is also subject to high input and transaction costs, which need to be carefully managed. While commercial potato farming is traditionally very labour-intensive, the industry

has begun to see greater mechanisation in the interests of leaner and more competitive operations, but this has the potential to displace jobs.

7.2.4 Land, finance and skills challenges lie at the root of limited empowerment among black smallholder potato farmers

The study analysed the empowerment status of black potato farmers from a number of different angles, covering both recorded institutional initiatives and experiences within the farming communities themselves. Although there are some positive signs emanating from the black potato farming industry – including the fact that numbers of farmers are growing – improvements in empowerment status have been uneven across different communities surveyed; in general, too, change has been too slow.

A number of indicators were used to gain an impression of relative empowerment status, from income and land ownership arrangements to access to finance and other resources. While the survey respondents shared valuable views and comments, the fact that these were not empirically tested suggests that they should be viewed as broadly indicative and not completely reliable.

There is no doubt that in the rural areas, potato farming is making an important economic contribution to those households that are engaging in such a pursuit, helping to ensure food security and ward off absolute poverty. Interestingly, participation levels vary across the provinces, with KwaZulu-Natal demonstrating the highest level of full-time potato farming and the Free State the lowest. However, the highest incomes were recorded among Free State participants, with income in the Eastern Cape and Mpumalanga trailing well behind. It is possible that Free State respondents were supplementing their income (which in some cases was substantial) via other non-potato-farming pursuits. Although some farmers reported incomes in excess of R200 000 per year, the bulk of respondents earned less than R42 000 per year, signalling limited yields from their farming activities.

Income is a key indicator of empowerment, and one that is influenced by many different factors. In this regard, cost factors were shown to be extremely significant – such as input costs, transaction costs, the added costs associated with the specificity of potato production (calling

for specialised equipment and infrastructure), the cost of land, and the cost of acquiring and/or developing technical and business-related expertise. Whether or not these costs constitute an impediment to farmers is dependent on their ability to access finance. Ultimately, the success and sustainability of a farming venture can be traced to the strength of the interrelationship between resources, finance and skills. Most of the farmers surveyed in the study faced challenges in all of these areas.

The question of land is particularly contentious in the agricultural sector in South Africa and lies at the heart of the difficulty experienced by many black smallholder potato farmers in improving their empowerment status. Only 4% of the farmers surveyed enjoyed full title to their land. The majority owned or occupied land via the PTO system, managed by tribal authorities, which means that they operated under very insecure property rights and could not access finance from formal financial institutions because such land is not recognised as collateral. In the absence of formal loans and credit facilities, their ability to invest in equipment and infrastructure to improve production was severely constrained; nor did many wish to invest money (even if it could be sourced from elsewhere) in farmland that they did not fully own. In addition, most farmers were operating on small pieces of land, with the result that they were unable to develop production efficiencies through economies of scale; they were also unable to adhere to the recommended one-in-four crop rotation principle. Small farms generally preclude commercial potato production and therefore many farmers are restricted to subsistence farming if they are unable to join cooperatives or other collaborative networks. Ultimately, the land/collateral/finance conundrum leads to a vicious circle of under-investment and under-performance.

While the above-mentioned challenges and limitations all point to the need for enhanced levels of support for the black potato farming community, there are indications that the attention given to the transformation pillars of employment equity, skills development and enterprise development have been sub-optimal. In fact, the potato industry lags behind several other industries in the agricultural sector in these areas, as measured against all seven pillars of the Agri-BEE Sector Codes. This is partly a function of the exclusion of many black farmers from the support services provided by PSA but it is also a reflection of the apparent lacklustre commitment to and investment in empowerment among provincial and municipal authorities,

private sector organisations and NGOs. In some cases, there has been a decline in empowerment activity. Although much research has taken place on the theme of potato production, it has centred on the activities of PSA members.

Approximately half the respondents indicated that they received no extension support. Where support was forthcoming from government entities, those providing the extension support services lacked specific knowledge of potato farming. Even where empowerment interventions have been successfully recorded, this has not been accompanied by information on growth trends in the black potato farming community, the level of commercialisation that has been attained or the contribution that has been made to employment creation or poverty alleviation. In other words, the impact of empowerment efforts on previously disadvantaged communities has not been satisfactorily determined.

One empowerment domain that showed quite pleasing results was leadership, with most respondents indicating that they were happy with the quality of leadership in their communities and were able to influence change in their families and communities. Many also reported that they had a strong internal drive and were well-connected through their membership of various associations. This is a good sign, signalling many communities' readiness to participate in more inclusive and collaborative development projects which could in time enrich their empowerment status.

7.3 CONCLUSIONS

With reference to the study's five research objectives, the following broad conclusions can be drawn:

- **Empowerment status of black smallholder potato farmers**

The results of the study show that overall the empowerment status of black smallholder potato farmers in South Africa is characterised by a growing (but still small) community of farmers who have largely been denied access to public and private sector empowerment initiatives. In

often having to fend for themselves – and generally not having full title to their land – they have been unable to acquire the finance and expertise to expand their operations or become more productive and competitive. As a result, subsistence farming and limited financial returns are the norm. It was only in respect of one empowerment domain, i.e. leadership, that promising levels of empowerment were discerned.

- **Commodity-driven transformation status among black smallholder potato farmers**

Although the potato industry has received much support over the years by way of the statutory levy system, which has given rise to various PSA-managed enterprise development programmes, access to these programmes is confined to the PSA membership which excludes the bulk of black potato farmers.

The government has also invested quite heavily in transformation initiatives (in the areas of enterprise development, skills development and farm-specific training) but this has recently started to show signs of slowing down. It would appear that the appetite for transformation is declining in the face of growing enthusiasm for the promotion of operational and business efficiency in the agricultural sector. If this is the case, then the black potato farming community could become further marginalised.

- **Extent and effectiveness of PSA's investment in transformation pillars for black smallholder potato farmers**

PSA's investment in transformation has been of marginal assistance to black smallholder potato farmers because only PSA members (of whom there are few black potato farmers) have access to its employment equity, skills development and other programmes. Even where black members of PSA are able to take advantage of the programmes on offer, the latter are not potato-specific.

The relative ineffectiveness of PSA's investment in transformation activities for the bulk of black potato farmers (which has also recently shown signs of declining) is evidenced in the

fact that the performance of the potato industry trails behind that of many other industries in the agricultural sector.

- **Status of enterprise development among black smallholder potato farmers**

While public and private sector entities have invested quite heavily in enterprise development programmes over the years, recently this activity appears to have slowed down, with budgetary concerns and a general preoccupation with business efficiency at the expense of empowerment being among the suspected causes. Enterprise development is a crucial dimension of empowerment and a waning of interest in this area (particularly within government) will have a negative effect on the black farming community. Having said that, long-term enterprise development can be problematic in that farmers sometimes develop a dependency on the support they receive (particularly when it involves a subsidy) and would be unable to sustain their operations without it.

- **Factors affecting investment in transformation and research in the black smallholder potato farming community**

It is clear that the statutory levy system has released much funding into the potato industry, but few black farmers benefit from it. Investment in research, in particular, has been driven by the availability of information and growing consumer education, as well as the levy system but levy-based research activities primarily focus on and are geared to PSA members since PSA controls how the levy payments are allocated. A shortcoming of industry research efforts is that to date they have generally not thrown much light on the impact of transformation efforts (such as rising numbers and greater visibility of black potato farmers) which would help to steer the policy-making process.

7.4 RECOMMENDATIONS

Based on the study's key findings and overall conclusions, a number of recommendations can be made.

- With knowledge of the black potato farming community being sorely lacking within the potato industry as a whole, it is recommended that – with further, more in-depth

research (and building on this study's findings) – a reliable database of smallholder farmers be developed and hosted by the NAMC, incorporating all the variables that are relevant for the measurement of transformation and other empowerment-related activities. This will go a long way towards arriving at a reliable profile of the black potato farming industry. The database should be updated regularly and details pertaining to the industry reported at regular intervals in NAMC and PSA publications. This would help to guide government policy and the empowerment strategies of other industry role players.

- It is proposed that transformation expenditure by PSA be budgeted according to each transformation pillar in the interests of transparency and that the NAMC play an oversight role in ensuring that expenditure targets, particularly where black smallholder farmers are concerned, are met.
- Research expenditure should be extended to transformation needs and dynamics in the potato industry, and should fairly address the circumstances of different categories and empowerment levels of farmers.
- In the face of the limitations of the approaches adopted so far in determining the empowerment status and trends among black potato farmers, it is recommended that an alternative, agriculture-specific approach be used to track empowerment progress – i.e. the application of the WEAI and 5DE methodology. This study has shown that the application of the WEAI and 5DE methodology has produced some rich data on black potato farmers – including their demographic profile, farming systems and marketing activities – which has been lacking in the industry. This methodology could be used more extensively to generate a fuller picture of the black potato farming sector, including their needs and potential. It should, for example, focus on different domains: production (production efficiency, expertise, costs), resources (land, access to mechanisation, access to finance, skills) and income (access to investment finance, working capital and markets). Several institutions would need to be involved in creating a more conducive environment for black potato farmers so that they can improve their livelihoods and explore commercialisation possibilities. The PSA could play a facilitating role in this regard.

- It is further recommended that another, independent body be appointed by the Minister of Agriculture whose mandate would be to champion the cause of empowerment and to monitor and evaluate the progress and impact of transformation initiatives in the industry at specified intervals. This body should report to the Minister, the NAMC and Parliament on a regular basis. Capacity-building of government personnel who are tasked with providing technical and administrative assistance to the black smallholder farming community could be included in the body's responsibilities (possibly via an outsourced arrangement).
- The government should be lobbied regarding the statutory levy system in the potato industry and the need for the funds (and the services that the funds support) to be dispersed more widely in the industry (i.e. beyond the PSA membership) in order to drive empowerment in a more holistic way. Assisting this process would be a campaign to forge a common understanding of the meaning and importance of empowerment, set against the backdrop of South Africa's political economy in recent decades. Greater involvement by the government in decisions regarding the allocation of levies in the potato industry might also ensure that the management structures of PSA and the PIDT become more representative of the demographics in the potato farming sector.
- Although in many ways sensitive, the perpetuation of the system of tribal authorities owning land and making it available to farmers under a PTO arrangement should be addressed at a high level. Affording individual farmers property rights under a more secure land tenure system could be a game changer, affording many the opportunity to access finance, invest in infrastructure and expand their operations so that they gain a firmer foothold in different markets.
- It is recommended that a conceptual framework for the empowerment of black potato farmers be developed and rolled out as the blueprint for the various industry players and government. The framework (see tentative framework in Figure 7.1) should have three main focus areas: transformation (relating to greater ownership of assets and resources and control over one's affairs and decisions), capacity-building (relating to employment equity rules and regulations, skills development (particularly in

specialised areas) and internal empowerment) and entrepreneurship (relating to enterprise development activities and the creation of jobs as the main route to poverty alleviation). In particular, entrepreneurship is one of the key ingredients in businesses' quest to become commercially viable in terms of quality and quantity and to participate in global or regional value chains. The cooperative farming model provides useful insights into the potential benefits of collective farming and/or marketing.

From a policy perspective, transformation in South Africa mainly has the goal of greater economic participation and thus emancipation (though its meaning should be broadened for greater accountability and impact); capacity-building aims to strengthen human capital which is essential for creating sustainable businesses and improved livelihoods; and entrepreneurship is the much-needed but elusive route to improved socio-economic conditions in the country as it makes more people self-sufficient and less dependent on the state.

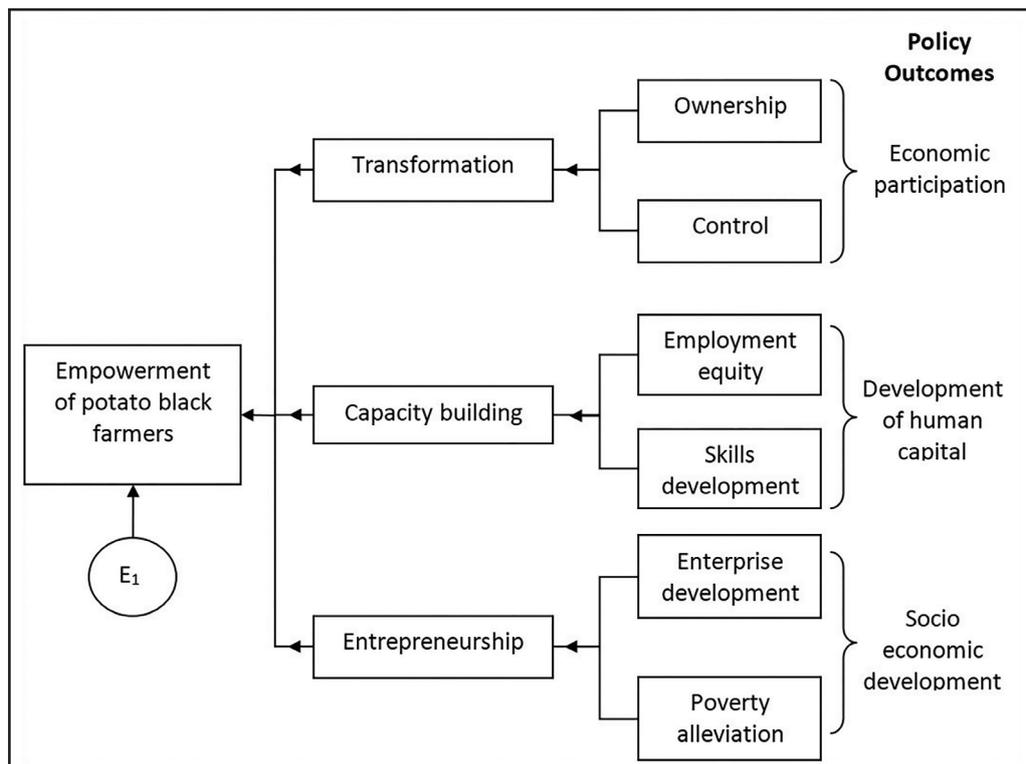


Figure 7.1: Conceptual framework for empowerment of black potato farmers

Adapted from Agri-BEE charter (DAFF, 2010)

The conceptual framework (see Figure 7.1) shows that empowerment is a composite of several different factors and measures, and certainly goes beyond economic empowerment. Policies therefore need to reflect the multifaceted nature of empowerment.

A strong policy environment in a particular industry or the economy as a whole (supported by competent institutions) makes it easier to attract investment – both from the public and private sectors. Coherence in interpretations of and opinions about empowerment and greater insight into the black smallholder farming sector will do much to clarify the policy landscape insofar as it affects this marginalised segment of the industry.

7.5 SUGGESTIONS FOR FURTHER RESEARCH

In investigating the empowerment status of the black smallholder potato farming sector in South Africa, this study has revealed a range of challenges and issues requiring more in-depth research, which will inform the policy-making and strategic planning processes going forward.

Research should be dynamic and responsive to continually changing external and internal circumstances. However, some initial research priorities might include:

- A full investigation into the numbers and locations of black potato farmers in South Africa, their production methods and levels, and their needs and constraints.
- The application of a quantitative empowerment methodology, such as the WEAI and 5DE methodology, to determine the impact of PSA's investment in empowerment (including transformation) activities.
- A study into optimum and sustainable production levels for both smallholder and commercial farmers, including an assessment of the economic viability of different potato production models (dry-land and irrigation).
- An investigation into the status of transformation-linked funding in the potato industry in South Africa.
- A study into possible monitoring and evaluation strategies for empowerment efforts in the potato industry in South Africa.

- An investigation into alternative property rights arrangements which could overcome the problem of smallholder farmers not being able to access loans and credit facilities from formal financial institutions.
- A study of the empowerment status and challenges among the youth and women in agriculture in South Africa, and the prospects for enhancing their contribution to the mainstream economy through targeted empowerment programmes.

REFERENCES

PRIMARY SOURCES

Data collection and interviews

Name	Date	Place
Mr. Jaco Oosthuisen	04/16	Johannesburg, Gauteng
Mr. Gjalt Hoghiemstra	04/16	Johannesburg, Gauteng
Ms. Meghan Ellis	5/16	Pietermaritzburg, KZN
Mr. Rudolf Badenhorst	4/16	Pretoria, Gauteng
Mr. Vusi Mlambo	07/17	Pretoria, Gauteng
Mr. Gerhard Posthumus	7/16	Christiana, Free State
Mr. Etienne Groenewald	7/16	Christiana, Free State
Mr. Gavin Hill	6/16	KwaZulu Natal
Mr. Charl Nel	7/17	Free State
Mr. Jappie Engelbrecht	8/16	Pretoria, Gauteng
Mr. Gerhard Botha	8/16	Pretoria, Gauteng
Mr. Tshepo Maeko	8/16	Pretoria, Gauteng
Mr. Johan Erasmus	7/16	Pretoria, Gauteng
Mrs. Lynn Erasmus	8/16	Rust de Winter, Limpopo
Dr. Andre Jooste	8/16	Pretoria, Gauteng
Mr. Pieter Van Zyl	9/16	Pretoria, Gauteng
Mr. Johan van Zyl	4/16	Warden, Free State
Mr. Jacques Crouws	9/16	Cape Town, Western Cape
Mr. John Easby	9/16	Hermanus, Western Cape
Mr. Inus Oosthuizen	9/16	Ceres, Western Cape
Mr. Stef Stephan	9/16	Aurora, Western Cape
Prof. Jacqui Van der Waals	9/16	Pretoria, Gauteng

Province	Date	Number of anonymous farmers interviewed
Mpumalanga	7 to 10 July 2016	28
KwaZulu Natal	12 to 15 July	30
Eastern Cape	19 to 23 July 2016	35
Free State	25 to 27 July and 13 to 15 August 2016	11
Limpopo	4 August and 24 to 26 August 2016	28

REPORTS

- NAMC Status Report on Statutory Measures, 2013 Survey. July 2014. NAMC, Pretoria.
- NAMC Status Report on Statutory Measures, 2015 Survey. November 2015. NAMC, Pretoria.
- NAMC Status Report on Statutory Measures, 2016 Survey. NAMC, Pretoria. Available at: <http://www.constitutinallyspeaking.co.za> [Accessed 20 March 2017].
- Adesina, J.O. 2016. *Inequality in sub-Saharan Africa: Dimensions and drivers*. World Social Science Report, 2016: Challenging inequalities, pathways to a just world, p. 96.
- Aliber, M. and Hart, T.G. 2009. Should subsistence agriculture be supported as a strategy to address rural food insecurity? *Agrekon*, 48(4), pp. 434–458.
- Aliber, M., Baiphethi, M., de Satge, R., Denison, J., Hart, T., Jacobs, P., and van Aberbeke, W. 2011. *Strategies to support South African smallholders as a contribution to government's second economy strategy*, Volumes 1 and 2. Research Report number 41. Cape Town: Institute for Poverty Land and Agrarian Studies, University of the WesternCape.
- Alkire, S. 2005. Why the Capability Approach? *Journal of Human Development*. Volume 6 Issue 1, 2005, pp. 115–135.
- Alkire, S. and Deneulin, S. 2009. *Introducing the human development and capability approach. An introduction to the human development and capability approach*. London: Earthscan.
- Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A.R., Seymour, G. and Vaz, A. 2013. *The Women's Empowerment in Agriculture Index*. Poverty, Health and Nutrition Division, International Food Policy Research Institute. Washington, D.C., U.S.A.
- Allen, J. 2003. *Lost Geographies of Power*. Oxford: Blackwell.
- Alsop, R. and Heinsohn, N. 2005. *Measuring empowerment in practice: Structuring analysis and framing indicators* (Vol. 3510). World Bank Publications.
- Amin, N. and Bernstein, H. 1996. *The role of agricultural co-operatives in agricultural and rural development* (Vol. 32). Land and Agriculture Policy Centre. (LAPC), Pretoria, South Africa.
- Ancerriz, L. 2016. *RSA Market Agents and Wesgrow Announce Strategic Partnership*. Available at: <http://www.freshgrow.com> [Accessed Oct. 2016].
- Appleyard, S. 2002. A rights-based approach to development: What the policy documents of the UN, development cooperation and NGO agencies say. Background Paper for

- Human Rights Round Table No. 1: “A rights-based approach to development”. Office of the United Nations High Commissioner for Human Rights, Asia-Pacific.
- Atkinson, D. 2014. Rural-Urban Linkages: South African Case Study. Working Paper Series No. 125. Working Group: Development with Territorial Cohesion. Territorial Cohesion for Development Programme. Rimisp, Santiago, Chile.
- Bartlett, A. 2004. *Entry Points for Empowerment*. A Report for CARE Bangladesh, June 2004. Bayley, B. 2000. *A revolution in the market: the deregulation of South African agriculture*. Oxford Policy Management. Oxford, United Kingdom.
- Bernstein, H. 2013. Commercial agriculture in South Africa since 1994: ‘Natural, simply capitalism’. *Journal of Agrarian Change*, 13(1), pp. 23–46.
- Bernstein, H. 1998. Social change in the South African countryside? Land and production, poverty and power. *Journal of Peasant Studies*, 25(4), 1–32.
- Bernstein, H. 1996. How White Agriculture (Re) Positioned itself for a “New” South Africa. *The Agrarian Question in South Africa*. London: Frank Cass, and Durban: Indicator Press.
- Bernstein, H. 1993. The Maize Industry: Business as Usual. *Indicator SA*, 10(4), 33–38.
- Besley, T., 1994. How do Market Failures Justify Interventions in Rural Credit Markets? *The World Bank Research Observer*. Volume 9(1), pp. 27–47.
- Bienabe, E. and Vermeulen, H. 2006. New trends in supermarket procurements systems in South Africa. The case of local procurement schemes from small-scale farmers by rich-based retail chain stores.
- Bundy, C. 1979. *The rise and fall of South African peasantry: Perspectives on Southern Africa*. University of California Press.
- Business Enterprises, University of Pretoria. 2015. Impact Evaluation of the Comprehensive Agricultural Support Programme (from its inception in 2004 to February 2013). Business Enterprises at University of Pretoria (Pty) Ltd. University of Pretoria.
- Chambers, R. 1993. *Challenging the professions: frontiers for rural development*. TT Publications Ltd (ITP), London, United Kingdom.
- Chisasa, J. and Makina, D. 2012. Trends in credit to smallholder farmers in South Africa. *International Business and Economics Research Journal*. Vol. 7 No. 11, July 2012.

- Chisasa, J. 2014. A diagnosis of rural agricultural credit markets in South Africa: Empirical evidence from North West and Mpumalanga provinces. *Bank and Bank Systems*. Volume 9 Issue 2, 2014.
- Christiansen, L.B., Johnson R.B. and Turner, L.A. 2015. Research methods, design, and analysis. 12th edition. Great Britain: Pearson Education Limited.
- Coetzee, G., Meyer, F., and Adam, H., 2002. *The Financial Position of South African Agriculture*. Working Paper 2002-01. Department of Agricultural Economics, Extension and Rural Development, University of Pretoria, Pretoria.
- Collins, H. 2017. *Economic Empowerment*. Collins Dictionary Publishers Limited. Available at: <https://collinsdictionary.com> [Accessed 3 April 2017].
- Collins, J.A. and Fraser, B.C. 2005. Balancing the strengths of systematic and narrative reviews. *Human Reproduction Update*, 11(2), 103–104.
- Cooper, D.R., Schindler, P.S. and Sun, J. 2006. *Business research methods* (Vol. 9). New York: McGraw-Hill Irwin.
- DAFF. 2010. *AgriBEE Transformation Charter*. Presentation to Public Hearings on AgriBEE, 17 September, 2010. Parliament of South Africa, Cape Town.
- DAFF. 2011. A profile of the South African wine market value chain. Department of Agriculture, Forestry and Fisheries, Pretoria.
- DAFF. 2016. *Abstract of Agricultural Statistics*. Department of Agriculture, Forestry and Fisheries, Directorate: Knowledge and Information Management, Pretoria.
- De Janvry, A. and Sadoulet, E. 2009. Agricultural growth and poverty reduction: Additional evidence. *The World Bank Research Observer*, 25(1), pp.1–20.
- De Janvry, A. 2010. Agriculture for development: new paradigm and options for success. *Agricultural Economics*, Volume 41, Issue s1, November 2010, pp.17–36.
- De Klerk, M. 2013. *Potato Seed Delivery Schedule, Durban Metro Projects*, contained in PSA Review of Enterprise Development Programme Report. De Vos, P. 2010. *What Do We Talk About When We Talk About Transformation*. In Constitutionally Speaking. Available at: <http://www.constitutionallyspeaking.co.za> [Accessed 20 March 2017].
- Devaux, A., Kromann, P. and Ortiz, O. 2014. *Potatoes for sustainable global food security*. *Potato Research*. pp. 185–199.

- DFID. 2000. *Empowering Poor People and Strengthening Accountability*. Available at: [https:// www.gov.uk/government/uploads/system/uploads/attachment_data/file/67465/empower-account-summary-note.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67465/empower-account-summary-note.pdf) [Accessed 27 March 2017].
- Diamantopoulos, A. and Schlegelmilch, B.B. 2005. Taking the fear out of data analysis. 2nd edition. London. United Kingdom: Harcourt Brace.
- Diener, E. and Binswar-Diener, 2005. *Psychological Empowerment and Subjective Well-Being*. In *Measuring Empowerment: Cross Disciplinary Perspectives*. Edited by Deepa Narayan, The World Bank, Washington D.C., U.S.A.
- Dollinger, M. 1995. *Entrepreneurship: Strategies and Resources*. Boston, MA: Irwin. Dorward, A.R., Kirsten, J.F., Omamo, S.W., Poulton, C. and Vink, N. 2009. *Institutions and Agricultural Development Challenge in Africa*. International Food Policy Research Institute, Washington D.C., USA.
- DTI. 2004a. Code 000: *Broad-Based Black Economic Empowerment Framework*, The Department of Trade and Industry, Pretoria.
- DTI. 2004b. *The elements of Broad-Based Black Economic Empowerment weighted scorecard*, pp. 11–16. The Department of Trade and Industry, Pretoria.
- DTI, 2012. *Broad-Based Black Economic Empowerment Codes, 2012*. The Department of Trade and Industry, Pretoria.
- DTI. 2017. *Amended AgriBEE Sector Codes in terms of Codes of Good Practice on Broad-Based Black Economic Empowerment*. Government Gazette 16 No. 41306, 8 December, 2017.
- Ewert, J. and du Toit, A. 2005. A deepening divide in the countryside: Restructuring and rural livelihoods in the South African wine industry. *Journal of Southern African Studies*, 31(2), pp. 315–332.
- Fanadzo, M., Chiduza, C. and Mnkeni, P.N.S. 2010. Overview of smallholder irrigation schemes in South Africa: Relationship between farmer crop management practices and performance. *African Journal of Agricultural Research*, 5(25), pp. 3514–3523.
- FAO, 2013. *Food and Agricultural Organisation of the United Nations*, FAOSTAT database. Rome, Italy. Available at: <http://faostat.fao.org> [Accessed 20 Aug. 2016].
- FAOSTAT. 2016. *Food and Agricultural Organisation of the United Nations*. Statistics Division. Available at: <http://faostat3.fao.org/download/Q/QC/E> [Accessed 14 May 2017].

- Fedderke, J.W., de Kadt, R.H. and Luiz, J.M. 2001. Indicators of political liberty, property rights and political instability in South Africa: 1935–97. *International Review of Law and Economics*, 21(1), pp. 103–134.
- Ferris, S., Robbins, P., Best, R., Seville, D., Buxton, A., Shriver, J. and Wei, E. 2014. Linking smallholder farmers to markets and the implications for extension and advisory services. *MEAS Brief*, 4(10), pp. 13–14.
- Foucault, M. 1982. The subject and power. *Critical inquiry*, 8(4), pp. 777–795.
- Friedman, S. 2017. *The odd meaning of ‘radical economic transformation’ in South Africa*. Available at: <http://theconversation.com> [Accessed 2 April 2017].
- Fukuyama, F., 2001. Social Capital, civil society and development. *Third World Quarterly* 22(1), pp.7-20.
- Gaventa, J. 2006. Finding the spaces for change: a power analysis. *IDS Bulletin*, 37(6), pp. 23–33.
- Gaventa, J. 2003a. Three Continuums of Power: The Power Cube, 2003. In: *IDS Bulletin* 27. Institute for Development Studies.
- Gaventa, J. 2003b. Finding the Spaces for Change: A Power Analysis. In: *IDS Bulletin*, 37(6).
- Gaventa, J. and Runciman, C. 2016. Untangling economic and political inequality: the case of South Africa. *World Social Science Report, 2016: Challenging inequalities; Pathways to a just world*, p. 70.
- Gouch, S.S. 2006. Empowerment. Available at: <http://www.fride.org> [Accessed 29 March 2017].
- Grain S.A. n.d. *The Grain and Oilseed Industry of South Africa - A Journey through Time*. Chapter 3.
- Greenberg, S. 2010. *Contesting the food system in South Africa: Issues and opportunities*. Institute for Poverty, Land and Agrarian Studies, University of the Western Cape.
- Groenewald, J.A. 2008. Personal Communication. Agricultural SMMEs. University of Free State, Brandwag, Bloemfontein.
- Gumede, V. 2012. *Social and Economic Inclusion in Post-Apartheid South Africa*. 2011 Transformation Audit: From Inequality to Inclusive Growth.
- Hagedorn, K. 2014. Post-Socialist Farmers’ Cooperatives in Central and Eastern Europe. *Annals of Public and Cooperative Economics*, 85(4), pp. 555–577.

- Hanekom, J.W., Willemse, B.J. and Strydom, D.B. 2010. September. Structure, conduct and performance in the South African potato processing industry. In: 2010 AAAE Third Conference/AEASA 48th Conference, September 19–23, 2010, Cape Town, South Africa (No. 96643). African Association of Agricultural Economists (AAAE) & Agricultural Economics Association of South Africa (AEASA).
- Herman, A. 2013. Are we there yet? Exploring empowerment at the microscale in the South African wine industry. *Environment and Planning A*, 46(8), pp. 1927–1945.
- Heynig, K. 1982. The principal schools of thought on the peasant economy. *CEPAL Review No.16*, pp. 113–139.
- Ibrahim, S. and Alkire, S. 2007. Agency and empowerment: A proposal for internationally comparable indicators. *Oxford Development Studies*, 35(4), pp. 379–403.
- Iheduru, O.C. 2004. Black economic power and nation-building in post-apartheid South Africa. *The Journal of Modern African Studies*, 42(1), pp. 1–30.
- Irwin, E.G., Isserman, A.M., Kilkenny, M. and Partridge, M.D. 2010. A century of research on rural development and regional issues. *American Journal of Agricultural Economics*, 92(2), pp. 522–553.
- Johansson, J.M. and Malmstrom, M. 2013. The business model transparency paradox in innovative growth ventures: Trade-offs between competitive advantages and agency costs. *Entrepreneurship Research Journal*, 3(2), pp. 238–263.
- Jooste, A. 2017. *Monthly Volumes Sold versus Real Prices*. Potatoes South Africa.
- Kabeer, N. 2001. Conflicts over credit: Re-evaluating the empowerment potential of loans to women in rural Bangladesh. *World Development*, 29(1), pp. 63–84.
- Karan, M., Davidson, J., Doyer, T., Machethe, C., Maloa, B., Sokhela, P., van Schalkwyk, H. and Vink, N. 2006. *Report of the Committee to Review the Agricultural Marketing Environment*. September 2006.
- Kirsten, J. et al. (eds.). 2009. *Institutional economics perspectives on African agricultural development*. International Food Policy Research Institute. Washington, D.C., U.S.A.
- Kirsten, J.F. and van Zyl, J. 1998. Defining small-scale farmers in the South African context. *Agrekon*, 37(4), pp. 551–562.
- Kruger, S., du Toit, A. and Ponte, S. 2006. “De-racialising exploitation: black economic empowerment in the South African wine sector”, Danish Institute for International Studies, Copenhagen.

- Land and Agriculture Policy Centre (LAPC). 1993. *Debt Relief and the South African Drought Relief Programme, Policy Paper No. 1*. Johannesburg.
- Longwe, S.H., 1991. *Changing Perceptions: Writings on Gender Development*. Edited by Tina Wallace and Candida March. Oxfam Gender and Development Unit, 1991.
- Luttrell, C., Quiroz, S., Scrutton, C. and Bird, K. 2009. *Understanding and operationalising empowerment Working Paper 308* (pp. 1–16). London: Overseas Development Institute. Westminster Bridge Road, London, U.K.
- Machethe, C.L. 2004. October. Agriculture and poverty in South Africa: Can agriculture reduce poverty? In: *Paper presented at the Overcoming Underdevelopment Conference held in Pretoria* (Vol. 28, p. 29).
- Maddison, A. 1970. *Economic Progress and Policy in Developing Countries*. New York: W.W. Norton and Co., Incorporated. New York, U.S.A.
- Mahmud, S., Shah, N.M., Becker, S., 2012. Measurement of Women's Empowerment in Rural Bangladesh. *World Development* 2012, March 1, 40(3), pp. 610–619.
- Malhotra, A., Schuler, S.R. and Boender, C. 2002. *Measuring Women's Empowerment as a Variable in International Development*. Background paper prepared for the World Bank Workshop on Poverty and Gender: New Perspectives.
- Mancosa. 2016. *MBA Research and Quantitative Methods*. Study Guide. Management College of South Africa. Durban, South Africa.
- May, J. and Carter, M. 2009. *Agriculture: Analysis of the NIDS Wave 1 dataset*. Discussion paper no. 6, National Income Dynamics Study. University of Cape Town, Cape Town.
- McEwan, C. and Bek, D. 2006. (Re) politicizing empowerment: Lessons from the South African wine industry. *Geoforum*, 37(6), pp. 1021–1034.
- McEwan C., and Bek, D., 2009. "Placing ethical trade in context: WEITA and the South African wine industry". *Third World Quarterly*. Vol. 30 pp 723-724.
- McGee, R. 2016. Power and Empowerment Meet Resistance: A Critical, Action-Oriented Review of the Literature. *IDS Bulletin*, 47(5).
- Meinzen-Dick, R., Behrman, J.A., Pandolfelli, L., Peterman, A. and Quisumbing, A.R. 2014. Gender and social capital for agricultural development. In: *Gender in Agriculture*. Dordrecht: Springer.
- Mmbengwa, V.M., 2009. *Capacity building strategies for sustainable farming: SMMEs in South Africa* (Doctoral dissertation, University of the Free State).

- Muller, C.H. 2011. *Coercive agrarian work in South Africa, 1948–1965: 'Farm labour scandals?'* (Masters dissertation, University of Pretoria).
- Mwangi, E. and Meizen-Dick, R.S. 2009. Understanding Property Rights in Land and Resource Management. In: Institutional Economics Perspectives on African Agricultural Development. Kirsten, Doward, Poulton and Vink (eds.), pp. 295–310.
- NAMC. 2016. Status Report on Agricultural Industry Trust 2015/16 Survey. Arcadia, Pretoria, Republic of South Africa.
- NAMC. 2012a. Minutes of Ministerial Trust Workshop held in Gauteng.
- NAMC. 2012b. Status Report on Agricultural Trust for the 2012–2013 Financial year. Arcadia, Pretoria, Republic of South Africa.
- Narayan, D. 2002. *Empowerment and poverty reduction: A sourcebook*. Washington D.C.: World Bank. Available at: <https://openknowledge.worldbank.org/handle/10986/15239> [Accessed March 2016].
- Ntsebeza, D. and Maenetje, H. 2009. *The Operation of Trusts to Which the Assets, Liabilities, Contractual Rights and Obligations of the Former Control Boards Transferred in Terms of Section 26 of the Marketing of Agricultural Products Act 47 of 1996*. Opinion.
- Oberfield, Z.W. 2012. Public management in time: A longitudinal examination of the full range of leadership theory. *Journal of Public Administration Research and Theory*, 24(2), pp. 407–429.
- Oettle, N., Fakir, S., Wenzel, W., Giddings, S. and Whiteside, M. 1998. Encouraging sustainable smallholder agriculture in South Africa. UK Environment and Development Consultancy Ltd.
- Okunlola, A., Ngubane, M., Cousins, B. and du Toit, A. 2016. Challenging the stereotypes: small-scale black farmers and private sector support programmes in South Africa.
- Oosthuisen, J. 2016. Fruit and Veg Prices Up 30 Percent Due to Drought. In: *Freshplaza*, published online 2 November 2016. Available at: <http://www.freshplaza.com> [Accessed 2 Nov. 2016].
- Page, N. and Czuba, C.E. 1999. Empowerment: What is it? *Journal of Extension*, 37(5). Pettit, J. and Mejía Acosta, A. 2014. Power Above and Below the Waterline: Bridging Political Economy and Power Analysis. *IDS Bulletin*, 45(5), pp. 9–22.
- Pettit, J. 2013. *Power analysis: A practical guide*. Swedish International Development Cooperation Agency (SIDA).

References

- Pienaar, P.L. 2013. *Typology of smallholder farming in South Africa's former homelands: Towards an appropriate classification system* (Doctoral dissertation, Stellenbosch University).
- Plaas. 2013. Supporting Smallholders into Commercial Agriculture: A Social Dialogue and Learning Project. A project by the Southern Africa Food Lan and the Institute for Poverty, Land and Agrarian Studies, Western Cape.
- PSA. 2017 *Potato Industry in Perspective: 2017 Update*. Potatoes South Africa, Pretoria. PSA. 2016a. *Industry Report, 2015/2016*. Potatoes South Africa, Pretoria.
- PSA, 2016b. *Verslag Insake Werksaamhede: 2014/2016*. Potatoes South Africa, Pretoria.
- PSA. 2015a. *The South African Potato Industry in Perspective: 2015*. Potatoes South Africa, Pretoria.
- PSA. 2015b. *Minimum Wage for Sectoral Determination: Farm Workers*. Submission to the Department of Labour.
- PSA.2015c. *Potatoes Statutory Measures*, MAP Act 47 of 1996, Government Gazette, No. 38864 – R.473.
- PSA. 2015d. *Constitution of Potatoes South Africa Voluntary/Aartapels Suid-Afrika Vrywillig*. PSA. 2014. *Consumer Usage and Attitude Study on Potatoes*. MQ Market Intelligence.
- PSA. 2005. Potato Industry Development Trust. *Deed of Trust*. Pretoria.
- PSA. 2004. *The Potato Industry Development Trust*. Deed of Trust. PSA. 2005. *Certificate of Incorporation* Potatoes South Africa.
- Raleting, P.M. and Obi, A. 2015. An analysis of institutional factors influencing vegetable production amongst small-scale farmers in six vegetable projects of the Nkonkobe Local Municipality. *Journal of Agricultural Science*, 7(6), p. 184.
- Ritchie, J., Lewis, J., Nicholls, C.M. and Ormston, R. (eds.). 2013. *Qualitative research practice: A guide for social science students and researchers*. Sage Publications. London, United Kingdom.
- Rowlands, J., 2016. Power in Practice: Bringing Understandings and Analysis of Power into Development Action in Oxfam. *IDS Bulletin, Volume 47 No. 5, 2016. Power, Poverty and Inequality*.
- Rowlands, J. 1997. *Questioning empowerment*. Oxford: Oxfam.

- Rowlands, J. 1995. Empowerment examined. *Development in practice*, 5(2), pp. 101–107.
- Salomon, B.B., 1976. *Black Empowerment: Social Work in Oppressed Communities*. New York: Columbia University Press, New York, U.S.A.
- San Pedro, P. 2007. Why promote empowerment in post-conflict situations? Empowerment as alternative development. *Development In Perspective*, 4, pp. 2–8.
- Sandrey, R. and Vink, N. 2007. The deregulation of agricultural markets in South Africa and New Zealand: a comparison. *Agrekon*, 46(3), pp. 323–350.
- Sato, C. 2013. Black economic empowerment in the agricultural sector: a case study of the wine industry. IDE Discussion Paper, Institute of Developing Economics, Chiba. Available at: <http://www.ide.go.jp/English/Publish/Download/Dp/384.html> [Accessed February 2017].
- Saunders, M., Lewis, P. and Thornhill, A. 2016. *Research methods for business students*. 7th edition, Harlow, United Kingdom: Pearson Professional Limited.
- Scheyvens, R. and Storey, T. (eds.) 2003. *Development fieldwork: A practical guide*. London: Sage. Publishers, London, U.K.
- Scott, J.C. 1989. *Weapons of the weak: Everyday forms of resistance*. New Haven and London: Yale University Press.
- Sen, A. 1999. *Development as Freedom*. New York: Knopf.
- Sen, A. 1992. *Inequality Re Examined*. Cambridge, MA: Harvard University Press.
- Sen, A. 1985. *Commodities and Capabilities*. Amsterdam: North Holland.
- Singini, R. & van Rooyen, J. 1995. Serving small-scale farmers: An evaluation of the DBSA Farmer Support Programme. Development Bank of South Africa.
- Singini, R. and van Rooyen, J. (eds.). 1995. *Serving small-scale farmers: An evaluation of the DBSA farmer support programmes*. Published by Development Bank of Southern Africa, Halfway House, South Africa.
- Southall, R. 2007. Ten propositions about black economic empowerment in South Africa. *Review of African Political Economy*, 34(111), pp. 67–84.
- Stats SA. 2017. Quarterly Labour Force Survey – QLFS Q1:2017. Pretoria. Stats SA. 2016. *Community Survey, 2016*, Statistical Release P0301.
- Steyn, J.M., du Plessis, H.F., Fourie, P. and Hammes, P.S. 1998. Yield response of potato genotypes to different soil water regimes in contrasting seasons of a subtropical climate. *Potato research*, 41(3), pp. 239–254.

- Steyn, J.M., Franke, A.C., van der Waals, J.E. and Haverkort, A.J. 2016. Resource use efficiencies as indicators of ecological sustainability in potato production: A South African case study. *Field Crops Research*, 199, pp. 136–149.
- Steyn, J.M., Haverkort, A.J., Franke, A.C., Engelbrecht, F.A., van der Waals, J.E. and Kruger, K. 2014. Impact of different climate change scenarios on future potato production in South Africa: Eastern Free State, Limpopo and Sandveld. Final Report.
- Stroebel, L., Jooste, A., van Zyl, P. and Swart, L. 2012. *Identification of the forces that determine competitiveness in the South African potato industry*. Paper presented at the International Food and Agribusiness Management Association (IFAMA) 21st World Forum and Symposium, Frankfurt, Germany.
- Strydom, D. and van Zyl, P. 2015. Price cost squeeze and production cost expectations for 2015 (original article in Afrikaans). *Chips* 29(2), pp. 60–66. Available at: <http://www.potatoes.co.za/> [Accessed 13 October, 2017].
- Strydom, D.B., Terblanche, L., van Zyl, H. and Willemsse, B.J. 2012. Reduction of transaction costs within the South African potato processing industry. *African Journal of Agricultural Research*, 7(47), pp. 6265–6273.
- Tellis, W.M. 1997. Application of a Case Study Methodology. *The Qualitative Report*, 3(3), pp. 1–19. Available at: <http://nsuworks.nova.edu/tqr/vol3/iss3/1> [Accessed June 2016].
- Timmons, J.A. and Spinelli, S. 2003. *New Venture Creation. For the 21st century* (6th edition.) New York: McGraw-Hill/Irwin.
- Trommlerova, S.K., Klasen, S. and Lessmann, O. 2013. Determinants of Empowerment in a Capability Based Poverty Approach: Evidence from The Gambia. Courant Research Centre: Poverty, Equity and Growth - Discussion Paper, No. 147.
- Tustin, D.H., Ligthelm, A.A., Martins, J.H. and van Wyk, H. 2010. Marketing Research. University of South Africa (Unisa): Unisa Press, Pretoria.
- United Nations Development Programme. 2016. *African Human Development Report 2016: Accelerating Gender Equality and Women's Empowerment in Africa*. United Nations Development Programme Regional Bureau for Africa. 1 UN Plaza, New York 10017, USA.
- Van der Waals, J.E., Steyn, J.M., Franke, A.C. and Haverkort, A.J. 2016. Grower Perceptions of Biotic and Abiotic Risks of Potato Production in South Africa. *Crop Production* 84 (2016), pp. 44–55.

- Van der Waals, J.E., Franks, A.C., Haverkort, A.J., Krüger, K. and Steyn, J.M. 2013. *Climate change and potato production in contrasting South African agro-ecosystems*. Effects on relative development rates of selected pests and pathogens. *Potato Research* 56.
- Van Niekerk, C., Schönfeldt, H., Hall, N. and Pretorius, B. 2016. The Role of Biodiversity in Food Security and Nutrition: A Potato Cultivar Case Study. *Food and Nutrition Sciences*, Volume 7 No. 5, pp. 371–382.
- Van Niekerk, J.A., Stroebel, A., van Rooyen, C.J., Whitfield, K.P. and Swanepoel, F.C.J. 2011. *Towards Redesigning the Agricultural Extension Service in South Africa: Views and Proposals of Smallholder Farmers in the Eastern Cape*. S.Afr. Tydskr. Landbouvoorl./S. Afr.J.Agric. Ext., Vol. 39 Nr 2, 2011: pp. 47–56.
- Van Rooyen, C.J. 2008. South African Wine Industry Benchmarking. Agecon Working Discussion Paper. University of Pretoria.
- Van Rooyen, C.J., Ngqanweni, S. and Njobe, B. 1994. Comments on the Reconstruction and Development Programme in South Africa. *Agrekon*, Vol. 33 No. 4, pp. 218–221.
- Van Zyl, J. and Kirsten, J. 1997. Economic Empowerment in South African Agriculture. In: Browning, P. 1989. *Black Economic Empowerment*, Foreign Publishing Company.
- Vermeulen, H. 2015. *Potatoes within the staple food consumption of the South African middle class*. In: Chips, March/April 2015, pp. 22–27. Potatoes South Africa, Pretoria.
- Vink, N. and Kirsten, J. 2003. *Agriculture in the national economy*. In: Groenewald J. and Nieuwoudt, L. (eds). *The challenge of change: Agriculture, land and the South African economy*. University of KwaZulu-Natal Press: KwaZulu-Natal, South Africa.
- Vink, N. and Van Zyl, J. 1998. Black disempowerment in South African agriculture: A historical perspective. *The Agricultural Democratization of South Africa*, pp. 61–70.
- Vink, N., van Rooyen, J. and Karan, M. 2012. Farmer Support Programmes: Lessons from Implementation. Paper read at the “Strategies to overcome poverty and inequality: towards Carnegie III” Conference. University of Cape Town, 4 September, 2012.
- Visser, A. 2016. Frozen potato chips heat up trade war between South Africa and European Union. *Business Day*, 23 October.
- Webb, J.W., Morris, M.H. and Pillay, R. 2013. Microenterprise growth at the base of the pyramid: A resource-based perspective. *Journal of Developmental Entrepreneurship*, Volume 18 No. 04.

- Western Cape Department of Agriculture. Available at: <http://www.elsenberg.com/content/western-cape-department-agriculture> [Accessed 9 September 2017].
- Wickham, P.A. 2004. *Strategy entrepreneurship*. 3rd edition. Person Education, Harlow: England, United Kingdom.
- Wiggins, S., Argwings-Kodhek, G., Leavy, J. & Poulton, C. 2011. Small farm commercialisation in Africa: Reviewing the issues. Futures Agriculture Consortium, Research Paper 023, April 2011.
- World Bank. 2011. *World Development Report 2012: Gender Equality and Development*. Washington, D.C.
- World Bank. 2007. *Cultivating Knowledge and Skills to Grow African Agriculture. A synthesis of institutional, regional and international review*. Agriculture and Rural Development Department, Africa Region Human Dept. pp. xiii–68.
- Worrall, L., Vrolijk, K., Mason, C. and Balchin, N. 2015. Baseline on Economic Transformation: Review of the international, regional and domestic literature on economic transformation. Supporting Economic Transformation, United Kingdom.
- Yin, R.K. 2015. *Qualitative research from start to finish*. Guilford Publications.
- Yin, R.K. 2009. *Qualitative research from start to finish*. The Guilford Press, New York, London.
- Yin, R.K. 1994. *Case study research: Design and methods*. Beverly Hills, CA: Sage Publishing.

APPENDICES

Appendix A:

Selection of disempowering legislation affecting blacks in agriculture in South Africa

Below are examples of some disempowering, coercive legislation up to 1959 which shaped South Africa's agricultural sector, with particular reference to the potato industry (managing the "*farm labour problem*")

Legislation	Year	Consequences
Squatters Law	1895	A maximum of 5 black families allowed per farm; introduction of a tax registration requirement; control of black squatting through enforced labour requirement.
Natives Recruitment Act	1911	Regulation of recruitment of black labour
Native Labour Regulation	1911	Regulation of black labour
Bantu Native Regulations	1911	Regulation of black labour
Land Settlement Act	1912	Control of black land settlement
Natives Land Act	1913	Regulation of black land and labour; carrying out of land repossessions; affirmation of whites.
Native Administration Bill	1917	Eviction of blacks, restricting them to native reserves or compelling them to work as farm labour
Pact Government	1920s	Intensification of state intervention in agricultural markets
Pact Govt.	1924	Effecting of massive farmer loan write-offs
Agriculture Credit Act	1926	Granting of subsidised credit to white farmers

Legislation	Year	Consequences
Master and Servants Amendment Act	1926	Right granted to farmers to criminally charge labour tenants for contract breaches
Native Administration Act	1927	Provide legal framework for the definition of land rights (e.g. Permission to Occupy (PTO) as well as ‘betterment’ planning resulting in the relocation of millions of black people.
Farm Relief Distribution	Early 1930s	Grants extended to white farmers for drought and other disaster relief
Native Service Contract Bill	1932	Control and redistribution of black labour through contracts; eviction of labour tenants; prevention of labour tenants from seeking jobs in urban areas without farmer consent; introduction of state taxation on share-croppers; permission granted to whip labour.
Proclamation 150	1934	Introduction of pass law regulations for blacks
Native Trust and Land Act	1936	Squatting outlawed through forced farm labour tenancy or eviction to native reserves; boosting of commercial farmland. These actions were taken to regulate the uneven distribution of labour in rural areas and eliminate rural squatting and labour tenancy, thereby turning blacks into full-time labourers.
Marketing Act	1937	Regulation and control of prices to enforce price “stabilisation”; formation of Control Boards (e.g. Potato Board); establishment of a Marketing Council; general favouring of white farmers and rescue of marginal white farmers; stimulation of mechanisation and capital-intensive farming; exclusion of blacks from subsidised agricultural credit.
Native Labour Bureaux	1945 to 1949	Introduction of farmer recruitment mechanisms to enable farmers to hire “illegal immigrants” and establish labour bureaux.
Native Urban Areas Act (Act 25)	1945	Restriction of access by blacks in urban areas without permission
Petty Pass Law Offenders Scheme or “Farm Labour Scheme”	1947	Granting of petty pass law offenders the option of working on white farms rather than going to jail. The establishment of ‘farm jails’ was a means for government to address the farm labour shortage challenge during the 1950s. This led to major increases in numbers of farm labourers, particularly on farms in the Bethal district.
Amendment of 1911 Native Regulation Act	1949	Permission given for 10 or more farmers to form a recruitment group or bureau to obtain labour without a permit, if recruited in own district; building of on-farm prisons by farmers’ cooperatives with the assistance of government incentives.

Legislation	Year	Consequences
Group Areas Act	1950	Regulation of the free movement of blacks and their restriction to native reserves and homelands
Prison Labour Scheme	1949 1953 1954	Sharp increases in use of prison labour. This was a source of cheap labour in response to the farm labour shortage. This emanated from the Native Taxes and Vagrancy Law, Act No. 9 of 1870 of the (then) South African Republic.
Native (Abolition of Passes and Coordination of Documents) Act	1952	Introduction of requirement that all blacks carry a pass book
General Circular No. 23 of 1954	1954	Operation of the farm prison labour scheme and increased frequency of unlawful recruitment practices.
Petty Offences Scheme	1959	Scrapping of scheme by the government
Amendment to prison labour scheme	1959	Reinstatement of the farm labour scheme and the legalisation of farm prisons

Source: Author's elucidation from Anseeuw, Liebenberg and Kirsten (2015) and Muller (2011)

Appendix B:

Elements of broad based black economic empowerment (B-BBEE weighted scorecard)

Core Component	Element (2004)	Element (2012)
Direct empowerment	Equity ownership	Ownership
	Management	Management control
Human resource development	Employment equity	
	Skills development	Skills development
Indirect empowerment	Preferential procurement	Enterprise and supplier development
	Enterprise development	
Residual	Industry specific initiatives	Socio-economic development

Source: DTI, 2004, 2012.

Appendix C:

Concepts and definitions of empowerment

Author	Definition and concept of empowerment
Albertyn (2001)	Effective empowerment must occur at each of three levels: micro (attitude, feelings and skills), interface (participation and action immediately surrounding the individual) and macro (beliefs, action and effects).
Alkire (2005)	Empowerment is an increase in certain kinds of agency that are deemed particularly instrumental to the situation at hand. Thus, empowerment is a subset of agency and so increases in empowerment will mean increases in agency (but not necessarily vice versa).
Alsop (2006)	Empowerment is defined as a group's or individual's capacity to make effective choices, i.e. to make choices and then to transform those choices into desired actions and outcomes.
Appleyard (2002)	It involves empowering individuals to make their own decisions rather than remaining passive objects of choices made on their behalf. It focuses on empowering all individuals to claim their right to opportunities and services made available through pro-poor development (cited in Bartlett, 2004:5).
Bartle and Phil (2003)	It is having the capacity to do things that community members want to do, such as going beyond the boundaries of political or legal permission to participate in the national political system.
Author	Definition and concept of empowerment
Bennet (2003)	Empowerment is used to characterise approaches based on social mobilisation. A key element in most social mobilisation approaches is helping poor and socially excluded individuals realise power from collective action. Often, social mobilisation approaches work 'from below' to create a voice and stimulate demand for change among diverse groups of poor and socially excluded citizens (cited in Bartlett, 2004:54).
Brown (2003)	Providing empowerment opportunities as necessary prerequisites to altering a person's potential reality and giving individuals the means to better themselves.
Chambers (1993)	Empowerment means that individuals, especially poorer individuals, are enabled to take more control over their lives and secure a better livelihood with ownership and control of productive assets as one key element. Decentralisation and empowerment enable local individuals to exploit the diverse complexities of their own conditions and to adapt to rapid change (cited in Bartlett, 2004:55).

Author	Definition and concept of empowerment
Craig and Mayo (1995)	Empowerment is about collective community and ultimately class conscientisation to critically understand the reality of the power that even the powerless possess, so as to challenge the powerful and ultimately transform the reality through conscious political struggles (cited in Oakley 2001:4).
Friedman (1992)	An alternative development involving a process of social and political empowerment whose long-term objective is to rebalance the structure of power within society by making state actions more accountable, strengthening the powers of civil society in the management of their own affairs and making corporate business more socially responsible (cited in Oakley, 2001:3).
Gootaert (2005)	Empowerment falls into 3 categories: making state institutions more responsive to poor individuals; removing social barriers; and building social institutions and social capital.
Gootaert (2003)	It entails expanding assets and capabilities of the poor to participate in, negotiate with and hold accountable institutions that affect their lives.
Jackson (1994)	The process by which individuals, organisations or groups who are powerless (a) become aware of the power dynamics at work in their life, (b) develop the skills and capacity to gain reasonable control over their lives, (c) exercise their control without infringing on the right of others, and (d) support the empowerment of others in the community (cited in Rowlands, 1997:15).
Khwaja (1994)	Empowerment comprises two components: information and influence, which together allow individuals to identify and express their own preferences and provide them with the bargaining power to make informed decisions (Khajwa, 2005, pp. 273–274).
Kabeer (2001)	Empowerment... refers to the expression in people's ability to make strategic life choices in a context where this ability was previously denied to them (cited in Bartlett, 2004:57).
Lokshin and Ravillion (2003)	Taking actions that selectively empower those with little power to address power inequalities.
Malena (2003)	Enabling or giving power to (whom) to do (what).
Mason and Smith (2003)	Empowerment is about “the extent to which some categories of people can control their own destinies, even when their interests are opposed by those of other people with whom they interact”.
Malhora (2002)	Enhancing assets and capabilities of diverse individuals and groups to engage and hold accountable the institutions that affect them.
Mayoux (2000)	Women's empowerment is defined as “individuals acquiring the power to think and act freely, exercise choice and to fulfil their potential has fallen equally to members of society”.
McMillan, <i>et al.</i> (1995)	Gaining influence over events and outcomes of importance.

Author	Definition and concept of empowerment
Moser (2003)	Expanding assets and capabilities of poor individuals to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives.
Moser (1991)	While empowerment acknowledges the importance of women increasing their powers, it seeks to associate power less with domination over others and more with the capacity of women to increase their self-reliance and internal strength. This is identified as the right to determine choices in life and to influence the direction of change, through an ability to gain control over crucial material and non-material matters. It places less emphasis than the equity approach on increasing women's status relative to men, but rather seeks to empower women through the redistribution of power within, and between, societies (cited in Oakley, 2001:4).
Narayan (2005)	Expanding assets and capabilities of poor individuals to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives.
Oppenheim, Mason and Smith (2003)	Extent to which some categories of individuals can control their own destinies, even when their interests are opposed by others with whom they interact.
Oxaal and Baden (1997)	Empowerment cannot be defined concerning specific activities or end results because it involves a process whereby women can freely analyse, and voice their needs and interests, without these being pre-defined, or imposed from above, by planners or other social actors.
Oxfam (1995)	Empowerment involves challenging the forms of oppression which compel millions of individuals to play a part in their society on terms which are inequitable, or in ways which defy their human rights Cited in Oxaal and Baden 1997:2).
Rowlands (1997)	Empowerment is more than participating in decision-making; it must also include the process that leads individuals to perceive themselves as being able and entitled to make decisions.
Speitzer (1995)	Interpersonal empowerment is the component of psychological empowerment that deals with cognitive elements. Other components are interactions (thinking about and relating to the environment) and behaviours (taking action and engaging issues).
Strandburg (2001)	Empowerment can be defined as all those processes where women take control and acquire the understanding that empowerment overlaps with the concept of human development, the latter being "a process of enlarging people's choices". Where human development entails enlarging choices, empowerment is the process of acquiring the ability to choose amongst the enlarged choices (cited in Bartlett, 2004:59).

Author	Definition and concept of empowerment
Van Eyken (1991)	Empowerment is an international and ongoing dynamic process centred on the local community, involving mutual dignity, critical reflection, caring and group participation, through which individuals lacking a valid share of resources gain greater access to and control over those resources by exercising greater leverage to power (cited in Oakley 2001:59).
WDR (2000/ 2001)	Empowerment is the process of enhancing the capacity of the poor to influence the state institutions that affect their lives, by strengthening their participation in political processes and local decision-making. It also means removing the barriers (political, legal and social) that work against particular groups and building the assets of poor individuals to enable them to engage effectively in markets.

Source: Ibrahim and Alkire (2007)

Appendix D:

Four dimensions of power

Type of power relation	Implications for an understanding of empowerment
Power Over: ability to influence and coerce domineering power.	Changes in underlying resources and power to challenge constraints.
Power To: organize and change existing hierarchies.	Increased individual capacity and opportunities for access.
Power With: increased power from collective action.	Increased solidarity to challenge underlying assumptions.
Power from Within: increased individual consciousness and internally driven power.	Increased awareness and desire for change.

Source: Rowlands (1997)

Appendix E

DESCRIPTION OF THE STUDY AREAS COVERED IN THE STUDY

The quantitative component of the study was conducted across five provinces, within the 16 potato production regions of South Africa. Further to this, multiple areas within the identified provinces were covered. Owing to the heterogeneous agro-ecological conditions occurring within provincial and district municipalities and local municipal areas covered in the study, it was necessary to address the various areas individually. Making such a distinction could be important when considering the suitability of particular areas for planting potatoes (Steyn et al., 2014), delivering services to farmers, actively planting potatoes, and determining marketing windows and the cultivars to grow for specific markets. These services are delivered through municipalities at a local level and might in turn influence the provision of services to farmers.

The five provinces have a high agricultural profile (StatsSA, 2017; Atkinson, 2014) and have been prioritised by the government for poverty alleviation through agricultural development (DAFF, 2015). The provinces also have divergent rural to urban profiles which directly impact the populations involved in agricultural activities, as presented in the Community Survey (2016) and outlined by Atkinson (2014). Mpumalanga, KwaZulu-Natal, the Eastern Cape and Limpopo are described by Atkinson (2014) as having commercial farmland as well as vast traditional rural areas, whose contours mirror the apartheid era homelands.

Drought and high temperatures were experienced during the 2015–2016 marketing season, which negatively impacted potato farmers, especially those farming under dry-land conditions. The province of Mpumalanga is said to have been one of the hardest hit areas, together with KwaZulu-Natal, the Free State and Limpopo (Geyer, 2016; Oosthuizen, 2016). While the Eastern Cape is not mentioned by these authors, the farmers surveyed in the study reported that they had been negatively affected by drought.

1. MPUMALANGA PROVINCE

The study covered farmers in the Thaba Chweu Local Municipality in the area near Matibidi and Moremola. A total of 28 qualified and completed questionnaires were included in the data

analysis. The government provides support to some farmers through the Asibuyeleni Masimini, a food security initiative that includes potatoes as one of the crops supported. However, farmers in the study area reported not having received support for potato production via this initiative.

The method applied to develop each of the maps indicating the study areas covered considered the following:

Map key (Figure E1)

The larger map indicates the District Council in which the study sites were situated.

The smaller three maps on the right indicate the following:

Mpumalanga is highlighted in yellow, the District Council in grey and the Local Municipality with a purple outline where study sites were located. The larger District Council is divided into smaller Local Municipalities (bottom map).

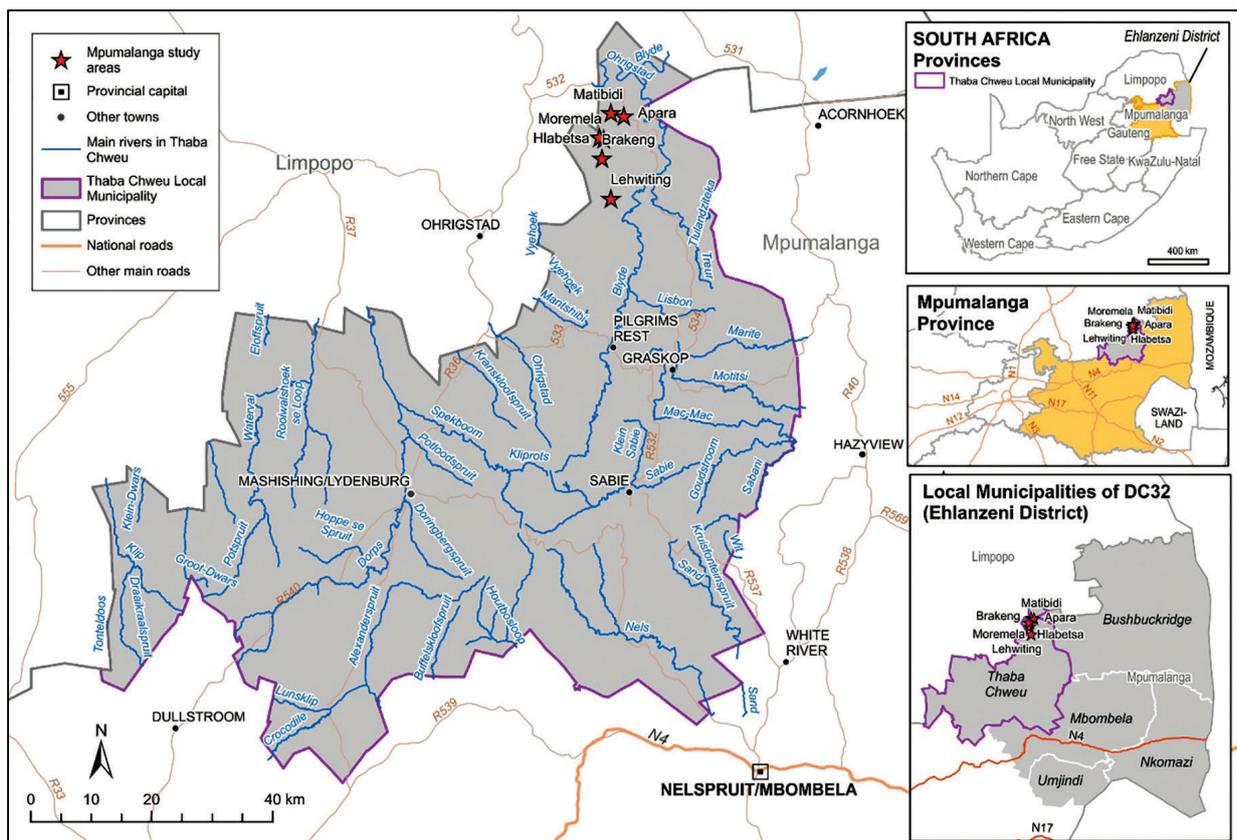


Figure E1: Map of Mpumalanga province study area

(Source: Author)

2. KWAZULU NATAL PROVINCE

The study covered three areas in the province, as outlined below, with data captured from 30 qualified and completed questionnaires. While farmers did not specifically mention government-supported initiatives involving potato production, the province does support some farmers with potato seed and other inputs through the *Siyavuna* Food Security Programme.

2.1 2.1 KwaZulu-Natal Midlands

The first study area in the province covered Swayimane and Applebosch, located inland in the KwaZulu-Natal Midlands region, in the uMshwathi Local Municipality and in the uMgungundlovu District Municipality near Wartburg and New Hanover.

Small-scale farming is prevalent in various areas, mainly under the authority of the communal land tenure (PTO) institution (Hitayezu, Zegeye & Ortmann, 2014). Land in traditional areas is owned by the state but governed under traditional tenure arrangements in which households do not hold exclusive rights to arable land but typically hold rights of use on small pieces of land (Atkinson, 2014). Potatoes are produced both commercially and at a subsistence level in this region.

The uMshwathi Local Municipality is a rural municipality characterised by a dualistic agricultural community. Interviews were conducted with black farmers randomly selected from within the sampling frame. The interviews, which took place at the Gcumisa Cooperative potato pack house in Swayimane and at Applebosch during July 2016, were facilitated by extension officers and management from the provincial Department of Agriculture at Cedara.

2.2 Sisonke

The second area covered was within Sisonke and surrounding villages in the Harry Gwala District Municipality (previously Sisonke District Municipality). This area was previously demarcated in the Eastern Cape province from where agricultural services were previously provided. The service delivery mechanism to farmers was reportedly different from that experienced by other areas covered in the province.

Agricultural activities are significant within the Harry Gwala District Municipality as a result of the high-quality soils in the region. Crop farming, including potatoes and dairy farming, contribute to the sector with commercial forestry plantations.

2.3 Madadeni

The third area covered in the province was in the north-western region bordering the Free State and Limpopo. This area represents the smallest district in the province, located within the Amajuba District Municipality with sampled farmers drawn from the Newcastle Local Municipality in Madadeni. This District Municipality is a cross-border municipality bordering two provinces and three district municipalities in KwaZulu-Natal and is of significance to the province.

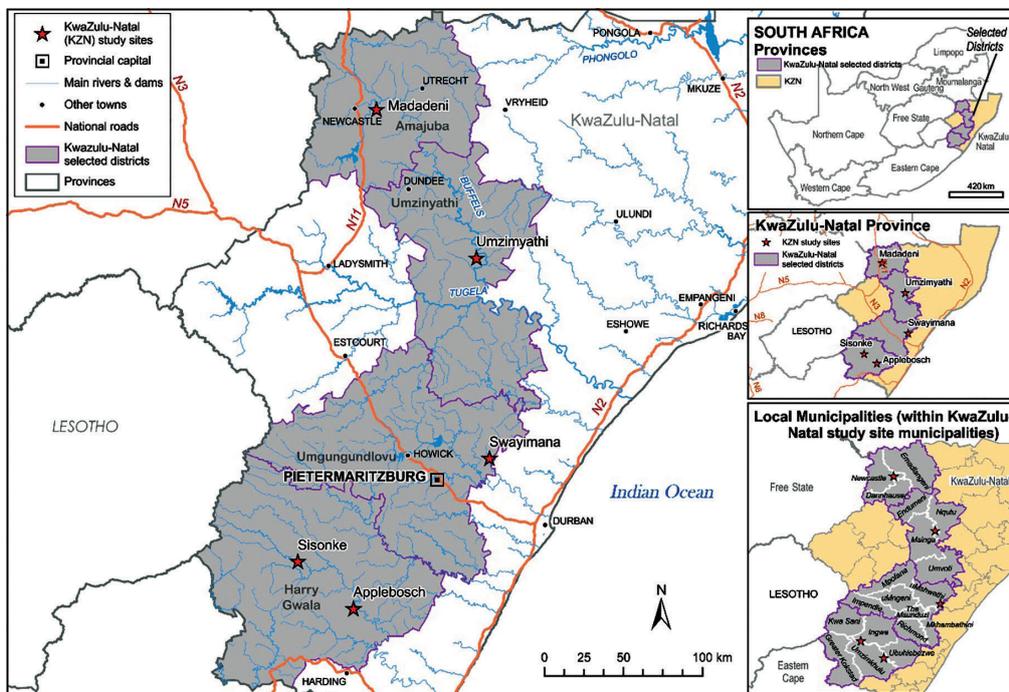


Figure E2: Map of KwaZulu Natal study area

(Source: Author)

3. EASTERN CAPE PROVINCE

The study covered one of the two metropolitan municipalities of the Eastern Cape province, i.e. Nelson Mandela Bay Metropolitan Municipality. The OR Tambo District Municipality is one of six district municipalities within the Metropolitan Municipality. The focus was on two of the five local municipalities – Ingquza Hill (covering the town of Lusikisiki) and Port St Johns, with both inland and coastal regions covered.

The analysis was conducted on 35 qualified and completed questionnaires. Most farmers surveyed farmed under dry-land conditions and reported that they had been affected by drought over the past two seasons. This was confirmed by the Department of Agriculture and rural development officials who support farmers through the province’s food security initiative, *Ziyazondla*, which includes potatoes as one of the crops supported.

3.1 Ingquza Hill

Lusikisiki is in the Ingquza Hill Local Municipality (previously named Qaukeni), which borders the Ntabankulu and Bizana Local Municipalities to the north and Port St John’s Local Municipality and the Indian Ocean to the south. Covering an area of 2 477 km², it is situated 45 km north of Port St Johns. The Magwa Tea plantation, Lambasi Dairy processing plant and forestry make up some of the significant agricultural entities in the Local Municipality.

3.2 Port Saint Johns

on the Indian Ocean coast, bordering Lusikisiki to the north, Mthatha 70 km to the south and Libode to the west. This is the smallest of the five local municipalities in the OR Tambo District Municipality, accounting for an area of 291 km². Port St Johns has a humid, subtropical climate.

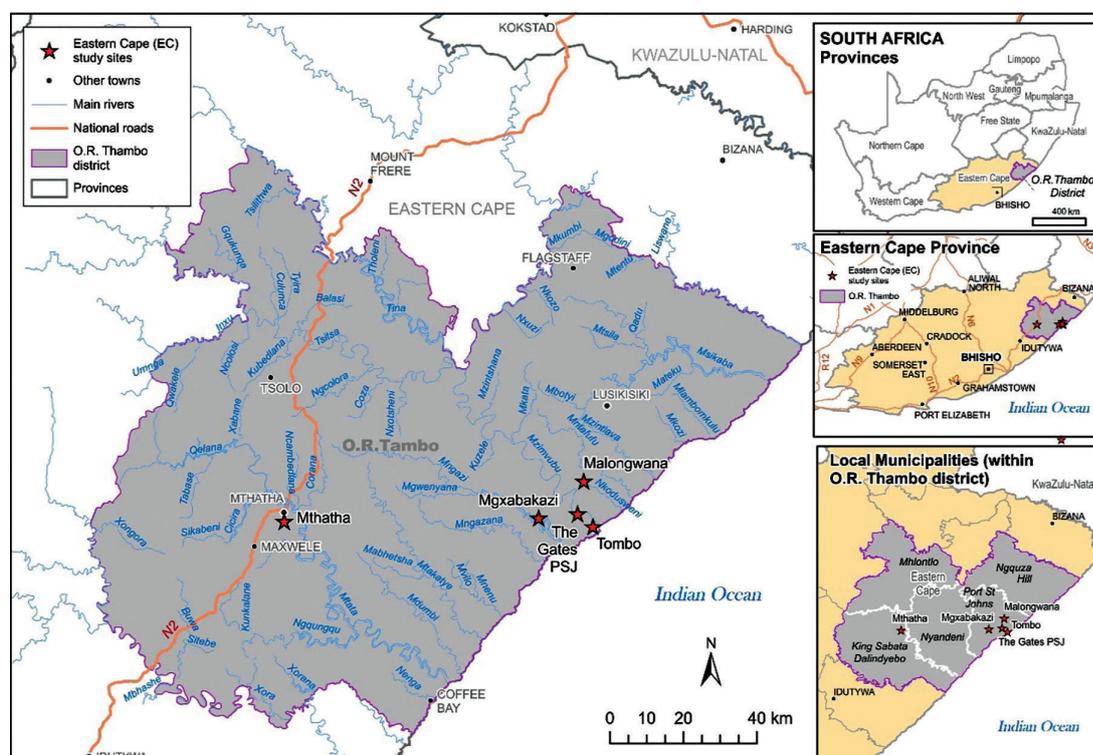


Figure E3: Map of Eastern Cape study area

(Source: Author)

4. FREE STATE PROVINCE

The study covered farmers across an extensive area due to farmers' wide dispersion throughout the province. Scheduled visits arranged were complicated by adverse weather conditions, resulting in inaccessibility of certain farms and therefore several farmers not being available. This resulted in some rescheduling, with 11 farmers ultimately being included in the data analysis.

4.1 Eastern Free State

The first study area covered was the eastern Free State, which accounts for the largest production area for potatoes grown by ha, representing 23% of processing potatoes. Most potatoes are produced under dry-land conditions. The area has a temperate climate and experiences summer rainfall with 700 to 750 mm of rainfall annually (PSA, 2016). While this is adequate for dry-land potato production, the distribution of rainfall during a season can present challenges, with drought experienced in the 2015/16 marketing seasons that resulted in several farmers either reducing their plantings or not planting at all. Winters are cold with heavy frost experienced between April and October.

The surveyed farmers were located in:

- Thabo Mofutsanyane District Municipality, with farming taking place in various local municipalities, including the Mantsopa Local Municipality areas near the towns of Ladybrand and Tweespruit.
- Lejweleputswa District Municipality, with farming taking place in the Machabeng Local Municipality near Welkom and Odendaalsrus.

4.2 Western Free State

The western Free State accounts for 17% of national potato production. This region is South Africa's second largest production region in terms of volume after Limpopo province. Seed, table and processing potatoes are grown in the western Free State, mainly under irrigation in commercial production systems.

Surveyed farmers were located in the Ruth Mompati District Municipality, with farms in the Lekwa Teemane Local Municipality near the town of Christiana.

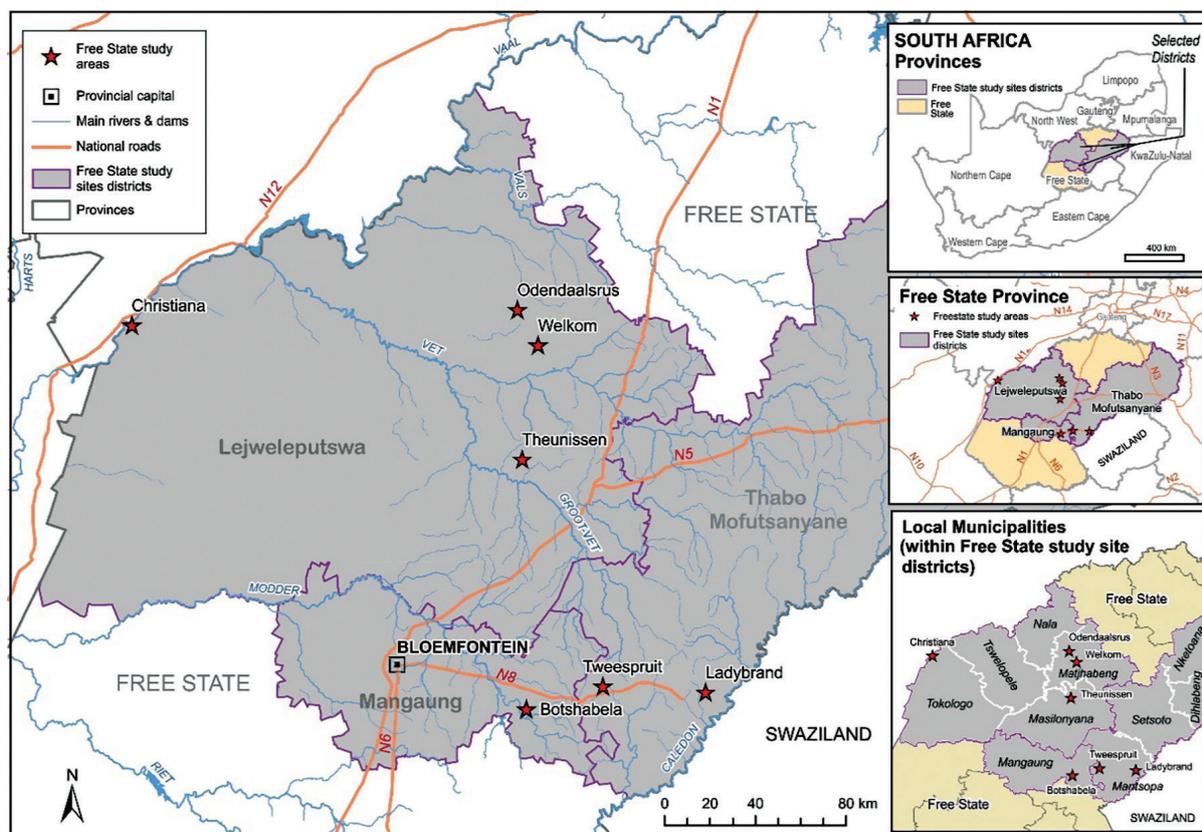


Figure E4: Map of Free State study area
(Source: Author)

5. LIMPOPO PROVINCE

The Limpopo province produces approximately 21% of the commercial potato crop in South Africa, representing the largest volume of potatoes, mainly under irrigation, supplied to the table and processing markets. Because of the strategic importance of the province due its potato production, and in view of the low presence of black potato farmers in the industry, the Limpopo Department of Agriculture (LDA) has implemented a development strategy aimed at integrating black potato producers into the industry (Limpopo Department of Agriculture, 2014).

A large area of the Limpopo province is prone to drought which significantly affects small farmers in particular, who do not farm under irrigation and are dependent on rain for their farming activities. The drought and severe heat conditions have negatively impacted all farmers in the province, with Limpopo being one of the provinces most severely affected (Oosthuizen, 2016).

The Limpopo study took place in two broad areas: the Rust de Winter region in the Waterberg District Municipality, covering farmers in the Bela-Bela and Lephalale Local Municipalities, and further north in various parts of the Capricorn District Municipality, including Polokwane, Molemole and the Blouberg Local Municipalities. A total of 28 completed questionnaires from qualified respondents were analysed in the study.

5.1 Rust de Winter in the Waterberg District Municipality

Rust de Winter is located in the Waterberg District which falls under the Bela-Bela Local Municipality. Rust de Winter has significant commercial agricultural production under irrigation and is within the top 13% of regions with the most arable agricultural soils in South Africa.

Over the years black farmers have engaged with commercial farmers in joint commercial initiatives, especially commercial potato and maize farmers in the Settlers area of Rust de Winter. The demand for potatoes from black producers is high; however, the supply is low. Farmers surveyed in the study were engaged in various farming initiatives with Easy Greens, a vertically integrated commercial farming enterprise with operations across several provinces, including the Free State and Limpopo. The company is a value chain role player with potato production operations and linkages across most production regions, mechanisation hubs and a pack house operation, and it supplies products to FPMs and to the processing industry (e.g. companies like Simba).

Several of the farmers approached for the purpose of the research indicated that they had received land from the old Lebowa Government in 1982. The land in question, which had previously been white commercial land, was occupied by black farmers in 1922, thus boosting the numbers of black farmers in the area. The land that some of the surveyed farmers occupied

was subsequently converted to leasehold property rights in 1994, thus legalising their land occupation. However, such an arrangement has since lapsed. At the time of the study, several farmers indicated that they were farming on the land while the DRDLR was attempting to address unresolved property rights under the current property rights regime. As this process had dragged on for some years, farmers were experiencing a high degree of insecurity over land tenure.

Rust de Winter farmers technically fall within both the Gauteng and Limpopo provinces due to land demarcation issues, resulting in provincial offices for two Departments of Agriculture. Among other things, the offices deliver extension and technical services to farmers. Consequently, farmers receive a variety of services close to one another in areas with similar geographical characteristics. Farms in the Limpopo part of Rust de Winter were at one stage subdivided into portions ranging from ten ha to more than 200 ha in size, which accounts for the variety of farm sizes reported by respondents in the survey.

The Rust de Winter area produces potatoes under irrigation with both commercial and smaller farmers who grow for various markets and rotate potatoes with seed maize, commercial maize, dry beans, sunflower and cattle. The Department of Agriculture in Limpopo has been involved in a process of revitalising 167 irrigation schemes in the province, including the Rust de Winter irrigation scheme. Some of these schemes have comprised various potato production initiatives with community members who have been afforded rights to use pieces of land. Others have been between PSA and a number of strategic partners, including Easy Greens.

The Rust de Winter area receives water mainly from water allocations granted by the Water Users' Association (an institution in the Department of Water Affairs' irrigation scheme) with water coming from the Rust de Winter Dam and the Rhenosterkop Dam. Both dams feed off the Elands River. Water rights are assigned through quota allocations from five ha, but because of the drought water supplies have been restricted. The water levels in the dams determine allocations and possible restrictions for farmers. In the season under review, farmers experienced water restrictions, which inhibited potato production during the previous year for some of the farmers. Although farmers enjoy water allocations, they cannot extend their water

access as they do not have a licence for water rights. This exacerbates the problem of insecure irrigation farming. The 2016/2017 marketing year was expected to experience continued water restrictions due to an expectation that the drought would persist. Several farmers draw water from boreholes, but several of these were not in good working order. One of the farmers reported that a white commercial farmer – who was subleasing land from him to raise capital to pursue his own farming activities (a practice not approved by the DRDLR) – had vandalised his boreholes and pumps.

After 1992, exiting commercial farmers sometimes destroyed and stripped boreholes and other infrastructure, leaving farmers with inadequate facilities to engage in commercial farming activities under irrigation. This is one of the factors that has contributed to the low productivity among farmers who have remained resource-challenged in a number of ways. For example, damaged fencing compromises crop security because it provides access to livestock and wild animals.

The Gauteng Department of Agriculture, together with the Agricultural Research Council Vegetable and Ornamental Plants Institute (ARC-VOPI), initiated a vegetable production project, including potatoes. None of the farmers surveyed indicated any involvement in this initiative with potatoes; the project was reported to have failed and was therefore discontinued.

5.2 Regions in the Capricorn District Municipality

In addition to the District Municipalities discussed above, the study covered potato farmers in the Capricorn District Municipality, who were located in Blouberg, Vivo, Mogwadi (formerly known as Dendron), Molemole (formerly known as Soekmekaar) and Polokwane.

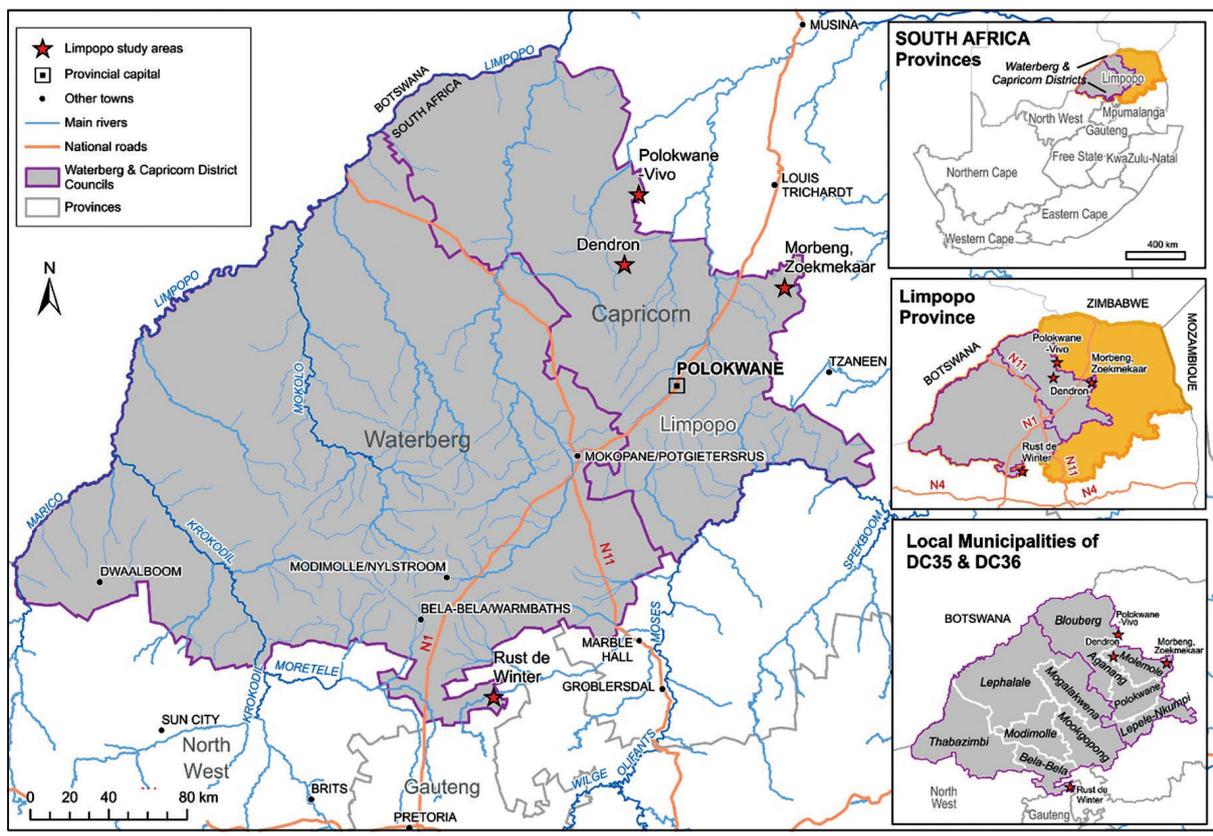


Figure E5: Map of Limpopo study area

(Source: Author)

