

**BENEFICIARY PERCEPTIONS REGARDING FARM WORKER
EQUITY SHARE SCHEMES IN SOUTH AFRICA**

By

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In accordance with Rule G5.6.3, I hereby declare that the above-mentioned thesis is my own work and that it has not previously been submitted for assessment to another University or for another qualification.



.....
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ABSTRACT

The study aimed to assess beneficiary perceptions regarding farm worker equity share schemes in South Africa. Farm worker equity share schemes started in the early 1990s with the aim of having a special arrangement pertaining to the ownership and operation of a farm between the farmer and the farm workers. This was intended to assist farm workers in not only remaining as farm workers but also to gain ownership of the farm. This could lead to the empowerment of farm workers, better working conditions, improved living standards and their rights to land ownership. Farm worker equity share schemes have been widely reported as having failed to meet their intended objectives, thus, in 2009, the Department of Rural Development and Land Reform initiated a study to assess the implementation of equity share schemes. Although the report was not made public, it reports that out of the 88 equity share schemes at the time, only nine managed to pay dividends ranging from R200 to R2000 per year. As a result, the Department of Rural Development and Land Reform put a moratorium on equity share schemes; this was however removed in 2011. It is against this background that this study was undertaken to assess beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

A positivistic research paradigm was employed in this study, by means of quantitative research. Secondary data in the form of textbooks, journal articles and Internet sources provided the theoretical framework for this study. Primary data was obtained using the survey method, by means of self-administered structured questionnaires. Convenience and purposive sampling were applied in order to select 20 farms that use equity share schemes. The farms selected for this study were located in the Eastern Cape, Gauteng, Mpumalanga and the Western Cape provinces, covering a variety of farming activities such as citrus fruits, crops, vegetables and wineries. Ideally, a total of 15 farm workers per farm were targeted. However, due to a variation in these farm worker equity share schemes, on some farms less than 15 workers and in others more than 15 workers were selected for the study; this resulted in a total sample size of 341 farm workers. Ten null-hypotheses and a hypothetical model of beneficiary perceptions regarding farm worker equity share schemes were tested. The influence of seven independent variables were tested, these are: stakeholder trust, operational risks, government interventions, two-way communication, farm worker

empowerment, training and skills development, and access to resources on farm worker equity share schemes. In addition, the influence of farm worker equity share schemes on three dependent variables, namely, farming performance, sustainability and employee expectations were tested. The Statistica (version 13.2) computer programme was used to analyse the results by means of advanced statistical techniques (such as exploratory factor analysis, regression and correlation analyses) as well as descriptive analysis and frequency distributions. After various statistical procedures, the model was re-specified; some of the variables were then renamed and the hypotheses were adjusted accordingly.

The empirical results showed that three key variables to the success of farm worker equity share schemes are stakeholder trust, government interventions and farm owner support. It was determined that these key variables could lead to increased farming performance, farming sustainability and meeting employee expectations.

This study provided useful and practical guidelines to farm owners and administrators of equity share schemes, so as to ensure effective strategising that could enhance their competitiveness and long term survival. The findings of this study could inform strategy policy formulation and implementation in the agricultural sector, as pertaining to farm worker equity share schemes. The study used a sound and well-developed research design and methodology, which has been justified and successfully applied to this research; this method can be utilised by other similar studies to conduct empirical research in the field of farm worker equity share schemes. It is envisaged that the results and recommendations of this study could be used to implement effective strategies that could ensure the effective functioning of farm worker equity share schemes in South Africa.

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CHAPTER 1

BACKGROUND AND SCOPE OF THE STUDY

1.1 INTRODUCTION AND BACKGROUND

South Africa's transition into a democratic country, since 1994, has seen a number of legislative instruments which attempt to address land issues. According to Binswanger-Mkhize (2014:257), six programmes for restitution, redistribution and post-settlement support have been introduced in South Africa. These programmes are Restitution of Land; the Settlement/Land Acquisition Grant (SLAG); Land Redistribution for Agricultural Development (LRAD); the Comprehensive Agricultural Support Programme (CASP); the Proactive Land Acquisition Strategy (PLAS); and the Re-capitalisation and Agricultural Development Programme (RECAP) (Binswanger-Mkhize, 2014:257-258). The various land reform programmes were introduced to tackle problems associated with historic dispossession and rural poverty (Lahiff, 2007:1577). These challenges came as a result of colonialism, whereby land was taken and reserved for the minority settler population. This land is estimated to have amounted to a total of 82 million hectares of commercial farm land by 1994, with the country's African majority occupying only 13% of South Africa's territory (Lahiff, 2007:1578). The agricultural policies at the time were in favour of and concerned with food security which, therefore, gave rise to the larger and mechanised farms that were operated by a few individuals or organisations (Kirsten & van Zyl, 1999:326). Despite all of government's attempts, land reform missed the target of 30% that was to be achieved by 1999. This deadline was later extended to 2014 and, surprisingly, only 4.1% was achieved by 2006, which indicated that it was unlikely that 30% would be reached by 2014 (Lahiff, 2007:1581). The latest official statistics, released in 2009, showed that only 8.2% had been achieved, but data gathered from 2009 to 2012 showed that 9.7% of land reform had been achieved (Binswanger-Mkhize, 2014:255).

As a consequence, farm worker equity share schemes, which are an extension of the land reform programmes, were started in the early 1990s in the Western Cape in order to redistribute assets to farm workers, referred to as beneficiaries, while still maintaining commercial farming operations. The first equity share scheme in South Africa, for example, was a farm which came before the introduction of grants for equity

schemes. The owner initiated it due to financial challenges and a desire to share the operation of the farm with the workers (Fast, 1999a:17-21). Fast (1999a:18) argues that workers were allocated shares according to their service period and income.

Furthermore, there is a possibility that the other schemes used a different set of criteria to allocate shares to workers. Knight, Lyne and Roth (2003:1), for example, report that, in these schemes, the original owner together with farmworkers, and in some instances with a third party investor, become shareholders; however, management gets the exclusive use rights of the farmland with farmworkers getting voting rights and benefits according to their proportion of investment. These schemes are usually arranged as a company, a trust or a partnership. Therefore, these are some of the reasons for the variation in the dividends pay-out. However, there is no mention from government as to whether there were other benefits received by the farm workers such as, better housing and training, and many others, this indicates that it is important to consider the ways in which the involved parties benefited from the scheme. This means that benefits would vary from financial to non-financial. For that reason, it would be unjustifiable to view financial benefits in isolation from non-financial benefits.

As was rightfully pointed out by the Minister of Rural Development and Land Reform, in September 2009, according to Greenberg (2009) it is necessary to put a moratorium on farm equity share schemes which claimed that the schemes are a good model, yet it is important to establish who has benefited from it. It appears that just knowing who has benefited is not sufficient; it is also important to know in what way the involved parties have benefited, as there are both financial and non-financial benefits involved. Thus, there is a need for a review of farm worker equity share schemes. The beneficiary views and perceptions regarding farm worker equity share schemes in South Africa is the main focus of this study.

1.2 PROBLEM STATEMENT

Hall and du Toit (2014) postulate that the government moratorium on equity share schemes was influenced by, amongst other things, the results of a study which revealed detrimental information regarding the performance of farm worker equity share schemes. Out of 88 equity share schemes at the time, only nine were able to pay out dividends, which ranged from R200 to R2000 per year.

Makhubele (2014) states that the shareholders of the farm worker equity share scheme are also faced with challenges pertaining to skills development, housing, procuring wrapping machines and repairing roads; for example, when it is raining, it becomes difficult to make deliveries as the roads become wet. As a consequence, the issue of infrastructure or resources such as roads, water and electricity, amongst others, can influence the performance of these schemes. This shows that it is not necessarily about empowering the workers as this can be done up to a certain level, but one would still need specialised skills or to attract people with a certain level of education in order to fill specific gaps. Mkodzongi and Rusenga (2016:13) revealed that the beneficiaries of the schemes were paid negligible amounts, whilst managers received high salaries. However, it is not clear whether these salaries were significantly higher after the formation of the schemes in comparison to what they were before (taking into consideration inflation adjustment), whilst those of ordinary workers were not adjusted, or at least not by the same percentage. If so, it would translate into unjust behaviour when comparing salaries to salaries, rather than salaries to dividend payments. Moreover, there is no clarity with regard to what is supposed to happen to salaries for all the employees in general after the formation of these schemes, considering that there is infrastructure development to be done, attraction of personnel with scarce skills at high costs, as well as better housing and training to be provided to workers, and other concerns.

Preferably, farm worker equity share schemes should provide three sources of income for farm workers: monthly salaries, land rental income and dividends paid out (Greenberg, 2009). For a share scheme which had no financial difficulties when it was started, it may be possible to realise all three sources of income, however, for the one established under financial strain, only salaries can be realised. Furthermore, a farm worker equity share scheme that is influenced by financial strain, for example, may provide a warning to workers that, in the initial years, the profits would not be high as a result of the repayment of loans.

Alternatively, it might seem odd not to pay land rental income because, if the landowner was not a shareholder, then the rental income would have to be paid to avoid being evicted. The situation is, however, totally different when one is a shareholder, as one cannot continue to receive rental income when the farm is

struggling. A delayed additional income (land rental income) is better than the process that has to be followed to seek a bank loan and the subsequent payment of interest on it. Even if only financial benefits were of interest, one cannot ignore the total dividends and the number of farm workers who had to share the total amount. Therefore, if a fixed amount of money is considered, more workers would translate to fewer dividends per worker, and the converse is also true. The reality is that, besides possible obstacles experienced by some farms in paying out significant dividends, there are reported cases of farms not acting in good faith with regard to their workers. Against this background this study addresses the following questions:

- What are the barriers to the success of farm worker equity share schemes?
- What are the factors that influence beneficiaries' perceptions of equity share schemes in South Africa?
- Will the perceptions of farm worker equity share schemes contribute to the promotion of farming performance and sustainability?

It is envisaged that this study will make a major contribution to the body of knowledge on farm worker equity share schemes in South Africa. It will also assist key role players in the industry, such as government and scheme administrators, to ensure that it is more effectively managed.

1.3 SIGNIFICANCE OF THE STUDY

The main purpose of this study is to understand beneficiaries' perceptions regarding farm worker equity share schemes in South Africa, with the aim of contributing to improving their performance, and leading to business sustainability. Government has identified the agricultural sector as one of the key sectors to solve the challenges of high unemployment in South Africa; in support of the sector, government has introduced a number of programmes. This includes programmes which support farm worker equity share schemes and developing further research regarding how the needs of farmers and farm workers can be satisfied. However, there has been too much focus, in various studies, on the results brought about by these equity share schemes, while limited attention has been given to internal and external factors that contribute to the success of these schemes. This study intends to contribute to the creation of solutions towards the improvement of financial and non-financial benefits

for workers and the performance of farm worker equity share schemes. The research findings of this study will provide strategies and guidelines for satisfactory employee expectations regarding job security as well as financial and non-financial benefits to the farm workers in order to motivate them to promote business sustainability, increase productivity, effectiveness and farming competitiveness.

The benefits mentioned above can be realised when there are sound institutional arrangements in place, supported by the willingness and desire to implement them. Therefore, it would be more appropriate for this study to broadly assess farm worker equity share schemes specifically, in order to make some recommendations towards minimising or eliminating risks to the success of these schemes. This study will create an awareness of good business practice amongst farm owners and workers regarding the importance of a review process once a farm worker equity share scheme has been implemented, and in respect of making any necessary adjustments. In addition, this study will provide guidelines which emphasise that the review and recommendations should not be left solely to government, but that all stakeholders have the responsibility to make a contribution towards improving the equity share schemes.

It is against this background that this study is significant, as it limits its research focus to the beneficiaries' perceptions of these schemes; this is important because the beneficiaries are most affected by agricultural programmes that aim to create livelihoods for them, and address the injustices of the past, as pertaining to land issues and the economy of the country.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary objective

The primary objective of this study is to understand beneficiaries' perceptions of farm worker equity share schemes in South Africa with the intention to make recommendations that will benefit current and future schemes.

1.4.2 Secondary objectives

The secondary research objectives of this study are intended to make the primary research objective effective, through:

- Reviewing the literature pertaining the current practices of farm worker share equity schemes.
- Developing a model and measuring instrument for assessing beneficiaries' perceptions regarding farm worker share equity schemes.
- Empirically assessing beneficiaries' perceptions regarding farm worker share equity schemes in South Africa.
- Providing guidelines and making recommendations to promote the success of these schemes and to minimise or eliminate risks that can bring about underperformance in these schemes.

1.5 RESEARCH QUESTIONS AND HYPOTHESES

1.5.1 Research questions

The research questions for this study are formulated based on the purpose and intended objectives. The following are the research questions for the study:

- Does *stakeholder trust* impact on the perceptions held by the beneficiaries of farm worker equity share scheme?
- Do *operational risks* impact farm worker equity share schemes?
- Are *government interventions* not in some way failing the beneficiaries of farm worker equity share schemes?
- Does *two-way communication* impact beneficiaries' perceptions of farm worker equity share schemes?
- Does *farm worker empowerment* impact beneficiaries' perceptions of farm worker equity share schemes?
- Do *training and skills development* influence beneficiaries' perceptions of farm worker equity share schemes?
- Does *access to resources* impact beneficiaries' perceptions of farm worker equity share schemes?

- Do beneficiaries' perceptions of farm worker equity share schemes impact *farming performance*?
- Do beneficiaries' perceptions of farm worker equity share schemes impact *business sustainability*?
- Do the perceptions of farm worker equity share schemes impact *employee or beneficiary expectations*?

1.5.2 Hypotheses

On the bases of the hypothetical model of beneficiaries' perceptions of farm worker equity share schemes, as indicated in Figure 1.1, the following null-hypotheses are formulated to be tested in this study:

H0₁: There is no relationship between *stakeholder trust* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₂: There is no relationship between *operational risks* (as measured by access to funding, climate conditions and worker exploitation) and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₃: There is no relationship between *government interventions* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₄: There is no relationship between *two-way communication* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₅: There is no relationship between *farm worker empowerment* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₆: There is no relationship between *training and skills development* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₇: There is no relationship between *access to resources* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₈: There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and *farming performance* (as measured by productivity; effectiveness and efficiency; and competitiveness).

H0₉: There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and *business sustainability*.

H0₁₀: There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and *employee expectations* (as measured by financial benefits, non-financial benefits, job security and improved living standards).

1.6 PREVIOUS CONCEPTUAL MODELS

Three conceptual models were used as a basis for developing the hypothetical model presented in this study.

1.6.1 Knight, Lyne and Roth's (2003) model

The study conducted by Knight *et al.* (2003) on farm worker equity share scheme intended to identify the institutional characteristics of successful farm worker equity share schemes in South Africa, and to discern a set of institutional best practices that are likely to promote the success of future equity share schemes. In order to achieve this goal, nine land reform projects that intended to empower previously disadvantaged farm workers were undertaken in the Western Cape in November 2001, to explore the relationships between their institutional arrangements, worker empowerment, management quality and performance.

The results of the analysis show the existence of positive relationships between sound institutional arrangements, competent management, effective worker empowerment and good performance. It was also found that farm worker equity share schemes should be treated in the same manner as an organisation with voting and benefit rights proportional to individual shareholdings, but limited to certain share transactions, so as to avoid free riding by non-workers. The study further shows that, for the positive results to be realised, there should be effective worker empowerment (e.g. skills transfer and gender representatives), good governance (e.g. external auditing) and

competent management (e.g. schemes are to reward worker performance and resolve disputes).

1.6.2 Business Enterprises University of Pretoria's (2012) theory of Recapitalisation and Development Programme

The study conducted by the Business Enterprises University of Pretoria (2012) focused on the Recapitalisation and Development Programme (RECAP) which was launched in 2010, to achieve the following objectives: to measure agricultural production; to guarantee food security; to graduate small farmers into commercial farmers; to create employment opportunities in the agricultural sector; and to establish rural development monitors (rangers). The RECAP was intended for struggling land reform farms, acquired since 1994, which had the potential to become successful. The study sought to evaluate the implementation of the RECAP in six provinces: the Eastern Cape, the Free State, Gauteng, KwaZulu-Natal, Limpopo and the North West. Data was gathered from 98 farms/projects in these six provinces, and land reform beneficiaries, government officials (project, provincial and national levels) as well as strategic partners/mentors took part in the study.

The findings of the study showed that there are varying degrees of understanding amongst RECAP stakeholders; RECAP is not appropriately designed to achieve its intended objectives; the strategic interventions do not result in broad-based capacitation of the beneficiaries; and RECAP had not yet produced commercial farmers. Further, the government officials responsible for RECAP do not seem to agree on the number of projects/beneficiaries targeted for recapitalisation; the efficiency of the RECAP programme, measured in terms of investment expenditure against results, is low overall; the RECAP project cycle is not aligned to farming operations, and most of the objectives are too ambitious and secondary in nature. It also appears that there is a transfer of skills, even though it has been minimal; there is a limited employment generating capacity; and there is a need to redesign and overhaul all public agricultural support programmes in order to do away with existing silos of funding agricultural support services, including post-settlement support.

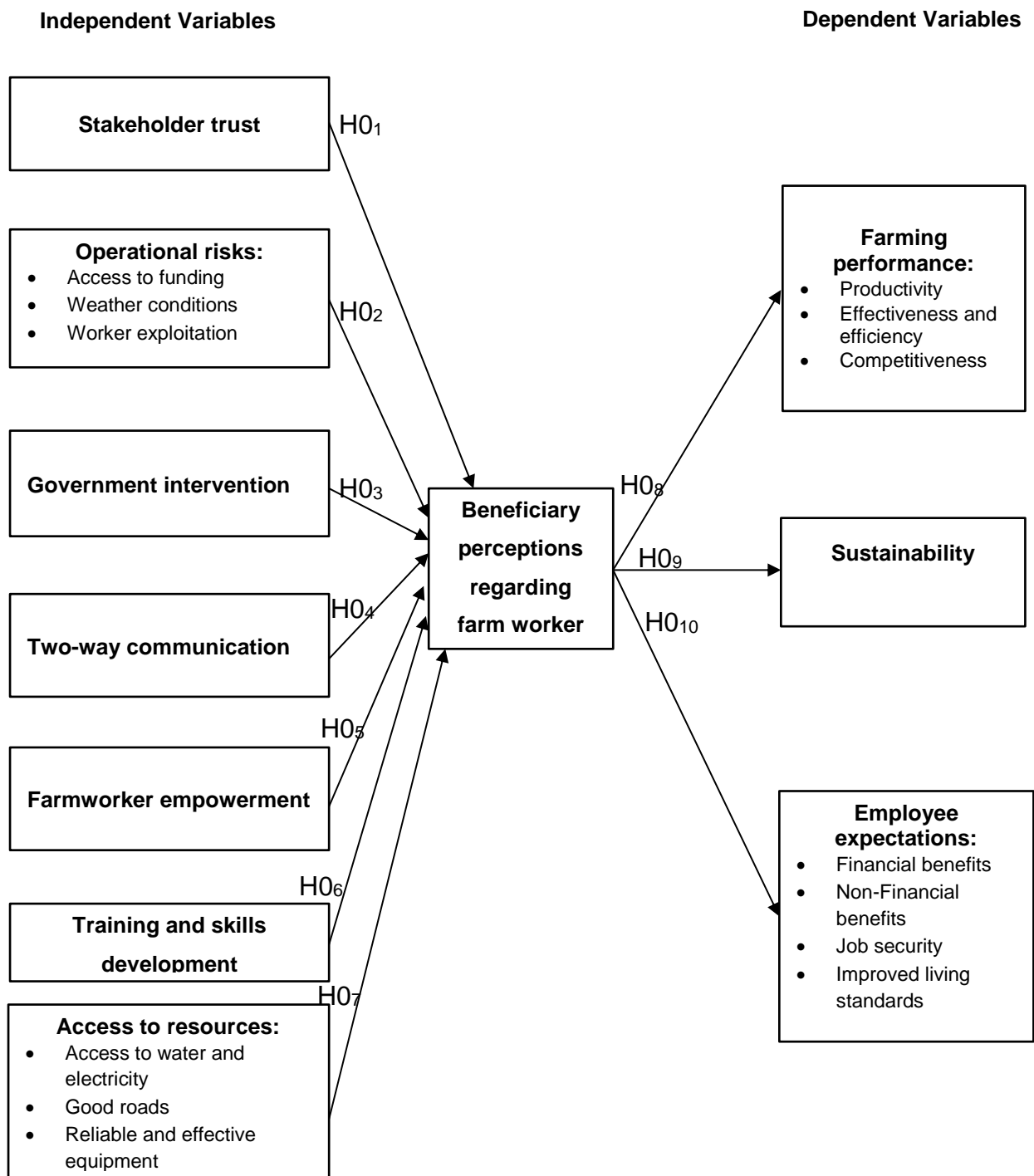
1.6.3 Or's (2011) equity share schemes in the South African wine industry

Or's (2011) study on reviewing an equity share scheme intended to learn from the experience of an equity sharing scheme operating in Stellenbosch. The aim, in this regard, was to develop an alternative approach to agrarian reform and rural development, based on the results from the wine industry. The study investigates how the workers, upon becoming shareholders, increase productivity, or quality of outputs; the study further explored the assistance received from government, technology sharing and management training received from the wine industry. Or (2011) believes that the outcome of the equity share scheme will contribute to the livelihood of the farm workers in wine farms. In Or's study, associate players and beneficiaries were interviewed, with a total of three equity share scheme farms participating in the study. The study found that social empowerment is important in dealing with rural inequality and disparity in South Africa, considering that farm workers have a simple and basic way of living. The study revealed that trust members are taken advantage of, due to their lack of education and business knowledge. The results also revealed that struggling farmers might see the equity share scheme as a means of making quick cash in order to mitigate their financial burden for the farm in trouble.

1.7 PROPOSED THEORETICAL MODEL OF BENEFICIARIES' PERCEPTIONS REGARDING FARM WORKER EQUITY SHARE SCHEMES IN SOUTH AFRICA

The three models discussed above made it possible to develop the proposed theoretical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa. The theoretical model has seven independent variables with associated attributes and three dependent variables (see Figure 1.1).

Figure 1.1: Proposed hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa



Source: Author's own work

1.8 OPERATIONALISATION OF VARIABLES

1.8.1 Stakeholder trust

Harrison (2016) regards trust as the willingness to accept vulnerability based on positive expectations of another's behaviour, thus allowing people to rely on others without feeling obliged to protect themselves with legal precautions at every turn. Greenwood and Van Buren (2010:426) concur that trust is the reliance by one person, group, or organisation, on a voluntarily accepted duty on the part of another to recognise and protect the rights and interests of all others engaged in a joint endeavour or economic exchange. Matuleviciene and Stravinskiene (2015:601-602) suggest that stakeholder trust consists of controllable factors (e.g. corporate reputation and organisational trustworthiness) and uncontrollable factors (e.g. inborn or acquired during growth, and factors related to the environment).

1.8.2 Operational risk

Operational risk refers to the risk that management and staff encounter on a daily basis, which requires constant monitoring so that it does not affect the expression of the implementation of activities (Croitoru, 2014:21). *Operational risk* is thus the prospect of loss resulting from inadequate or failed procedures, systems or policies (KPMG Business Dialogue, 2012). Operational risk in this study will be assessed by means of access to funding, weather conditions and exploitation of workers.

Access to finance is the ability of individuals or enterprises to obtain financial services, including credit, deposits, payment, insurance, and other risk management services (Brav, 2009:263). Baiyegunhi and Fraser (2014:79) state that funding and credit can be accessed from either the formal or informal financial sectors. However, the services of commercial banks, which are the main providers of credit, are often not suitable for poor smallholder farmers as they do not possess payslips as proof of payment and do not have collateral for loans. According to Chan and Ryan (2009:2640), *weather conditions* such as high or low temperatures, rain, snow or wind could reduce the pleasure of outdoor activities and impact on agricultural produce (droughts or floods). Pines and Meyer (2005:155) argue that multinational organisations often *exploit workers* by shifting a significant portion of their operations to countries with low wages, in seeking for the highest profits. Unions, non-government organisations and the

media have made the public more aware of low-wage workers' exploitation and, as a result, many consumers are prepared to pay premium prices to ensure that organisations provide better wages and working conditions to their employees.

1.8.3 Government intervention

Belsky and Wacter (2010) regard government intervention as regulatory action taken by a government in order to affect or interfere in decisions made by individuals, groups, or organisations regarding social and economic matters. According to Olowa and Olowa (2014:487), traditionally, governments intervened in the agricultural sector in order to improve sector coordination and efficiency, but now the agricultural sector has forms of protection and subsidies. The agricultural sector also relies on non-agricultural policy and expenditure decisions, which are beyond the control of ministries of agriculture, such as spending on rural infrastructure (roads, irrigation), land reform policy, education and health services.

1.8.4 Two-way communication

According to Lombard (2011:3489), two-way communication is regarded as an interactive dialogue between an organisation and its customers or stakeholders. According to Versosa and Garcia (2009:1), strategic two-way communication refers to the design of action plans intended to promote voluntary changes in the behaviour of stakeholders whose endorsements are crucial to the success of reform initiatives. It employs the tools of persuasion and negotiation, rather than the power of laws, coercion or incentives, to identify involved parties' underlying interests and promote their understanding of and support for a proposed reform. Markos and Sridevi (2010:93) further state that employees are not sets of pots into which one pours out ideas without giving them a chance to respond to issues that matter to their job and life.

1.8.5 Farm worker empowerment

Spreitzer (1996:484) defines empowerment as intrinsic motivation manifest in four cognitions reflecting an individual's orientation to his or her work role, namely, meaning, competence, self-determination and impact. Strydom (2003:242) regards empowerment as the process through which personal, interpersonal, socio-economic

and political powers are gained in order for a community to change their circumstances. This could be accomplished by identifying their own problems and solutions and implementing them through co-operative efforts, by mobilising local resources. Smit and Cronjé (2002:208) state that for employees to be empowered, they should participate in designing their own jobs, they should be motivated and, consequently, their productivity will increase. Cravey, Arcury and Quandt (2000:229) concur that the ultimate goal is to encourage employees to act in ways that increase their control over their personal and community lives in order to create the impetus for social justice.

1.8.6 Training and skills development

Laird, Naquin and Holton (2003) regard training and skills development as the official ongoing educational activities within an organisation, which are designed to enhance the fulfillment and performance of employees. Mmbengwa, Botes, Gundidza, Nephawe and Maiwashe (2011:387) state that South Africa institutionalised skills development for workers in 1998 by enacting the Skills Development Act (No. 97 of 1998). This Act provided a framework for developing and improving the skills of South African employees. Paterson (2003:1) concurs that the central focus of the National Skills Development Strategy is to address huge disparities in education, skill and wage levels in the working population, and to utilise the workplace as an active learning environment. To fulfil this mission, five objectives have been identified to drive the National Skills Development Strategy: developing a culture of life-long learning; fostering skills development in the formal sector for productivity and employment growth; stimulating and supporting skills development in small, medium and micro enterprises; promoting opportunities for skills development in social development initiatives and assisting new entrants into employment in the labour market (Erasmus & van Dyk, 2003:29).

1.8.7 Access to resources

The United States Department of Agriculture (2016) states that a resource is something people can use to satisfy their needs. Resources could be anything from ground water, grass, land, people to musical compositions. Farmer capacity to employ improved technology and investment depends on access to productive resources

(Anaglo, Boateng & Boateng, 2014:13). Investment in infrastructure in general and in transport, water and energy in particular, is considered a crucial prerequisite for sustainable economic development (Frosch, 2010:2). In this study, access to resources such as water, electricity, roads as well as reliable and effective equipment will be investigated. The increasing demands placed on the global water supply threaten biodiversity; moreover, the supply of water is essential for maintaining an adequate food supply and a productive environment for all (Pimentel, 2006:119). Similarly, the generation, supply and distribution of electricity, and access to it, have the potential to unlock economic development (Lotz & Blignaut, 2011:449). Effective roads could stimulate the process of economic development in rural areas and are an instrument of poverty alleviation as well as agricultural productivity (Kiprono & Matsumoto, 2014:2). The lack of infrastructure in rural areas and the existing road networks leave many communities inaccessible by vehicle (Gollin & Rogerson, 2010:9).

Sondalini and Witt (2016) refer to equipment reliability as a measure of the odds that an item of equipment will last long enough to do its duty and is seen as a measure of the chance of remaining in-service to a point in time. The reliable operation of equipment results in reduced repair costs and the improved quality of work performed by operative employees (Nesterov, Sozaev & Pikin, 2011:828). Effectiveness could be assessed by ensuring that equipment is exploited in comparison to its theoretical potential (e.g. high scrap, losing market share, high levels of inventory, poor quality in products and labour, long lead times and the existence of many sources of waste in production processes) (Singh, 2016:64).

1.8.8 Farming performance

Aluko (2003:172) defines performance as the accomplishment of work, tasks or goals according to a certain level of desired satisfaction. McNamara (2010) contends that organisational performance refers to the effectiveness of the organisation in fulfilling its purpose, and it is a key indicator for evaluating the operational efficiency of a business. Marimuthu, Arokiasamy and Ismail (2009:270) and Khan (2010:159) acknowledge that organisational performance could be measured using financial (profit, sales, and market share) and non-financial (customer or employee satisfaction, innovation, workflow improvement, skills development, productivity, quality, efficiency,

and the attitudinal and behavioural measures, such as commitment, intention to quit, and satisfaction) metrics. According to Wilson, Lewis, Crane, Robertson, McHoul, Bonner, Davenport and Riley (2012), the measurement of agricultural performance is an established agricultural economics research area. Performance in agriculture is frequently measured in terms of profitability, as a function of the prevailing levels of input and output prices, and the efficiency with which inputs are utilised to produce outputs. This study will focus on the impact that farm worker equity share schemes have on productivity, effectiveness, efficiency, and competitiveness.

According to Eldridge and Price (2016:1), the productivity of workers indicates the effectiveness of converting labour inputs into outputs; in addition, it provides vital information for assessing the need for change in technology, labour share, living standards and competitiveness. Smit and de J Cronjé (2002:406) define productivity as the relationship between products and services (outputs) and the resources (input) used to generate those outputs, in an effort to provide an indication of the effectiveness with which the organisation's resources are being deployed. The degree of effectiveness describes the extent to which the fundamental objectives are achieved, whereas the degree of efficiency refers to the relation between the operationalised fundamental objectives and the resources used, as well as any relevant positive and/or negative side effects (Clermont, 2016:1353). Competitiveness refers to the ability of an organisation or nation to offer products and services that meet the quality standards of local and world markets, at prices that are competitive and provide adequate returns on the resources employed or consumed in producing them (Clipa & Ifrim, 2016:104). Atkinson (2013:2) concurs that competitiveness refers to how an economy, nation or organisation manages the totality of its resources and competencies to increase prosperity.

1.8.9 Sustainability

Sriboonlue, Ussahawanitchakit and Raksong (2016:15) state that organisational sustainability refers to the organisation's ability to meet and satisfy direct and indirect stakeholder demands without compromising its ability to meet the needs of future stakeholders. Dyllick and Hockerts (2002:130) define organisational sustainability as the ability of an organisation to possess leverage in the financial, societal and ecological assets. According to Savitz and Weber (2007:73), an organisation is

sustainable when it generates profits for shareholders, protects the environment, and improves the lives of the people with whom it interacts.

1.8.10 Employee expectations

An expectation is a belief about what might happen in the future. The word is derived from the Latin word “expectationem”, which means an awaiting or a presumed degree of probability of an occurrence (Santos & Boote, 2003:142). Employees have certain expectations regarding their employer and job. Employees’ unmet job expectations could be related to various negative outcomes such as emotional exhaustion, reduced satisfaction and organisational commitment, and increased turnover intentions (Maden, Ozcelik & Karacay, 2016:5). This study will focus on expectations related to benefits, job security and living standards. Schlechter, Hund and Bussin (2014:1) mention that financial rewards include remuneration, employee benefits and variable pay, all of which are necessary to attract talent. Silverman (2004:3) regards non-financial rewards as work-life balance, development and career opportunities, as well as an array of other non-financial benefits that organisations offer employees. Salaries, dividends and rental income are financial benefits. In principle, non-financial benefits are divided into two categories: direct benefits and indirect benefits. To clarify this point, because farm workers participate in equity share schemes and are regarded as shareholders, items such as housing and training, which are categorised as non-financial benefits, are regarded as direct benefits to them. Further, indirect non-financial benefits include items such as investing in machinery and building warehouses, and so forth, in order to improve performance and safeguard the quality of the stock that is set to go to market. The indirect non-financial benefits are benefits to the farm workers as they ensure business sustainability and an increase in direct financial benefits in future. Grubb (2016:12) maintains that the productivity of workers leads to more products, exports, business sustainability and the profitability of the company and government. Mkodzongi and Rusenga’s (2016:13) research findings confirm that there are financial and non-financial benefits for workers. Furthermore, the research findings indicate that there were success stories pertaining to the sense of ownership and cohesion of farms; it is, therefore, important to note how the involved parties benefited.

Bose and Sampath (2015:12) interpret job security as the organisational commitment, loyalty and trust of employees in emerging difficulties, which affect their roles and security in finding alternative employment in case of current job loss. According to Clark and Postel-Vinay (2005) it could also entail aspects such as security against arbitrary employment procedures, safety at work and safe working conditions, opportunities to gain and retain skills, scope and participation in decision-making processes, as well as the security of a stable income from a job. The World Bank (2016) states that standard of living refers to the level of wealth, comfort, material goods and necessities available to a certain socioeconomic class in a certain geographic area. Standard of living can also be characterised by a number of summated and special indicators, such as gross national income and real income of households; average and minimum wages of workers and level of pensions; level of household consumption of basic material goods; provision of housing; income and consumption inequality; life expectancy and level of education (Baikova & Vardiashvili, 2015:517).

All these variables will be discussed and operationalised in detail in chapter five.

1.9 BRIEF LITERATURE OVERVIEW OF SHARE EQUITY SCHEMES

1.9.1 Clarification of concepts

- **Share equity schemes**

Palmer (2000) states that, in a farm equity share scheme, the participants (both land reform beneficiaries and private sector partners) purchase equity in the form of shares in an agricultural/natural resource-based enterprise (either a land and operating company or separate land and operating companies). Participants receive returns in the form of dividends and capital growth. Equity can be purchased directly through the grant or through interest received from a debenture issued by the enterprise to the participants. According to Tom (2006), ownership of equity focuses on who owns the productive assets of society and the manner in which ownership can be better distributed. Therefore, share ownership is a model that broadens capital ownership amongst workers. It creates access to productive credit for employees who would normally not have such access due to a lack of collateral. It allows employees to

purchase shares without having to pay a deposit, as well as no salary deduction, no commitment of the employees' pension fund and no personal liability. This form of shared ownership traces its roots back to the concept of 'empowerment', which means giving power to people who are in a disadvantaged position within the organisation (Vaca, 2003).

- **Beneficiaries**

Beneficiaries are seen as the recipients of money or any other benefits. A beneficiary is thus a person designated as the recipient of funds or other property under a will, trust, insurance policy or scheme (Scarboro, 2010:455). For the purpose of this study, beneficiaries refers to recipients or farm workers who participate in share equity schemes.

1.9.2 Challenges of farm worker share equity schemes

Bless and Higson-Smith (2004:15-16) state that previous research revealed that a number of factors, such as, contradictory results or a questionable approach, indicate that what has been achieved thus far regarding farm worker equity share schemes in South Africa is dissatisfying and sub-standard; this is evident in the reflections effected by the Department of Rural Development and Land Reform. It was shown that the benefits are classified into financial and non-financial benefits, and that different reasons would cause the slow realisation of benefits to beneficiaries. This deficiency is centred on the limited financial gains achieved by the beneficiaries of the equity share schemes. It was further argued that regardless of the number of underperforming equity share schemes, the ultimate goal should be to exceed the workers' expectations and minimise or eliminate any unfavourable situation pertaining to the performance of the equity share schemes. Generally, institutions or companies do not simply fail because there are no good plans in place. There are a number of reasons that could led to failure such as an unwillingness to implement changes, a lack of competent people to administer the process, a lack of adequate financial resources to sustain the plan, and ulterior motives, amongst others. One has to make a distinction between an unwillingness to implement changes and the willingness to do so, which is affected by the unavailability of resources, economic conditions, financial conditions, environmental conditions, and various projects that compete over

a few resources (Makamure, 2014:25, 64). If a farm is making a significant profit, but fails to meet the targets that were set when the equity share scheme was established, without providing any reasons for the lack of implementation, then it would qualify to be listed under failed schemes and associated with an unwillingness to implement.

If a farm is making a significant profit and a large portion is channelled into doing various things for the workers, that is, those things which did not exist previously or which existed but were in a bad condition, and if for that reason the farm pays less dividends, then it cannot qualify as a scheme that has failed workers, as it can be associated with the willingness to implement. The same can be said about a farm that is struggling financially due to a number of reasons, such as economic reasons, and therefore cannot be considered a scheme that has failed workers because there were things beyond its control which impacted the business and caused it, unintentionally, not to meet its set targets. For example, Lloyd (2016:2) argues that heat and drought could affect the size of the products and, consequently, the quantity of what will be extracted from farming products as well as the resultant income. Furthermore, most of the farms were engulfed by fire, which resulted in the loss of productivity and the loss of income; furthermore, additional labour was required to remove damage and restart the farm. Therefore, if some of the farms with worker equity share schemes were amongst those impacted by drought and fire, one would not expect significant dividend pay-outs. The fact that there were no dividend pay-outs due to drought and fire, does not imply an unwillingness to pay, but these circumstances prevailed.

Furthermore, if a farm was just breaking even, one would not expect many benefits to be offered to the farm workers. Thus, poor farm performance refers to small dividends received by the individuals, as that is what appears to be government's focus (Hall & du Toit, 2014). This by no means suggests that the conclusion made by government in 2009, to place a moratorium on equity share schemes due to poor performing schemes, was incorrect. However, it is important to note that producing more products, which are not absorbed by the market, does not translate to profitability; therefore, there are other factors to be considered such as product quality, supply-demand and operating environment, amongst others.

Worker equity share schemes were introduced to fill certain gaps. What seems to be a prevailing trend in some of the studies conducted by various researchers and farm

owners is to pay attention to the results produced by farm worker equity share schemes. However, the main focus of this study is to investigate beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

1.10 PROPOSED RESEARCH METHODOLOGY

1.10.1 Research paradigm

There are two basic research paradigms to be adopted in general: positivistic and phenomenological research. Wilson (2010:13-14) indicates that quantitative studies emphasises the measurement and analysis of causal relationships between variables, not processes. Alternatively, Gill and Johnson (2010:148) state that qualitative research is defined as an approach in which quantitative data are not used and the research is less structured, and it focuses on the belief that the world is socially constructed and subjective. Small samples are utilised through in-depth investigations over time by means of qualitative methods (Gray, 2009). A qualitative study follows an inductive theory, whereby theory becomes an outcome rather than applied from the start of the research (Wilson, 2010:13). This study adopts a quantitative approach. A positivistic research design by means of quantitative research is used during the empirical study. This is achieved through a descriptive and exploratory research approach in order to assess beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

1.10.2 Population

Population refers to the total number of cases that can be included as research subjects (Matthews & Ross, 2010:154). The population of this study includes all farm worker equity share schemes operating in South Africa. During the commencement of the empirical study, the Department of Rural Development and Land Reform (DRDLR) was contacted. Although the DRDLR has not shared the database of the equity share schemes, it is likely that approximately 88, or more, farm worker equity share schemes exist, as per the information contained in the confidential study report produced in 2010 (Hall & du Toit, 2014). There is no updated published information on registered farm worker equity share schemes in South Africa, which makes it difficult

to determine the population of this study. Most of this information is confidential and has not been published by the relevant Department.

1.10.3 Sampling

The literature review revealed that previous studies used samples ranging from three to nine farms. This excludes the study conducted by the Department of Rural Development and Land Reform in 2009, as the report is not yet available for public scrutiny, and the RECAP study conducted by the Business Enterprises University of Pretoria. There are studies that utilised a small sample of farms; these numbers were further reduced because some farms refused to participate in the study or they did not have the necessary historical data for the analysis. Choosing a small sample of farms offers both advantages and disadvantages. The advantages are that farms are scattered in remote areas and when choosing a small sample it is easy to visit the farms and conduct face-to-face interviews as opposed to online or telephonic interviews. Furthermore, as there are only a few farms to be visited the researcher is able to interact with the respondents. The disadvantages of having a small sample are that when the analysis is conducted with limited data, one cannot observe trends over the years or group the data according to various categories; this makes the results less reliable.

Non-probability sampling was used by means of convenience and judgemental sampling, based on the availability and accessibility of farm workers who belong to an equity share scheme. As no database was provided by the DRDLR, a self-created list was compiled based on information gathered from Google Search, Citrus Growers Association and Agri South Africa. A total of 20 farms utilising equity share schemes were identified and selected for this study. It was noted that some of the farm worker equity share schemes on this self-created list were eliminated from the sample because their contact details were outdated or they had gone out of business, while others did not want to participate. Ideally, a total of 15 farm workers per farm were targeted for participation in this study; the measuring instrument was administered to these farm workers.

1.10.4 Data collection

According to Neuman (2003:8), data can be defined as the empirical evidence or information that one carefully gathers according to rules and procedures. Wilson (2010:134) notes that there are two basic types of data, namely, secondary and primary data.

- **Secondary data**

Emanuelson and Egenvall (2014:300) define secondary data in research as “data which have not been collected with the specific research question in mind” and further state that the main advantage of secondary data is that it is already available and is constantly increasing due to the digitalization of many records. The practice requires that, before undertaking any primary research, researchers should complete an exhaustive search of existing or secondary data (Castleberry, 2001:195). Secondary analysis of existing data is regarded as new analysis of data collected either for research studies or for other purposes, including registry data, regardless of whether the persons conducting the new analysis participated in the initial collection of the data (Bradley, Cunningham, Lowell, Nagel & Dunn, 2017:78). Previous studies concluded that secondary data sources provide a valid alternative to fieldwork, however, others have expressed the need for caution (Clary & Kestens, 2013:5). Sociologists and economists tend to analyse data that they did not collect, called secondary data analysis (Hofferth, 2005:891). The secondary data used in this study includes books, journals and the Internet.

- **Primary data**

This study was conducted by collecting primary data through the survey method. Buckingham and Saunders (2004:13) define a social survey as a technique for gathering statistical information about the attributes, attitudes or actions of a population by administering standardised questions to some or all of its members. Due to the sensitive nature of this study, the questionnaire was administered to farm workers or beneficiaries in for them to complete it at their own time or as a group, depending on operational activities, various requirements on these farms, and the literacy levels of the farm workers. Where deemed necessary, the questionnaire was administered

during group sessions in the style of a face-to-face interview. The level of literacy and education of the respondents was taken into consideration when designing the measuring instrument.

Due to a variation in farm worker equity share schemes – less than 15 farm workers were selected from some schemes and more than 15 farm workers were selected in others – a total sample size of 341 farm workers was drawn for the study. Previous studies by Or (2011), Knight *et al.* (2003) and Fast (1999a) indicated that some of these farm worker equity share schemes are located in the Western Cape, Mpumalanga, KwaZulu-Natal and Limpopo provinces. However, none of the schemes in Limpopo and KwaZulu-Natal were willing to participate in the study. The farms that participated in this study are located in four provinces: the Eastern Cape, Gauteng, Mpumalanga and the Western Cape. These farms covered a variety of farming activities such as citrus fruits, crops, vegetables and wineries. The level of accuracy and the availability of resources guided the choice of sample size. Buckingham and Saunders (2004:32) state that large national surveys are expensive and the state is one of the few players that have the resources to carry out these types of surveys.

1.10.5 Questionnaire design

A questionnaire is a method of data collection that comprises a set of questions designed to generate data suitable for achieving the objectives of a research project. A questionnaire also has the capacity to collect vast quantities of data from a variety of respondents (Wilson 2010:148). Zikhali (2009:135) argues that the use of a questionnaire guarantees anonymity, privacy and confidentiality, and allows respondents to answer questions without fear of victimisation. The questionnaire employed in this study consists of four sections:

- Section A uses a seven-point Likert-type ordinal scale to assess the impact of seven factors (independent variables) on beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.
- Section B uses a seven-point Likert-type ordinal scale to analyse perceptions regarding beneficiaries' perceptions regarding farm worker equity share schemes (mediating variable) in South Africa.

- Section C uses a seven-point Likert-type ordinal scale to analyse the impact of farm worker equity share schemes in South Africa on dependent variables (outcomes).
- Section D uses nominal-scaled questions to solicit background information from the respondents (demographic characteristics) such as gender, age, ethnic group, educational background and employment level.

(See chapter 6 for detailed discussion of measuring instrument scales).

1.10.6 Pilot study

As the questionnaire has not previously been used and tested, a pilot study was conducted amongst 15 farm workers or beneficiaries of share equity schemes. This was important to ensure that the wording and language used in the measuring instrument are properly understood by the respondents. The literacy levels of respondents was taken into consideration in implementing the measuring instrument. After the pilot study, a few changes were made to some of the statements in order to make the questions clear and understandable to the respondents.

1.10.7 Data analysis

Data collected during this study was transferred to an MSExcel spreadsheet and was analysed by means of the Statistica computer programme. Various statistical methods have been used in this study. Descriptive statistics through measures of central tendency (mean) and dispersion (standard deviation) are provided in this study. Frequency distributions expressed as percentages are presented in the form of table. The measuring instrument was assessed for validity and reliability; both face and content validity were assessed through a pilot study and the expert judgement of management, agriculture and statistical experts. Exploratory factor analysis has assessed construct validity through both convergent and discriminant validity. A cut-off point of 0.40 was used and at least three items should load per factor in order to be regarded as acceptable. The reliability of the measuring instrument refers to its internal consistency, that is, the extent to which a measuring device will produce the same result when applied more than once to the same sample under similar conditions (Gill & Johnson, 2010:143). Cronbach's alpha coefficients has been used to assess

the internal reliability of the study variables. Regression and correlation analysis were also used to test relationships between the dependent and independent variables, and to test the stated null-hypotheses of the study.

1.10.8 Ethical considerations

Due to the sensitive nature of this research, permission to conduct the study on the selected farms was obtained from the Department of Rural Development and Land Reform (DRDLR). The acknowledgement of receipt of the request was received from the DRDLR, although the actual database requested was not received; however, the acknowledgement response had a note stating that the responsible unit within the DRDLR was requested to draw the information together. Ethical clearance to conduct the study was obtained from the Nelson Mandela Metropolitan University. Permission was obtained from farm owners to conduct the study amongst the farm workers on their farms. The purpose of the study was clearly explained to all farm owners and beneficiaries, and consent was obtained from beneficiaries prior to their participation in the study.

1.11 SCOPE AND DELIMITATIONS OF THE STUDY

This study focusses on beneficiaries' perceptions of farm worker equity share schemes in South Africa. The sensitive nature of this study as well as the limited and confidential information provided in relation to farm worker equity schemes in South Africa, from the Department of Rural Development and Land Reform, made it difficult to determine the population of this study. The study was conducted in the following provinces: the Eastern Cape, Gauteng, Mpumalanga and the Western Cape. Three hundred beneficiaries from 20 farms (± 15 from each) belonging to a farm worker equity scheme were targeted for participation in this study.

1.12 STRUCTURE OF THE RESEARCH

- **Chapter 1: Background and scope of the Study**

This chapter provides information regarding the problem statement, research objectives, questions and significance of the study. The chapter further elaborates on the proposed hypothetical model and hypotheses proposed in the study. In addition,

the chapter provides a brief literature review and outlines the research methodology employed in the study.

- **Chapter 2: Overview of the agricultural sector in South Africa**

This chapter outlines the agricultural or farming sector in South Africa. The chapter highlights the nature, regulatory framework, challenges and industry characteristics relevant to this sector.

- **Chapter 3: Theories related to equity share schemes**

This chapter highlights the theories related to this study, such as stakeholder theory.

- **Chapter 4: Equity share schemes in South Africa**

This chapter provides a brief overview of farm worker equity share schemes in South Africa; the chapter provides a detailed description of the nature, management, challenges and implementation aspects of these schemes.

- **Chapter 5: Hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa**

This chapter outlines the hypothetical model of the study, the operationalisation of the study variables and the hypotheses of the study.

- **Chapter 6: Research methodology**

This chapter offers a discussion of the research methodology of the study. The following aspects of the research methodology employed in this study are outlined in this chapter: research paradigm, population and sampling, data collection, questionnaire design and data analysis.

- **Chapter 7: Empirical review of beneficiaries' perceptions regarding farm worker equity share schemes**

This chapter outlines the main empirical results of the study, as pertaining to beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

- **Chapter 8: Summary, conclusions, management implications and recommendations**

This chapter provides a summary of the study. The chapter also highlights the main conclusions drawn from the research findings, and puts forward recommendations based on the results of the study.

1.13 SUMMARY

This chapter provides an introduction of and background of the study. The main focus of this chapter was to conceptualise factors impacting beneficiaries' perceptions regarding farm worker share equity schemes in South Africa. This chapter also provided the problem statement, research questions and hypotheses of the study, and briefly outlined the conceptual model of the study and the research methodology employed in the study. The chapter also clarified the key concepts of the study.

Chapter 2 of this study provides an overview of the agricultural sector in South Africa, within the context of farm worker equity share schemes.

CHAPTER 2

OVERVIEW OF THE AGRICULTURAL SECTOR IN SOUTH AFRICA

2.1 INTRODUCTION

Chapter 1 of this study provided the introduction and background of this study of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa. The chapter provided detailed information regarding the problem statement, purpose and significance of the research, research objectives, research questions and hypotheses, conceptual model, proposed theoretical model, literature review, proposed research methodology, data collection methods and analysis, population and sample, as well as the scope and delimitations of the study.

The current chapter, Chapter 2, provides an overview of the agricultural sector in South Africa. This chapter covers the background to the agricultural sector, branches of the agricultural sector, and challenges in the agricultural sector.

2.2 BACKGROUND TO THE AGRICULTURAL SECTOR

The agricultural sector is broader than just farming operations, of which farming is the focus of this study, since the agricultural sector includes the entire value chain. However, it excludes the forestry and fisheries sectors because forestry and fisheries are currently treated differently in South Africa agriculture, hence, the name of the National South African Government Department for these sectors is: "Department of Agriculture, Forestry and Fisheries". This is aligned to the definition of the agricultural sector provided by the Department of Labour (2015:9): "farming activities' includes primary and secondary agriculture, mixed farming, horticulture, aqua farming and the farming of animal products or field crops, excluding the Forestry Sector".

The supply chain of agricultural products in South Africa involves many players and agents (Mkhabela, 2010:3). Increased production for emerging farmers, beneficiaries of land reform programs, irrigation schemes and community gardens should be linked with direct access to markets in order to sustain the development of the sector (Maponya, Venter, Du Plooy, Modise & Van Den Heever, 2016:117). Despite the fact that this study focusses on equity share schemes, which are applicable to farming, this

chapter covers topics beyond farming because what transpires in a particular section of the value chain, has an impact on the performance of farming operations. Although there is existent research on agriculture, there is limited research on country-specific studies that consider the multidimensional nature of agricultural production in South Africa (Oberholster, Adendorff & Jonker, 2015:49).

The development of integrated value chains would assist with an effective approach to secure the income of the agricultural producers and their access to finance using the value chain linkages (Oberholster *et al.*, 2015:49). The agricultural sector is diverse, consisting of a number of branches: field crop husbandry, horticulture, animal production, dairy farming, and agro-processing (AgriSETA, 2010:1). Depending on the purpose of farming, the produce is consumed by the producers, sold to the market for consumption without processing, sold to the market for processing, or any combination of these three points. There are two main categories of farmers: smallholder and commercial farmers. There are few commercial white farmers and many small scale farmers, mostly black and previously disadvantaged, who are largely subsistence farmers (Mkhabela, 2010:3). In South Africa, “the successful capitalist white farming class was born of state regulation and subsidy, made possible through the minerals revolution” (Hall & Cousins, 2015:2). There is a perception that small scale farming is backward, non-productive, non-commercial, subsistence agriculture in the homeland areas, and that commercial farmers are modern and efficient, using advanced technology; these perceptions are, however, a misrepresentation of the facts (Kirsten & van Zyl, 1998:552).

Smallholder farmers play an important role in securing food in rural areas, but their challenge is a lack of resources, which results in low market participation due to the lack of access to markets, lack of access to market information, slow technology adoption and inferior infrastructure in rural areas (Maponya *et al.*, 2016:120). The other challenges for smallholder farmers are high transactional costs, poor quality of products, lack of storage facilities, low educational levels, poor agricultural extension services, lack of financial support, inadequate property rights, inadequate and inaccessible market infrastructure, as well as the lack of adequate access to finance (Maponya *et al.*, 2016:122). Small scale farmers are only concerned about producing their crops or animals without worrying about the needs of consumers; they are price-

takers and their contact with the market is limited to issues concerning a produce collector or to sales on the village market and district markets (Mkhabela, 2010:3). Small scale farmers “practice subsistence agriculture on land plots of often less than a hectare with perhaps a few animals” (Wilk, Andersson & Warburton, 2012:274).

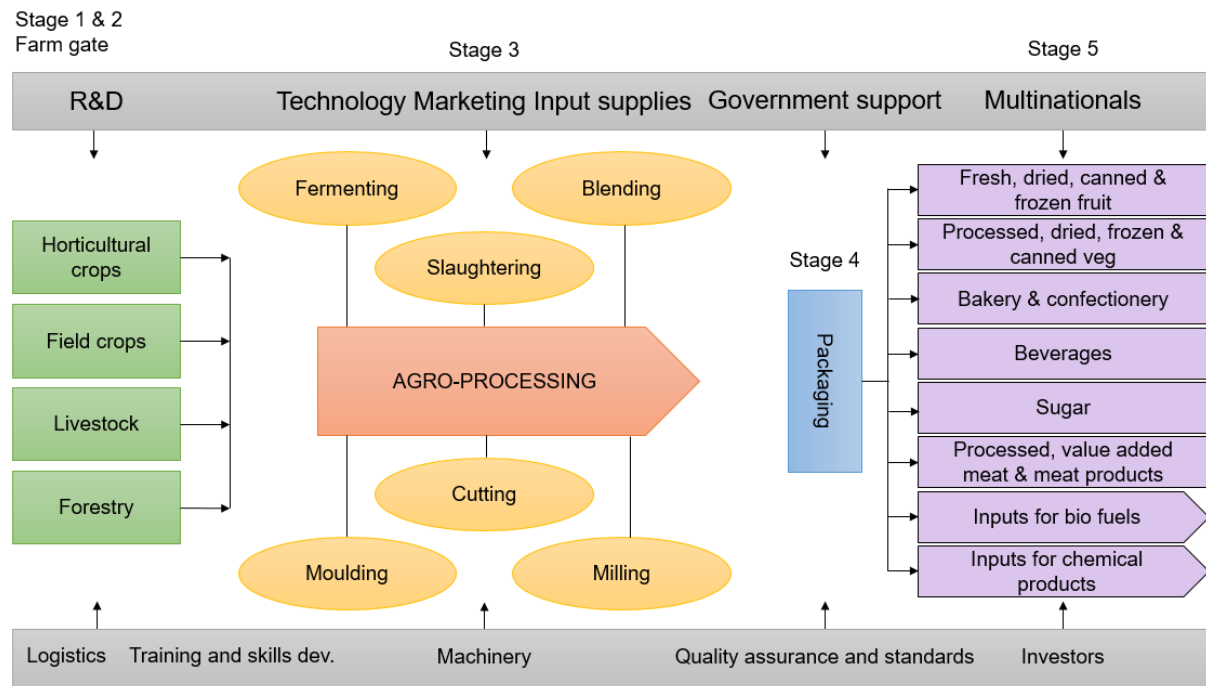
In the developing world, approximately 85% of smallholder farms have land areas of less than two hectares, with more than 50% of smallholder farms being operated by women (United Nations Environment Programme, 2012:8). Commercial farmers have large pieces of land, ranging from hundreds to thousands of hectares, with a diversity of crops and numerous livestock (Wilk *et al.*, 2012:274). Approximately 25% of all farms in the “white” commercial sector have land areas of less than 200 hectares, and five percent have land areas of less than 10 hectares; despite their small sizes, these are still considered commercial farms (Kirsten & van Zyl, 1998:552). Primary producers in the South African agricultural industry are price-takers due to free market practice (South African Grain and Oilseed Industry, 2015:3).

In 1994, the South African government launched a three component Land Reform Programme (redistribution, restitution and land tenure reform) aimed at distributing 30% of the agricultural land from white landowners to black people (Middelberg, 2013a:165). During this land reform, government provided farm workers with grants to purchase commercial farms jointly, or to acquire shares in existing farming operations (Bitzer & Bijman, 2014:168). Individuals, groups or communities would take the initiative to approach the Department of Land Affairs in order to obtain grants that would allow them to purchase a targeted or identified piece of land (Middelberg, 2013a:165). This kind of ownership is referred to as farm worker equity share schemes, which is the subject of this study. Prior to 1994, black subsistence farmers were not provided with infrastructure, financial, technical, and other necessary support, which resulted in the degeneration of black farming and its low yield, part-time, and unproductive status (Satgar, 2011:178). From 1994 onwards, the South African government implemented a number of policies and programmes, and increased the budget allocated to the agricultural sector in its efforts to support emerging farmers; despite these efforts, there is inadequate evidence to indicate that these attempts have been successful (Khapayi & Celliers, 2016:25). This shows that there is a gap somewhere since government made most of the critical elements

available to the farmers, but there was still no progress in this regard. According to Aliber and Hall (2012:552), “the government departments responsible for supporting farmers are making poor use of the resources at their disposal, do not have an adequate appreciation of their clientele, and prioritise avoiding underspending over having a broad impact”.

The processing of agricultural produce is referred to as agro-processing; Figure 2.1, below, represents its value chain. The agro-processing represented in Figure 2.1 is part of the agribusiness. There are various definitions of agribusiness; some define it as “all market and private business-oriented entities involved in the production, storage, distribution, and processing of agro-based products; in the supply of production inputs; and in the provision of services, such as extension and research” (University of Pretoria, 2008a:3). Agribusiness has a direct or indirect connection with primary agriculture (farming) and value adding businesses (agro-processing) down the agricultural value chain (University of Pretoria, 2008a:3). Large supermarkets, retail chains, agro-processors and fast food chains have now become important players in the food sector, driven by lifestyle changes due to urbanisation, income growth, democracy and changing family structures (Louw, Jordaan, Ndanga & Kirsten, 2008:288-289). Stage 3 in Figure 2.1 is what Thindisa (2014:6) refers to as upstream industries that involve the processing of primary agricultural products such as flour milling; stage 5 refers to the downstream industries involving further manufacturing operations that use intermediate products (products from stage 3) to produce biscuits and bread, amongst other items. Full vertical co-operation refers to a business entity that undertakes both farming and processing; contract farming happens when the processing entity secures regular supply of raw material through contract and, in return, provides assistance to farmers (Food and Agricultural Organization of the United Nations, 2004:14-15).

Figure 2.1: Overview of South African Agro-Processing Sector



Source: University of Pretoria (2008a:2)

The success of the agricultural sector relies on important factors such as favourable climate change patterns, population growth, addressing skills shortages, changes in consumer needs and shifts in the global economy and related markets (Department of Government Communications and Information System, 2013:44). The importance of agriculture, agro-processing and related activities in addressing both national employment and export revenues is unquestionable (Earle & Paterson, 2007:575).

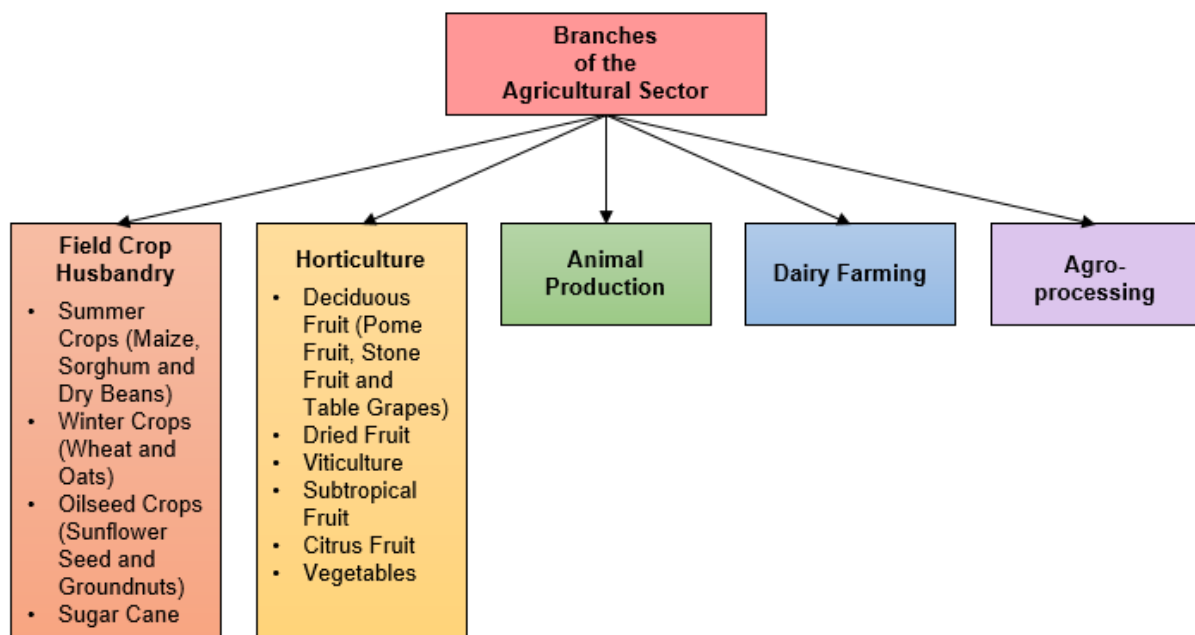
Agriculture is important for employment and food security, as is envisaged in the National Development Plan (NDP) and the New Growth Path. In the NDP it is estimated that by 2030, the agricultural sector could create one million jobs (Department of Agriculture, Forestry and Fisheries, 2014:3). Food security is defined as “the access to nutritionally adequate food at affordable prices, is culturally accepted, and can be accessed through non-emergency means at all times” (Middelberg, 2013a:164). The following section provides the breakdown of the branches of the agricultural sector in order to further understand it in terms of the market it serves (i.e. local market or local and international markets); geographical location of various branches; recent production figures; other industries or sectors that

benefit from the agricultural sector; and the value of agricultural waste, amongst other factors.

2.3 BRANCHES OF THE AGRICULTURAL SECTOR

This subsection covers the five branches, as shown in Figure 2.2 below, of the agricultural sector: field crop husbandry; horticulture; animal production; dairy farming; and agro-processing. This subsection relies on official published statistics that are available in the public domain, and various documents pertaining to the subject being discussed. In instances where the data is presented in a different format to that of other subsections, this is due to the unavailability of data in a format similar to that which is presented in other subsections.

Figure 2.2: Branches of the Agricultural Sector



Source: Author's Own Work

2.3.1 Field crop husbandry

In simple terms, field crop husbandry refers to seasonal or non-seasonal staple food that is produced from sowing seeds on the ground, with the exclusion of fruits and vegetables. This can be categorised into summer crops, winter crops, oilseed crops and sugar cane (Department of Agriculture, Forestry and Fisheries, 2015a:1). Summer

crops include maize, sorghum and dry beans; winter crops include wheat and oats; oilseed crops include sunflower seed and groundnuts; and sugar cane crops.

2.3.1.1 Summer crops (Maize, Sorghum and Dry Beans)

(a) Maize

In South Africa, maize is considered the most important grain crop because it is used as a feed grain; it is also the staple food for most people in the country, with 47% of the maize produced being white and 53% yellow (Department of Agriculture, Forestry and Fisheries, 2015a:8). Poor and rich people have various options of cooking maize: it can be cooked with its corn, then eaten from the corn; grains from the corn can be mixed with dry beans and cooked together; it can be ground into fine particles to make homemade bread or to serve as mealie meal, and so forth. There are about 8 000 commercial maize producers and thousands of small scale producers responsible for the supply of maize in South Africa. The three provinces that produce the most maize in South Africa are the North West, the Free State and Mpumalanga (Department of Government Communications and Information System, 2013:51). Table 2.1, below, shows provincial data in hectares of maize (white and yellow) planted in 2015 and tons harvested.

Table 2.1: Provincial data in hectares of maize (white and yellow) planted in 2015 and tons harvested

Province	Area planted (Hectares)			Final crop (Tons)		
	White	Yellow	Total	White	Yellow	Total
Western Cape	450	3 800	4 250	4 050	34 200	38 250
Northern Cape	3 500	46 000	49 500	35 000	644 000	679 000
Free State	710 000	510 000	1 220 000	2 236 000	1 708 500	3 944 500
Eastern Cape	2 600	14 000	16 600	15 600	84 000	99 600
KwaZulu-Natal	40 000	45 000	85 000	224 000	283 500	507 500
Mpumalanga	154 000	315 000	469 000	824 000	1 605 300	2 429 300
Limpopo	28 500	21 000	49 500	156 750	124 000	280 750
Gauteng	44 000	65 000	109 000	193 600	292 500	486 100
North West	465 000	185 000	650 000	1 046 000	444 000	1 490 000
Total	1 448 050	1 204 800	2 652 850	4 735 000	5 220 000	9 955 000

Source: Department of Agriculture, Forestry and Fisheries (2016a:2)

The correct application of inputs for maize production is important to improve production. These inputs include: adapted cultivars, plant population, soil tillage, fertilisation, weed, insect and disease control, harvesting, marketing and financial resources (Department of Agriculture, 2003:1). Maize from South Africa is largely exported to Mexico, Japan, Taiwan, Zimbabwe and BLNS (Botswana, Lesotho, Namibia and Swaziland) (Grain SA, 2014).

(b) Sorghum

Sorghum is common amongst Africans for providing staple food and making a traditional beer that is used during certain events, such as traditional ceremonies and weddings, amongst others. It comes in two types, bitter and sweet sorghum cultivars, with sweet cultivars being the most preferred and bitter sorghum is used to control troublesome birds (Department of Agriculture, Forestry and Fisheries, 2015a:12). In South Africa, it is planted in areas that experience drier summer rainfall, such as Mpumalanga, the Free State, Limpopo and the North West (Department of Government Communications and Information System, 2013:52). It is now also planted in wetter eastern areas due to the identification and development of cultivars that resist lower temperatures (Agricultural Research Council, 2010:1). Table 2.2, below, shows provincial data in hectares of sorghum planted in 2015 and tons harvested.

Table 2.2: Provincial data in hectares of sorghum planted in 2015 and tons harvested

Province	Area planted (Hectares)	Final crop (Tons)
Western Cape	-	-
Northern Cape	-	-
Free State	36 000	45 000
Eastern Cape	-	-
KwaZulu-Natal	500	2 200
Mpumalanga	11 000	48 000
Limpopo	16 000	17 600
Gauteng	1 000	2 600
North West	6 000	5 100
Total	70 500	1 200

Source: Department of Agriculture, Forestry and Fisheries (2016a:3)

Based on data from the Department of Agriculture, Forestry and Fisheries (2015a:14), South Africa both imports and exports sorghum. Since 2011, the imports have exceeded exports; this has however changed since 2014.

(c) Dry Beans

Dry beans is an important food for most people. Whilst being cooked, it can be mixed with samp, mealie meal, rice or just cooked separately, depending on an individual's preference. It is a source of protein and the increase in protein demand has led to the development of new cultivars that are suitable to most soil types, are resistant to diseases and are able to grow in different areas (Department of Agriculture, Forestry and Fisheries, 2015a:32). Table 2.3, below, shows provincial data in hectares of dry beans planted in 2015 and tons harvested.

Table 2.3: Provincial data in hectares of dry beans planted in 2015 and tons harvested

Province	Area planted (Hectares)	Final crop (Tons)
Western Cape	300	390
Northern Cape	900	2 160
Free State	28 000	22 400
Eastern Cape	800	1 040
KwaZulu-Natal	6 500	7 800
Mpumalanga	9 000	11 250
Limpopo	7 000	16 800
Gauteng	4 000	4 800
North West	7 500	6 750
Total	64 000	73 390

Source: Department of Agriculture, Forestry and Fisheries (2016a:3)

In 2010, 75% of dry beans consumed in the country were locally produced and the rest was imported (Department of Agriculture, Forestry and Fisheries, 2010a:1). The local production of dry beans is lower than its demand, hence, each year dry beans have to be imported, primarily from China (Department of Agriculture, Forestry and Fisheries, 2015a:32). This trend shows the potential for new and existing farmers to capture the local market.

2.3.1.2 Winter crops (Wheat and Oats)

(a) Wheat

Wheat production is the third largest field crop in South Africa. The majority of wheat produced in the country is bread wheat, which is hard wheat with high protein content, while soft wheat is used for confectionery (Department of Agriculture, Forestry and Fisheries, 2015a:15). The production of wheat takes place in the winter rainfall areas of the Western Cape and the eastern parts of the Free State (Department of Government Communications and Information System, 2013:51). Table 2.4, below, shows preliminary provincial data of wheat production in 2015.

Table 2.4: Preliminary provincial data of wheat production in 2015

Province	Production (Tons)
Western Cape	697 000
Eastern Cape	15 000
Northern Cape	259 000
Free State	184 000
KwaZulu-Natal	42 000
Limpopo	151 000
Mpumalanga	20 000
Gauteng	2 000
North West	87 000
Total	1 457 000

Source: Department of Agriculture, Forestry and Fisheries (2016b:12)

The demand for wheat exceeds the domestic supply, hence, some wheat is imported from Russia, Germany and the Ukraine, among other countries (Department of Agriculture, Forestry and Fisheries, 2015a:16). South African wheat prices have outperformed the US markets and parity prices; in addition, the uncertainty around the South African wheat import tariff and the slowdown in imports have led to some buyers turning to local wheat, which benefits the local market (Unigrain (Pty) Ltd, 2017:3). This trend shows the potential for local farmers to increase their sales.

(b) Oats

Oats are used to produce animal feeds and human food such as cereal and energy bars, with the majority of oats being processed locally and the rest exported to neighbouring countries such as Zambia, Zimbabwe and Mozambique (Department of Agriculture, Forestry and Fisheries, 2010b:3). The majority of oats produced is used to produce animal feed (Agricultural Research Council, 2014:89). The three main provinces in which oats are produced are the Western Cape, the Free State and the Northern Cape (Department of Agriculture, Forestry and Fisheries, 2010b:3). The preliminary amount of oats produced in South Africa in 2015 is 33 000 tons (Department of Agriculture, Forestry and Fisheries, 2016b:21).

2.3.1.3 Oilseed crops (*Sunflower seed and Groundnuts*)

(a) Sunflower seed

Over the years, sunflower seeds have been the focus of the food industry in the making of cooking oil for the preparation of several dishes, and oilcake for animal feed. This has changed since it was discovered that biodiesel could be derived from sunflower seed. This has raised concerns regarding food security, in that there could be a shortage of sunflower seed for the food industry if large-scale operations of several biodiesel plants come into existence. This led to the former Department of Minerals and Energy, now known as the Department of Energy, to initiate a draft Biofuels Industrial Strategy that was approved by Cabinet in 2007; this strategy suggested a two percent biofuels introduction to the existing fuel pool by 2013. The two percent suggested in the strategy is to be achieved from new and additional land, since some land in the homelands is underutilised (Department of Minerals and Energy, 2007:3). This strategy has helped to mitigate the threat to the food industry. Biodiesel is attractive to the energy industry because the current natural resources used to make diesel are being depleted due to the high energy demand in the industrialised world. In addition, biodiesel is also biodegradable, non-toxic and has a low emission profile in comparison to petroleum fuels (Sales, 2011:2).

The eastern parts of the production areas plant the sunflower seed from November to December, while the western part plants sunflower seed from the middle of January

onwards (Department of Agriculture, Forestry and Fisheries, 2015a:20). The provinces that produce sunflower seed are the Free State, the North West, Mpumalanga Highveld area and Limpopo (Department of Government Communications and Information System, 2013:52). Table 2.5, below, shows provincial data in hectares of sunflower seed planted in 2015 and tons harvested.

Table 2.5: Provincial data in hectares of sunflower seed planted in 2015 and tons harvested

Province	Area planted (Hectares)	Final crop (Tons)
Western Cape	-	-
Northern Cape	500	500
Free State	285 000	370 500
Eastern Cape	-	-
KwaZulu-Natal	-	-
Mpumalanga	2 500	3 300
Limpopo	82 000	61 500
Gauteng	6 000	7 200
North West	200 000	220 000
Total	576 000	663 000

Source: Department of Agriculture, Forestry and Fisheries (2016a:2)

Based on data from the Department of Agriculture, Forestry and Fisheries (2015a:21-22), a significant amount of sunflower seed was imported from Bulgaria, Malawi and India; and a small portion was exported.

(b) Groundnuts

In the food industry, groundnuts are used for a number of things such as making peanuts, snacks, peanut butter and oil production, among others. Some groundnut growers, particularly the resource limited farmers, produce groundnuts for their own consumption (Agricultural Research Council, 2011:2). The plantation season for groundnuts is mid-October to mid-November (Department of Agriculture, Forestry and Fisheries, 2015a:25). Groundnut production competes with maize, sunflower, cotton or canola; for instance, high maize prices combined with high yields make groundnut production less attractive due to low margins (Bureau for Food and Agricultural Policy, 2012:40). The provinces that produce groundnuts are the Free State, the North West

and the Northern Cape (Department of Government Communications and Information System, 2013:52). Table 2.6, below, shows provincial data in hectares of groundnuts planted in 2015 and tons harvested.

Table 2.6: Provincial data in hectares of groundnuts planted in 2015 and tons harvested

Province	Area planted (Hectares)	Final crop (Tons)
Western Cape	-	-
Northern Cape	7 100	22 700
Free State	22 500	21 800
Eastern Cape	-	-
KwaZulu-Natal	100	100
Mpumalanga	-	-
Limpopo	2 500	3 250
Gauteng	-	-
North West	25 800	14 450
Total	58 000	62 300

Source: Department of Agriculture, Forestry and Fisheries (2016a:3)

Some of the groundnuts produced in South Africa are exported to Mozambique, Japan, the Netherlands, Belgium, Egypt, the United Kingdom, Norway and Swaziland, while some groundnuts are imported from Namibia, India, Mozambique, the United States, Zambia, Malawi and China (Department of Agriculture, Forestry and Fisheries, 2015a:26).

2.3.1.4 Sugar cane crops

Sugar cane crop is a source of energy in the form of sugar cane crop or as a processed product such as sugar. The waste material generated from processing sugar cane (bagasse) is used in some industrial activities as a source of fibre. In the pulp and paper industry, the modern integrated pulp mill is capable of burning the non-cellulose waste products, which remain after extracting fibres from the processing of bagasse, in recovery boilers (Davies, 1984:109). The waste stream that goes to recovery boilers serves as a source of fuel after it has been concentrated to a level that it can be fired in the boilers.

Sugar cane grows faster in coastal areas and is harvested from April to December (Department of Agriculture, Forestry and Fisheries, 2015a:33). There are approximately 29 130 registered sugar cane growers in KwaZulu-Natal, and some are found in Mpumalanga and Eastern Cape (Department of Government Communications and Information System, 2013:52). There has been a decline in sugar cane production from 1994 to 2015 due to a decline in average yields and total area under production, because of uncertainty regarding land reform and longer replacement schedules in response to profitability levels (Bureau for Food and Agricultural Policy, 2015:24). During 2014/15, 2 108 000 tons of sugar cane were produced in South Africa and locally produced sugar sold on the international market at a price below the domestic sugar price, due to sugar subsidies in other countries (Department of Agriculture, Forestry and Fisheries, 2015a:34-35). The association that serves the interests of sugar cane growers is called the South African Cane Growers' Association; it represents approximately 23 866 independent sugar cane growers who are provided support in economic, industrial, technical and institutional matters (South African Cane Growers' Association, 2016).

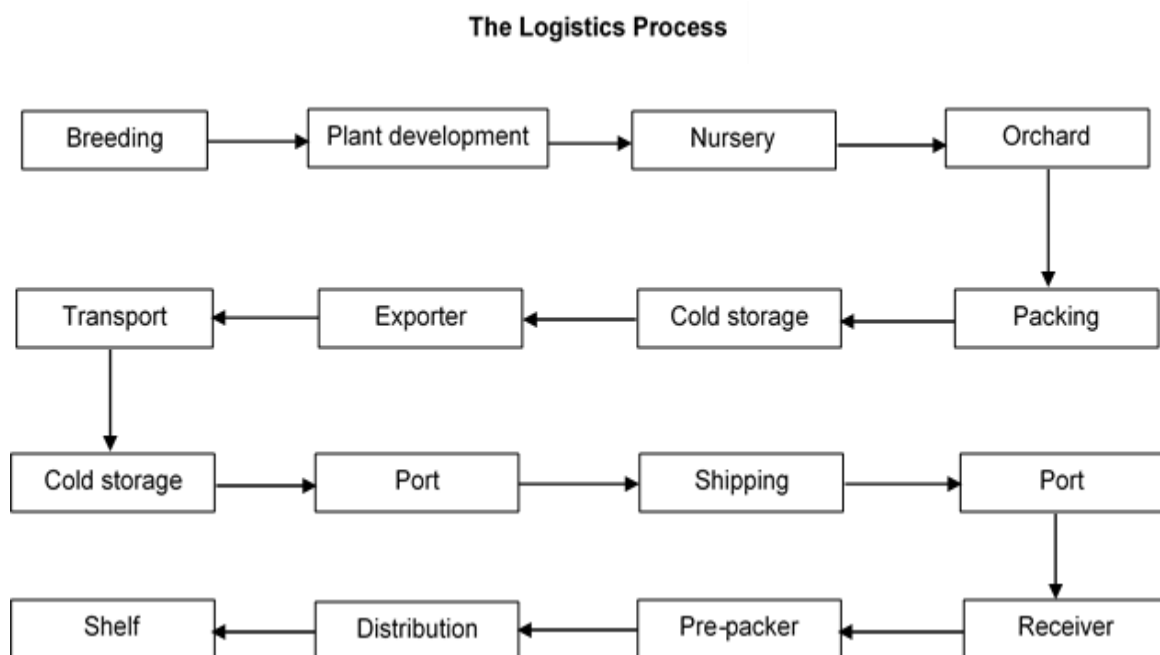
2.3.2 Horticulture

Horticulture involves plants for food such as fruits, vegetables, mushrooms, culinary herbs, and non-food crops such as flowers, trees and shrubs, turf-grass, hops, medicinal herbs, amongst others (University of KwaZulu-Natal, 2016). In this study, the focus will be on food horticulture involving deciduous fruit, dried fruit, viticulture, subtropical fruit, citrus fruit and vegetables. Deciduous fruit is classified into three categories: pome fruit (apples and pears), stone fruit (apricot, peaches and nectarines, and plums) and table grapes (National Agricultural Marketing Council and Commark Trust, 2007). Dried fruit is fruit that has been dried naturally, through methods such as exposure to the sun or using a machine that removes moisture from the fruit; the warmth of the sun and warm gentle breezes will remove moisture as the air passes across the surface of the fruits or vegetables being dried, provided that the air is unsaturated with moisture (Mercer, 2012:4).

In this study, viticulture refers to winemaking; subtropical fruit refers to avocados, bananas, pineapples, mangoes, papayas, granadillas, litchis and guavas; citrus fruit refers to oranges, grapefruit, lemons, naartjes and soft citrus; and vegetables refers

to tomatoes, onions, cabbages, pumpkin and carrots (Department of Agriculture, Forestry and Fisheries, 2015a:41-45). South Africa produces more high quality fruit than demanded by the local market, therefore, some fruit is exported through the ports of Cape Town, Port Elizabeth, Durban and Maputo, with approximately 386 enterprises engaged in the export of fresh fruit in 2003 (van Dyk & Mapsero, 2004:58-59). Figure 2.3, below, shows the fresh fruit supply chain.

Figure 2.3: The fresh fruit supply chain



Source: Van Dyk and Maspero (2004:59)

2.3.2.1 Deciduous fruit (pome fruit, stone fruit and table grapes)

The provinces that mainly produce deciduous fruit are the Western Cape and the Eastern Cape due to their warm, dry summers and the cold winters that prevail (Department of Agriculture, Forestry and Fisheries, 2015a:35). The association of deciduous fruit producers is called Deciduous Fruit Producers' Trust (DFPT), which created the Deciduous Fruit Development Chamber to integrate emerging producers into mainstream commercial structures, and to provide technical, financial and management support (Human Science Research Council, 2009:186-189). The DFPT is made of SA Apple and Pear Producers' Association (SAAPPA), SA Table Grapes

(SAT) and SA Stone Fruit Producers' Association (SASPA) (van Dyk & Maspero, 2004:57).

HORTGRO, a body that provides support to growers of deciduous fruit, focusses on production, research and technology, as well as transformation within the deciduous fruit industry (HORTGRO, 2016a). The National Agricultural Marketing Council and Commark Trust (2007:9) report shows that, in 2007, there were 2 225 deciduous fruit producers in the country. However, the report by the Department of Agriculture, Forestry and Fisheries (2015a:35) shows that, in 2015, there were 1 770 deciduous fruit producers in the country, which means that there is a decline in the number of growers. The production of deciduous fruit in 2014/15 was 1 860 530 tons, which was more than any production over the past four years, and 49.2% of deciduous fruit produced in 2014/15 was exported (Department of Agriculture, Forestry and Fisheries, 2015a:35-36). The local market of deciduous fruit consists of fresh, dried and canned fruit (Department of Government Communications and Information System, 2013:52).

2.3.2.2 Dried fruit

Sun drying is widely used for drying fruit, where fruit is prepared using de-pipping and portioning, then layered out on drying trays in the sun on the ground to dry (Embassy of the Kingdom of the Netherlands, 2011:30). The boom of the dried fruit industry in South Africa is due to the poor quality of subtropical fruits, smaller fruit size, poor colour development and changes in life style or consumer behaviour (Nixwell, Johanna & Ngezimana, 2013:2679). Dried fruit production is mainly done in the Western Cape and the Northern Cape (Department of Agriculture, Forestry and Fisheries, 2015a:37). The Dried Fruit Technical Service was established to manage industry related research and development, maintain technical information as well as a database, and administer the statutory levy in terms of the regulations of the National Agricultural Marketing Act and the National Agricultural Marketing Council (NAMC) (HORTGRO, 2016b). In 2001, the total production of dried tree fruit was 3 740 tons and 31 000 tons of dried vine fruit (Vink & Tregurtha, 2005:6). In 2015, the total production of dried tree fruit was 6 429 tons and 60 537 tons of dried vine fruit (Department of Agriculture, Forestry and Fisheries, 2015a:38), which shows an increase in production for both types of dried fruits since 2001.

2.3.2.3 Viticulture

The South Africa wine industry is divided into wine (natural, fortified and sparkling), wine for brandy, distilling wine, brandy and other spirits distilled from distilling wine, and grape juice as well as grape juice concentrate for use in non-alcoholic products (Department of Agriculture, Forestry and Fisheries, 2011a:5). South Africa is the seventh-largest wine producer in the world, with the production in South Africa taking place in the Western Cape and the Northern Cape, with a wine production of 1 181 million litres in 2014 (Department of Agriculture, Forestry and Fisheries, 2015a:39).

2.3.2.4 Subtropical fruit

Subtropical fruit grows in warmer conditions, and is sensitive to large temperature fluctuations, and frost (Department of Agriculture, Forestry and Fisheries, 2015a:41). For this reason, these fruits are produced mainly in Mpumalanga and Limpopo, including the KwaZulu-Natal and Eastern Cape provinces, with pineapples grown in KwaZulu-Natal and the Eastern Cape (Human Sciences Research Council, 2009:186). The association of the subtropical fruit producers is called the SA Subtropical Growers' Association (Subtrop) (Human Sciences Research Council, 2009:186). Subtrop was formed in 2006, after the amalgamation of the South African Avocado Growers Association (SAAGA), South African Litchi Growers Association (SALGA), South African Macadamia Growers Association (SAMAC) and the South African Mango Growers Association (SAMGA) (Stones, 2012:1).

2.3.2.5 Citrus fruit

Citrus trees cannot handle severe frost, therefore, they are confined to areas with mild and almost frost-free winters (Department of Agriculture, 2009:1). Citrus fruit is mainly produced in irrigated areas of Limpopo, Mpumalanga, the Eastern Cape, the Western Cape and KwaZulu-Natal; its industry association is called the Citrus Growers' Association (Human Sciences Research Council, 2009:186). The association has a membership of approximately 1 400 growers in the Southern Africa region, and it assists with market access, research, transformation, logistics and communication (Citrus Growers' Association of Southern Africa, 2016).

The three important components of citrus fruit for commercial purposes are juice, peel and peel oil, with canneries interested in using the peel for candied peels or for manufacturing marmalade; juice factories only use the juice, while peel-oil manufacturers are interested only in the peel oil (Coetzee, Krynauw, Hugo & Pratt, 1950:64). The citrus waste peel has an important substance called pectin, which is used as a thickening or gelling agent in a broad range of formulated foods such as yoghurt and desserts, dairy drinks, as well as jams and spreads (Rech, Barnett & Pinto, 2005:51-58). The peel is the source of essential oils in the range of half to three kg/tons of fruit (Ahmad, Rehman, Anjum & Bajwa, 2006:186). The essential oils are used as pharmaceutical components, in nutritious supplements, in the cosmetic industry and in aromatherapy (Colecio-Juárez, Rubio-Núñez, Botello-Álvarez, Martínez-González, Navarrete-Bolaños & Jiménez-Islas, 2012:275).

South Africa is ranked 13th in world citrus production (Department of Government Communications and Information System, 2013:54). South Africa is the world's major exporter of grapefruits, with China being an attractive place to which grapefruit is exported, since it exports few grapefruit despite being the world's major producer of grapefruit (National Agricultural Marketing Council, 2013:2). Citrus fruit production in South Africa during 2014/15 was 2 760 561 tons and approximately 66.2% was exported to the Netherlands, the Russian Federation and the United Kingdom (Department of Agriculture, Forestry and Fisheries, 2015a:43).

2.3.2.6 Vegetables

Vegetables, besides being a source of food for humans, contain many vitamins, minerals and protein (Agricultural Research Council, 2013:5). Published systematic reviews and scientific health reports show that vegetable intake is associated with a reduced risk of nutrient-related diseases and risk factors in South Africa (Naude, 2013:S46). Vegetables are not only needed for the fresh produce market or informal market for consumption, but they are also processed into several products found in canned, bottled or refrigerated products needed by consumers. Most parts of the country produce vegetables, although certain areas focus on specific crops; for example, onions are produced mainly in Caledon, Pretoria and Brits (Department of Agriculture, Forestry and Fisheries, 2015a:44).

Tomatoes are produced on the largest scale in Limpopo, Mpumalanga, KwaZulu-Natal and the Western Cape; while cabbage is mostly produced in Mpumalanga and KwaZulu-Natal (Department of Government Communications and Information System, 2013:55). Carrots are grown in the Western Cape, KwaZulu-Natal, Gauteng, the North West, Mpumalanga and the Free State (Department of Agriculture, Forestry and Fisheries, 2012:4). Pumpkins are mostly produced in Mpumalanga, the North West, the Western Cape and Gauteng (Department of Agriculture, Forestry and Fisheries, 2011b:4). The total production of vegetables (excluding potatoes) in 2014/15 amounted to 2 821 000 tons, with approximately 47% traded on the major fresh produce markets (Department of Agriculture, Forestry and Fisheries, 2015a:45).

2.3.3 Animal production

In South Africa, stock farming is a viable agricultural activity because 68.61% of the available land is suitable for raising livestock (Embassy of the Kingdom of the Netherlands, 2011:35). Livestock farming constitutes the largest subsector, contributing 25% to 30% of the total agricultural output in South Africa per annum (Asset Research, 2014:36). In some areas, the animals are kept in combination with other farming enterprises (Department of Agriculture, Forestry and Fisheries, 2015a:51). Among the categories of animal production are: beef cattle farming, small stock (sheep and goat) farming, poultry and pig farming (Department of Government Communications and Information System, 2013:56-57). Cattle farming is done primarily in the Eastern Cape, KwaZulu-Natal, the Free State and the North West provinces; sheep farming in all provinces, particularly in more arid parts of the country; goat farming in the Eastern Cape, Limpopo, KwaZulu-Natal and the North West; pig farming in Limpopo, the North West, Gauteng and the Western Cape; and poultry farming in the North West, the Western Cape, Mpumalanga, KwaZulu-Natal, Gauteng, the Eastern Cape and the Free State (Department of Agriculture, Forestry and Fisheries, 2015a:51-56).

Animal production serves different purposes, among which are meat production for personal and commercial use, animal breeding in order to sell, skin production for several uses, egg production, as well as wool and mohair production. In 2015, the estimated number of cattle was 13.69 million, sheep 23.94 million, goats 5.871 million

and pigs 1.552 million (Department of Agriculture, Forestry and Fisheries, 2015a:51-53).

2.3.4 Dairy farming

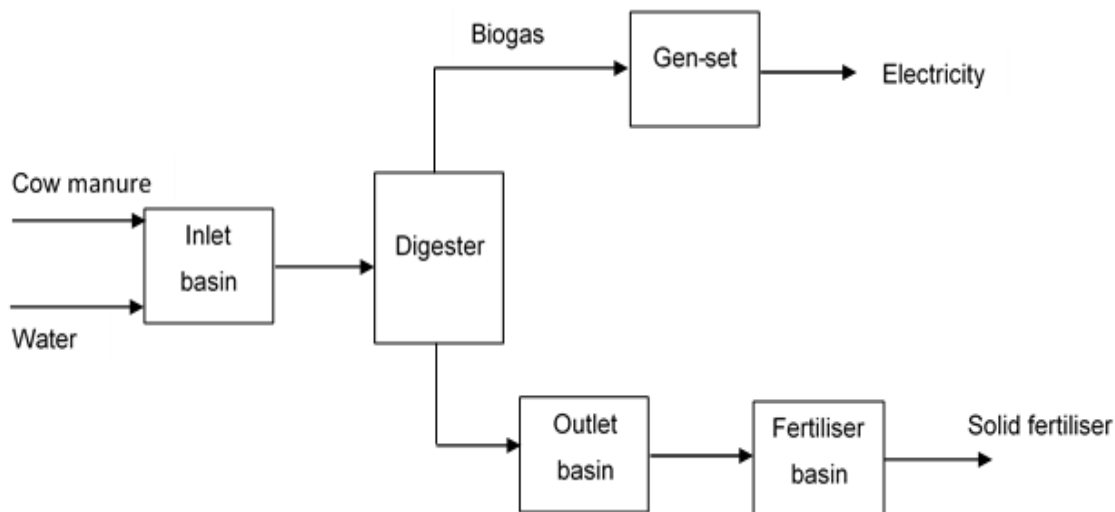
Milk consumption is important for the body, although some people are allergic to it; hence, they choose non-cow milk such as almond milk. Milk is an ingredient for many products, and some companies process it in order to make dairy products. Within the African community, milk is used to produce sour milk, which is consumed with fine stiff pap, which is a maize product. Dairy processing plants also started producing sour milk after realising the demand for it. Milk is important for many enterprises, regardless of size, and it is a source of income for commercial farmers. For smaller farmers, it mainly serves to feed the household and to earn extra income (Milk SA, 2014:v). Dairy farmers in South Africa are not subsidised, therefore, the level of production is relatively stable when the increase in milk prices does not compensate increasing fodder prices (Lassen, 2012:2).

The period from 1997 to 2007 shows a 41% decline in the number of milk producers in South Africa (Grobler, Scholtz, Bester, Mamabolo & Ramsay, 2008:25). The majority of small dairy farms are exiting the milk industry; the view is that small dairy farms are limited by the high unit cost of production compared to their larger counterparts (Mkhabela & Mndeme, 2010:122). Milk is produced in all regions of South Africa, however, the coastal areas are more suitable for milk production due to their mild temperatures and good rainfall; the Eastern Cape leads milk production in the country, followed by the Western Cape and KwaZulu-Natal, the Free State, the North West, Mpumalanga, Gauteng, Limpopo and the Northern Cape (Department of Agriculture, Forestry and Fisheries, 2015a:58). The total milk produced in South Africa in 2014 was 2 875 million litres (Department of Agriculture, Forestry and Fisheries, 2015a:58).

Dairy farming is not only important to the food industry, but also for the energy industry, which uses excretion waste from cattle to produce electricity. Bio2Watt Company has entered into a deal with the BMW assembly plant in Pretoria to supply 4.4 megawatts of electricity, over 10 years, produced from a biogas plant that makes use of cattle dung and organic waste (Business Day Live, 2015). An estimation of about 100 grams

of cow manure can produce approximately 32303.93 joule, therefore, the implementation of biogas technology has many advantages including economic profit (Wresta, Andriani, Saepudin & Sudiby, 2015:123). Note that waste from biogas digesters can be used as a solid fertiliser, as shown in Figure 2.4, below.

Figure 2.4: The simple process scheme of cow manure biogas system



Source: Wresta *et al.* (2015:124)

Biogas is a renewable source of energy and is produced as a by-product of the anaerobic digestion process, with 60% methane and 40% carbon dioxide, and then the resultant methane can be used for electricity generation, lighting, heating and cooking (Chaudhary & Goyal, 2014:310). Biogas is also produced from crop residue, and industrial or residential waste in appropriate conditions; therefore, methane and carbon dioxide composition vary with the type of waste decomposition (da Silva Fortunato, da Silva, Santana, Baptista & Junior, 2011:3).

2.3.5 Agro-processing

The majority of agro-processors do not produce raw material, but buy them from farmers; usually, the prices that processors offer to growers are not attractive (Limpopo Department of Economic Development, Environment & Tourism, 2007:18). Supermarkets and agro-industries are overtaking the food industry due to the increasing urbanisation of the world population; large-scale innovation in biological and information technologies; and a strong consumer demand for high-quality food products (Vermeulen, Kirsten & Sartorius, 2008:198). The expansion of agro-

processing in South Africa is influenced by an increase in demand for processed goods, as urbanisation means there is less food preparation time available to women who have joined the workforce, changes in consumption patterns and population growth (Louw *et al.*, 2008:292). Despite the expansion of agro-processing, the Gauteng Department of Agriculture and Rural Development (2015:2) indicates that South Africa is the net importer of processed agriculture, forestry and fisheries products, which represents an opportunity for South Africa to explore further opportunities.

The information presented on various primary agricultural products, shows that these products can be processed further in order to produce other important products that are demanded by the market. The processing of agricultural products is referred to as agro-processing, which is covered in this subsection. As previously outlined, there are various agricultural products; the value adding processes for these products differ due to different products being produced from different materials, and different operating conditions for different purposes and customers. All of this information shows the opportunities available for primary producers to access and sustain their operations, but which might not be easy to establish. The global agricultural value chain is becoming difficult to access due to large buyers instituting demanding requirements and standards for primary producers (Bitzer & Bijman, 2014:167-168). This has caused the industrialisation of agriculture in many developed countries to experience tighter alignment of supply chains, leading to fewer larger farms, and consequently jeopardising the opportunities for small scale farmers in developing countries from profitable niche markets; however, incremental transaction cost is among the drawbacks of using small scale farmers in high risk supply chains (Sartorius & Kirsten, 2007:640-641). Supermarkets, as the retailers for finished goods, try to reduce transaction costs in the supply chain. One of the strategies to do this is to select and deal with only a limited number of approved suppliers; these are mostly large companies with the necessary capital and capacity to meet procurement requirements (Louw *et al.*, 2008:293).

In South Africa, four food giants dominate processing and manufacturing: Tiger Brands, Pioneer Foods, Premier Foods and FoodCorp (Hall & Cousins, 2015:8). Tiger Brands products that are made from agricultural produce are: Jungle Oats, Black Cat

peanut butter, Purity products for babies, Energade drink, Oros concentrated juice, Hall's concentrated juice, Rose's juices, Tastic rice, Aunt Caroline rice, Golden Cloud flour, Ace maize meal, Koo products, All Gold tomato sauce, Albany bread, Enterprise products and Renown products, amongst others. Pioneer Foods products that are made from agricultural produce are: Bokomo Weet-Bix cereal, ProNutro, Sasko flour, Ceres juices, Fruitree juices, as well as Safari dried fruits and snacks, amongst others. Premier Foods products that are made from agricultural produce are: Blue Ribbon bread, Iwisa maize meal, Nyala maize meal, Snowflake flour and Blue Ribbon flour, amongst others. FoodCorp products that are made from agricultural produce are: Yum peanut butter and Ouma Rusks, amongst others. FoodCorp is now operating under RCL foods, which consists of Rainbow (chicken business), Vector (logistics business) and FoodCorp. These four food giants are competitors, as some of their products are similar, but they are produced under different brands and taste might be different. Although these companies are giants, they do not produce all agro-processed products, as the remainder of the agro-processed products are produced by different companies; among these are various dairy, canned, bottled and frozen products.

This information shows the importance of the integration of the agricultural sector in the achievement of processed food needed by the market. It also shows that, if smallholders are well assisted to overcome existing bottlenecks, they have a significant role to play in the agricultural sector, not necessarily as only primary producers but as processors for agricultural produce. Government has invested in agricultural projects with infrastructure and inputs support to link smallholder farmers to commercial streams of agriculture, as well as agro-processing industries (Maponya *et al.*, 2016:121). An example of where there are both large and small scale processors is the Limpopo province. Limpopo produces a significant amount of tomato, hence, there are two large tomato processors in the province: Tiger Brands and Giant Foods (no name brands), however, there are also small processors like Indemex and Miami in the province (Louw *et al.*, 2008:299). Although Giant Foods procure approximately 60% of their supply of tomatoes from small scale farmers and 40% from large farmers; the downside of this is that local farmers have no supply agreement with the processors that covers a specific period, due to dependence on supply from China when the exchange rate is favourable to the processor (Louw *et al.*, 2008:299).

The Department of Agriculture, Forestry and Fisheries has developed a strategy for the development of small and medium agro-processing enterprises in South Africa. The intention for the strategy is to “articulate how government at National, Provincial and Local spheres would support and develop SME agro-processing enterprises” (Department of Agriculture, Forestry & Fisheries, 2015b). The Gauteng province has developed the agro-processing strategy, and is planning to establish the agribusiness development agency, as done by the KwaZulu-Natal province approximately five years ago. The Limpopo province has identified the potential processing facilities in the relevant areas, as outlined in Table 2.7 below.

Table 2.7: Potential processing facilities

Product / Rating	1	2	3
Bananas	Soutspansberg	Letaba	Phalaborwa
Oranges	Letaba	Musina	Phalaborwa
Tomatoes	Letaba	Musina	Soutspansberg
Mangoes	Letaba	Phalaborwa	Soutspansberg

Source: Limpopo Department of Economic Development, Environment and Tourism (2007:47)

These are some of the initiatives taken by some of the provinces, although not limited to those on this list. In 2006, the Lepelle-Nkumpi Local Municipality in Limpopo conducted a feasibility study on citrus juice extraction. The study determined the Zebediela Citrus Estate’s costs breakdown, profit and losses, as represented in Table 2.8 below.

Table 2.8: Construction costs, capital expenditure, profit and loss for citrus processing plant

Construction of processing plant			
Expenditure	Size	Price	Total (R)
Construction of warehouse space	1000m ²	R2,500 per m ²	R2,500,000
Office space	80m ²	R3.500 per m ²	R280,000
Kitchen, bathroom, lockers	50m ²	R4,000 per m ²	R200,000
Professional fees (Quantity surveyor, architect, etc.)	n.a	15% of above	R450,000
Total construction costs	n.a	n.a	R3,430,000
Capital expenditure			
Expenditure	Amount	Price (R)	Total (R)
Machinery costs		R5,150,147.00	R5,150,147
Installation of machinery	1	R327,320.00	R327,320
Office desks	5	R1,000.00	R5,000
Chairs	30	R250.00	R7,500
Kitchen equipment			R15,000
Filing cabinets	8	R300.00	R2,400
Computer	5	R6,000.00	R30,000
Fax/copier/printer	1	R3,000.00	R3,000
Construction of processing plant	1	R3,430,000.00	R3,430,000
Total	n.a	n.a	R8,970,367
Profit and loss			Income
Income			R17,242,500
Expenditure			R16,880,752
Expected Net Profit per year (income – expenditure) (for production of approximately 5.5 million litres of citrus juice per year)			R361,748

Source: Lepelle-Nkumpi Local Municipality (2006:29-33)

The costs breakdown indicated in Table 2.8, above, provides vital information regarding citrus agro-processing in terms of what to expect upon adjusting the figures to the current period. Similar financial information on other key processing plants would be helpful to aspiring agro-processors.

2.4 CHALLENGES IN THE AGRICULTURAL SECTOR

Equity share schemes have failed due to insufficient post-settlement support to empower new landowners with the expertise and resources needed to succeed in high-value, exported-oriented agriculture (Bitzer & Bijman, 2014:169). Undoubtedly, the agricultural sector has a big role to play in alleviating poverty, reducing the unemployment rate, ensuring food security and the supply of food, improving the living conditions of workers and bringing hope to society, amongst others. Approximately 11 million people in South Africa are food insecure and 14 million are vulnerable to food insecurity (AgriSETA, 2014:7). These challenges require the systematic removal of bottlenecks in the implementation of agricultural programmes and ensuring the availability of adequate resources to sustain the agricultural activities that are undertaken. The challenges facing smallholders and commercial farmers cannot be equated, although certain events might be similar, because of different operating levels and the accessibility of certain resources when challenges are experienced. Hence, the focus of many government activities or programmes has been on smallholders; other than this, most smallholders are from previously disadvantaged groups.

Some theories have advocated for large-scale commercial farms over their small scale counterparts by stating that economies of scale should push small scale farmers out of the market; this has however been rejected (Van Niekerk, Stroebel, Van Rooyen, Whitfield & Swanepoel, 2011:47). There is a significant amount of research that has been done regarding the agricultural sector, and various suggestions have been provided by the researchers, however, it is not clear how much of this information has come to the attention of the responsible institutions, and what has been done with it. Researchers reveal that less than one million hectares of agricultural land had been transferred by the end of 1999 (O’Laughlin, Bernstein, Cousins & Peters, 2013:8); approximately 2.3 million hectares of agricultural land had been transferred to new farmers by 2008 (Terblanché, 2008:77); and 6.3 million hectares had been transferred

by 2011 (O’Laughlin *et al.*, 2013:8). Kloppers and Pienaar (2014:678) report that at least 90% of land transferred is not used productively. Moreover, Terblanché (2008:77-82) notes that the land transferred to new owners is not being used productively due to the provision of insufficient support services. In this regard, Terblanché (2008:77-82) proposes the following guidelines on land transfer:

- The selection of new farmers (by means of a reliable screening instrument) is essential. Owning a farm does not make one a farmer. The farmers’ willingness and ability to learn and to adopt are of critical importance;
- Beneficiaries need to work together and participate (co-operate) fully. They should be committed and should accept responsibility for their actions and decisions;
- New farmers must have a clear understanding of their farms as businesses;
- Where possible, new farmers should be linked to capable mentors;
- Farms need viable and sustainable business plans (including physical, biological and economic plans);
- Farms and farmers need financial support as prescribed in their business plans; and
- The production of produce needs to be market driven.

Terblanché, Stevens and Sekgota (2014:82) mention that land reform is divided into three parts:

- Land Redistribution – aims to create equality by providing black people with access to land for either productive or residential purposes;
- Land Restitution – aims to return land to black South Africans who were forcibly removed from their land by the apartheid system; and
- Land Tenure – aims to provide labour tenures with secure tenure (ownership or occupancy rights) of land.

The underutilised land could be land obtained either from land redistribution or land restitution, as defined by Terblanché, Stevens and Sekgota (2014). A number of reasons could have led to unproductivity, for example, Tshilowa (2015:8) states that cultivation on small landholdings is not considered cost-effective, therefore, about half

of the fields are uncultivated. Schirmer (2015:49) makes reference to land restitution that has the possibility of undermining commercial farming by weakening property rights, but the Restitution of Land Rights Amendment Act 15 of 2014 is addressing this by encouraging beneficiaries to use the land productively or risk to losing it if this is not adhered to. Although Terblanché (2008) does not define the term “new farmers”, for the purpose of this study, it will be interpreted as synonymous with smallholders or small scale farmers.

A number of critical points regarding the agricultural sector have to be unpacked in order to better understand the challenges facing this sector. In this chapter, focus is placed on the challenges faced by small scale farmers in the agricultural sector in South Africa; these challenges include the shortage of skills in the agricultural sector, gaps pertaining to breakeven points for commercializing farms, competing with recognized brands, and the dynamics of exporting produce.

2.4.1 Challenges of small scale farmers in the agricultural sector in South Africa

The agricultural challenges in the provinces of South Africa are not identical, as 80% of the country’s surface area is used for agriculture, but only about 15% of this 80% is arable. This poses serious challenges for plans for land resettlement for previously disadvantaged black rural communities on small units (Nel & Davies, 1999:254-258). The challenges facing the new farmers or smallholders or small scale farmers are both internal and external, therefore, the external challenges could supersede the internal challenges, and vice-versa. In this study, internal challenges refers to farming activities and related knowledge, while external challenges refers to the resources and agricultural services rendered by various service providers applicable to the agricultural sector. In their study that examined the demand for skills in the agricultural sector, Earle and Paterson (2007:576) state that they came to realise the need to look beyond the aggregate size of the demand for skills, but also to consider the internal and external forces that have either a positive or negative impact on demand.

Ramabulana (2011:103) acknowledges that there has to be an understanding of the complexity of agriculture because of the different views held by diverse interest groups. Kirsten, Machelo, Ndlovu and Lubambo (2016:442) indicate that the vision

of land reform is to transfer commercially viable farms to beneficiaries and provide assistance to achieve commercial viability, however, land reform projects have failed to ensure commercial viability. Commercial viability can be achieved if there is an improvement in the access to post-transfer support services, including access to funds for start-up costs, as well as training and extension services to ensure long-term sustainable use of the land (Kirsten *et al.*, 2016:456). Nel and Davies (1999:258) argue that a boost of agricultural activity amongst the black population can be achieved once issues of access to land and the provision of adequate infrastructure and extension support are addressed. Ortmann (2001:471) recommends the subsidisation of transaction and information costs, so that small scale farmers are better able to compete with larger farmers as size economies become less pronounced. Rother, Hall and London (2008:400) are concerned with the use of pesticides by small scale farmers, which is being promoted in South Africa by economic, trade and agricultural policies at national and international levels without adequate support for emerging farmers to manage pesticides safely, thereby placing farmers, their families, their workers and their communities at increased risk of short-term and long-term health problems.

2.4.2 Shortage of skills in the agricultural sector

Understanding the demand for high-level agricultural skills will assist in aligning supply with demand and ensuring the sustainability of the sector (Earle & Paterson, 2007:575). Smallholder farmers in the Eastern Cape are found to have low agricultural skills, which include poor livestock production, poor agronomic skills in ploughing and pest control, and poor management skills, as well as bookkeeping (Van Niekerk *et al.*, 2011:51). The results of a study conducted by Makeleni (2015:63) in the Eastern Cape show that the majority of respondents are not happy with the level of knowledge they have; this includes knowledge in marketing and other technical skills. South Africa has a number of universities, universities of technology and agricultural colleges, which produce a significant number of graduates who are ready to be absorbed by the sector. Liebenberg (2015:40-41) lists the following agricultural institutions of higher learning:

- Ten universities offering agriculture qualifications in South Africa: Fort Hare, Free State, KwaZulu-Natal, Limpopo, North West, Pretoria, Stellenbosch, UNISA, Venda, and Zululand;

- Five universities of technology: Cape Peninsula University of Technology, Central University of Technology, Mangosuthu University of Technology, Nelson Mandela University and Tshwane University of Technology; and
- Twelve colleges of agriculture: Cedara in KwaZulu-Natal, Cape Institute for Agricultural Training in Elsenburg, Fort Cox in the Eastern Cape, Glen in the Free State, Grootfontein in the Eastern Cape, Lowveld in Mpumalanga, Madzivhandila in Limpopo, Owen Sithole in KwaZulu-Natal, Potchefstroom in the North West, Taung in the North West, Tompi Seleka in Limpopo, and Tsolo in the Eastern Cape.

Nine of these colleges offer a qualifications mix, and three colleges operate as farm training centres which offer short-courses and learnerships (AgriSETA, 2014:8). Although there is an outcry against the shortage of skills in the agricultural sector, there are still a number of students with agricultural qualifications who are unemployed; hence, the KwaZulu-Natal Department of Agriculture and Rural Development has initiated the Agricultural Graduate Placement Programme's online portal. The online portal allows registration for both graduates who are seeking for placement and farmers who are willing to participate in the programme. Since April 2016, there are over 1000 graduates who registered online, which excludes those who came to register the offices of the Department in person at (KwaZulu-Natal Department of Agriculture and Rural Development, 2016). Unfortunately, no indication has been made as to which farmers have shown interest in participating in the programme, so as to determine if there is interest and common understanding regarding the programme. In addition, no information is provided as to how well-marketed the programme is, so that no one will miss the opportunity to be part of the programme if there is value to be derived from it. This information confirms the high level of unemployed agricultural graduates, taking into consideration that not all graduates are familiar with the existence of the online portal, and that there are some unemployed graduates in other provinces.

According to the KwaZulu-Natal Department of Agriculture and Rural Development (2016), its strategy is to empower qualifying and willing land reform beneficiaries with an opportunity to lease their underutilized land to graduates. Tshilowa (2015:68) states that, in Limpopo Province, there are farmers who are not leasing land due to certain

fears, and he encourages government to promote awareness of the advantages of leasing land, such as generating extra income. Olatunji and Letsoalo (2013:26) distinguish between four types of collective farms: group farms created by believers in an ideology; group farms created by landless families who were able to acquire the land but were not able to start individual family farms; collective farms organised by government in order to reach national economic and social goals; and collective farms organised by farmers in order to enjoy the advantages of large operations, lower cost of production, more effective use of land, manpower, capital and, consequently, higher economic returns (cooperatives).

The approach followed by the KwaZulu-Natal Department of Agriculture and Rural Development falls under the third category: collective farms organised by government in order to reach national economic and social goals. This is a step in the right direction, assuming that the lessor and lessee will not be competitors in the business. If they compete, there is a heightened possibility of the non-sharing of skills between the two parties, and for the lessor to be absorbed by the lessee; in this respect, when one absorbs the other, there is no guarantee that all employees will also be absorbed. This information shows that, although the strategy is a good idea, various factors need to be thorough consideration in order to make it work, and so that it can be adopted by other provinces to tackle the agricultural challenges they experience.

Oluwatayo and Ojo (2016:98) argue that one of the challenges for Africa is bad leadership, which results in inefficient resource allocation and corruption. Gumede (2014:53) suggests that “the private sector believes that government lacks requisite capacity to implement its own land reform policies quickly, fairly, consistently and in ways that leave land reform beneficiaries better off in the long run”. Immonen and Cooksy (2014:96) argue that, in previous decades, the public sector used performance measurement systems to enforce accountability and enhance the efficiency and effectiveness of its operations. In regard to development theorists and extension practitioners, Mutimba (2014:18) mentions that development theorists are good at blaming extension practitioners, but the drawback for extension practitioners is that they do not have intelligible and evidence-based documentation of its successes in order to convince the sceptics. Mutimba (2014:18) further suggests that there are

agricultural disciplines with accessible platforms that contain evidence-based databases.

In a study conducted by Earle and Paterson (2007:577), it has been determined that 45.2% of workers with degrees, diplomas and certificates in agriculture and nature conservation earn between R2 501 and R8 000 per month; 33.4% earn R8 000 or more per month; and 21.4% did not reveal their salaries. Ideally, smallholders are mostly likely to be dominant in the 45.2% salary category for workers with skills; however, this scenario could be different for unskilled labour considering the wage outcry shown by workers, particularly those in the Western Cape Province, over the past years. AgriSETA (2014:6) mentions that the unrest demonstrated by fruit farm workers in the De Doorns area in the Western Cape, caused government to reconsider wages for casual workers. This led to the development of Sectoral Determination 13, which deals with farm workers' employment conditions, and sets a new minimum wage for farm workers. Anecdotal evidence shows that farmers are not paying high wages, since they reduced the daily working hours upon the announcement of high wages for farm workers (AgriSETA, 2014:6).

The task of ensuring the success of the agricultural sector should not only be the responsibility of government and farmers or beneficiaries, but everyone else should be involved and they should not expect remuneration for their services rendered. The reasons for the expectation of remuneration upon rendering a service is what Lwazi Lushaba, in a radio interview on 19 September 2016, described as 'decolonized education':

colonial knowledge that has value only as a commodity since value of education as a commodity it enables you to consume other commodities, but in actual facts knowledge has value in and of itself, it is not meant to enable you to consume other commodities, it is something you use to resolve problems of your society.

Collaborative work is emphasized, by de Loë, Murray and Simpson (2015:191), as becoming very important in collaborative approaches to governance involving diverse mixes of state and non-state actors, including farmers.

2.4.3 Gaps pertaining to breakeven points for commercialising farms

Communal and small scale farmers are encouraged to participate in commercial farming (Van Niekerk *et al.*, 2011:49). However, Kloppers and Fourie (2014:306) argue that, in most cases, beneficiaries are resettled on agricultural land or receive such land through the land reform programme, and are expected to farm the land economically, without any prior or sufficient agricultural experience or knowledge. It has thus become evident that these emerging farmers tend to require a great deal of assistance in order for them to become commercial farmers. There is less dependence of small farms on the market for their inputs, while they rely to a greater extent on family labour (for example) and are probably concerned about maximising output rather than profit (Junankar, 1980:187).

South Africa is dependent on imported maize, wheat, oilseeds, meat and milk products, amongst others (Terblanché, 2008:60). This is one of the reasons for the promotion of communal and small scale farmers. Falling product prices in a global market and the rising costs of production have necessitated the need to weigh commercial farming viability because of land reform (Conradie, 2015:1). In addressing the call for promotion of commercial farming, the Department of Agriculture, Forestry and Fisheries has developed a number of guidelines for various agricultural products, among which is the wheat production guidelines of 2010. The content of the wheat production guidelines includes: cultivation practices (soil preparation, planting, fertilization, micronutrients, irrigation, pest control, diseases and weeds, and harvesting); post-harvesting handling (sorting, grading, packing, storage, transport and marketing); production schedule; and utilisation.

The guidelines for other produce use the same format as the wheat production guidelines. This is useful information for farmers or aspiring farmers as it details what has to be done. This information is relevant for subsistence farmers and commercial farmers. A study conducted on Lithuanian Farms, by Aleknevičienė, Aleknevičiūtė and Martirosianienė (2011:19-20), shows the importance of farm size and type of farming to net profit margin and other financial ratios, as per the information provided in Tables 2.9 and 2.10 below.

Table 2.9: Average profitability and turnover ratios in Lithuanian farms according to farm size in 2007-2009

Farm size (hectares)	Gross production profit margin	Net profit margin	Return on assets	Return on equity	Assets turnover	Current assets turnover	Fixed assets turnover
< 10	79.1	26.8	8.8	9.4	0.33	1.46	0.42
10-<20	87.9	33.0	10.5	10.8	0.32	1.26	0.43
20-<30	92.8	40.8	13.8	15.2	0.34	1.16	0.48
30-<40	94.7	47.7	17.3	20.6	0.36	1.15	0.53
40-<50	96.9	52.7	21.2	29.4	0.40	1.29	0.59
50-<100	88.8	48.8	18.7	25.0	0.38	1.23	0.56
100-<150	84.9	47.4	20.0	28.8	0.42	1.29	0.63
>=150	75.4	40.6	19.4	33.1	0.48	1.51	0.70

Source: Aleknevičienė, Aleknevičiūtė and Martirosianienė (2011:19)

Tables 2.9, above, and 2.10, below, provide information that is also vital to South African small scale farmers or emerging farmers in deciding on the type of farming based on the available farm size, in order to increase their net profit margin.

Table 2.10: Average profitability and turnover ratios in Lithuanian farms according to types of farming in 2007-2009

Type of farming	Gross production profit margin	Net profit margin	Return on assets	Return on equity	Assets turnover	Current assets turnover	Fixed assets turnover
Cereal and grapes	77.6	41.3	20.9	32.7	0.51	1.44	0.79
Crops	80.6	42.4	18.9	25.4	0.45	1.30	0.68
Horticulture	84.8	43.2	18.9	23.3	0.44	1.50	0.62
Dairy	91.3	47.2	15.4	19.2	0.33	1.37	0.43
Mix (dominating crops)	87.1	41.0	15.6	17.9	0.38	1.15	0.57
Mix (dominating grass feeding animals)	93.0	40.7	12.8	15.0	0.32	1.14	0.44
Mix of crops and grass feeding animals	93.3	47.4	16.4	20.9	0.35	1.22	0.48
Mix of crops and swine breeding	70.2	31.6	13.3	16.5	0.42	1.34	0.62

Source: Aleknevičienė, Aleknevičiūtė and Martirosianienė (2011:20)

Commercial farming requires more than what is provided in the guidelines, such as a template showing the costs breakdown to breakeven for a particular product and land size. The Department of Agriculture, Forestry and Fisheries has made an effort to assist prospective farmers by developing agricultural business plan guidelines in 2011, which provide information pertaining to the recommended production system size. The Department of Agriculture, Forestry and Fisheries (2011c:6) provides the following details, as listed in Table 2.11 below, regarding the recommended production system size:

Table 2.11: Recommended production system size

No.	Description	Recommendation
1.	Recommended minimum farm size for cattle	A minimum farm size of 198 ha for extensive cattle farming is recommended if a threshold of R30 000 net profit is targeted. Such farm should also produce maize and have a portion of planted pasture in order to achieve better results. Without grain production and planted pasture, a minimum farm size of at least 350 ha may be necessary to achieve R30 000 profit per farm family. The average carrying capacity figure for cattle in Gauteng is quoted as 8 ha/LSU (large stock units). This can be improved to even 1 ha/LSU when grain and planted pasture are provided as supplementary feedstock. On farms where grain or planted pasture is not provided, an average farm requires at least a 400 ha of land to sustain a maximum of 50 LSUs (8 ha/LSU). Fifty (50) LSUs are not good enough to create meaningful job opportunities or provide sufficient revenue to satisfy all household needs.
2.	Recommended farm sizes for grain production under dry land	A minimum farm size of fifty (50) ha under dry land is recommended if a threshold of R30 000 net profit is targeted.
3.	Recommended minimum farm sizes for vegetables	A minimum farm size of five (5) ha under irrigation for fresh fruit and vegetables is recommended if a threshold of R30 000 net profit is targeted.
4.	Recommended minimum farm units for broilers	A minimum farm unit of 5 000 is recommended.
5.	Recommended minimum farm units for layers	A minimum farm unit of 2 500 is recommended.

Source: Department of Agriculture, Forestry and Fisheries (2011c:6)

This information is useful but falls short in providing details as to whether net profit is represented as per year, per month or for a specific period. A reference to the costs breakdown and revenue information presented under the agro-processing subsection shows that the information can easily be updated on a regular basis to reflect the applicable values.

According to Kumbhakar and Bhattacharyya (1992:231), traditional agriculture does not pay attention on efficiency in resource allocation, which emphasizes the importance of education and extension services. The cost of inefficiency is high to both the producer and society at large (Hoque, 1988:1354). The importance of the costs breakdown is exacerbated by the fact that a number of beneficiaries have to come

together in order to approach government for grants; thus, the profit made has to consider the number of beneficiaries, all of whom have certain expectations regarding their standard of living, other than breaking even or being profitable. In the Mashishimale Community of Limpopo, for example, there were 1 885 households involved in a claim for 35 350 hectares of land – they only received 16 353.2 hectares of land at the total cost of R148 620 000. Further, regarding the Nkumbuleni Community Trust in KwaZulu-Natal, there were 211 households who claimed 800.95 hectares of land (Terblanché, 2014:85-93) for an undisclosed amount.

This information encourages a review of the commercialization of farms and further consideration for the provision of information that will be vital in deciding whether to venture into farming. This is especially important because not all farmers have some kind of training, including research skills and the requisite knowledge for using the internet.

2.4.4 Competing with recognised brands

Beneke and Carter (2015:60) define a brand as “an identifiable product, service, person or place, augmented in such a way that the buyer or user perceives relevant, unique, sustainable added values which match their needs most closely”. Parents transfer their brand preferences to their children; these include preferences for products such as cooking oil, toothpaste, ketchup, coffee, liquid detergent and bread (Shobri, Wahab, Ahmad & bt 'Ain, 2012:524). The reason why consumers try dominant brands before they try lesser-known brands is that there exists a decreasing relationship between product experience and the perceived risks associated with lesser-known brands (Heilman, Bowman & Wright, 2000:140). In an instance where a brand that has a large brand loyalty competes with a brand that has a low brand loyalty, it appears that, in equilibrium, the stronger brand (i.e. the brand with the larger loyalty) promotes less frequently than the weaker brand, which results in the weaker brand gaining more from price promotions (Raju, Srinivasan & Lal, 1990:276).

Dyasopu (2014:18-19) argues that emerging farmers face difficulties in both the production and marketing of agricultural produce, and some of these difficulties are due to a range of technical and institutional constraints. Large-scale commercial operators are better positioned to profit from economies of scale, reducing their unit

costs, whereas resource-poor farmers cannot do this and so must pay higher prices, which inhibits their profitability and competitiveness; in addition, quality control can also be complex and costly, thus further inhibiting market-related production by these farmers (Verschoor, van Rooyen & D'Haese, 2005:501). The available information shows that the drawbacks of some agricultural sectors and value-adding activities being non-competitive are due to low productivity (leading to high unit costs), poor business strategies and “unfair” trade practices by the country’s competitors (Ortmann, 2005:287). Black farmers encounter significant limitations to effective participation in the highly competitive and globalised commodity production sectors, owing to their lack of financial resources, technology, technical and managerial skills, as well as access to markets; therefore, they require significant investments in farmer support (Tapela, 2008:183).

Beneke and Carter (2015:68) observes that reliance solely on reduced prices would compromise quality, which is the key driver for product success or failure in the modern retailing environment, therefore good quality products should be matched with reduced prices as competition intensifies. Tanusondjaja, Trinh and Romaniuk (2016:733) state that the launch of new brands is risky, as many fail to attract a sustainable customer base. This information shows that a lot of convincing is needed to win customers; this is usually done through marketing campaigns, which are also costly. Ortmann and King (2010:399) state that, in South Africa, smallholder farmers have limited access to factors of production, credit and information, as well as face high transaction costs in input and product markets. It appears that the first struggle for small businesses in agriculture or smallholder farmers would be to introduce efficiency and effectiveness in production, in order to reduce unnecessary costs so as to make the price competitive.

Some of the concerns raised by the well-established retail giants mentioned in this chapter are high transaction costs and a high risk of dealing with many small producers, thus leaving some uncertainty in the security of supply. The current supply chain practice is detailed by Vermeulen, Kirsten and Sartorius (2008:214-210) as follows:

- potato crisp industry, 20% of supply is open market and 80% by contracting;

- peanuts for the snack food industry, obtained through a single agent who both produces and contracts with farmers for the balance of its requirements;
- red meat, poultry and eggs supply, makes use of vertical integration, medium to long-term contracts and long-term informal supply arrangements;
- beef supply, makes use of vertical integration;
- dried fruit supply of produce, obtained using seasonal or one-year production contracts;
- fruit and vegetable processing companies' supply of produce, obtained using spot market purchases and contracting sources;
- large retailers, most source produce directly from farmers, but there are no contracts with farmers; and
- South African agribusiness firms obtain most of their produce from wholesale markets (national fresh produce markets) and directly from producers.

In 2008 there were 17 major fresh produce markets throughout the country with the Johannesburg Fresh Produce Market being the largest (National Department of Agriculture & National Agricultural Marketing Council, 2008:9). The Johannesburg Fresh Produce Market makes use of marketing agencies, which have the exclusive rights to sell the produce on the market, and which are able to reduce their commission, capped at 7.5 percent of gross sales revenue in order to compete on sales volume (Bun & Thornton, 2013:42). There is a gap in respect of linking urban producers to the urban market (Bun & Thornton, 2013:40); further, if this is the situation for urban producers, chances are that rural producers are worse off. The National Department of Agriculture and National Agricultural Marketing Council (2008:6) explains that financial viability has been a stumbling block to the establishment of fresh produce markets in towns surrounded by homelands, not to mention the homelands themselves. Sartorius and Kirsten (2007:640) call for a new approach to the design of agribusiness supply chain arrangements in developing countries. If some structures were put in place for wool producers, the same concept can be adopted for fresh produce. The document prepared by the previous National Department of Agriculture (2001) presents information pertaining to wool marketing amongst the available marketing channels, as presented in Table 2.12 below.

Table 2.12: Marketing channels of wool

No.	Marketing Channel	Description
1.	Shearing and classing	Communal shearing sheds are used for shearing, classing and marketing of wool for small scale farmers. These shearing sheds are, however, not always in reach of small scale farmers. In such cases the small scale farmer can shear his sheep at home and sell the wool to the nearest hawker. Once the sheep are sheared in the communal shearing sheds it is classed and baled. Shearing, classing, and baling of wool are done either by the producers and their families or by contractors. Wool of different classes are baled in different bales. Not all small scale producers are trained in wool shearing and classing, and that is why contractors are sometimes used.
2.	Marketing	Marketing of wool from the shearing sheds usually takes place through a broker. The broker negotiates a price (at the shearing shed) with the farmer and is then responsible for all the additional costs involved to get the wool to the auction floor.

Source: National Department of Agriculture (2001)

In the past, the South African Wool Board was empowered to acquire and to market all wool purchased in South Africa; the wool was purchased from one pool system and all wool was offered for auction. This board was however discontinued at the end of the 1992/93 season as part of the general reform of agricultural organisations (Abbott, 2013:66-70). The Wool Board would buy wool at a guaranteed price and auction it to wool buyers, but the accumulation of assets during the late 1980s revealed that the Wool Board was receiving a higher price for the sale of wool, than it was paying wool growers (Abbott, 2013:74-75). The weakness of the guaranteed price was that it was increased to an unsustainable level, hence, South Africa tried to assist the Australians in maintaining high prices through stockpiling, which eventually resulted in crippling debt and the subsequent discontinuation of the Board's (Abbott, 2013:75).

A study conducted by the Food and Agriculture Organization of the United Nations (2005), on the associations of market traders, found that the Johannesburg association made provision for storage facilities and security for stored produce; it was also found that the Mandalay association owns and operates the market, hence, it is regarded as fairly unique since other associations are not actively involved in trading. Smallholders cannot afford to join these organised associations due to the high joining fees and the necessary compliance with regulations and quality standards, including

ISO and Hazard and Critical Control Point (HACCP), as required by retailers (National Department of Agriculture & National Agricultural Marketing Council, 2008:8). In Mandalay, non-members do not trade on the commodity exchange (Food and Agriculture Organization of the United Nations, 2005:10).

The National Department of Agriculture and National Agricultural Marketing Council (2008:6-106) commissioned a feasibility study to establish two fresh produce depot facilities per province, at a cost of R10.3 million per depot; this materialised in 18 new depot facilities for South Africa. The feasibility study was triggered by the lack of post-harvest handling facilities for horticultural products to be used by smallholders, as well as the low prices offered by the farmers from the local markets, which resulted in producers by-passing local markets for more established markets that have high product demand at good prices (National Department of Agriculture & National Agricultural Marketing Council, 2008:7).

Major retailers have created no-name branding or store brands in order to sell products under their retailer names. Amaldoss and Shin (2015:754) note that there is empirical evidence suggesting that store brands have helped retailers increase their share of profit.

2.4.5 Dynamics of exporting produce

Small agricultural producers in developing countries are increasingly showing interest in participation in global markets. There is however limited support for small farmers as they attempt to navigate increasingly complex and global supply chains, considered coordinated supply chains – “durable arrangements between producers, traders, processors and buyers about what and how much to produce, time of delivery, quality and safety conditions, and price” (Stanton & Burkink, 2008:199-200). Mbithi (2011:58) argues that there is no doubt that the stringent standards demanded by developed countries are essential, but the farmer bears the cost of compliance and certification. The standards imposed by the European Union, covering food and agricultural products, fall into four main groups: health control (food law, hygiene, microbiological criteria, contaminants, pesticides); plant health (phytosanitary) and control (harmful organisms); marketing standards (general or specific); and other requirements (food additives, food contact materials, food irradiation, novel foods, radioactivity, quick

frozen foods, GMOs, labelling and organic products) (Barrientos & Visser, 2012:13). In regard to many small firms, the large fixed costs required to enter a foreign market deters them from exporting their output abroad; in addition, a Mexican study of the decision of firms to export, reveals that firm size, cost structure and international ownership are positively correlated to the probability of exporting abroad (Alia, 2015:339).

In an attempt to avoid exchange rate risk, some people make use of a macro-hedging financial instrument. Abdelghani and Melnikov (2015:1-2) define macro-hedging as a financial instrument that is employed to reduce several underlying risk factors including volatility of interest rate, volatility of exchange rates, variability of a portfolio of assets as a whole, wars, changes in weather and changes in economic policies, using hedge instruments such as futures and options contracts. Abdelghani and Melnikov (2015:1-2) argue that, where assets do not have tradable or liquid hedge instruments, these assets can be hedged by other instruments of correlated underlying assets, as evident in this example:

Suppose an airline company wants to avoid the variation in the price of jet fuel for which futures or option contracts may not exist or with enough liquidity and time horizons. By buying futures in another correlated asset such as oil and natural gas the company can offset the risk of the price of jet fuel fluctuations. But note that, even though jet fuel prices are correlated with oil and gas, the different properties of the underlying and a possible maturity dates mismatches makes it impossible to hedge all the risk associated with jet fuel price variability.

Forward contracts and futures markets are becoming popular amongst maize farmers in order to better manage price risks (Ortmann, 2005:298). MCX Research and Strategy (2013:6) provide a list of advantages and disadvantages of the futures and options contracts, as represented in Table 2.13 below:

Table 2.13: Advantages and disadvantages of futures and options contracts

Products	Features and advantages	Disadvantages and risks
Futures	<ul style="list-style-type: none"> Standardised contract in terms of contract size, delivery dates, quality, trading hours, tick size, and maximum daily price limits; Exchange traded, hence, zero counterparty risk; Involves a 'down payment' known as the initial margin; Transparent pricing Contract can be closed out prior to its maturity (giving an opportunity to cut losses); 	<ul style="list-style-type: none"> Requires active portfolio management as losing positions leads to margin calls; Standardisation can have an impact on hedging, as delivery dates and terms are not flexible; Does not cover basis risk.
Options	<ul style="list-style-type: none"> Helps to lock-in the price but without the compulsion to honour the contract, especially to benefit from favourable price movements; No margin calls for options buyers; Risk is limited for the buyer of the options contract, i.e., he/she can at the most lose the contracts premium; More suitable for risk averse participants such as farmers and small commercial players; Options can be exercised or offset before expiration; Generally, a very liquid market allowing the producer to quickly reverse positions. 	<ul style="list-style-type: none"> Does not cover basis risk; Premium required to be paid upfront by options buyer; Premium payable for the options contract may at times be "too high" in comparison to the rights granted by the contract; Options are in specified quantity (contract size) and represent some standard quality; Using options requires thorough understanding of futures and options markets.

Source: MCX Research and Strategy (2013:6)

Hedging can be a tricky exercise, particularly when one is not familiar with the use of available financial instruments, unless someone competent in this field is taken on board to deal with hedging. The appreciation of local currency against that of its trading partner makes exports expensive and imports cheaper in respect of goods markets (Nyeadi, Atiga & Atogenzoya, 2014:41). The producers who benefit from a depreciating currency are exporters of fruit, wine and sugar, however, depreciating currency hurts importers whose goods become relatively more expensive (e.g. chemicals and machinery) (Ortmann, 2005:295).

In cases where emerging farmers do export, it is usually through fair trade and other labelling regimes in sectors such as rooibos tea, cut flowers and table grapes, so that goods certified as the produce of disadvantaged farmers get preferential access to export markets, usually at guaranteed prices, and may be sold at a premium (Rother

et al., 2008:413). For produce or institutions that receive government support for assistance in order to grow certain produce for exports, there is usually a certain fixed price that is agreed upon for a particular period, which makes it easier for smallholders to export. Among these types of produce is the production of essential oils, such as rose geranium oil, which are demanded by various countries. There are particular programmes, supported by government, in which farmers are taught to produce and process rose geranium; the incubation lasts for about 5 years, after which the farmer would be competent to work independently. Among these programmes is the SEDA Essential Oil Business Incubator (SEOBI). SEOBI “is a specialised essential oil business incubator that was established to address the constraints experienced by essential oil farmers, particularly emerging farmers” (Institute of Natural Resources, 2011:17-19). The Institute of Natural Resources (2011:17) states that the services provided by SEOBI are community development, agronomy, agro-processing, business development and marketing. Marketing involves:

- Assisting farmers to have access to reliable and competitive local and international markets;
- Ensuring that there is a contractual agreement with the buyers, to buy all the oil produced, before production begins;
- Monitoring the relationship between essential oil growers and buyers, to ensure fair trade;
- Facilitating linkages between buyers and markets;
- Providing chemical and sensory analyses of essential oils, to determine the quality and marketability of the oils produced;
- Interacting with the buyers of essential oils locally and internationally; and
- Promoting the essential oil business and clients through open days and field days.

The success of the farm worker equity share schemes should not be limited to the local market; however, the exporting opportunities should also be explored to grow business and make more profit.

2.5 SUMMARY

The information provided in this chapter shows that the agricultural sector is broad, as it incorporates crop husbandry; horticulture; animal production; dairy farming; and agro-processing. Each of these branches of the sector has a number of different types of produce. This chapter outlines which areas of South Africa are most suitable for the production of each type of produce, and provides data related to the production and export of some of the produce, so as to indicate available opportunities. Furthermore, agricultural waste was shown to serve as input material in other sectors, such as energy, pulp and paper. It is apparent that existing industry associations have been established for certain produce, therefore, farmers in those fields are able to seek membership and liaise with the relevant associations concerning certain matters.

Smallholders play a significant role in the value chain, provided that the structures currently in place are improved. It was indicated that the guidelines should be improved by incorporating detailed financial aspects linked to the minimum size required so as to profit from operation, in order to decide whether to engage in a particular activity or not. Potential participants in the sector will be provided with clear information regarding the applicable costs breakdown and values, which will be replaced with updated data, and will be indicated in the guidelines.

Unemployed agricultural graduates play a significant role in ensuring the profitability and sustainability of the operations. Everyone who has an interest in the success of the agricultural sector should contribute to it, and should not expect to be rewarded afterwards. Various operations in the agricultural sector have a number of players who compete with one another for the market; most smallholders also have to compete with well-known brands. Those interested in exporting their produce should consider the quality of standards required and exchange rate fluctuation, which lead to uncertain income from sales.

In Chapter 3 of this study, theories related to equity share schemes will be discussed. These theories include in their scope various aspects from management to finance, as applicable to the implementation and operation of equity share schemes.

CHAPTER 3

THEORIES RELATED TO EQUITY SHARE SCHEMES

3.1 INTRODUCTION

The previous chapter of this study provided an overview of the agricultural sector in South Africa, with a specific focus on the five branches of the sector: field crop husbandry; horticulture; animal production; dairy farming; and agro-processing. Each branch was discussed together with examples showing its produce in various provinces, as well as the concomitant exports, where applicable, and information related to the relevant industry associations. The usefulness of some of the agricultural waste, and where it is needed, was also discussed. Chapter 2 also reflected on the realities of the agricultural sector, including the shortage of skills in the sector, gaps in research pertaining to breakeven points for commercializing farms, as well as competing with recognized brands and the dynamics of exporting produce. Moreover, a detailed discussion of these points was put forward in the chapter, together with possible suggestions for dealing with challenges that would hinder the achievement of certain results.

The current chapter, Chapter 3, explores twenty-one theories related to equity share schemes. The theories covered in this chapter are: new institutional economics; stakeholder theory; managerial power theory; tournament theory; agency theory; theory of choice; revealed preference theory; motivational theory; expectancy theory; social capital theory; human capital theory; theory of initial public offering; property rights theory; resource dependence theory; financial theory; the capital structure theory; the pecking order theory; trade-off theory; equity theory; bonus theory; and dividend theory.

3.2 BACKGROUND TO THEORY

Byron and Thatcher (2016:3) mention that all theories contain underlying assumptions and boundary conditions. Wacker (1998:364) states that the goal of theory is to answer the questions of how, when (or where), and why. Houdek (2016:363) argues that “theory and documented evidence can provide tools for caution by pointing out that

managers can be influenced by unconscious propensities, under what circumstances these irrational tendencies could prevail, and how to fix them”.

Thompson’s ‘moral economy’, which is not a theory unto itself, but is embedded within a larger Marxist and materialist approach to political economy, can be traced to an assemblage of beliefs, customs, norms and practices around issues of distribution and surplus extraction (Gorman, 2014:504-505). Wolford’s theory of moral economy states that “moral economy thus consists of ‘moral arguments’, constituted through ‘historically and culturally specific production relations’ and ‘used by a particular group of people to define the optimal organization of society, including most importantly an outline of how society’s productive resources (in this case, land) ought to be divided’” (Gorman, 2014:506).

3.3 THEORIES RELATED TO EQUITY SHARE SCHEMES

This subsection provides an overview of various theories that can be linked to farm worker equity share schemes from a range of different categories of formation and operation.

3.3.1 New Institutional Economics

Kirsten, Dorward, Poulton and Vink (2009:35) mention that there are different schools of economic theory that were developed in the past to interpret economic phenomena, behaviours, and outcomes. Among these theories is New Institutional Economics (NIE), which Caballero and Soto-Oñate (2015:948) state is the theoretical body of knowledge that built upon Ronald Coase’s notion of transaction costs and North’s vision of institutions. Klein (1998) cited by Baştürk (2016:13) defines new institutional economics as “an interdisciplinary field assembly several disciplines such as economics, law, sociology and political science in order to analyze social, political and commercial institutions”. Langlois (1986) cited by Orhan (2016:191) defines NIE as “a mix of nine different theories under the ‘Modern New Institutional Economics Approach’ title”, involving the Property Rights Approach, Economic Contract Theory, Transaction Cost Approach, New Institutional Approach to Economic Theory, Constitutional Choice Theory, Collective Action Theory, Public Choice Theory, Evolutionary Economics Theory and Modern Austrian Economics Theory. Thomas and Hangula (2011:696) define NIE as the collection of transaction cost economics,

agency theory and property rights analysis. Thomas and Hangula (2011:696-698) define transaction costs economics, principal agent theory and property rights theory as follows:

- Transaction costs refer to a legal agreement or contract between two or more partners engaged in trade, including the costs of searching for trading partners, related negotiations, information management, monitoring and even the enforcement of contracts.
- The agent relationship, also referred to as a principal agent, is defined as an explicit or implicit contract in which one or more persons (the principal) engage another person (the agent) to take actions on behalf of the principal.
- The property rights theory is based on the importance of asset ownership and control.

The transaction cost economics hypothesis regards institutions as transaction-cost-reducing arrangements, with the possibility of changing and evolving with changes in the nature and source of transaction costs, because market exchange is not costless, considering that the costs related to reaching, modifying and implementing agreements restrain potential gains from trade (Kirsten *et al.*, 2009:43-44). The principal agent theory focuses on the effects of institutions on reducing transaction risks and costs, due to imperfect transactional information, by addressing the manner in which the principal can structure contracts, incentives and sanctions to encourage, at low cost, agents to behave in the best interests of the principal (Kirsten *et al.*, 2009:41). The property rights theory encompasses the relations between people with something, the benefit streams to be generated and the corresponding duties to be observed (Kirsten *et al.*, 2009:48).

NIE economists are of the view that countries with more secure property rights, that is, better economic institutions, have higher average incomes, when considering the colonisation strategies of European countries (Schneider & Nega, 2016:436). Schneider and Nega (2016:436) warn that new institutional economics has some significant deficiencies, in that it has brought the importance of institutions to the development process to the fore in development policy circles, which are apparent when applied to Sub-Saharan Africa. Moreover, insufficient attention is paid to

improving inequality and poverty such as a broad-based approach that provides income for the poor, that is, cash grants which stimulate business and generate employment (Schneider & Nega, 2016:440). This view on property rights proved not to be true in Kenya, Senegal, Gambia, and other Sub-Saharan African countries, where it undermined the wellbeing and productivity of many people, especially women, pastoralists, and others with traditional, subsidiary land rights (Schneider & Nega, 2016:437). In South Africa, land redistribution had little effect, which indicates that any policies that might freeze property rights in their current state could generate widespread unrest and destabilise the economy (Schneider & Nega, 2016:437).

3.3.2 Stakeholder Theory

The main proponent of stakeholder theory, which deals with business ethics, is Freeman (Mertens, 2013:6). Friedman's (1970) essay 'The Social Responsibility of Business is to Increase its Profits' cited by Jahn and Brühl (2016:1-2), gave rise to a lot of disagreement amongst researchers in business ethics, as it was accused of being incoherent and of setting rather low ethical standards for managers, amongst other claims that managers have a responsibility "to make as much money as possible". Freeman's conceptualisation of stakeholder theory stresses the need for an inclusive stakeholder definition in strategic management, including investors, suppliers, customers, users, authorities, neighbors, and the media (Eskerod, Huemann & Ringhofer, 2016:44). Modern stakeholder theory, initiated by Freeman (1984), as cited by Cordeiro and Tewari (2015:835), is a conceptual model specifying that organisations must go beyond merely maximizing stockholder value to address the interests of their stakeholder-groups and individuals who can affect or are affected by the organisation's purpose.

Stakeholder theory is based on the traditional dichotomy of a "transactional" approach, which emphasises self-interest and financial incentives, and a broadly defined, stakeholder-oriented "relational" approach, based on compassion, honesty, integrity, and kindness (Bridoux & Stoelhorst, 2016:230). However, Sama-Lang and Njonguo (2016:98) state that the stakeholder theory or model of corporate control presupposes that a company owes a wider duty to all who can affect and/or can be affected by its act(s) and/or omission(s), and not just its shareholders. It embraces a forward-looking perspective and strives to understand how managers can prioritize and address

stakeholders' claims in an effort to improve the organisation's ability to create value (Olsen, 2016:71).

In stakeholder theory, the emphasis is on the role of owners and employees (Ketokivi & Mahoney, 2016:133). Moreover, Harrison, Freeman and Sá de Abreu (2015:859) state that stakeholder theory emphasises a practical, efficient, effective, and ethical way to manage organizations in a highly complex and turbulent environment; it can thus be viewed as follows:

- It is a practical theory because all organisations have to manage stakeholders – whether they are good at managing them is another issue.
- It is efficient because stakeholders that are treated well tend to reciprocate with positive attitudes and behaviors towards the organization, such as sharing valuable information (all stakeholders), buying more products or services (customers), providing tax breaks or other incentives (communities), providing better financial terms (financiers), buying more stock (shareholders), or working hard and remaining loyal to the organization, even during difficult times (employees).
- It is effective because it harnesses the energy of stakeholders towards the fulfillment of the organization's goals. It is useful in a complex and turbulent environment because organisations that manage their stakeholders have better information upon which to base their decisions and, because they are attractive to other market participants, they have a degree of strategic flexibility that is not available to competitors that do not manage stakeholders.

Bridoux and Stoelhorst (2014:108) argue that the relationship between stakeholder management approaches and organisational performance is more complex than instrumental stakeholder theory typically assumes. Stakeholder theory considers that different stakeholders have different interests at risk, and that the alignment of these interests provides the central mechanism through which value is created by business (Paul, 2015:705). Harrison and Wicks (2013:97) observe that, despite the importance of stakeholder theory, little attention has been devoted to questions regarding what it means to create value for stakeholders and how this can be measured. Existing stakeholder theory concentrates on messages that come from an organisation, but

relatively little attention is given to the context in which these messages are received, and little consideration is given to how organisations communicate with marginalized stakeholders, or with those insufficiently differentiated or lumped together, as in the residual category of “community” (Paul, 2015:706). According to Cordeiro and Tewari (2015:844), the stakeholder theory perspective is that “investors in better ranked organisations anticipate larger future cash flows due to more positive reactions from key stakeholders such as environmentally conscious customers, employees, NGOs, regulators, and thus reward these organisations with stock price increases”.

3.3.3 Managerial Power Theory

Lin and Lu (2009:2) state that previous studies conducted by Conyon and Peck in 1997; Yermack in 1997; Core, Holthausen, and Larker in 1999; as well as Carter and Lynch in 2001, reveal that executives have too much power in determining their own compensation contracts and that rent-seeking incentives tend to destroy shareholder wealth and organisational value. However, Bebchuk and Fried (2004) developed a framework that considers two theories that describe executive compensation contracts, these are optimal contract theory and managerial power theory (Lin & Lu, 2009:2). According to van Essen, Otten and Carberry (2015:167-168), the work done by Bebchuk and Fried, in 2004, on managerial power theory, shows that when CEOs have more power over the board of directors, they will be better positioned to negotiate for compensation arrangements that serve their own interests; that is, they will be better able to negotiate for higher pay and pay that is less sensitive to their organisation’s performance. The optimal contract theory assumes that shareholders can properly exercise control over the board of directors, and that the board of directors can fully control top executives (Lin & Lu, 2009:2). Van Essen *et al.* (2015:168) argue that this claim in managerial power theory is due a challenge to the common optimal contracting assumption within agency theory, which posits that managers and boards negotiate in arm’s-length transactions over compensation, with directors acting as selfless agents of shareholders and negotiating for compensation arrangements that serve the interests of shareholders rather than those of the executives.

Bebchuk, Fried and Walker (2002:754) state that the compensation arrangements granted by boards often deviate from optimal contracting because directors are

captured or subject to influence by management, sympathetic to management, or simply ineffectual in overseeing compensation. Managerial power has the potential to lead to the use of inefficient pay structures that weaken or distort incentives and which, in turn, further reduce shareholder value (Bebchuk *et al.*, 2002:754). Murphy (2002:850) argues that Bebchuk, Fried and Walker's view of managerial power is problematic as a theoretical matter and is too simplistic to explain executive pay practices. This is due to the fact that their hypothesis is largely inconsistent with the most important development in executive compensation practices: the recent escalation in option-based compensation for both top-level and lower-level executives.

Managerialists have concluded that the missing link between executive pay and organisational performance is due to the power imbalance between executives and shareholders (Chen, Ezzamel & Cai, 2011:4).

3.3.4 Tournament Theory

It was in economics that the framework of tournament theory was first established (Poujol & Tanner, 2010:33). It was regarded as a mid-range economic theory used to understand behaviour in response to incentive systems, and was first used to explore sales contest format choices by organisations (Poujol & Tanner, Jr., 2010:35). The work done by Lazear and Rosen (1981), as cited by Chen *et al.* (2011:6), attempted to explain the gap between Chief Executive Officer (CEO) pay and that of the next level below, found that this gap was typically very large and was not explained convincingly by managerial marginal product arguments; this was termed tournament theory. The compensation of executives has attracted the attention of managers, compensation experts, organisational theorists, accountants and economists, who seem to ask a common question: "are the large sums paid, especially to chief executives, deserved?" (O'Reilly III, Main & Crystal, 1988:257). Lazear and Rosen (1981) suggested that those vying for the position of CEO could be viewed as competing in a tournament in which prizes are fixed in advance and tournament participants expend effort to increase the likelihood of winning a prize, and where what matters is not the absolute level of performance, but how well one does in relation to other competitors (Chen *et al.*, 2011:6). The critics of tournament theory refer to the salaries paid to CEOs as "madness" while, in contrast, the detractors of this theory

have countered by arguing that “top executives are worth every nickel they get” (O’Reilly III *et al.*, 1988:257).

According to Connelly, Tihanyi, Crook and Gangloff (2014:16), the tournament theory is useful for describing organisational behaviour when reward structures are linked to relative rank rather than absolute levels of output. However, management scholars have used tournament theory to describe a wide range of inter- and intra-organisational competitions, including promotion contests, innovation contests, and competition amongst franchisees (Connelly *et al.*, 2014:16). The focus of tournament theory has been on organisational and individual employee characteristics, that is, information related to effort, monitoring costs and attitudes toward risk, amongst others, that would affect the efficiency and incentive characteristics of such a reward system (Becker & Huselid, 1992:336). In tournament theory, prices are set before the tournament begins and are awarded based on the rank order at the finish, rather than on the absolute performance of the participants (Becker & Huselid, 1992:337).

There are two contradictory explanations of the structure of pay amongst top executives, with Lazear and Rosen indicating that tournament theory suggests that the salary of a corporation’s top executive may well exceed any measure of his marginal product and yet be economically efficient (Main, O’Reilly III & Wade, 1993:606-607). The other view stemming from theoretical considerations, by Milgrom and Roberts in 1998 and Lazear in 1989, of the impact on economic efficiency of workers’ attempts to influence their own advancement within the organisation suggests that a compressed executive salary structure may be most efficient (Main *et al.*, 1993:607).

Tournament theory has previously been applied to drug dealing, a form of direct sales involving illegal products, and theory has long been used to explain career patterns in organisations, with rare application in marketing (Poujol & Tanner, Jr., 2010:35). There are benefits in tournaments when it is difficult for a third party, such as a court, to verify performance (Harbring & Irlenbusch, 2003:444). However, they suffer severe drawbacks since basing pay on relative performance creates incentives for agents to apply for jobs with less able reference groups, or agents may try to collude, that is, to cooperate by collectively exert effort on a very low level (Harbring & Irlenbusch, 2003:444). Much like a sports tournament, tournament incentives mean that workers

compete for a prize, where the worker with the higher performance gets the prize, which could be a higher salary or a promotion (Falk & Fehr, 2003:400). However, the tournament theory advocates that workers' equilibrium efforts should be chosen in such a way that marginal effort costs equal marginal gains (Falk & Fehr, 2003:400). One view of tournament theory is that the winner's price in the CEO tournament is directly proportional to the number of competitors for the CEO position. However, an alternative view states that the square of the number of competitors is negatively associated with the CEO price (Bognanno, 2001:290). Empirical findings regarding the operation of corporate tournaments relate largely to one theoretical result, which suggests that larger rewards are necessary in order to provide proper incentives for competitors as there are fewer chances of promotion at high levels (Bognanno, 2001:291).

Sheremeta and Wu (2012:1) argue that the majority of experimental research on tournaments focuses on the agent's side of the principal-agent relationship. However, according to Sheremeta and Wu (2012:1), their study investigates both sides of the principal-agent model.

3.3.5 Agency Theory

Agency theory claims that, in the modern corporation, in which share ownership is widely held, managerial actions depart from those required to maximise shareholder returns (Donaldson & Davis, 1991:50). This theory can be traced to research as early as Berle and Means' study in 1932, which recognized that when monitoring is costly and actions are partly unobservable, managers may exert less effort, consume perquisites, or invest in other nonvalue maximizing activities, such as building empires, all to the detriment of shareholder value (Bitler, Moskowitz & Vissing-Jørgensen, 2005:541). This notion, as cited by Crutchley and Hansen (1989:36), was advanced by Jensen and Meckling (1976), and extended by Rozeff (1982) and Easterbrook (1985). According to Shapiro (2005:266), Jensen and Meckling assert that "most organisations are simply legal fictions which serve as a nexus for a set of contracting relationships among individuals". However, according to Walkling and Long (1984:54), Jensen and Meckling recognised that the employment of agents has been shown to allow impediments to shareholder wealth maximisation because the best interests of agents may differ from the best interests of shareholders, while the resolution of the

difference may generate agency costs. Harris and Raviv (1991:300) define agency costs as costs incurred due to conflicts of interest. Harris and Raviv (1991:300-301) state that Jensen and Meckling identify two types of conflicts:

- Conflicts between shareholders and managers arise because managers hold less than 100% of the residual claim.
- Conflicts between debtholders and equity holders arise because the debt contract gives equity holders an incentive towards suboptimal investment.

Agency theory is primarily concerned with the relationship between managers and stakeholders (Hill & Jones, 1992:131). However, Crutchley and Hansen (1989:36) argue that it derives from the conflicts of interests between corporate managers, outside stockholders, and bondholders; they further note that managers choose their stock ownership in the organisation, the organisation's mixture of outside debt and equity financing, and dividends in order to reduce the costs of these agency conflicts. It is concerned with the study of problems that arise when one party, the principal, delegates work to another party, the agent (Zsidisin & Ellram, 2003:16). Theoretical and empirical research on agency theory focuses on the moral hazard posed by conflict between outside shareholders, that is, principals and inside owners or managers, who are agents of the organisation (Bitler, Moskowitz & Vissing-Jørgensen, 2005:541). Previous studies on agency theory used “coordinated efforts”, “control” and “management” as the units of measurement; however, as far as supply risk management is concerned, the purchasing organisation is the principal and the supplier is the agent (Zsidisin & Ellram, 2003:16). The changes made regarding strategic management and business policy have been influenced by agency theory, where managers will not act to maximise the returns to shareholders unless appropriate governance structures are implemented in the large corporation to safeguard the interests of shareholders (Donaldson & Davis, 1991:50).

Agency theory is similar to stakeholder-agency theory in many respects; however, the stakeholder-agency theory is based on assumptions concerning market processes, which are substantially different from those underlying the finance version of agency theory (Hill & Jones 1992:132). Agency theory operates on the assumption that markets are efficient and adjust quickly to new circumstances (Hill & Jones, 1992:132).

Kim and Mahoney (2005:223) observe common intellectual antecedents amongst agency theory, property rights theory and transaction costs theory that have traditionally been applied to an organisational economics approach to the discipline of strategic management. The application of transaction costs theory is widely in the social sciences, including economics, finance, marketing, organization theory, political science, sociology, and strategic management, while agency theory has been usefully applied to issues in accounting, economics, finance, marketing, political science, and strategic management (Kim & Mahoney, 2005:223).

3.3.6 Theory of Choice

Economists, with a few psychologists, have produced a large body of theory and a few experiments that deal with individual decision making (Edwards, 1954:380). Economists refer to the economic theory of consumer decision making as theory of consumer choice (Edwards, 1954:380). In theory of consumer choice, it is not customary to differentiate between actions and their consequences since the two are in one-to-one correspondence; however, in the static theory of the organisation, there is a need to “distinguish between the actions-input-output decisions and the consequence of varying levels of money profit” (Arrow, 1951:404-405). One of the problems in theory of choice under risky conditions, is the description of consequences, which are not certain and therefore certainty is not uniquely related to actions (Arrow, 1951:405).

A new theory of choice under risk, proposed by Yaari (1987:95), was developed as a result of the following:

- A methodological reasoning - In expected utility theory, the agent’s attitude towards risk and the agent’s attitude towards wealth are forever bonded together. At the level of fundamental principles, risk aversion and diminishing marginal utility of wealth, which are synonymous under expected utility theory, are horses of different colours.
- An empirical reasoning – Behaviour patterns which are systematic, yet inconsistent with expected utility theory, have often been observed.

The expected utility theory, the standard theory of individual choice in economics, is one of the available theories of decision making under risk and uncertainty (Starmer, 2000:332). Intensive research on individual choice behaviour has generated a great deal of theoretical innovation as well as a much richer body of evidence against which models can be judged (Starmer, 2000:332).

3.3.7 Revealed Preference Theory

Basu (1984:213) mentions that some of the scholars who analysed preference theory include Samuelson (1938), Arrow (1959), Richter (1966), Sen (1971) and Suzumura (1976). According to Ekeland and Galichon (2012:2-3), Samuelson formulated and left the preference problem open in 1938, and Houthakker solved it in 1950, after which Afriat provided an operational solution in 1967 by using nontrivial combinatorial techniques. Diewert provided a Linear Programming proof in 1973 and Varian designed an algorithmic solution in 1982 (Ekeland & Galichon, 2012:3). Nau (2010:439) states that the state preference framework was developed by Arrow in 1953 and Debreu in 1959, where the consumer's objects of choice are bundles of commodities, that is, money, goods and services, that may be state-contingent and time-contingent.

Hands (2013:1081) states that revealed preference theory is a broad research program in choice theory, not a single theory, therefore understanding this diversity is essential to any methodological analysis of the program. It is based on the idea of consistency of choice, that if a consumer chooses bundle A when B is affordable, then consumers have "revealed" that A is preferred to B; therefore, consumers will never purchase B when A is affordable, which is all that is required for the analysis of consumer choice (Hands, 2013:1082). Sen (1973:241) states that the term revealed preference is an unfortunate one and, while the appropriateness of the terminology may be debated, the approach of revealed preference has gradually taken hold of choice theory in general and of demand theory in particular. Different degrees of indeterminacy characterise human preferences (Basu, 1984:212). It is noted by Nau (2010:438) that a model of preferences that are incomplete due to the indeterminacy of probabilities was introduced into microeconomics by Bewley in 1986, who referred to it as "Knightian" uncertainty. Individuals observe choices first, and preferences are in turn presumed from these observations (Sen, 1973:241).

According to Leahy and Doughney (2006:37), the statement made by Hakim (2000) that women's choices are based on their preference for a particular lifestyle, that is, work-centred, home-centred or one that combines paid work and family time, is flawed. This is due to the fact that, amongst other things, it fails, in particular, to account for the phenomenon of 'adaptive preferences', whereby women adjust their preferences in response to persistent gender inequalities and make a conscious decision not to play by the current rules of the game (Leahy & Doughney, 2006:37).

3.3.8 Motivational Theory

There are many theories of motivation, categorised into two main groups: content theories and process theories, where content theories tend to focus on the needs of the individual by trying to explain the different factors that contribute to either encouraging or halting a behaviour within that individual. Amongst these theories are Maslow's Hierarchy of Needs Theory (1954), McClelland's Needs Theory (1961), and Herzberg's Two-Factor Theory (1959) (Riley, 2005:3). Maslow's publication on Motivation and Personality introduced his theory about how people satisfy various personal needs in the context of their work. It further theorised these matters through the use of a concept called prepotency, which determined that a person could not recognize or pursue the next higher need in the hierarchy until her or his currently recognised needs were substantially or completely satisfied (Gawel, 1997:1). Maslow's hierarchy of needs, in a pyramid design, starts with physiological needs at the bottom of the pyramid, followed incrementally by the need for security, affiliation, esteem and self-actualisation at the top of the pyramid (Burton, 2012:8).

Drago (2015:16) notes that Herzberg accepted Maslow's concept of the importance needs, but went further to suggest that not all needs are motivational. Herzberg's theory of motivational factors led to the study on the use of factor analysis in order to identify five major motivators: achievement, autonomy, challenging work, professional growth and recognition (Chu & Kuo, 2015:58). Process theories they seem to be much more complex and delve deeply into the thinking process of the individual, trying to explain the "why" or "how" of motivation, such as why workers select particular behaviours and how they determine whether their choices were successful; amongst these theories are Vroom's Expectancy Theory (1964), and Adam's Equity Theory (1965) (Riley, 2005:3).

The literature on motivational theory shows that achievement goal theorists have been mindful of the fact that the influential theory of human motivation remained mostly silent about burning issues facing the field of education (Carr, 2015:1384). Choi (2006:24) notes that very few motivational theories on charismatic leadership have been proposed to explain explicitly how it affects followers' needs.

Employee motivation can be sparked by financial or non-financial motivators. Financial motivators involve monetary rewards (cash bonus, salary increase, commission or profit sharing), while non-financial motivators involve recognition (praise from managers, attention from leaders, or the opportunity to lead projects) (Burton, 2012:15-20).

3.3.8.1 *Expectancy Theory*

Barakat (2016:167) cites that the expectancy theory proposed by Vroom (1964) is regarded as a theory of motivation used to explain the psychological and cognitive process that an individual will go through to determine the level of effort that he/she will choose to maximize his/her gains. However, Purvis, Zagenczyk and McCray (2015:5) are not sure as to what role psychological and organisation climates play in shaping employees' expectancy-related perceptions and, ultimately, their motivation; moreover, some scholars have theorised that stakeholders' psychological climate perceptions affect their motivation to participate in projects. Vroom's model proposes three important variables: instrumentality, valence (two types), and expectancy (Starke & Behling, 1975:703).

Expectancy theory provides information as to why actors make decisions. It asserts that behavioural choice is a function of expectancy, the probability of realising the desired outcome, while valence refers to the value attached to the desired outcome (Chen, Ellis & Suresh, 2016:593). According to Nimri, Bdair and Al Bitar (2015:71), expectancy theory allows for an understanding of how employees perceive their work and the rewards that they receive for it. In this regard, it explains how motivation force is formed by examining the employees' perceptions on three levels:

- Expectancy, which addresses how employees see the effort they put into their job affects their performance.

- Instrumentality, which explains how employees view potential rewards for their performance.
- Valence, which shows the value employees place on those rewards.

Nimri *et al.* (2015:71-73) further state that this theory has faced criticism from different scholars, but has not been rejected entirely. The main concern emerging from the criticism is that the theory was too simple, hence, some scholars made the following suggestions or observations:

- Lawler and Porter (1967) presented a modified version of the theory to include extrinsic and intrinsic factors.
- Starke and Behling (1975) did not find that people made decisions related to work effort in a manner consistent with the axioms underlying the expectancy theory: independence and transitivity.
- Campbell and Pritchard (1976) argued that the set of variables is too complex and poorly misunderstood to be encompassed by a simple equation.
- Schwab (1979) examined the relationship between the VIE model (Motivation force = Expectancy x Instrumentality x Valence) and two criterion variables, effort and performance. They included several moderators of this relationship in 32 between-subject studies in a statistical analysis.
- Landy and Becker (1990) suggested that the key to improving the predictions of the expectancy model might lie in variables such as the number of outcomes, valence of outcomes, and the particular dependent variable chosen for study.
- Van Eerde and Thierry (1996) used meta-analysis to examine the theory's factors and their relationship to five types of criterion variables: performance, effort, intention, preference, and choice.

Liddell and Solomon (1977:460) provide clarity on the work done by Starke and Behling (1975); they indicate that it reported methodologically faulted tests on Vroom's model to predict behaviour. However, Starke and Behling did not test the transitivity postulate of the Vroom model, which makes part of their test of the independence postulate inappropriate, and it is questionable whether their remaining evidence is sufficient to reject this property even if it were necessary to expectancy theory (Liddell & Solomon, 1977:460).

Expectancy theory relates to training motivation, turnover, productivity, self-set goals, goal commitment, and goal level, despite the fact that only a few researchers have applied it in the context of motivation to start a new business; this is surprising because research in other domains has demonstrated the usefulness of expectancy theory such as in investigating predictors of future employment status (Renko, Kroeck & Bullough, 2012:667-668).

3.3.8.2 Equity Theory

Adams pioneered equity theory in 1963, with scholars considering it to be “among the more useful middle-range theories of organizational behavior”. However, the five constructs of the model – inputs, outcomes, referent other, equity, and reaction to inequity – have been the subject of criticism and reformulation; nonetheless, scholars have concluded that, although there are some limitations, the basic propositions of theory are generally well supported (Buzea, 2014:421-422). Equity theory was originally intended to justify financial compensation, however, it now also explains exchange relationships where individuals compare their inputs and outcomes with the inputs and outcomes of others; it has been utilised across various contexts, including organisational behaviour, dating relationships and, more recently, stakeholder perceptions in a volunteer tourism setting (Lovegrove & Fairley, 2017:4). In social psychology, equity theory studies have focussed on how perceptions of fairness in social situations depend on the relationship between input and output, with the main results indicating that people find it fair that the income (output) of a person is in proportion to their work effort (input), and that they dislike deviations from a proportional distribution (Cappelen, Eichele, Hugdahl, Specht, Sørensen & Tungodden, 2015:3).

According to equity theory, employees evaluate the ratio between their contributions (inputs) and rewards (outcomes), compared with the input-outcome ratio of a referent person or group (referent other) (Buzea, 2014:421). Equity theory ratios based on ratios of exchange inputs to exchange outcomes are used to justify evaluations, where situations are evaluated as just if ratios are equal and unjust if ratios are unequal (Arvanitis & Hantzi, 2016:1). The framework of equity theory not only considers fairness perceptions, which justice theory captures, but cumulative perceptions as well, with the notion of equity theory that the effectiveness of recovery efforts cannot

be understood entirely without considering a consumer's entire history with the company (Kwon & Jang, 2012:1235-1236).

Equity theory offers an especially appropriate approach to understanding and predicting employees' attitudes in a two-tier wage setting, in which the top rate of pay for new employees is substantially lower than that for old employees; this is becoming a common form of union concession (Martin & Peterson, 1987:297-298). Perceptions of equitable pay are instrumental in defining attitudes and behaviours concerning employment because individuals attempt to equate their ratios of outcomes to inputs with the ratios of relevant others (Martin & Peterson, 1987:298).

3.3.9 Social Capitalism Theory

The use of social capital as a tool of analysis for social scientists is not that longstanding, however, this concept already has a wide variety of meanings and uses across a range of disciplines (Haynes, 2009:2). The introduction of the concept of social capital into social theory was inspired by French progressive sociologist Pierre Bourdieu, at the end of the 1970s; Bourdieu was concerned with how oppression and power are reproduced, especially through non-economic means, and the implications of this for the economy and for culture (Fine & Lapavitsas, 2004:19). However, empirical work on social capital in Russia can be traced from the work done by Rose (1999), where Rose asks why some individuals should be healthier than others or attain higher levels of welfare. Rose argues that there is high (horizontal) social capital both at low and higher levels of Russian society, which is reflected in solidarity at low levels and persistent nomenclature at higher levels (Fine & Lapavitsas, 2004:18).

Coleman uses the term social capital inclusively to refer to all human relationships. Coleman defines it in functional terms to mean "the value of these aspects of social structure to actors as resources that they can use to achieve their interests" (Schmid & Robison, 1995:59). Social capital refers to information, trust, and the norms of reciprocity inhering in one's social networks (Woolcock, 1998:153). According to Schmid and Robison (1995:59), Coleman's concept of social capital consists of obligations, expectations and trustworthiness of structures; information channels; as well as norms and effective sanctions. Social capital should translate to communities

blessed with high stocks of social capital being safer, cleaner, wealthier, more literate, better governed, and generally "happier" than those with low stocks, because their members are able to find and keep good jobs, initiate projects serving public interests, costlessly monitor one another's behavior, enforce contractual agreements, use existing resources more efficiently, resolve disputes more amicably, and respond to citizens' concerns more promptly (Woolcock, 1998:155). The concept foresees that higher associational activities inside a community are able to foster a sense of civic engagement where cooperation, reciprocity and mutual trust are developed and used in order to solve collective action and asymmetric information problems (Andriani, 2013:3).

According to Haynes (2009:2-15), a number of weaknesses have been identified in different aspects of the concept of social capital and its use, amongst these are the following:

- Social capital is a concept based on a misleading metaphor, it is not capital.
- Social capital is a concept indicative of the colonisation of sociological territory by fundamentally economic notions, it is not social; social capital is not an original concept, but rather a rebranding of a loose collection of themes related to trust and group participation from social psychology, sociology and economics, it is not a theory.
- Social capital is not an explanation but rather a tautology; in respect of changes in social capital and changes in communities, even if they are related, it is difficult to show from which direction causality originated.
- Social capital is difficult enough to define, but it is impossible to measure; social capital, as outlined in the literature, can be a hindrance to economic success, with different types of negative externalities, barriers to meritocratic and efficient decision making; social capital has a dark side.
- The concept is difficult to operationalise; attempts to do so have been inconsistent, and they obscure the way more specific concepts have been applied.

Dodd (2016:290) views social capital as the exchange of resources by their owners, and that the sociological origins of social capital emphasised the structure and content

of social behaviour. However, in using social capital theory, business scholars focused not on the structure and content of intangible resources, but on the outcomes of ownership. Dodd (2016:290) further notes that social capital is a concept that focuses on the “social resources” available to an individual or collective as a function of their relationships. Ramsey (2016:329) believes that most research work accepts that social capital provides measurable benefits to individuals, institutions, and communities. Social capital analyses often fail to live up to their explanatory ambitions, since social capital theorists frequently fail to distinguish between the elements of social capital, its sources and the means by which it is converted and mobilised for the pursuit of goals (Vorhaus, 2014:186). Other scholars have shown that social capital affects organisational performance measures such as organisation survival (Rass, Dumbach, Danzinger, Bullinger, & Moeslein, 2013:178). Social capital recognises and stresses the potential that the poor have to escape poverty and improve their behaviours through their own community assets, in conjunction with the support provided by development programs, whilst bonding social capital that is found at the level of community assets (i.e. informal networks and community leaders) places emphasis on the notion of empowerment (Aizenberg, 2014:94).

3.3.10 Human Capital Theory

In the 1960s, neo-classical economists Schultz and Becker developed the notion of human capital. They argued that a society's endowment of educated, trained, and healthy workers determined how productively the orthodox factors could be utilised (Woolcock, 1998:154). Bae and Patterson (2014:12) cite that the basic notion of human capital, introduced by Becker (1962), defines human capital theory as skills acquisition, and proposes that skills acquisition can be achieved through education and training. Tan (2014:412) notes that human capital is not only limited to education and training, but it is an extensive concept that covers many areas from health to migration. Human capital theory and the related skills biased theory, which are derived from orthodox or neo-classical economics, aspired to knowledge claims that are universal; however, the general proposition of human capital theory held over the years is that a rise in educational quality will lead to increased productivity and economic growth. This is no longer the case, as there is a need for new theories to challenge its fundamental theoretical and empirical claims (Lauder, 2015:491). The

human capital theory postulates that education level is positively correlated with income (Bae & Patterson, 2014:11). It has been sharply criticised by educators, economists, sociologists, and philosophers for placing education at the centre and for considering it the source of economic development (Tan, 2014:411).

Human capital theory is about behaviour; however, it is unclear whether individuals and organisations would act on perceptions of organisation-specificity as extant theory predicts (Raffiee & Coff, 2016:783). The human capital theory is widely used in the Western contexts to explain objective career success, which reflects the observable achievements of an individual, such as pay and promotion (Hayek, Thomas, Novicevic & Montalvo, 2016:929). It has become a trend for individuals to invest in education and training in the hope of getting a higher income in the future, as the investment is not only “for the sake of present enjoyments but for the sake of pecuniary and non-pecuniary returns in the future” (Tan, 2014:412-413).

3.3.11 Property Rights Theory

The seminal classical property rights literature includes the work of Alchian and Demsetz (1972), Coase (1960), and Demsetz (1967) (Asher, Mahoney & Mahoney, 2005:6). Property rights are an important tool for society, whose significance is derived from the fact that they help a man form those expectations which he can reasonably hold in his dealings with others (Demsetz, 1967:347). The involvement of government in codifying and protecting property rights is regarded as important to providing the preconditions for economic growth (Besley 1995:903). These matters are important in Africa due to relatively poor economic performance and the fact that individualistic notions of ownership are not, as yet, fully accepted (Besley, 1995:903-904).

In developing countries, the presumption of exclusive, transferable, alienable, and enforceable rights is frequently inaccurate and potentially misleading (Feder & Feeny, 1991:135). Land rights may include hunting, passage, gathering, grazing, cultivation, the mining of minerals, the use of trees, and even the right to destroy particular resources (Feder & Feeny, 1991:136). A significant difference between private and public enterprises concerns the transferability of property rights, with property rights in publicly owned enterprises effectively being non-transferable (Crain & Zardkoohi, 1978:397).

The more recent literature on modern property rights equates ownership with residual control rights, whilst classical property rights theory defines ownership as residual rights to income, that is, residual claimancy (Asher *et al.*, 2005:6).

3.3.12 Resource Dependence Theory

The seminal work of Pfeffer and Salancik (1978) was on resource dependence theory and, ever since, resource dependence theory (RDT) has become one of the most influential theories in organisational theory and strategic management (Hillman, Withers & Collins, 2009:1404). According to RDT, an organisation is characterised as an open system, dependent on contingencies in the external environment (Hillman, Withers & Collins, 2009:1404). RDT is based on the basic assumptions that organisations are rarely internally self-sufficient with respect to strategically important resources, thereby leading to dependencies on other organisations; however, organisations seek to reduce uncertainty and manage dependency by carefully structuring their relationships with other organisations through formal and semiformal means (Singh, Power & Chuong, 2011:50). Organisations establish exchange relations with actors in their external environment because they are in need of resources like capital, knowledge, or technologies (Ortlieb & Sieben, 2008:74).

RDT is based on the notion that all organisations critically depend on other organisations for the provision of vital resources, and that this dependence is often reciprocal (Drees & Heugens, 2013:2). This theory points to such inter-organisational interdependencies to explain why formally independent organisations engage in different kinds of inter-organisational arrangements, such as board interlocks, alliances, joint ventures, in-sourcing, as well as mergers and acquisitions (Drees & Heugens, 2013:2). The strength of dependence is based on the importance and criticality of resources for the organisation, on the extent of the resource control by other actors, and on its concentration, that is, the alternatives an organisation has in order to obtain a certain resource (Ortlieb & Sieben, 2008:74). The differences in behaviour of organisations can be traced back to differences in management decisions, which are influenced by external and internal agents controlling critical resources; further, those who control critical resources have power, and power influences behaviour (Nienhüser, 2008:10). Organisational decisions and actions can be explained depending on the particular dependency situation (Nienhüser, 2008:11).

RDT predicts the types of responses that organisations would exhibit depending on the level and nature of dependence they develop, and the relative power of all players. It also provides guidance regarding how the resource acquisition process can be facilitated and sustained (Singh *et al.*, 2011:51). The role played by managers in strategic decision making, to address external constraints, is amongst the most important tenets of resource dependence theory (Hodge & Piccolo, 2005:173).

3.3.13 Financial Theory

The financial theory and corporate policy focuses on issues such as capital budgeting, the cost of capital, capital structure, dividend policy, leasing, mergers and acquisitions, and international finance (Copeland & Weston, 1988:2). Finance theory has made major advances in understanding how capital markets work and how risky real and financial assets are valued, as well as how the tools derived from finance theory, particularly discounted cash-flow analysis, are widely used, however, finance theory has had scant impact on strategic planning (Myers, 1984a:126).

3.3.14 The Capital Structure Theory

The modern theory of capital structure, as cited by Harris and Raviv (1991:297), came from the celebrated paper of Modigliani and Miller (1958), in which they pointed the direction that such theories must take by identifying the conditions in which capital structure is irrelevant. There used to be a general academic view, in the mid-1970s, although not a consensus, that the optimal capital structure involves balancing the tax advantage of debt against the present value of bankruptcy costs (Bradley, Jarrell & Kim, 1984:857). However, this general view become prevalent in the profession, after which Miller presented a new challenge by showing that, under certain conditions, the tax advantage of debt financing at the organisation level is exactly offset by the tax disadvantage of debt at the personal level. There has since been a surge in the development of theoretical literature that attempts to reconcile Miller's model with the balancing theory of optimal capital structure (Bradley, Jarrell & Kim, 1984:857).

Myers (1984b:575) mentions that no one knows how organisations choose their capital structure such as debt, equity or the hybrid securities they issue, and that the capital structure puzzle is tougher than the dividend one. There are existing explanations of capital structure and, of these, only the trade-off argument has a fully worked out

dynamic theory that produces quantitative predictions about leverage ratios in dynamics (Strebulaev, 2007:1749). Ozkan (2001:177-178) mentions that the impact of farm size on capital structure decisions can only be qualified with limited evidence; moreover, the studies conducted by Ferri and Jones (1979), Kim and Sorensen (1986), and Chung (1993), show that there is no systematic association between organisation size and capital structure.

Kopcke and Rosengren (1989:6) state that the pecking order theory and the trade-off theory are among the theories of capital structure.

3.3.15 The Pecking Order Theory

The pecking order theory, as cited by Sánchez-Vidal and Martín-Ugedo, (2005:341), originates from the model constructed by Myers and Majluf (1984); however, the companies' financial policies seem to be better explained by the behaviour described by Donaldson (1961). Donaldson established a hierarchy described by company preference for internal funds over external funds: in the case of external funds, a company prefers debt first, then hybrid instruments like convertible bonds and, finally, equity issues (Sánchez-Vidal & Martín-Ugedo, 2005:341). However, Aggarwal and Kyaw (2010:142) explain that the pecking order model contends that, because of transaction costs and information asymmetry, organisations finance new investments first with retained earnings, then successively with safe debt, risky debt and, finally, with equity. This theory proposes an explanation of how organisation makes incremental financing choice under asymmetric information (Ang & Jung, 1993:31). The pecking order theory of capital structure is regarded as one of the most influential theories of corporate leverage and, due to adverse selection, organisations prefer internal to external finance (Frank & Goyal, 2003:218). It takes into consideration the role of information asymmetry, as far as assets presently held and investment opportunities are concerned, between organisations and the capital market (Bontempi, 2002:2). However, in Cotei and Farhat's (2009:2) study of the non-time-varying coefficient assumption under the pecking order model, it is assumed that organisations within the same industry and across industries finance their external financing needs with the same proportion of debt over time, ignoring the degree of information asymmetry, organisation's debt capacity, equity market condition and other

organisations' characteristics, which significantly affect the amount of debt that an organisation can issue.

According to Frank and Goyal (2003:220), the pecking order theory can be summarised as follows, if there are three sources of funding – such as retained earnings, debt, and equity – available to organisations:

- Retained earnings have no adverse selection problem.
- Equity is subject to serious adverse selection problems while debt has only a minor adverse selection problem.
- From the point of view of an outside investor, equity is strictly riskier than debt. Both have an adverse selection risk premium, but that premium is large on equity.

Ang and Jung (1993:31) argue that the empirical testing of this theory is weak if not inappropriate. Furthermore, to be specific, the fact that one can demonstrate that there is existence evidence, is not sufficient. The pecking order could be also observed under a variety of other explanations such as transaction costs, taxes, and agency costs. Baker & Wurgler (2002:26) note that in pecking order theory there is no optimal capital structure; where this is the case, the cost of deviating from the optimum is significant in comparison to the cost of raising external finance. In addition, raising external finance is costly because managers have more information about the organisation's prospects than outside investors, and because investors know this (Baker & Wurgler, 2002:26).

3.3.16 Trade-Off Theory

The trade-off theory, as cited by Hackbarth, Hennessy and Leland (2007:1389), can be traced to the work of Brennan and Schwartz (1984), Kane *et al.* (1984), Fischer *et al.* (1989), Leland (1994), Goldstein *et al.* (2001), Titman and Tsyplakov (2003), and Strebulaev (2004). According to Baker and Wurgler (2002:25), trade-off theory determines an optimal capital structure by adding various imperfections, including taxes, cost of financial distress, and agency costs, but retains the assumptions of market efficiency and symmetric information.

The trade-off theory translates into empirical hypotheses, for example, it predicts the reversion of the actual debt ratio to a target or optimum, and it predicts a cross-sectional relation between average debt ratios and asset risk, profitability, tax status and asset type (Shyam-Sunder & Myers, 1999:220). The existing trade-off models analyse the optimal amount of debt, but provide no guidance on debt structure, such as the mix of market versus nonmarket debt and specification of priority, therefore, the silence of the models to these issues, could be attributed to the fact that they assume that the organisation issues a single class of debt (Hackbarth *et al.*, 2007:1389). Shyam-Sunder and Myers (1999:219) argue that theory of capital structure has been dominated by the search for optimal capital structure, due to which optimums normally require a trade-off. Strebulaev (2007:1749) warns that the use of a trade-off model seems questionable due to the empirical evidence for this model being, at best, mixed.

In trade-off theory, the capital structure decisions of organisations depend on the benefits and costs of using more debt; thus, less debt is used if the cost of bankruptcy is higher than the tax shield or other benefits of using debt (Aggarwal & Kyaw, 2010:141).

3.3.17 Dividend Policy Theory

Agrawal and Jayaraman (1994:139) cite that the seminal work of Miller and Modigliani (1961) showed the irrelevance of dividend policy. There are several models in literature that explain the existence of dividends as a way for an organisation to signal its formation. Among these are the models developed by Bhattacharya (1979) and Miller and Rock (1985), which differ from those which suppose that dividends are chosen to maximise the total wealth of the organisation's current shareholders (Fudenberg & Tirole, 1995:78). Some researchers view dividends as a bonding mechanism to reduce the agency costs arising due to the conflict between managers and outside shareholders (Agrawal & Jayaraman, 1994:139). There is considerable debate on how dividend policy affects organisation value, with some researchers believing that dividends increase shareholder wealth, and others believing that dividends are irrelevant (Holder, Langrehr & Hexter, 1998:73). According to Holder *et al.* (1998:73), the group of financial theorists who provide a hypothesis for the irrelevance dividend policy include Martin, Petty, Keown and Scott (1991); Miller

(1986); and Miller and Modigliani (1961). Their arguments are based on the following assumptions:

- Perfect capital markets, meaning no taxes or transaction costs exist, the market price cannot be influenced by a single buyer or seller, and there is costless access to information;
- Rational behaviour on the part of participants in the market, valuing securities based on the discounted value of future cash flows accruing to investors;
- Certainty about the investment policy of the organisation and complete knowledge of these cash flows; and
- Managers that act as perfect agents of the shareholder.

Amidu (2007:103) comments that Frankfurter *et al.* (2002) and Black and Scholes (1974) also came to the conclusion that the dividend “puzzle”, both as a share value-enhancing feature and as a matter of policy, is one of the most challenging topics of modern financial economics.

Organisations pay dividends only when they have enough money left after meeting their requirements and short-term needs (Imran, 2011:47). The higher dividend pay-out can be associated with low income retention and higher debt ratios; therefore, both debt and dividends can be used as substitute mechanisms to mitigate managerial agency costs of under- and over-investments (Aggarwal & Kyaw, 2010:140). Frankfurter and Wood Jr. (2002:112) separate the research done on dividend policies into the following three categories:

- One faction sees dividends as attractive and as a positive influence on stock price.
- A second bloc believes that stock prices are negatively correlated with dividend pay-out levels.
- The third group of theories maintains that an organisation’s dividend policy is irrelevant in stock price valuation.

3.3.18 Theory of Initial Public Offering

Great effort, both theoretical and empirical, has been made to understand managerial decision-making in the initial public offering (IPO) process, with the majority of empirical IPO research relying on publicly available stock return data or data contained in Securities and Exchange Commission (SEC) files (Brau & Fawcett, 2006:399). However, there is little empirical research on why companies go public. There is only a study conducted by Pagano, Panetta and Zingales (1998), which directly tests for factors that contribute to a firm's decision to go public by using a proprietary database of private Italian firms and comparing it to public Italian firms. Further, in a less direct approach, a study conducted by Brau, Francis, and Kohers (2003) compares firms that choose to conduct an IPO to private firms that choose to be acquired by a public firm (Brau & Fawcett, 2006:405).

Habib and Ljungqvist (2001:433) note that some IPOs are underpriced, such as the IPOs by companies with "dot.com" in their names; these companies suffer average underpricing, whilst Chinese and Malaysian IPOs are also underpriced. A number of researchers in many different countries have confirmed the underpricing of initial public offering of common stock, with a number of reasons explaining why the owners of an organisation would rationally sell shares to outsiders for less than the apparent maximum price achievable (Brennan & Franks, 1997:392).

3.3.19 Bonus Schemes

According to Guidry, Leone and Rock (1999:114), a number of studies examine managers' motivation to manipulate earnings, including the influence of short-term bonus plans on managers' discretionary accrual decisions. These studies include the work of Healy (1985); Gaver *et al.* (1995) (GGA) and Holthausen *et al.* (1995). Corporate executives are rewarded by means of earnings-based bonus schemes, hence, they select income-increasing accounting procedures to maximise their bonus compensation (Healy, 1985:85). The most popular forms of compensation are deferred salary payment, insurance plans, non-qualified stock options, restricted stock, stock appreciation rights, performance plans and bonus plans (Healy, 1985:85). Healy and Kang (1987:7) define bonus plans and performance plans as follows:

- Bonus plans typically award managers cash payments if certain annual earnings targets are achieved.
- Performance plans award managers the value of performance units or shares in cash or stock if certain long-term (three- to five-year) earnings targets are achieved.

It is noted that no funds are allocated to the bonus pool when actual performance is below some minimum threshold, that is, lower bound. However, as performance exceeds the minimum, funds are added linearly in relation to performance, up to a ceiling, that is, upper bound, at which point the bonus pool is capped (Guidry *et al.*, 1999:116). According to Baker, Jensen and Murphy (1988:594), economists have not studied, extensively, a number of common and important features of organisational incentive systems, including the following:

- pay systems that are largely independent of performance,
- the overwhelming use of promotion-based incentive systems,
- egalitarian pay systems apparently motivated by horizontal equity considerations,
- the asymmetric effects of rewards and punishments,
- tenure and up-or-out promotion systems,
- survey-based and seniority-based pay systems,
- profit sharing,
- holiday bonuses,
- the generally rare observation of bonding and up-front entry fees for jobs,
- “efficiency wages”, and
- the general reluctance of employers to fire, penalize, or give poor performance evaluations to employees.

There is criticism of annual bonus awards that are based solely on financial results, since they promote an over-emphasis on short-term accounting returns and discourage long-term investments (Ittner, Larcker & Rajan, 1997:232).

The theories outlined above show various aspects of operating an organisation. Stakeholder, managerial, tournament, choice and finance theories, amongst others, are all applicable to the implementation and operation of equity share schemes.

3.4 SUMMARY

Various theories related to equity share schemes were presented in this chapter. The information provided details of the pioneers of each theory, the definition of each theory, its applicability and the critics of theories - where such information is available from the documents consulted.

Some of the theories are interrelated, but the information provided distinguishes between each theory. The list of theories available is not limited to the theories included in this chapter, as it would be impossible to include every theory. However, the information provided here makes it apparent that a wealth of theories exists and that it is impossible to use only one theory to explain a particular phenomenon at a farm. The discussion made it clear that there are always different schools of thought for a particular theory, with some scholars for the theory and others against it; this poses a challenge for someone who is not educated on these matters to establish which approach to follow and their reasons for following such an approach.

The long list of theories related to equity share schemes increases the probability of that those involved in farming are unaware of the existence of such theories, and that they blindly apply these techniques without following an effective approach. Alternatively, to some extent, the presented theories explain some phenomena observed during the literature review, such as arguments presented regarding reasons that would trigger the establishment of equity share schemes or selling a farm, and so forth.

The various dynamics involved in equity share schemes are catered for in the theories covered in this chapter. These theories provide balanced information that is important to understanding equity share schemes, whether those theories are known by those who are involved in farming or not. The theories discussed herein cover the phase prior to the establishment of equity share schemes, as well as the phase of operation of the schemes and various stakeholders involved in the schemes.

The following chapter in this study, Chapter 4, provides a detailed discussion of equity share schemes. Furthermore, the chapter plots the history of land reform in South Africa.

CHAPTER 4

EQUITY SHARE SCHEMES IN SOUTH AFRICA

4.1 INTRODUCTION

Chapter 3 of this study provided a discussion of various theories related to equity share schemes. These theories include institutional economics, stakeholder, human capital, equity, expectancy, motivational and social capital theories.

The current chapter, Chapter 4, explores equity share schemes at length in order to better understand them. The University of Pretoria (2008b:63) defines equity share schemes as arrangements whereby farmers sell portions of their farm shareholding to their workers, so that workers acquire voting rights and, in some cases, veto rights on undesirable (to them) structural changes which the farmer might be considering. In addition, farm workers become involved in the management of the farm as board members and receive dividends where these are declared, which motivates workers to improve productivity for the benefit of 'all the shareholders', hence, the scheme is attractive to employees (University of Pretoria, 2008b:63).

4.2 BACKGROUND ON LAND REFORM

The ultimate goals for land reform are to achieve land restitution, land redistribution and land tenure. Although these three elements (restitution, redistribution and tenure) are handled differently and equity share schemes are considered to be under land redistribution, although the equity share scheme is at times not purely a matter of land redistribution. The Molemole Local Municipality in Limpopo has achieved a relatively large amount of land reform via both redistribution and restitution but, in many respects, the mix of land reform initiatives in the area is typical (Aliber & Maluleke, 2010:1). An example of a land reform with such a mix is the Schaaphoek farm, which was a white-owned cattle farm established in the 1920s, in 2005 it was bought by Dr Sadiki through an LRAD grant but, in 2009, the state acquired the farm from Dr Sadiki since it was subject to a land restitution claim by the Nthabalala Royal Council (Aliber & Cousins, 2013:149-150). However, in respect of this matter, Aliber and Maluleke (2010:5) note a resemblance to strategic partnerships to farm worker share equity schemes.

A strategic partnership is a contract between an established commercial agricultural enterprise and formerly disadvantaged smallholder farmers intended to regulate the manner in which the involved parties intended to produce crops together (Bourblanc, Ducrot & Mapedza, 2017:382). Strategic partnerships are more common on restitution projects where the beneficiaries acquire the property outright, thereafter the claimant community creates an operating company of which the claimant community owns half the shares or more and the strategic partner owns the balance (Aliber & Maluleke, 2010:5). The South African government encourages the active involvement of the private sector in enhancing the participation of emerging farmers in mainstream agriculture, preferably through strategic partnerships, which are different types of arrangements between emerging farmers (land reform beneficiaries), agribusiness (the strategic partner) and the state (Bitzer & Bijman, 2014:169-170). Contractually, regarding regulatory arrangement, a strategic partnership should explicitly state the dividend and/or privatisation policy principles (Dementiev, 2016:66). It is expected that the strategic partner provides the working capital, while the operating company pays a lease to the claimant community for the use of their land and a management fee to the strategic partner, whilst the strategic partner is required to transfer skills to the claimant (Aliber & Maluleke, 2010:5). The University of Pretoria (2008b:63-64) makes the following distinctions in percentage allocations to beneficiaries pertaining to equity schemes:

- Less than 25% gives the workers a minority interest with little power over the business, unless these can be achieved on the side via contractual arrangements. Such minorities have limited rights and are often little more than a nuisance-lobby to the employer. For these reasons, small minority share equity schemes are insecure.
- Where shareholding is greater than 25%, employees have substantial veto rights and the power to become part of the consulting framework where major changes to the farming business are planned.
- A shareholding of 50% and more, offers equal or full control, and is fully empowering and desirable.

Gray, Lyne and Ferrer (2004:378-379) state that despite government having guidance policies on equity share schemes, the Department of Land Affairs (DLA) has not

conducted thorough research on these schemes, nor does it have records of the number of schemes currently operating in South Africa. The DLA makes no distinction between land transfers that occur under the various sub-programmes of redistribution (e.g. LRAD, settlement, municipal commonage) along with land transferred under the farm dwellers' tenure reform programme (Jacobs, Lahiff & Hall, 2003:6). This has resulted in the reporting of a lump sum of 1.4 million hectares of land transferred to 130 000 beneficiaries from the start of the programme in 1994 to 31 December 2002 (Jacobs *et al.*, 2003:6). Approximately 50 farm worker equity share schemes were established in 1998, mostly in the Western Cape, but since then they have spread across all nine provinces and involve wine, fruit, vegetable, olive, poultry, cut flowers, dairy and eco-tourism enterprises (Knight, Lyne & Roth, 2003:2).

For a farm to be classified as a share equity arrangement, the farmworkers or others should use their grants to buy shares in an established farming enterprise, and become co-owners with the existing owner (Murray, 1997:199). A farm worker share equity scheme is formed when applicants for land redistribution grants use the awarded grants to purchase equity in a going concern (Aliber & Maluleke, 2010:4). In share-equity schemes, workers have a choice to enter into a joint enterprise with a commercial farmer and/or third-party investor (Fast, 1999b:29). Others view equity share schemes as investment schemes and not as instruments of land redistribution since the aim of the farmers is to obtain committed workers rather than to transfer land (Gray *et al.*, 2004:381). As the University of Pretoria (2008b:64) states, the popularity of employee equity schemes is due to the need for farmers to strengthen their balance sheets or fund the development of their farms; in some instances, these funds are used to pay pressing debts. Land reform equity schemes are built on the same principle of an enterprise, in that a company must issue equity in the form of share capital (normal or preference shares) in order to purchase equity in a company (Klaas, 2011:33).

4.3 BACKGROUND OF LAND REFORM IN SOUTH AFRICA

Sud (2007: 603) views land as a symbol for power, wealth and status. The importance of land cannot be over emphasised as land serves as a principal source of natural capital and goods for subsistence to millions of poor people, and it is further considered to be one of the most important assets and an important reason to earn a living (Hoeks,

Azadi, Khachat, Troyo-Dieiguez, Van Passel & Witlox, 2014:647). Unfortunately, land is not portable and cannot be increased or modified, therefore, its productivity and sustainability are of great importance (Hoeks *et al.*, 2014:647). South Africa's land policy does not emerge out of a vacuum, but comes from a political and historical context, which is a legacy of the racial past and its patriarchal nature (Madletyana, 2011:17).

The 1913 Native Land Act resulted in the restriction of African land "ownership" to tribal homelands, which caused grossly inequitable land ownership in South Africa (Knight & Lyne, 2002:356). As a result, land reform is a priority programme in South Africa so as to redress land ownership (Terblanché, 2011:55). This was made possible, as stated by Hall, Kleinbooï and Mvambo (2001:1) through the South African Freedom Charter (1955) which declared that the "Restriction of land ownership on a racial basis shall be ended, and all the land re-divided amongst those who work it, to banish famine and land hunger". The promulgation of both Land Acts (1913 & 1936) was due to the challenge faced by the South African Party, which came to power after the formation of the Union of South Africa in 1910, to define a single land and labour dispensation for South Africa (Department of Rural Development and Land Reform, 2015:5). The land reserved for black South Africans by the Native Land Act of 1913 was increased from eight percent to thirteen percent, but the land which could be acquired by the Trust was limited to land within the scheduled native areas or within released areas (Kloppers & Pienaar, 2014:683). The demands from its rural constituency threatened by the successes of farmers in tenancy or share-cropping forms of tenure led to the passing of the Native Land Act of 1913, where 80% of the country's population was restricted to 13% of the land (Department of Rural Development and Land Reform, 2015:5). This resulted in many black farmers losing a substantial portion of their income which, in turn, resulted in further economic hardship for them (Kloppers & Pienaar, 2014:682).

The Native Land Act of 1913 was the foundation for apartheid and territorial segregation, which formalised limitations on black land ownership, believing that differentiation between dissimilar races was fundamentally desirable (Kloppers & Pienaar, 2014:680). The government of the day was supposed to enhance social cohesion and the spirit of "Ubuntu (an African perspective as far as human relations

are concerned)”, instead of exacerbating the situation by promulgating segregation laws like the Native Land Act of 1913 and, much later, the Group Areas Act of 1950 (Mbedu, 2014:101). This legislation of 1913 was intended to destroy independent African existence for the benefit of White settlers using a number of reserves for the settlement of black people, which would in turn serve as pools of migrant labour for White-owned farms and urban based industry (Madletyana, 2011:17). The Act led to the identification of areas within which black people would not be permitted to acquire or hire land or any interest in land, as well as areas where persons other than black people would be prohibited from acquiring or hiring land or any interest in land (Kloppers & Pienaar, 2014:681-682).

Over and above this loss, approximately 1.5 million hectares of land rented to whites by blacks was also lost (Madletyana, 2011:18). Moreover, the Native Trust and Land Act of 1936, partially implemented the recommendations of the Beaumont Commission to expand areas allocated to Africans by almost double, with the entrenchment of a policy of spatial and territorial segregation, which was followed until the 1980s (Department of Rural Development and Land Reform, 2015:6). The policy was designed to create a duality of land tenure in South Africa, with whites holding land in freehold title supported by registration and Africans in the designated territories with tenure held in trust by the state (Department of Rural Development and Land Reform, 2015:6). The so-called coloured population was confined to reserves and the African (black) population to Bantustans where land tenure and farming practices were mainly communal (Mbedu, 2014:106). This Act of 1936 led to the eviction of unregistered black people living on white-owned land, such as cash paying tenants (Madletyana, 2011:18). Due to the Native Trust and Land Act of 1936, the South African Native Trust, a state agency, was established to enable the administration of trust land, settlement, support, benefit and the material welfare of the natives of the Union (Kloppers & Pienaar, 2014:682).

Jacobs (1997:83) states that land reform involves the transfer of land, particularly private land from large or medium holders to poorer rural farmers, with compensation or just compulsory transfer. The democratically elected government of South Africa managed to adopt the land reform programme to deal with issues inherited from the past and developmental challenges in rural areas, through restitution, tenure reform

and redistribution (Jacobs *et al.*, 2003:1). Restitution is about historical rights to land, tenure reform is about land holding, and redistribution is about transforming the racial pattern of land ownership (Jacobs *et al.*, 2003:1). According to Cloete (2010:111), the South African government after 1994 opted for a three-pronged land reform policy to correct past injustices, which includes:

- Land restitution, to restore land or provide financial compensation for people dispossessed of the land after 1913,
- Land redistribution, which is about making land available for agricultural production, settlement and non-agricultural enterprises,
- Land tenure reform, which was introduced to give farm workers and labour tenants security of tenure, over houses and land where they work and stay.

Among many reasons leading to land reform are those involving economic, political and social criteria, where economic reasons centre on increases in production and upon associated impact, while political and social rationales encompass a variety of reasons (Jacobs, 1997:83). The vision of land reform in South Africa is to ensure that farms transferred to new landowners should be commercially viable, and previously disadvantaged farmers should be assisted to achieve commercial viability; however, the reality of the situation is that many land reform projects have failed to achieve commercial viability (Kirsten, Machethe, Ndlovu, & Lubambo, 2016:442). Lyne and Roth (2004:1) are of the view that land reform has lagged far behind the goals set by the first democratically elected government of South Africa. This observation came after considering that, in KwaZulu-Natal alone, by then only half a percent of the commercial farmland had been transferred to previously disadvantaged owners each year, despite the availability of government grants to purchase land on a willing-buyer, willing-seller basis (Lyne & Roth, 2004:1). Terblanché (2011:55) takes this matter further by mentioning that, in those instances where there has been implementation of agricultural projects, the results show a high failure rate of the implemented projects, with the majority being unsustainable.

Aliber and Maluleke (2010:2) argue that South Africa's land reform challenge is daunting considering that it differs from the land-to-the-tiller type of land reform that was undertaken in Japan and Taiwan a century ago, "whereby erstwhile tenant

farmers were given ownership of the land they farmed at the 'expense' of absentee landlords". In the case of South African, one has to "determine how to reconfigure 'junkie' estates, i.e. large scale commercial family farms that rely on mechanisation and wage labour" (Aliber & Maluleke, 2010:3). Terblanché (2011:55) notes that the rate at which transformation is taking place globally is at a high speed, is sometimes confusing and the intended direction is sometimes not so clear. Global initiation of land reform programmes are influenced by a variety of circumstances due to different reasons in different types of state formations (Jacobs, 1997:83). Regarding land reform, Terblanché (2011:56) mentions that the programmes are not only for the settlement of previously disadvantaged individuals, groups and/or communities on agricultural land, but also to provide support services to improve the lives of beneficiaries. Kirsten *et al.* (2016:446) refer to Zimmerman's (2000) views that the return of land to beneficiaries is not sufficient because, in addition to land, the success of beneficiaries depends on the following:

- access to finance to cover upfront and out-of-pocket costs of production;
- access to extension services and training to improve their technical and managerial skills; and
- the presence of supporting infrastructure (e.g. roads, electricity and water).

Gumede (2014:50) states that there is policy confusion regarding land reform in South Africa. Puttergill, Bomela, Grobbelaar and Moguerane (2011:599) argue that there is a disjuncture between the community and policy, due to the naive presumption that those in power make better policies for the 'poor'; instead, it should be established how and to what degree policy makers' decisions may be compatible with what ordinary people can accommodate in their livelihood strategies in practice.

Lahiff (2007:1590) confirms that even the Ministry of Agriculture and Land Affairs acknowledged the need for additional support for land reform beneficiaries. Hence, in 2004, a new Comprehensive Agricultural Support Programme (CASP) was introduced. Various studies show that beneficiaries struggle to access the following services: credit, training, extension advice, transport and ploughing services, veterinary services, as well as input and produce markets (Lahiff, 2007:1590).

Kloppers and Pienaar (2014:688) state that there were unacceptable inequalities in levels of income. Hoeks *et al.* (2014:648) characterise the former homelands of South Africa to show insecurity of tenure, conflict over land, internal migration to crowded cities, de-peasantisation, extreme poverty and land degradation. Logan, Tengbeh and Petja (2012:174) attribute the government market-led approach to acquisition of land as a prerequisite for conflict avoidance and rural development. The Group Areas Act of 1950, dubbed the “second wave” of evictions, exacerbated the situation as the National Party government forcibly removed black, coloured and Indian people from designated “white areas” (Kloppers & Pienaar, 2014:684).

The Reconstruction and Development Programme (RDP), introduced in 1994, was one of the key programmes aimed at correcting the injustices of the past through the redress of inequalities and building a vibrant and democratic South Africa; among the identified aspects to be addressed by this programme were the provision of land and housing, as well as access to safe water and sanitation (Kloppers & Pienaar, 2014:688). The RDP advocated for the eradication of poverty through programmes of land reform and land redistribution, as well as the development of human resources, hence, the emergence of the White Paper on Land Policy in 1997 (Kloppers & Pienaar, 2014:691-692). The land stock taken after the end of the apartheid era, post 1994, shows that white individuals and companies owned approximately 90% of the land, while the native black majority owned approximately 10% of the South African soil, which led to the development of a wide range of land-related policies and programmes (Hoeks *et al.*, 2014:648-649). Table 4.1, below, which is an extract from Hoeks *et al.* (2014: 649-650), summarises land-related policies, laws and programmes in South Africa. This is not an exhaustive list as some were not included, such as the Comprehensive Rural Development Programme (CRDP).

Table 4.1: Land-related policies, laws and programmes in South Africa

Policy, laws, programmes	Key features / Comments
1996 Constitution (Section 25 (5) & (6))	<ul style="list-style-type: none"> • Requires the State to take reasonable legislative measures within its available resources to foster conditions which enable citizens to gain access to land on an equitable basis. • Entitles a person or community whose tenure to land is legally insecure as a result of past racially discriminatory laws or practices to either a legally secure tenure or comparable redress to the extent provided by the law.
1994 Land Rights Act, as amended by the 2004 Restitution of Land Rights Amendment Act	<ul style="list-style-type: none"> • The 1994 Act aimed at restoring the property rights of persons and communities dispossessed of property as a result of racially discriminatory apartheid laws and practices. It established the Commission on Restitution of Land Rights and a Lands Claims Court for purposes of receiving and adjudicating restitution claims using a market-based strategy. The 2004 Amendment Act expanded the scope of the Ministry of Land Affairs in land restitution matters. The Act does not explicitly mention women as a group deserving of special protection.
1996 Land Reform (Labour Tenants) Act and the 1997 Extension of Security of Tenure Act (ESTA)	<ul style="list-style-type: none"> • This forms part of the legal framework that governs land distribution and tenure reform in communal agricultural areas. These laws focus on protecting rural groups that live under insecure tenure arrangements due to racially discriminatory property and labour laws that existed prior to 1994.
1997 White Paper on Land Policy	<ul style="list-style-type: none"> • Framed a land-reform strategy with the three components of land restitution, land redistribution, and tenure reform.
1997 Settlement Land Acquisition Grant (SLAG)	<ul style="list-style-type: none"> • Introduced the provision of a grant for purchasing land, enhancing tenure rights, or investing in infrastructure, home improvement and farm capital.
2004 Communal Land Rights Act (CLaRA, operational in 2008)	<ul style="list-style-type: none"> • Combines customary land-tenure practices and titling by vesting ownership of land in a large group living under the authority of a Traditional Council. • Land rights are administered by committees according to administrative powers conferred on them by the rules of the community.
2001 Land Redistribution and Agricultural Development Programme (LRAD)	<ul style="list-style-type: none"> • Provided a grant, determined on a sliding-scale basis, and matched the applicants' own contributions which could be in cash or in kind. • Focused on two components: (i) transferral of agricultural land to distinct individuals and groups, and (ii) the improvement of access to municipal and tribal land for grazing purposes.

Source: Hoeks *et al.* (2014:649-650)

The new government made a commitment not to intervene in the land market; however, instead of getting involved in the purchase of land for redistribution to adhere to the principle of “willing-buyer, willing-seller”, government provided resources to finance market-led redistribution transactions without government becoming the owner of the land (Kloppers & Pienaar, 2014:692-693). Government has realised the weaknesses of this principle, hence, the government is considering abolishing it and moving towards the more aggressive approach of expropriation (Kloppers & Pienaar, 2014:693). The slow progress of market-led land reform is not unique to South Africa as empirical evidence from Asia, South America and Africa show similar results (Logan *et al.*, 2012:176). Madletyana (2011:41) observes that there are divided views on land reform policy in South Africa, with those who support the market-led approach and those who support a state-led approach. The evidence shows that market-led land reform exacerbates poverty by reifying rather than eliminating class, race and gender disparities in land distribution and for sacrificing peasant aspirations at the crucible of land owners’ rights (Logan *et al.*, 2012:176). This has led some equity advocates to propose that efficient agricultural production can be accomplished only through forced land acquisition, nationalization and equitable redistribution (Logan *et al.*, 2012:176). Those who advocate for the state-led approach emphasise the development of small scale family farms, considering that the two phases of South Africa’s post-1994 land reform i.e. 1994-1999 and 2000-2009 focused on large-scale farming; however, government has recently pushed for the establishment of small scale farms through its Comprehensive Rural Development Programme (CRDP) (Madletyana, 2011:42). The CRDP seeks to be an effective response to poverty and food insecurity by maximizing the use and management of natural resources to create vibrant, equitable and sustainable rural communities, through coordinated and integrated broad-based agrarian transformation; strategically increasing rural development; and an improved land reform programme (Ministry of Rural Development and Land Reform, 2009:9-13).

Gumede (2014:50) views land reform to be a dismal failure, which has led to a land crisis in South Africa. Walker (2012:809) states that land reform is in disarray, hence, even the Minister of Rural Development and Land Reform, Honourable Minister Nkwinti, acknowledged the problems in 2011, while stating that government was on a learning curve. There is a complex maze of challenges in this regard, where involved players (government officials, claimants, landowners, non-governmental organisations

(NGOs), politicians, etc.) have clashing interests and strong disagreements around specific outcomes (Walker, 2012:810-811). There are claims that approximately 90% of land reform projects have failed and some are of the belief that land reform is on a 'road to nowhere' (O' Laughlin, Bernstein, Cousins, & Peters, 2013:8-9). More than 90% of the farms bought by the government for victims of apartheid through restitution or redistribution have collapsed; this requires a shift of emphasis towards viewing land primarily as an asset, and requires development (Puttergill *et al.*, 2011:609). Walker (2012:810) puts the blame on the bodies responsible for implementing the programme; he indicates that they compromised the state's ability to deliver a reasonably acceptable set of outcomes in this symbolically charged endeavour and further states that the obstacles facing the programme go well beyond those attributable to the poor performance of state officials. Where beneficiaries run a farm, the challenge is whether or not the dividends yielded by these commercial activities will be adequate to meet these community's expectations (Puttergill *et al.*, 2011:609).

In a study conducted by Xaba and Roodt (2016), as reported by News24 (including various publications such as The Star newspaper of 7 December 2016), it is stated that research findings reveal that 70% to 90% of projects have failed, with the inclusion of land restitution projects. The study focused on a land restitution project in Macleantown, a village near East London in the Eastern Cape; it was discovered that there were no tangible benefits for the village people and it cited lack of support for farmers once they become landowners as the common cause of failure, because government neglected them (Xaba & Roodt, 2016). When the South African government introduced the Procedural Guidelines Related to the Registration of Beneficiaries on the Critical Project Database, it was indicated that a review of redistribution projects revealed that a number of land reform beneficiaries have either received grants in excess of R16 000 by making multiple applications to the Department of Land Affairs (DLA); or have derived benefits from other state departments, such as the Department of Housing (Department of Land Affairs, 1998:2). In the 1990s, in separate processes, both the Department of Land Affairs (DLA) and the Department of Housing (DOH) developed grants, with the DLA grant developed to enable poor people to access land for settlement or other purposes, and the DOH grant to assist poor people to acquire their own homes (Hall *et al.*, 2001:8). Farm workers were eligible for either of these grants, not both (Hall *et al.*, 2001:9).

Aliber and Cousins (2013:140-141) are not convinced that poor extension and other support to land reform 'beneficiaries', inadequate beneficiary skills, and too little money spent (and thus land transferred) per beneficiary, among others, are the fundamental reasons for poor livelihoods and production outcomes. Instead, they believe that the more fundamental problem is the South African state's stubborn commitment to the Large-Scale Commercial Farming (LSCF) model of agriculture, notwithstanding the rhetorical embrace of smallholder agriculture in some policy documents. The R15 000 per household grant was based on the average land market price of R900 per hectare (Aliber & Cousins, 2013:142). In 2001, government was delinking the DLA and DOH grants to create separate databases in order to enable people to apply for both the land redistribution and the housing grant (Hall *et al.*, 2001:9). Hall (2009:127) provides information, post 1998, that reveals that government developed a number of initiatives to support land reform beneficiaries, all of which have been hugely underfunded.

A literature review of work done by other researchers shows that further reasons for failure include inadequate post-settlement support, lack of skills, poor planning and infighting within communities (Xaba & Roodt, 2016). Xaba and Roodt (2016) proposed that government has to concentrate on its policy of land acquisition for redistribution and ensure that redistributed land is used productively.

4.3.1 Land Restitution

After 1913, people were dispossessed of their land under racially discriminatory laws, which were later amended to include racially discriminatory policies (Beyers & Fay, 2015:433). Land restitution is the key programme for land reform as it is about restoring cultural land to the people who were the original owners/occupiers (Gumede, 2014:59). The Restitution of Land Rights Act was the first piece of legislation to be passed by the first democratic government of South Africa in 1994 (Walker, 2005:647). Restitution was provided an unusual moral and legal standing as a constitutional right, that had to be balanced against other fundamental rights in determining priorities for development policies related to land (Beyers, 2013:966).

Land restitution is regarded as a very complex process of community reconstruction (Beyers, 2013:967). The land acquisition process involves negotiations between the

government and land owners, and amongst claimants (Logan *et al.*, 2012:178). In implementing land restitution, the government set three years to receive claims, five years to produce negotiated settlements, and ten years to complete the implementation (Walker, 2012:810). The land restitution process is complicated and often frustrates claimants' initial expectations for quick and fair settlement (Beyers & Fay, 2015:432). The State measures the success of land restitution against the number of claims processed, hectares of land restored and financial compensation paid out (Walker, 2012:817). From 1994 to 2000, approximately 63 455 claims had been lodged, 4 925 had been settled, with many of the settlements being cash payment, and just 162 for the restoration of land (Gumede, 2014:59). By the year 2006, 80 000 claims had been lodged and the majority (81%) were for urban land (Gumede, 2014:59). In 2010, approximately 75,800 claims were settled, out of the approximately 80,000 restitution claim forms, benefiting approximately 325,000 households at a total cost of R21.6 billion, averaging approximately R66 000 per household, which is not a significant amount (Walker, 2012:817-818).

The results should not only be quantity based, but also quality wise (Walker, 2005:652). Walker (2012:818) argues that success is far more than the return of a plot or the handover of a cheque, since the mission statement in 1997 set out the following goals:

- to promote justice in respect of all victims of dispossession of land rights as a result of racially discriminatory laws or practices;
- to facilitate negotiated settlements, bringing together all stakeholders in matters related to land claims;
- to promote sustainable use of land through the restitution process; and
- to foster and nurture a spirit of reconciliation through the restitution process among those who use land and within the nation at large.

Despite these set goals, the overall record on 'delivery' would inevitably be seen as falling short of what was promised (Walker, 2012:818).

The forced removals of people is linked to the development of cities, which are considered as preserves of dominant class power, and others pursued forced removals in the name of 'progress', 'modernization', 'beautification', 'ethnic cleansing',

'sanitization', 'restoring order', and the like (Beyers, 2013:965-966). Cash settlements have no significant effect on development (Beyers, 2012:827). In the case where the application is granted, claimants are nevertheless entitled to other forms of restitution such as monetary compensation, alternative land, or priority access to state housing (Beyer, 2016:204). In the rural areas, restitution is exceptional because of its developmental focus; however, in urban areas, it is viewed at best as marginally contributing to transformation and, at worst, as diverting potential resources and attention from rural land reform, which is deemed more fundamental to development (Beyers, 2013:966). In Port Elizabeth, after the forced removal of people in a residential area called Korsten, the area was changed to an industrial area, which was in private hands (Beyers, 2012:833-834). In most cases, the urban claims consist of individual claimants, which are resource intensive (Beyers, 2012:827). Where claimants cannot acquire their historical lands, the state can compensate them in the form of another land (land swap) or cash payment (Logan *et al.*, 2012:178).

Gumede (2014:59) states that the majority of claimed land was part of urban centres, hence, claimants were compensated with money, leaving them landless. When land is in private hands, it becomes difficult to obtain at a viable cost (Beyers, 2012:834). Approximately 19 million people were landless in South Africa by 2003, despite the existence of the land restitution programme; furthermore, 13 million people were, in 2005, crowded in the former homelands due to unresolved claims (Logan *et al.*, 2012:178). Puttergill *et al.* (2011:598) bring another dimension to the debate of land ownership as they explain that the expectations of the people themselves have shifted and society is no longer agrarian in its disposition or aspiration, since a majority of people are oriented towards a consumer-based lifestyle in which a secure cash income plays a key role. People are interested in obtaining employment or pursuing other more dependable means of accessing cash (Puttergill *et al.*, 2011:598).

The reasons for the delays in land matters are of a technical and legal nature (Beyers & Fay, 2015:433). Logan *et al.* (2012:178) state that there are various explanations for setbacks in the land restitution programme, which include the unfair deadline of December 1998 for eligible claimants who did not learn of the programme on time; administrative problems, including a rigid framework for validating and prioritizing claims; and cumbersome legal terminologies surrounding the right to claim. Although

some people expect the agricultural activities on restored land, but land restitution and commercial agriculture are two different processes, therefore, there is no reason why the one should necessarily imply the other (Puttergill *et al.*, 2011:597).

The State's wish for the restored land regards it as an economic resource, with commercial agricultural production presented as the most efficient and sustainable use of the land (Puttergill *et al.*, 2011:597). Legal structures have to be formed to represent claimants and enable landownership; at the same time, claimants have to show unity, which may not endure as some claimants channel frustration into challenges to the legal entity that nominally represents them (Beyers & Fay, 2015:433). Out of 101 labour tenants at the Baynesfield Estate outside Pietermaritzburg, who lodged a claim on a portion of the Estate, by the time the transfer of 265 hectares was done in 2000, only 24 claimants received land because they wanted land and 77 households received money because they preferred money (Walker, 2005:654). In 2004, no households were living on the estate (Walker, 2005:654).

A study conducted by Puttergill *et al.* (2011:608), on three communities involving land restitution claims in the Western Cape, Limpopo and KwaZulu-Natal, shows that where households have access to fields they lack capital, a regular water supply, labour and fencing, which forces people to secure employment rather than engaging in small scale agricultural production. Walker (2005:655) attributes the post-settlement challenges to the quality of the development plans drawn up for communities whose land is being restored and the inadequacy of post-settlement support.

In an attempt to avoid individual claims in Port Elizabeth, an association was formed called the Port Elizabeth Land and Community Restoration Association (PELCRA) (Beyers, 2012:827). The mission of PELCRA was to group all individual claimants in Port Elizabeth for the purpose of collectively developing alternative land allocations rather than restoring original properties to their former owners or settling claims with financial compensation (Beyers, 2012:827). PELCRA was proactive in its approach as it started valuing property in the area to ensure equity amongst the claimants (Beyers, 2012:827). Contrary to the idealisation of the advantages for the formation of PELCRA, Beyers (2012:828) states that the settlement process stalled because of state inaction and some claimants mobilised each other to register their dissatisfaction with

PELCRA's credibility in representing them. The example of PELCRA raises a number of questions that are important to understanding the dissatisfaction of some claimants and what led to state inaction. Beyers (2012:830) mentions that the Port Elizabeth Legal Resources Centre advised many victims of forced removals who approached it to form an organisation, hence, the birth of PELCRA, which then elected leadership from 200 to 300 people who attended the meeting. The Legal Resources Centre and Urban Services Group got involved with PELCRA, and provided its services free of charge (Beyers, 2012:832). The claimants who wanted a cash settlement were left to negotiate their settlements directly with the Eastern Cape Regional Land Claims Commission (RLCC); this created problems when they were asked to resign from PELCRA because the claimants believed that property values had climbed considerably higher than the monetary compensation values (Beyers, 2012:832-834). The expectations of some claimants were not met as the proposed settlement plot sizes turned out to be 200, 320 and 400 square metres, which some claimants referred to as 'toilet sites'; later, the settlement land sizes were 400, 600 and 800 square metres (Beyers, 2012:833-834). The claimants' settlement values would be R20 000, R30 000 and R40 000 depending on the property they had lost (Beyers, 2012:834).

A typical example of the resemblance of equity share schemes in land restitution was reported by the Limpopo Department of Economic Development, Environment and Tourism (2007:40) where it is stated that the Zebediela Estate citrus plantation was handed to the Batladi Community after a successful land claim consisting of 331 households near Mokopane. The land restitution programme provided the formation of partnerships between the Batladi community and the existing farmers on the estate (Limpopo Department of Economic Development, Environment and Tourism, 2007:40). Agrarian production and the creation of sustainable rural livelihoods are crucial for achieving national economic growth and a more equitable distribution of resources (Beyers, 2013:966). This is regardless of a programme that made land available for agrarian production. Land restitution is linked to ancestral lands where the state is to restore or return land or provide comparable compensation to people whose land had been appropriated by law since 1913 when the Land Act was passed (Gumede, 2014:55-58). Land redistribution requires that individuals, groups or communities take initiative to approach the Department of Land Affairs to access

grants for the purchase of a targeted or identified piece of land (Middelberg, 2013a:165).

4.3.2 Land Redistribution

In addressing land reform, land restitution was the first plank, followed by land tenure reform, then land redistribution (Moseley & McCusker, 2008:324). The land redistribution process in South Africa depends on market-assisted redistribution (Kirsten & van Zyl, 1999:329). This market-assisted approach, adopted from the World Bank, is referred to as the 'willing-buyer, willing-seller' concept (Lahiff, 2007:1577). Stemela (2007:21) mentions that the sub-programmes of the land redistribution programme are:

- Agricultural Development - to make land available to people for agricultural purposes;
- Settlement - to provide people land for settlement purposes; and
- Non-agricultural enterprises - to provide people land for non-agricultural enterprises, for example, eco-tourism projects.

Global comparison shows that unequal land distribution in South Africa is considered one of the starkest examples of inequity relative to population due to widely known statistics on apartheid-era land concentration (Moseley & McCusker, 2008:322). The first period of land redistribution was from 1994 to 1999, making use of the Settlement / Land Acquisition Grant (SLAG) intended for "historically disadvantaged groups" for settlement or agricultural purposes, with a maximum award of R15 000 per household, which later changed to R16 000 (Moseley & McCusker, 2008:324). Most of the beneficiaries before the projects began were untrained, poor and often lived in marginal environments (Moseley & McCusker, 2008:324). Government relied on 'communal property associations' (CPAS) for redistribution, due to the Communal Property Associations Act of 1996, which guaranteed certain rights to groups of individuals that had formed to purchase land utilizing the SLAG mechanism; the act is strictly limited the resale of project land (Moseley & McCusker, 2008:325).

The first democratically elected government promised 30% of white controlled agricultural land to the majority black population by 1999, which produced

disappointing results as little land had been transferred by 2000 (Moseley & McCusker, 2008:322). Almost everyone acknowledged that there was a problem, but there was no consensus on the source of the problem and the relevant remedial action to be taken (Aliber & Cousins, 2013:140). However, disappointing results prompted government to revise land-reform policy, changing from a model of land redistribution to alleviate poverty toward one aimed at promoting a class of black commercial farmers (Moseley & McCusker, 2008:323). This was the birth of the Land Redistribution for Agricultural Development (LRAD) program, which had largely replaced the Settlement / Land Acquisition Grant (SLAG) by late 2000 (Moseley & McCusker, 2008:323). The new grant (LRAD) came after the moratorium (which is discussed further in the next subsection) of new redistribution projects in 1999, which prohibited the acquisition of land solely for settlement, with grants ranging from R20 000 to R100 000 (Moseley & McCusker, 2008:325-326). The LRAD grant allowed for group projects and the subdivision of land, but it clearly stated that it discouraged group projects (Aliber & Cousins, 2013:142-143). Table 4.2, below, shows the list of land reform grants as of 2003.

Table 4.2: Land reform grants in terms of Act 126

Product	Level of grant	Beneficiary	Programme
Settlement / Land Acquisition Grant (SLAG)	R16 000	Households	Redistribution Tenure reform
Land Redistribution for Agricultural Development (LRAD)	R20 000 to R100 000 depending on amount of own contribution	Individuals	Redistribution
LRAD Planning Grant	Maximum of 15% of anticipated project costs	Individuals (or groups in projects where LRAD grants will be pooled)	Redistribution
Settlement Planning Grant	Maximum of 9% of anticipated project costs	SLAG beneficiary households or groups	Restitution Redistribution Tenure reform
Commonage Grant	Unspecified	Municipalities	Redistribution (municipal commonage)
Land Development Objectives Planning Grant	Unspecified	Municipalities	Restitution Redistribution Tenure reform
Restitution Discretionary Grant	Maximum of R3 000	Claimants (individuals or groups)	Restitution

Source: Jacobs, Lahiff and Hall (2003:3)

In 2008, evidence showed that the LRAD grant was not sufficient for a family to acquire the entire farm, hence, the amount was increased to R431 000 to ensure that large areas of land are redistributed to groups consisting of fewer beneficiaries (Aliber & Cousins, 2013:143). Despite so many land reform policy changes by the South African government, the initial target of redistributing 30% of land over five years was still not achieved after 18 years, since only eight percent of commercial farmland had been redistributed (Aliber & Cousins, 2013:140). Various studies cited the following challenges: poor extension and other support to land reform 'beneficiaries'; inadequate beneficiary skills; too little money spent (and thus land transferred) per beneficiary; an economy that is hostile to small scale entrepreneurs generally, whether in agriculture or off-farm; and a failure to subdivide large farms (Aliber & Cousins, 2013:140).

According to Jacobs, Lahiff and Hall (2003:4), in 1999 the then Honourable Minister of Agriculture and Land Affairs, Mrs Thoko Didiza, in a policy statement released in

2000, announced the review of land reform policy and programmes, as well as a moratorium on new redistribution projects due to the following challenges:

- a number of 'severe limitations' in the structure and implementation of SLAG, including over-reliance on market forces;
- payment of inflated prices for marginal land;
- lack of any significant contribution to the development of semi-commercial and commercial black farmers; and
- limited impact on rural employment or transformation of agricultural land holdings.

Moseley and McCusker (2008:325) add the following reasons regarding the moratorium: "lengthy project cycles, excessive bureaucracy and reliance on outside consultants [,] ... over-centralisation of the decision-making process, and low levels of complementary support services". Jacobs *et al.* (2003:4) further mention that before the Minister issued the policy statement to lift the moratorium on new redistribution projects, she proposed a revised redistribution programme, to include the following:

- grants for aspiring commercial farmers,
- food safety net grants for the rural poor,
- settlement grants for both the urban and rural poor to access land for settlement, and
- a revised commonage grant that would be available to both municipalities and tribal authorities.

Jacobs *et al.* (2003:4) note that after a lengthy period of review and debate, a definitive new redistribution policy was unveiled in June 2001, entitled Land Redistribution for Agricultural Development: A sub-programme of the land redistribution programme, with four types of projects that can be supported under the LRAD:

- food safety net projects: agricultural production primarily for subsistence purposes,
- share equity schemes: purchase of shares in established commercial agricultural enterprises,

- commercial agricultural production: agricultural production primarily for the market, and
- agriculture in communal areas: existing subsistence or commercial production in the former homelands.

The reason mentioned for the 2009 moratorium is a lack of economic empowerment for farm workers in the majority of agricultural share equity schemes (Kleinbooi, 2011:11). The focus of the new action plan was on increasing the success of partnerships between farmers and workers, although the Minister stated that farmers would not be forced into equity partnerships, which was bizarre (Kleinbooi, 2011:11). This was because it was not ensuring that farm workers benefit from land reform and transform rural land patterns, and to create economic empowerment and ensure tenure security for farm workers (Kleinbooi, 2011:11).

Jacobs *et al.* (2003:3) note that most projects under the land redistribution programme involve groups of applicants pooling their grants to buy formerly white-owned farms for commercial agricultural purposes, whilst less commonly, groups of farm workers have used the grant to purchase equity shares in existing farming enterprises. Aliber and Cousins (2013:143) observe that the land restitution programme hardly changed its approach, simply because there is less latitude in how to define a 'restitution project', whereas land redistribution has witnessed a number of changes, including a concerted effort to move away from group farming projects. Raup's (1986:1338) comment on the study done by Barry (1980) on farmland investment was that some researchers had relied on Barry's findings that there was little systematic risk in farmland investment, however, new events rendered results moot.

Interestingly, Cousins (2016:18) believes that land restitution has proved to be a mistake since it is complex, cumbersome, conflict-ridden, expensive, consumes scarce capacity and yields few sustainable benefits. Moseley and McCusker (2008:324) explain that "academic researchers often examine cases of demonstrable change in an attempt to uncover driving forces and reduce such forces across case studies to a set of common causes of change".

4.3.3 Land Tenure

In the former homelands, the pattern and forms of land-holding and land use have been directly influenced by the policies and actions of the South African state (in its various forms) in pursuit of racial segregation and the promotion of an oppressive migrant labour system (Lahiff, 2000:46). Historically, farm workers and farm dwellers' tenure security on farms has been determined by their personal relationships with farmers, with ultimate authority vested in the white owner, usually a man, while access to housing was tied to the employment of the male head worker who also acted as manager over his family members in their capacity as residents and workers on the farm (Mkhize, 2014:213).

The distribution of land in South Africa is on the basis of tenure, defined as “the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land and associated natural resources, including water, trees, minerals and wildlife”, and also defined as “the terms and conditions on which land is held, used and transacted, determining who can use what resources for how long, and under what conditions” (Hoeks *et al.*, 2014:647). The increasing drop of powerful global forces and elite actors engaging in land grabs, social justice, gender equity, environmental sustainability, and customary institutions to narrow economic framing narratives that focus on resource extraction, external food security, and biofuel production based on the priorities of a few, has led to women and men being dispossessed of their land, livelihoods, and access to critical natural resources, thus experiencing acute hardship, loss of livelihoods, gender insecurity in tenure, and landlessness (Verma, 2014:53).

Tenure reform seeks to secure the land rights of farm workers, labour tenants and residents in ‘communal areas’ under ‘traditional’ systems; however, new legislation and policies have generally failed to achieve this objective (O’Laughlin *et al.*, 2013:9). Previously, the tenure reform policy aimed to allow people to ‘choose the tenure system which is appropriate to their circumstances’, however, in the preliminary settlement of 1996, it was agreed that ‘ownership of land will be granted to the community, who will decide on what form of tenure they prefer’, in line with Department of Land Affairs policy (Beyers & Fay, 2015:444). Barry and Roux (2016:49) believe that the crafters and implementers of the land tenure administration system need

theory to explain how well certain designs are working and to predict how they are likely to work, preferably in the form of a set of hypotheses and the set of conditions under which those hypotheses are found to be valid. Cousins (2007:282) argues that the challenges are underlined by consideration of the record to date, in which reform efforts have not sufficiently taken into account the reality of how tenure regimes operate in practice, leading to a variety of unintended consequences.

The 13 percent of land that was allocated to the Black community pre-1994, was held in trust by the state, with traditional authorities appointed by the apartheid government that administered it under the communal tenure system; however, a law that would have facilitated land tenure reforms in these rural areas was passed in 2004 (Communal Land Rights Act No. 11, 2004) because it has been challenged by activists and subsequently withdrawn for apparently leaving too much control in the hands of unaccountable chiefs, and possibly violating vulnerable rural dwellers, such as women and orphans (Kepe, 2012:395).

4.4 PREVIOUS STUDIES REGARDING LAND REFORM AND SHARE EQUITY SCHEMES IN SOUTH AFRICA

This section explores some of the previous studies related to this topic. Not all previous research pertaining to land reform and farm worker equity share schemes are included here, but only a few relevant to the specific focus of this study.

4.4.1 Approaches and progress with land reform in South Africa (Kirsten & van Zyl 1999)

This study tracks the approaches followed for land reform in South Africa with a view to improving the situation created by the previous regime. The study outlines that there are five key lessons to be learnt from international experience regarding land reform: the speed of implementation of the programme; economic viability of the farm models; political acceptability and legitimacy of the programme; clear definition of the role that the public sector can and will play; and land reform is only one part of a comprehensive programme of economic reconstruction.

A crucial point made regarding the last point is that additional services are required to sustain higher productivity. Additional services could be infrastructure, markets,

incentives and health. The recommended approach to land redistribution is a market-assisted approach, as opposed to a public sector operated approach which tends to be bureaucratic and which might introduce conflicting results. This approach recommends government intervention in providing grants in order to facilitate the land reform programme and beneficiaries who buy from willing sellers. Land reform is based on restitution, redistribution and tenure reform. The long start-up time delayed delivery in the land reform process. The conclusions drawn from the implementation were:

- Equity sharing projects should be embarked upon as a (final) part of a process whereby farm workers were upgraded into management systems on farms;
- Trust between owner and workers remain a vital ingredient for a successful partnership;
- High value farming allows a substantial and measurable return to participants within an acceptable time period;
- Continued support and commitment from the existing land owner/manager/farmer is necessary to allow the maintenance of farm income streams;
- Clear entrance and exit rules are required; and
- Business considerations should be the main value system driving deals.

The study concludes by suggesting that land reform has failed in South Africa due to government being the major player, hence, the redistribution targets have not been met (Kirsten & van Zyl, 1999).

4.4.2 Examination of the impact of share equity schemes on beneficiaries in the Western Cape and Mpumalanga (Fast, 1999a)

Fast's (1999a) study concentrated on the achievements of the expected results by farm workers regarding equity share schemes and the objectives of the land reform programme. The study explored four schemes: one chicken farm, one livestock farm and two fruits farms. The study identified gaps in terms of the establishment of the schemes, such as: lack of clarity to beneficiaries about land reform and housing options; beneficiaries not participating in decision-making pertaining to financial and legal arrangements; and challenges in the assessment of farm value and financial

viability. The study further acknowledged the level of education of farm workers as a contributing factor, which is in line with this study in that there might be a need to source certain scarce skills in order to fill the gap. There is a need to explore these challenges more broadly, rather than focusing on a narrow view of the schemes, so as to achieve certain objectives without acknowledging particular stumbling blocks.

The study revealed that beneficiaries were disappointed with the visible benefits such as high salaries and improved living conditions. One of the reasons provided for the lack of visible benefits is the scheme's focus on capital-intensive production, which takes a while to produce results. In order to realise immediate benefits, the study recommends the following: encourage equity schemes that provide for regular cash flow; use Department of Land Affairs funds to subsidise a declining interest rate subsidy; and establish equity schemes that specialise in cash crop production. It seems that, as mentioned above, when equity share schemes are established, farm workers have certain expectations that are not clearly articulated at the beginning, thus creating confusion (Fast, 1999a).

4.4.3 Measuring the performance of equity-share schemes in South Africa: A focus on financial criteria (Gray *et al.*, 2004)

This study focused on the financial criteria for equity share schemes and does not address the non-financial aspects that are included in the present study. The study states that the success of these schemes is determined by the redistribution of wealth, worker empowerment, retaining or attracting quality management, creditworthiness, improved worker productivity and power relations, as well as provision for ownership and control to be fully transferred to previously disadvantaged shareholders. It concluded that no single study has adequately assessed the performance of equity share schemes in terms of a comprehensive set of criteria that objectively measures the broader goals of agrarian reform. Gray *et al.* (2004) state that it is important to develop a holistic approach for measuring the performance of these schemes in order to gauge, monitor and identify reasons for their success or failure. The results of this study indicate that the former Department of Land Affairs is lagging behind in terms of research and keeping track of existing share schemes.

The focus of the study conducted by Gray *et al.* (2004) on financial performance includes profitability, solvency, liquidity, risk, efficiency and growth status. The study is restricted to four of the seven equity share schemes in the Western Cape Province, from 2002 to 2003. The business activities of the four farms include: wine grapes; wine grapes and vegetables; deciduous and citrus fruit; as well as deciduous and citrus fruit and cut flowers. The study only covered financial matters and overlooked non-financial matters, which are part of the current research project. The study's intention was to develop a framework within which to gauge and monitor the financial performance of share schemes. It was discovered that the four equity share schemes performed badly due to adverse market conditions (Gray *et al.*, 2004).

4.4.4 Willing-buyer-willing-seller: South Africa's failed experiment in market-led agrarian reform (Lahiff, 2007)

This study reviews the approach adopted by Government for land reform where willing buyers negotiate with willing sellers. The study suggests that the slow progress of land reform is worsened by the lack of mobilisation and militancy amongst the rural poor and the landless. Equity share schemes, which some view as the success story of land reform, created a gap between the owner and the workers and have produced no benefits for the workers. It was mentioned that good quality land is sold at an auction or private contract within a short space of time, as the process of buying land through land reform takes longer. The study assumes that the land made available for equity share schemes is because either the owner is really committed to land reform or the land cannot be disposed of at an open market due to poor location or poor quality of land. In the current study, various points of a well-functioning system were mentioned as important for consideration in assessing share schemes (Lahiff, 2007).

4.5 TYPES OF EQUITY SHARE SCHEMES

Farmworker equity schemes (FES) and employee stock ownership plans (ESOPs) have emerged as a business model for empowerment processes, with the objective of ESOPs being labour productivity gains and the objective of FES being empowerment (Kirsten, Dorward, Poulton & Vink, 2009:202). Knight and Lyne (2002:357) state that "farm worker equity share schemes are privately owned farming operations that are generally restructured as companies with the original owner of the

farm and the farm workers as shareholders”. The farm workers are able to apply for redistribution grants from the government and then use these grants to buy shares in the farm on which they are employed (Hall *et al.*, 2001:6). Kirsten *et al.* (2009:202) add that third party investors are also involved, including others who qualify for state grants, such as black professionals and/or entrepreneurs, private investors, or equity warehousing financiers.

The four types of equity shares to be discussed here are: employee share ownership, employee stock ownership plan, joint ventures and cooperatives.

4.5.1 Employee Share Ownership

Landau, Mitchell, O’Connell and Ramsay (2007:1) define employee share ownership (‘ESO’) as “a form of employee financial participation that confers on employees the right to share in the wealth of the company and, in theory at least, the right to exercise some degree of control over company affairs”. Share ownership is a means for both management and employees to share in the profits of the firm (Mazibuko & Boshoff, 2003:32). According to the European Commission (2014:1-7), ESO refers to employee shares or stock options, where employee participation in the enterprise results in indirect ways, through receiving dividends, through appreciation of share values, or both, and provides the following information regarding shares and stock options:

- Shares may be distributed for free or may be sold at market price or under preferential conditions. The latter may include sale at a discount rate (Discounted Stock Purchase Plan), sale at a lower price through forms of delayed payment (usually within a capital increase), or by giving priority in public offerings to all or a group of employees.
- There are also employee stock options, which – unlike executive stock options granted to reward individual performance – are broad-based and offered to all or a majority of employees. The company grants employees an option, which entitles them to acquire shares in the company at a later date, but at a price fixed at the time the option is granted. The potential gain from rising share prices is the primary reward conferred by options.

Mazibuko and Boshoff (2003:31) indicate that there exists a wide gap between management objectives and employee expectations, which can be narrowed by a change in attitudes amongst both employees and management. Through ESO, employees acquire equity shares from their employer in order to become shareholders and have additional rights which include a right to share in the company's profits, access to information on company finances and operations, and rights to participate in the management of the company (Kaarsemaker, Pendleton & Poutsma, 2009:3). These rights are likely to bring changes in employee attitudes and behaviour, to be reflected in productivity and financial performance outcomes (Kaarsemaker *et al.*, 2009:3). The European Commission (2014:2) adds that there will also be a high rate of employment. Share ownership offers many advantages: they are easy and inexpensive to design and implement; they can provide liquidity without the loss of control; and they can add an incentive for employees who have become part owners (Mazibuko & Boshoff, 2003:32). Critics of ESO are concerned about the difficulties of coordinating diverse worker interests; of its diluting effect on managerial and owner incentives; owning small proportions of company shares; exposing employees to the risks of ownership but not substantial gains; and undermining trade unions and head-off employee dissent when labour is strong (Kaarsemaker *et al.*, 2009:4). Mazibuko and Boshoff (2003:32) add that there is a perception that there is more work for members of the share ownership or that members cannot be part of industrial action as they have invested in the business, and that managers find it difficult to regard employees as workers, rather than shareholders.

4.5.2 Employee Stock Ownership Plans

The European Commission (2014:1-8) defines employee stock ownership plans (ESOPs) as “a collective employee share ownership, with share of profits allocated to employees in addition to their remuneration”. The shares are acquired through a separate intermediary entity usually set up by the company and financed by a profit share paid in addition to wages, and structured as follows:

- The company establishes an employee share ownership fund for the benefit of its employees and shares are held and managed in the trust by a separate entity (in continental Europe by a limited company, foundation or association, in the UK, Ireland and North America usually a trust).

- The fund is financed by a combination of company contributions and loans. The former are free shares or cash, usually as part of a profit-sharing agreement with the employees. The trust may borrow money directly from a bank or from the company, which may utilise a loan from a bank or other lender.
- Shares are either acquired directly from existing shareholders or through a new share issue. They are held collectively in a trust, and are only allocated to individual employees' accounts, or distributed, after a specific holding period.
- The loan may be repaid by direct cash contributions from the company to the fund, by monies received from the sale of shares to the share-based profit-sharing scheme, or by dividends on the shares held in the trust.

4.5.3 Joint Ventures

Joint ventures are arrangements between two or more parties to run a business together, where each party contributes in cash (capital) or in kind (e.g. land/natural resource rights, technology, know-how) and is part of the profits (or losses) made by the joint venture (Vermeulen & Cotula, 2010:59). A farm worker equity share results when farm workers join their resources and capital to buy into a joint ownership of a farm, making use of a land company or agricultural assets or business or farm operating company (Human Sciences Research Council & Surplus Peoples Project, 2004:12). Vermeulen and Cotula (2010:59) state that there are two main features of jointure ventures:

- the partners share ownership of the venture, not just benefit-sharing; and
- the partners do not merge into a single entity but retain their individual legal status.

The Human Sciences Research Council and Surplus Peoples Project (2004:11) observed that among the available options to land reform beneficiaries to enter into commercial agriculture is through partnerships with current white commercial farmers, where capital, technical expertise and market access are shared, hence, the rise of various joint venture schemes in South Africa since 1994. Beneficiaries make use of the grants to participate in different types of joint venture schemes, therefore, for their participation, the beneficiaries are not only protected against arbitrary evictions, but

also have access to land and capital for productive farming (Human Sciences Research Council & Surplus Peoples Project, 2004:12).

The complex and challenging process of designing and implementing joint ventures has resulted in slow progress in their implementation (Human Sciences Research Council & Surplus Peoples Project, 2004:12). Although the joint venture concept is a good idea in theory, in terms of providing beneficiaries with a tangible commercial asset that can yield good dividends and grow in value over time, but such an arrangement is heavily criticised since individual share ownership is linked to continued employment and the lack of major changes in production systems (Vermeulen & Cotula, 2010:62). The drive for the major focus in agriculture is the belief that agriculture is the solution to unemployment since, for every R1 million investment, approximately 40 to 50 jobs are created, but in reality the capital-intensive nature of farming activities distorts the situation (Mapedza, van Koppen, Sithole & Bourblanc, 2016:96). In Limpopo, the rules governing the joint venture partnership were developed by the Limpopo Department of Agriculture and the joint venture scheme (JVS) partner, excluding the communities due to their low levels of education; it turned out that the rules favoured the JVS partner, resulting in no sharing of expenditure and income information (Mapedza *et al.*, 2016:96).

4.5.4 Cooperatives

A cooperative is an organisation which operates within the rules in its daily activities and is characterised by member ownership, control and benefit (Thomas & Hangula, 2011:695). People who form a cooperation are united voluntarily to achieve their common economic needs and aspirations through a jointly owned and democratically controlled enterprise (Khumalo, 2014:62). Cooperative movement is regarded as an invaluable tool for human and economic development (Okem & Lawrence, 2013:16). As a business model based on egalitarian and welfarist ideology, cooperatives are strategically placed to increase benefits to society, unlike conventional capitalist enterprises, which are based on the philosophy of profit maximization (Okem & Lawrence, 2013:18). One of the legal frameworks for the establishment of cooperatives in South Africa is the new Cooperatives Act, 2005 (Act No. 14 of 2005), which was promulgated in August 2005 to ensure the development of sustainable

cooperatives in South Africa and their use as a vehicle to develop small enterprises (Nganwa, Lyne & Ferrer, 2010:39).

The Cooperatives Act of 1981 seemed to focus on larger and commercial agricultural cooperatives, hence, a new Cooperatives Bill was drafted by the Department of Agriculture (DoA) in 2001; later, the responsibility for cooperatives was transferred from the DoA to the Department of Trade and Industry (DTI) (Nganwa *et al.*, 2010:40). The transfer was to ensure that cooperatives are promoted as businesses in all sectors of the economy (Nganwa *et al.*, 2010:40). The DTI was entrusted with the responsibility of the cooperatives; it treated these initiatives as small and medium enterprises (SMMEs) and, as such, it envisaged that they would qualify for all of the incentives and support programmes offered by the Department and its agencies to SMMEs in the broad areas of training and access to finance (Lyne & Collins, 2008:182). The ultimate goal for the South African government in adopting the cooperative model after 1994 was to alleviate the triple challenges of poverty, unemployment and inequality, whilst in England, the modern forms of cooperatives emerged in response to the harsh economic conditions of the industrial revolution (Okem & Lawrence, 2013:16-17). The drawbacks for traditional cooperatives are free-rider, horizon, portfolio, influence and control problems, which led to their inability to raise equity and debt capital to finance growth capital, due to institutional problems of poorly defined property rights because they adhere to rules that require member ownership, democratic control, returns to patronage, and redeemable (i.e. nontradable) equity shares (Nganwa *et al.*, 2010:41). Nganwa *et al.* (2010:42-43) provide the following information on free-rider, horizon, portfolio, influence and control problems:

- The free-rider problem arises when property rights are not tradable, insecure, or unassigned. It exists when the gains from cooperative action can be accessed by individuals who do not fully invest in developing the gains.
- The horizon problem occurs when residual claims on the net income generated by an asset are shorter than the economic life of the asset.
- The portfolio problem arises when members are unable to structure their investments in ways that best suit them.

- Influence problems are likely to arise in traditional cooperatives because members have equal voting power regardless of the differences in their levels of investment.
- The control problem arises due to the divergence of interests between the members of a cooperative and its managers. The costs associated with trying to prevent or minimise divergence of interests are known as agency costs.

There are two types of cooperatives: worker cooperatives and user-owned cooperatives. In the former, workers in the enterprise own and control the cooperative and, in the latter, members are users of the services of the cooperative without any necessary employment relationship within the enterprise, such as cooperative banks, consumer cooperatives, and marketing cooperatives (Khumalo, 2014:64). Agricultural cooperatives, which started in the early 20th century, have been instrumental in the development of commercial agriculture in South Africa. With government support, the cooperatives managed to serve commercial agriculture as suppliers of inputs to farmers, as marketing agents of their commodities through various marketing boards, and as providers of services (Ortmann & King, 2007:219-220). Cooperatives play an important role in improving livelihoods across the globe and serve as an alternative approach to dealing with socio-economic challenges (Khumalo, 2014:61). The establishment of cooperatives is a response to poverty, market failure and high transaction costs (Ortmann & King, 2007:219). New Institutional Economics, which is discussed in the previous chapter, makes provision for a framework to explore the implications of transaction costs for cooperatives (Okem & Lawrence, 2013:20). Other reasons for the establishment of cooperatives are a desire to enhance bargaining strength with input from suppliers and buyers of farm products; operation at cost; income enhancement; provision of missing services; assurance of input supplies and/or product markets; coordination of the flow of input supplies and farm products to markets; reduce opportunistic behaviour by potential competitors; and gain economies of size advantages (Ortmann & King, 2007:225). The establishment of cooperatives enables members to share costs and benefits, and the professional ethics of buyers and sellers is crucial in establishing reputation and trust (Kanyane & Ilorah, 2015:4).

Successful cooperatives are characterised by self-determination, self-responsibility and collective action, as opposed to government intervention and mobilisation through incentives (Khumalo, 2014:61). The international experience shows the need for supportive, stimulating, and sponsoring agencies to help cooperatives in their work of market access (Westoby, 2014:831). Kanyane and Ilorah (2015:3) believe that cooperatives in South Africa experience historical, ideological, organizational, and operational challenges, partly due to a lack of governmental support, which results in their early death or stunted growth. Out of 31 898 formally registered cooperatives in South Africa in 2010, approximately 88% have failed, and the majority of these cooperatives are located in KwaZulu-Natal, Limpopo, Gauteng and the Eastern Cape (Westoby, 2014:828).

The assumptions made in the formation of cooperatives are that individuals participate because they expect significant economic benefits; the sustainability of cooperatives is linked to adequate capitalization, viability of business, and the availability of social capital; cooperatives promote social capital creation, strengthening existing bonds in social capital and upgrading it to bridging social capital (Kanyane & Ilorah, 2015:5). Members borrow money from relatives, community members or groups without collateral, using natural familial ties as community members; where a member has borrowed money, debt must be settled before another member is granted a loan, and no repetitive loans to the same member are allowed (Kanyane & Ilorah, 2015:5-6). Furthermore, group members are responsible for loans extended to one another and those suspected of defaulting on their loans are disapproved membership (Kanyane & Ilorah, 2015:6). The challenges facing cooperatives in South Africa include limited access to funds, insufficient essential skills, poor record keeping and poor monitoring of performance and development (Nieman & Fouché, 2016:2). Traditional sources of finance, including banks, are reluctant to lend to cooperatives due to a lack of collateral and due to the poor backgrounds of most members, which have led in some places to the formation of cooperative banks or community development corporations (CDCs) that can provide seed capital (Westoby, 2014:831). After the new Cooperatives Act, 2005, was promulgated, it was announced that incentives and capacity building grants had been designed for development-oriented cooperatives, and that government financing agencies (including Khula and SEDA) had been mandated to support cooperatives (Lyne & Collins, 2008:181). Despite this, it seems that the cooperative

movement has been unable to transform itself as expected; some of the reasons for this are lack of knowledge about the purpose and functions of cooperatives, absence of information about cooperatives, no marketing skills, and a dearth of financial resources (Okem & Lawrence, 2013:20).

The flaws with the establishment of cooperatives are the result of building a sector to create jobs, instead of enabling a movement. In addition, they are due to lack of attention to process, or simply lack of time available, combined with a lack of investment in educating workers to overcome a lack of understanding of the long lineage of the cooperative mutuality tradition (Westoby, 2014:836). The ill-defined benefit rights make some members reluctant to invest more equity capital in order to help finance the improvements (Lyne & Collins, 2008:184). Lyne and Collins (2008: 183) do not doubt the importance of training, but their concern is that if the underlying institutional problems discourage managers and members from growing the cooperative business, then training will have little impact, considering that in the US, tax breaks, interest subsidies and gratis services were keeping inefficient cooperatives in business. Lyne and Collins (2008:183) propose the establishment of the origins of institutional problems in traditional cooperatives and the extent to which prevailing legislation can accommodate changes to address these problems.

4.6 FRAMEWORK FOR IMPLEMENTING EQUITY SHARE SCHEMES

Farm worker equity share schemes began in the early 1990s, with the first scheme in materialising in 1992, called Whitehall fruit farm in Elgin (Knight & Lyne, 2002:358-359). The establishment of equity share schemes was based on their suitability to change the ownership structure of the enterprise rather than divide the land into smaller units, such as cases where the enterprise is indivisible due to technical, managerial or natural resource constraints (Knight & Lyne, 2002:359). The Department of Land Affairs developed procedures for farm worker equity share schemes in 1997, after it realised that the inexistence of formal procedures caused confusion at the implementation level around the procedures of farm worker equity schemes (Department of Land Affairs, 1997:2). Land Redistribution for Agricultural Development (LRAD) sub-programme, introduced in 2001 after the DLA imposed a moratorium on new grants. The LRAD grant ranged from R20 000 to R100 000 and one's own contribution (in kind or otherwise) ranging from R5 000 to R400 000 (Aliber

& Cousins, 2013:143). Knight and Lyne (2002:358) mention that equity share schemes were excluded in the early drafts of the LRAD sub-programme, as the focus was on emerging farmers who would purchase and manage small farms of their own. The LRAD was introduced to create a significant class of black commercial farmers who would acquire entire farms but without abandoning the rural poor. However, when the LRAD proved to be inadequate in 2008 for the purpose of enabling families to acquire entire farms, the grant was increased to a maximum of R431,000 (Aliber & Cousins, 2013:143). The procedures developed in 1997 by the Department of Land Affairs for farm worker equity share schemes stipulate the following:

- Possible scenarios for farm worker equity schemes
- Procedure to be followed with Section 10 of Act 126
- Overview of phases of farm worker equity schemes:
 - Project Identification
 - Feasibility or preparation
 - Designation and land transfer
 - Development and support services.

4.7 SUCCESS STORIES OF FARM WORKER EQUITY SHARE SCHEMES

This subsection provides examples of three success stories of farm worker equity share schemes in South Africa.

4.7.1 Sinethemba Beef CPA, Mooiplaas

The following information on Sinethemba Beef CPA in Mooiplaas is sourced from the Human Sciences Research Council (2003:54-60). The Sinethemba project is located in the Great Kei Municipality in the Eastern Cape. Approximately 15-20 farmers were close to Ngxingxolo village and almost all of these farmers would consider selling due to problems related to fence cutting, stock theft and the murder of a farmer in 2002. The farm that was abandoned would be made available to the community as a municipal commonage project. The concerns raised by the white farmers in the area are that their neighbours living on state land did not have enough land for their livestock, and that there was a sense among some Mooiplaas residents that the white-owned farms should be returned to their rightful owners.

The group members of the Sinethemba project were pensioners who lost their factory jobs during the 1990s, with the initial membership of 10 which later increased to 12, who in 2000 explored the possibility of purchasing some cattle together. Out of the two farms that the group shortlisted, they decided on a farm further away from Ngxingxolo village where they lived, to avoid being vulnerable to fence cutting and theft. The chosen farm was about two kilometres, or half an hour's walk, from Ngxingxolo. The farm size was 115 hectares at an asking price of R150 000, but the owner agreed to sell it for R110 000 since he knew their fathers. The estate agent who assisted with the sale of the farm indicated that, initially, the farmer asked for R165 000 for the farm, but later realised that he had to offload the property as soon as possible for fear that, if he waited too long, it would fetch even less. The members used the LRAD grants of R20 000 each, totalling R240 000, to buy the farm; the balance was used to purchase livestock, vaccines, a second-hand tractor, and a trailer.

The group started with 17 cattle, which subsequently multiplied to 23 and a portion of the land suitable for arable production was used to plant maize, cabbage and potatoes, which were sold at Ngxingxolo and Mooiplaas. The other source of income for the farm was to make the tractor available for hiring and all the proceeds of the farm activities were deposited in the group's bank account, rather than distributed to members. The members had realistic expectations regarding the project, as they did not expect the project to become more profitable more quickly and they realised the need to get an additional property as they felt that what they had was not enough. The extension agent informed the members that the farm could accommodate twice the number of cattle they had, which seemed contradictory to what they experienced. To buy the new property they would need some financial assistance. The livestock farming infrastructure that was in good condition included boundary and internal fences; dams for the four camps; and a dipping tank. The windmill was not functioning properly, although it did pump some water that was used to irrigate the adjacent vegetable patch, but seemingly not enough. The researcher points out that a business plan for Sinethemba project was not obtained; however, for less complicated projects in the Eastern Cape, the business plan was not necessarily a prerequisite for project approval.

The beneficiaries received training which covered farm management, animal husbandry, and crop production. They valued the training since it helped them raise their knowledge of farming to a higher level. The group was cohesive, the property well located relative to the market, and the project was technically and managerially within the beneficiaries' grasp, although it was not certain how large a welfare difference it would make to the beneficiaries once it was fully operational. Many local residents perceived the modest benefits of Sinethemba as significantly better than nothing.

4.7.2 Cape Olive

The following information on Cape Olive is sourced from Knight (2003:12-14). Cape Olive is comprised of six farms at Drakenstein in the Western Cape Province; these farms have produced olives since 1925, and grapes, but the equity share project was introduced in 1997, consisting of thirty-four members from 29 households. DLA settlement/land acquisition grants were used to fund shares in the workers' trust amounting to three and a half percent of total shares of the holdings company. In 2001, 99.5% of Cape Olive's gross income of R15 000 000 came from the local sale of olives and the remainder from grapes.

The equity share scheme was initiated to give the farm workers at Cape Olive a financial stake in the business, capacity to influence decision-making on the farm, and an opportunity to acquire the business and financial management skills that they would need to become entrepreneurs in the future. The major challenges in facilitating the project was the low literacy levels of workers; control measures for alcohol abuse where instituted; a common language was adopted to explain the project to workers in simple terms; and labour policy was established to define rules of conduct for management and workers.

The beneficiaries managed to finance a "Spaza" shop from the remains of the grants, whose establishment reduced travel costs required to buy basic necessities and contributed a small income to the workers' trust. Over and above this, a fish project was started using a loan from Cape Olive and expertise from the University of Stellenbosch. According to both workers and management, mutual trust and transparency were key to the success of the project.

4.7.3 Kleinbegin, a Deciduous Fruit and Citrus Farm

The following information on Kleinbegin, a deciduous fruit and citrus farm, is sourced from Knight (2003:21-23). The Kleinbegin farm is situated on the Piket Mountain in the Western Cape and produces deciduous fruit and citrus. The equity share project was established in 2001, comprising of seventy workers who obtained grants from the DLA's Land Redistribution for Agricultural Development and a loan from Khula Enterprise Finance in 2001. The beneficiaries obtained a 49% share in the land-holding company and a 49% share in an operating partnership. The amount remaining from the grants after buying workers' shares was loaned to the operating partnership, and to return interest by constructing two houses per year for the beneficiaries. The beneficiaries signed the 99-year lease agreements for their houses due to difficulties they experienced in obtaining permission to sub-divide agricultural land, as the contracts were registered against Kleinbegin's title deed to provide tenure security.

The farm had 16 hectares to produce stone and pome fruit and 12 hectares to produce citrus. In 2001, R850 000 equivalent to 80% of the project's gross income came from the local and international sale of stone and pome fruit, and 20% from the sale of citrus. All beneficiaries received training in life skills, including domestic financial management, farm management and technical skills.

4.8 INTERNATIONAL AND NATIONAL BENCHMARKS

This subsection provides information related to international and national benchmarks on equity share schemes, including equity investment from a global perspective, the international context of land reform and equity share drives from the national perspective.

4.8.1 Equity Investment from a Global Perspective

Farm worker equity share schemes do not only involve farm workers, but also previously disadvantaged stakeholders such as neighbouring rural communities (Gray *et al.*, 2004:378). Emerging farmers entered farming either by climbing the agricultural ladder from hired man to tenant to owner, accumulating capital in small amounts as they progressed, or inherited the farm business from family members (Fiske, Batte & Lee, 1986:1319). Regardless of how the farming business was obtained, the financing

of capital transfers was done primarily by the principals, through personal savings, gifts, or inheritance (Fiske *et al.*, 1986:1319). This was due to the formal intermediation in agriculture being primitive and unreliable and lenders offered only costly, short-term credit, even for the purchase of farmland (Fiske *et al.*, 1986:1319).

Investor capital is important for entry into and expansion of a farm, but it is characterised as threatening owner-operator control and encouraging large-scale farms to dominate production and marketing (Matthews & Harrington, 1986:1324). There is a perception that capital contribution as an investment is the preserve of already existing farm businesses, but the situation in the agricultural sector proves otherwise (Matthews & Harrington, 1986:1324). The following investment scenarios for farming enterprises are important: farmers must choose between renting and buying land and, if buying, they must choose between debt and equity finance; if using equity, they must choose between internal equity (up-front investments from member-patrons) and external equity (contributions from external investors); and if using external equity, they must choose between publicly traded and privately issued securities (Mondelli & Klein, 2014:146).

In the 1970s, debt financing was favourable due to the low cost of debt close to zero, translating to high real returns on assets. However, in the 1980s, lower commodity and land prices, and higher and more volatile interest rates reduced the return on farm assets, resulting in increased farm financial risk (Crane & Leatham, 1995:223). This led to a significantly higher incidence of credit problems, loan delinquencies, foreclosures, and bankruptcies in agriculture, with highly leveraged farmers feeling the effect the most. Thereafter, external equity financing of production agriculture was seen as an alternative financing solution for farmers to better manage financial risk (Crane & Leatham, 1995:223). A large number of farm foreclosures and bankruptcy liquidations suggests that equity capital may be equally important as substitute equity, to allow farmers with untenable financial positions to exit or move large creditor inventories of repossessed collateral (Matthews & Harrington, 1986:1324). When there is no shortage of capital in agriculture, due to farmer-held equities, then only desperately indebted farmers would be willing to sell off some of their equities for survival (Raup, 1986:1337-1338). Off-farm migration promotes the availability of external equity capital to agriculture (Raup, 1986:1339).

The three sources of investment capital for agriculture include family members of existing farm operations, local investors, and nonlocal investors (Matthews & Harrington, 1986:1325). A typical institutional arrangement where external suppliers could satisfy the demand for farm equity involves three primary actors in the system: the user of capital, or the farmer entrepreneur; the intermediary, or the investment institution; and the provider of capital, or the supplier of investment deposits (Crane & Leatham, 1995:224). Agricultural intermediaries have the means to facilitate the flow of funds from investors and urban areas to rural agricultural areas, and vice versa; however, investors' funds are not available to individual farm producers in rural areas until an investment institution collects them and makes them available (Crane & Leatham, 1995:224). During the collection process, the funds obtained from several savers are put into larger units for a farmer to receive funds from a single source rather than from multiple sources (Crane & Leatham, 1995:224).

To mitigate agricultural lending risks, the financial intermediary can invest loanable funds in a loan portfolio diversified across economic sectors and geographic areas (Crane & Leatham, 1995:224). The term equity, as used above and explained below, can be used in different scenarios depending on the form of equity being discussed. Some investors lack the knowledge of investing in equity shares (Pinto, 2016:63). Equity financing is when a firm raises capital by issuing shares or stocks, and the money that a firm attracts from different sources is called equity, which investors put up cash in return for a stake in a firm or for a share of profits when the business starts to make a return (Klerx, 2015:3). When there is no difference in the class of shares, these are called equity shares and they can be purchased from a stock market and a portion of profits can be earned (Pinto, 2016:63). The disadvantage with the market mechanisms, such as going public to sell shares of common stock, or creating limited partnerships, involve high transaction costs for both small and large commercial farms (Crane & Leatham, 1995:223-224). All factors considered, farm size enlargement is key to reducing transaction costs and setting the stage for the emergence of more efficient equity markets in agriculture (Raup, 1986:1337).

Equity shares issued by a company at a fair price represent ownership in the company, and the owner gets the right to have a share in the profits of the firm (Pinto, 2016:63). The investor can even sell them to receive a capital gain, but if the shares are sold at

a price below the buying price, there is a capital loss (Pinto, 2016:63). Some companies pay out dividends and others do not since there is no obligation to pay out dividends (Pinto, 2016:63). As far as the balance sheet is concerned, the deduction of a company's liabilities, such as long-term borrowings from its assets results in residual interest referred to as equity (Pinto, 2016:63). "Capital" refers to the amount of money available from an owner's equity, that is, from internal sources, which is an alternative source of finance to debt (Gniewosz, 1995:6). Private equity refers to investments in later-stage firms and, when all other sectors are considered, private equity has shown growth partially because of high returns on equity, but the realized return on equity in agriculture makes it an option that is not preferred (Klerx, 2015:1-15). Despite this, the use of external equity as a funding source by firms in the agri-food sector is gaining popularity (Mondelli & Klein, 2014:145). This phenomenon is explained by the fact that theory suggests to indicate that capital should flow to the sector yielding the highest rate of return, but that does not seem to be of value when considering the agricultural sector due to market imperfections resulting from technical externalities, defective factor markets, and tax laws (Raup, 1986:1337). Over and above that, agency theory assumes that capital is undifferentiated, therefore, there is no suggestion that debt is better suited for some projects and equity for others. Moreover, agency problems are minimised by an appropriate scheme that aligns the manager's incentives with the investors' interests (Mondelli & Klein, 2014:146).

Firms can raise capital by selling equity in the public market because they are interested to financial investments, to transfer wealth from new shareholders to existing shareholders, and to increase liquidity for both insiders and the firm (Kim & Weisbach, 2005:2). Firms can choose to issue new primary shares or offer existing shares held by insiders, called secondary shares; only primary share issuances that can be used to finance investments, due to capital inflows to the firm, while secondary share offers do not (Kim & Weisbach, 2005:3). Equity financing is convenient, has a positive relationship with profitability due to the high leverage that companies obtain from equity financing, and firms with higher equity financing compared to debt financing are better able to handle decreases in demand and other fluctuations, however, its main disadvantage is partial ownership of the equity funders (Klerx, 2015:3). However, financing farm firms with external equity increases transaction costs and distorts management incentives; when returns to the farm business are low,

so is compensation for the equity investor (Lowenberg-DeBoer, Featherstone & Leatham, 1989:92).

The rural industry prefers equity finance as opposed to loans because it is highly risk-averse (Gniewosz, 1995:2). For farm businesses, external equity must be viewed as beneficial to all parties (farmers, the investor and the investment banker, or anyone with an intermediation function) to derive a significant source of capital (Collins & Bourn, 1986:1330). Investors, according to the standard capital market theory, would be willing to supply capital, provided that the expected rate of return is not less than the required rate of return, which is determined by adding risk premium to a riskless rate of return (Collins & Bourn, 1986:1334). Among the models to estimate the risk premium is the Capital Asset Pricing Model (CAPM) or Arbitrage Pricing Theory (APT) (Collins & Bourn 1986:1334). Equity investors may provide capital in riskier situations due to the opportunity to share profits when returns are higher (Lowenberg-DeBoer *et al.*, 1989:92). However, information asymmetry happens when investors are better informed than entrepreneurs in some areas, which includes industry conditions and general business acumen, whereas entrepreneurs may or may not be better informed about the efficacy and desirability of their new technology and/or new products (Douglas, Carlsson-Wall & Hjelström, 2014:287).

The difference in share of ownership between the farm operator and equity investor may cause the operator to have less of an incentive to maximise returns to the firm (Lowenberg-DeBoer *et al.*, 1989:92). Information asymmetry causes moral hazard, adverse selection, and asymmetry of trust, whereby entrepreneurs typically trust investors more than investors trust entrepreneurs (Douglas *et al.*, 2014:287-288). The consequences of information asymmetry are different valuations of the new business venture by the entrepreneurs and investors, causing the breakdown of negotiations, or a proposed deal that leaves the entrepreneurs feeling that they were victimized (Douglas *et al.*, 2014:288).

From the farmer's point of view, when debt (with its fixed interest costs) that requires a share of income as payment is replaced by equity, it reduces financial risk because financing costs would vary with income (Collins & Bourn, 1986:1330). External equity can play a significant role in addressing the financial stress of a farm, but the structural characteristics of agriculture creates barriers to the flow of equity capital between the

farm and investors (Fiske *et al.*, 1986:1319). Additional equity into agriculture does not have to lead to old equity selling out entirely, since, traditionally, capital shortage would be addressed by additional borrowing or the selling of assets (Matthews & Harrington, 1986:1324). Barriers are due to the organizational structure of production agriculture with the corresponding high transaction costs, including the search for information, underwriting, and monitoring costs associated with sole proprietorships and small partnerships contracting for external equity (Crane & Leatham, 1995:223). For example, the business organisation in agriculture such as the proprietorship, the partnership, and the family corporation vest the ownership and control of assets in a single person or a small group of closely related people (Fiske *et al.*, 1986:1320). This leads to farm owners accepting lower returns on capital than non-proprietor investors since they can include a variety of nonmonetary rewards in their calculation of total return on investment (Fiske *et al.*, 1986:1320). External equity has noticeably bypassed the existing farming businesses, instead flowing into direct ownership of farm assets or shared ownership of newer and generally larger and more technologically innovative farm businesses (Fiske *et al.*, 1986:1319).

Investors make equity capital available in order to participate in gains in exchange for risk sharing, whereas farm asset owners make their income-producing assets available to farmers through leasing; for both cases, however, the farm owner would participate if there is no farm control decision involved (Matthews & Harrington, 1986:1324). Raup (1986:1338) adds that outside investors would be interested to risk investing in agriculture for the following reasons:

- In anticipation of long-run capital gains that a current farm operator cannot value highly;
- Because they can endure periods of low or negative income at less cost than can a farm owner-operator, i.e. their pure time-preference discount rate is lower;
- Because the tax system permits the use of farm losses to offset nonfarm taxable income, thus reducing the after-tax impact of low or negative returns on farm assets;
- Because they believe that they can introduce managerial reforms that will result in more effective and more profitable use of farm capital.

Only the last point, in the world of efficient markets for land, labour and capital would justify efforts to promote the introduction of external equity capital into agriculture (Raup, 1986:1338). According to Matthews and Harrington (1986:1324-1325), the five most important points to consider when a legal entity brings in external equity investment are:

- Business continuity. When an investor retires, dies, becomes disabled, or simply wants to withdraw from the farm investment, will this cause the farming operation to liquidate?
- Income tax minimisation. Is the legal entity subject to income taxes? If so, at what rates? How are distributions to investors taxed?
- Management control. Do all investors participate in decision making equally, pro rata per capital investment, or are some investors given exclusive control?
- Limits on business liability. Is an investor's liability limited to his investment, or is there a limit?
- State restriction on certain legal entities from engaging in farming or owning farmland. Are there such statutes in the state of the farm operation? Are there exceptions applicable to some legal entities, type of investors, or farming activities?

Although the source of equity capital will not determine the legal entity chosen to pool the investment from, it will have an impact on the type of agricultural enterprise, provisions for withdrawal from the entity, and the emphasis on tax shelter potential (Matthews & Harrington, 1986:1325). Middle-market companies, firms in financial stress, and firms needing growth capital are now depending on private equity capital as a source of funding, and it has been the fastest growing financial market since the 1980s (Mondelli & Klein, 2014:145). South Africa is involved in large scale land acquisition on the continent through a jointly registered UK/SA management firm that specialises in farmland investments in Africa, using two of its funds called 'African Agricultural Investment Fund' established in 2008, and the 'African Land Fund' established in 2010 (Hall, 2012:838). By late 2010, these two funds had secured land holdings in Angola, Botswana, DRC, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe (Hall, 2012:838-839). Most companies in agricultural production have limited options

of public equity, thus the need of external private equity for companies in this sector. However, the use of external private equity affects the ownership structure of the firm (Mondelli & Klein, 2014:146).

It is noted that a drive for participation in farm ownership by external investors excites credit agencies that hold temporarily unsaleable inventories of repossessed farmland (Raup, 1986:1339). Farmers with debt-equity ratios of 70 or above and who are financially stressed would opt for any of the two options: to sell off a part or all of his prospects for future capital gains; and to sell off a part of his entitlement to future benefits of government agricultural programs (Raup, 1986:1337). Capital structure and managerial actions have an impact on a firm's profitability, as does the allocation of decision (control) rights between entrepreneurs and investors on firm value (Mondelli & Klein, 2014:146). The characteristics of the assets determines whether a project should be financed by debt or equity; therefore, assets which are highly specific to the project will have a lower value for other uses in case the project is liquidated (and has a lower salvage value) (Mondelli & Klein, 2014:147). This makes bondholders subject to opportunistic behaviour by the owner–manager of the firm, as bondholders have no control over firm management (Mondelli & Klein, 2014:147). Debt is preferable, due to its low cost, for projects involving highly redeployable assets because, if the project is successful, interest and principal will be paid on schedule and, if the project fails, debt holders can liquidate assets to recover their investment; the converse is true for debt regarding highly specific assets (i.e. non-redeployable) (Mondelli & Klein, 2014:147).

4.8.2 International Context of Land Reform

Japan, Taiwan, South Vietnam and India are countries that have implemented land reform programmes, and they are the focus of discussion in this subsection.

4.8.2.1 Land Reform in Japan

The land reform programme in Japan began in 1945 and was almost complete in 1950 (Misawa, 1971:393). The land reform in post-war Japan happened after the Occupation authorities had directed the Japanese legislators to initiate land reform, without specifying exactly what should be done (Grad, 1948:118). This happened immediately after the Second World War in order to remove the landlord system of

ownership (Takigawa, 2007:290). In 1946 the Japanese government drafted the Special Measure for the Establishment of Owner-Farmers (Land Reform Law) and Agricultural Land Adjustment Law, to enable the government to purchase approximately 5,000,000 acres, approximately 80 percent, of the farmlands under tenant cultivation, for subsequent resale to tenants (Gilmartin & Ladejinsky, 1948:314). Tenants and part-tenants constituted approximately 70 percent of the 5,700,000 Japanese farm families; where 50 percent of the tenants rented an average of half an acre; and another 27 percent rented an average of 1.7 acres each (Gilmartin & Ladejinsky, 1948:312-313). The tenants and part-tenants were compelled to deliver half or more of the yields from their rented plots to a landlord (Gilmartin & Ladejinsky, 1948:312).

Tenancy contributed to farm indebtedness because some tenants regularly had to borrow after paying rent, as they did not have the wherewithal for their own needs (Grad, 1948:117). In addition, the interest paid by landlords and wealthy landowners on their borrowings did not exceed five or six percent, while tenants paid interest ranging from 10 to 25 percent; this prevented tenants from making full use of their economic opportunities, such as improving their farms or cultivation methods (Grad, 1948:117). As a result of this, the Land Reform Bill was to replace produce (mostly rice) rent with cash rent and to change ownership of arable land, which goes beyond a certain limit, from landlords to tenants (Misawa, 1971:393). Grad (1948:115-118) states that agrarian relations in Japan were complicated by tenants who were landlords elsewhere, as they leased out land in one area and rented land in another; in addition, most tenants were renting land from a number of landlords as every piece of land was needed. Land reform would stabilise agriculture, increase agricultural output and remove one of the underlying causes of war, since agriculture was regarded as the backbone of the Japanese national economy (Trewartha, 1950:376). There were three categories of land that the government could purchase: all land owned by absentee landlords irrespective of the area; all tenant land owned by resident landlords in excess of one hectare; and all land cultivated by owner-farmers in excess of three hectares (Misawa, 1971:394).

Absentee landlords arose because tenants were required to pay exorbitant rent prices due to the shortage of agricultural land and the lack of alternative job opportunities; as

a result, the new landowners preferred to derive their income as absentee proprietors of tenanted land, rather than undertake personal management (Trewartha, 1950:377). The land purchase price would be at the discretion of the Land Commission, and the sale price would be paid in the form of 24-year annuity bonds bearing an interest rate of 3.65 percent (Trewartha, 1950:382). The prices at which government would buy landlords' holdings would be so low that they were considered equivalent to confiscatory (Grad, 1948:123). Land Commissions were made up of 15 members, consisting of five tenants, five owner-cultivators and five landlords, of which the amended Bill made provision for the additional three members "of high moral reputation" (Grad, 1948:120).

From 1947 to 1953, the government, in accordance with the Owner-Farmer Establishment Special Measures Law enacted in 1946, bought approximately 1.81 million hectares of agricultural land and 186 000 hectares of agricultural land acquired as property tax in kind, amounting to a total of 1 996 000 hectares of liberated agricultural land (Takigawa, 2007:290). The total land acquired by the government accounted for one-third of the total agricultural land acreage prior to the land reform, which is 70% of the tenant-cultivated land (Takigawa, 2007:290). All the agricultural land bought by the Japanese government was sold to tenants and part-owner farmers, benefiting roughly three million agricultural households from the scheme (Takigawa, 2007:290). The rise in agricultural productivity, particularly rice as a major crop in Japan, was due to better seeds and fertilisers, better drainage, new methods of forcing seedbeds and, above all, a rapid diffusion of new methods of pest control (Dore, 1963:266). The expansion of the urban market for what were hitherto luxury foods, made it possible for farmers to earn more by diversifying their production and changing to higher income-yielding crops; there was also an increase in the number of dairy cows, the pig population, chickens and fruit production (Dore, 1963:266).

Pertaining to the post-war land reform, Takigawa (2007:291) refers to Prof. E.H. Tuma of the University of California, who states that:

the philosophy of the post-war reform, then was not indigenous. It was imported and foreign to the country. The theory was that small peasant farming in place of the prevalent tenant-landlord system would help democratise the community and stabilise its political system. Some

Japanese groups believed in that philosophy, but such was not the attitude of the majority or of the government.

It must be noted that Takigawa (2007:292) does not believe Prof. Tuma's statement that land reform was imported into Japan, considering the historical facts, which suggest that the Ministry of Agriculture and Forestry in Japan had since 1920 been formulating measures to establish an owner-farmer system of land ownership, that was to be carried out on smaller scale.

4.8.2.2 Land Reform in Taiwan

In 1945, Taiwan returned to China from Japan (Koo, 1971:1). This move led to the Chinese Nationalist Government's decision to carry out land reform in this province in order to achieve the equalization of land rights and ensure peace and stability (Bowden, 1961:34). Land reform took place from 1949 to 1953 (Stebek, 2013:223). The land confiscated from the Japanese and land bought from Japanese owners was redistributed, reducing tenancy from 38 percent of farm families in 1949 to 17 percent in 1953 (McGuire, 1994:213). Since its existence, Taiwan has experienced two distinct stages of development, in both of which agriculture played a significant role. During the first phase (1895-1945), the Japanese government introduced and extended modern agricultural technology, including the promotion of large-scale development of water resources as well as technological improvements in rice and sugar-cane production (Koo, 1971:1). The second phase involved land reforms that were instituted after 1945, covering the programme of rent reduction in 1949, the sale of public land in 1951 and the "land-to-the-tiller" programme of 1953 (Koo, 1971:1).

The land-to-the-tiller policy allows the farmer both to have ownership of the land he tills and to enjoy the fruits of his labour (Bowden, 1961:34). The enforcement of land to the tiller was achieved through the sale of government land (former Japanese property) to small farmers, and then by compulsory expropriation and redistribution under the 1953 law; this resulted in the proportion of farming families owning land rising from 50% in 1948 to 86% in 1959 (Koo, 1968:953). The government made use of public enterprise stock shares to pay for the lands compulsorily purchased from landlords, which has the effect of converting investments in land into industrial assets and laying the foundation for the industrialization of Taiwan (Bowden, 1961:34).

Land reform led to rapid growth in Taiwan, with an estimated annual growth of 7.9 percent in 1951-1961, a 23% increase in agricultural production between 1953 and 1960, and a slight increase in employment; the method followed here is similar to the American method, as applied in Japan (Koo, 1968:953-954). McGuire (1994:207) states that practitioners of the state-centric political economy approach trace the development achievements of East Asian New Industrializing Countries and that this approach recognizes the development success of the redistribution of land, skills and jobs contributed to the East Asian. Koo (1968:954) believes that the American doctrine that reform contributes to development by inducing expropriated landowners to invest the proceeds of compensation in industry or urban enterprise is a myth, considering that most former landlords sold their industrial shares and retained their land bonds as the more secure form of investment. Despite this, Taiwanese policy makers manipulated or overrode market forces to redistribute assets and stimulate new industries; they however avoided the huge budget deficits, sharply negative real interest rates, and persistently overvalued currencies, which led to economic bottlenecks in Latin America (McGuire, 1994:206-207). In 1962, Taiwan was not much wealthier but around 1980 the gap between the rich and poor was smaller than in any other capitalist country; this stems primarily from three policies, namely, land reform, basic education and the promotion of labour intensive industry (McGuire, 1994:208-212).

4.8.2.3 Land Reform in South Vietnam

The Communist Party of Vietnam, after the victory in the American war in April 1975, embarked on the process of establishing socialism in the south of Vietnam (Bui & Preechametta, 2016:300). The reunification of Vietnam in 1975 led to the Vietnamese government carrying out policies to reshape and transform agrarian structures in the South, in line with the socialist economy in the North, where the socialist transformation of agriculture had two primary components: land reform and collectivization (Dang, 2010:72). These two primary components experienced challenges, particularly in the Southern Region, which led to the implementation being dragged out over many years and, only in the mid-1980s, after a decade of great effort, struggle and policy adjustment, did the authorities in the Southern Region announce the completion of agrarian reform, soon after which collective farming was dismantled

nationwide (Dang, 2010:72). Land inequality was serious and the new government struggled with agricultural collectivisation contributing to the decline in rice productivity (Bui & Preechametta, 2016:300). The five-year plan (1976-1980) intended to organize the nation's production facilities into agricultural cooperatives that aimed at correcting food shortages and optimizing the state's resources (Steinfeld & Thai, 2013:2).

South and North Vietnam came into existence due to the Geneva Accords in 1954, after Vietnam achieved its independence from France in 1954 (Tuan, 2010:2). The Geneva Accords divided Vietnam into two countries with opposing ideologies: the Democratic Republic of Vietnam in the North adopted a socialist ideology influenced by China and the Soviet Union, while the Republic of Vietnam in the South pursued a capitalist ideology influenced by the United States of America (Tuan, 2010:2). The minority ethnic Chinese, who dominated factors of production during French rule, experienced disenfranchisement and eventually discrimination by the economic reorganization, which involved land redistribution and forced collectivization (Steinfeld & Thai, 2013:2). Land reform was not happening for the first time since 1975; for instance, during 1945-1954, land was distributed from absentee landlords and pro-French collaborators to tenant farmers, transforming the beneficiaries into newly landed farmers (Gorman, 2014:507). In the early 1960s, the land claims again took centre stage assisted by the National Liberation Front (NLF) as 'land to the tiller' reforms transformed former tenants into 'de facto owners of the land they worked'. In 1970, the government of South Vietnam changed course by implementing a land to the tiller reform of its own (Gorman, 2014:507-508). The implementation of reforms that took place in 1970 happened under the guidance of American advisors (Gorman, 2014:507-508).

The five-year plan of 1970-1980 resulted in New Economic Areas being established on previously undeveloped land, where heavy industry was generally thwarted in favour of lighter production facilities such as food processing and textiles, and the agricultural and industrial sectors were to be intertwined into a single operational system under central control by the government (Steinfeld & Thai, 2013:19). The land reform avoided dividing land into small parcels unsuitable for production (Dang, 2010:80). Foreign aid played an important role in economic stability, with China's contribution up to year 1977 amounting to \$300 million a year, but this changed in

1978, when China withdrew aid from seventy-two projects in Vietnam (Steinfeld & Thai, 2013:19). The authorities' strategy of redistributing land to avoid resistance started with communal and public land, before moving individuals who had more land (more than ten hectares) to share some of their land with others (Dang, 2010:85). The majority of people did not like the land redistribution policy citing that those who had land did not want to share it because they achieved it with sweat and tears, and the landless did not want to hurt their feelings. In addition, the landless feared adopting high-yielding rice, with which they were unfamiliar, and which they would not be able to make profitable (Dang, 2010:85).

4.8.2.4 Land Reform in India

Land reform in India had been considered for a while, resulting in a number of policy debates (Deininger, Jin & Nagarajan, 2008:893). The Indian state enacted legislation on different aspects of land reform since 1949 (Uppal, 1969:361). The general feeling of Indians was that British rule had ruined India economically and, during World War II, about three million people died in the once rich province of Bengal, solely from the lack of food (Patil, 1955:374). The information on distribution of land, tools, implements, farm power, water supply, and so on, showed high levels of inequality in India (Swamy, 1980:5-6). According to Deininger, Jin and Nagarajan (2009:501), land reform in India involved three components:

- abolition of intermediaries shortly after independence;
- tenancy laws to increase tenure security of sitting tenants by registering them and often imposing restrictions on the amount of rent they had to pay, or the scope for new rental transactions; and
- ceiling laws that provided a basis for expropriating land held by any given owner in excess of a state-specific ceiling and, subsequently, transferring it to poor farmers or landless agricultural workers.

Progress in the first component of land reform went very well, but the last two components were slow; however, after some interventions, the reform transferred rights to almost 10 million hectares of land, an area more than three times what was involved in the well-known land reforms of Japan, Korea and Taiwan combined (Deininger, Jin & Nagarajan, 2009:501). The slogan for this campaign was "land to

the tiller”, and its aim was that the man who actually handles the plough on the land must also own it, in order to secure the full fruits of his own efforts; such a tenure will provide for both maximum production and social justice (Patil, 1955:374-375). Pertaining to land to the tiller, Patil (1955:375) states that the following assumptions were made:

- all the needs of these peasant proprietors, like credit, seed, fertilizers, implements, etc., which are today in large measure loaned by intermediaries, will in future be met primarily by the state, and
- the size of the holding is not a substantially important factor in a program of agricultural development, at least under Indian conditions of farming with its plough and bullock technique; any drawbacks on this account could be made up for by a system of cooperation for mutual benefit, and compensated for by the greater effort which personal ownership is bound to produce.

The five-year plan intended to eradicate poverty and attain economic self-reliance by developing the two vital sectors of the economy: industry and agriculture (Koshy, 1974:43). The issue of land reform always aroused a lot of controversy and emotion because not only it directly affect agricultural growth, but also since it affects the existence of a vast majority of the toiling masses in the countryside agriculture (Koshy, 1974:43).

The pressure for change exerted by the people and the promulgation of several pieces of legislation could not save the Indian government from conspicuously failing to bring about the redistribution of land and the allocation of credit in favour of the weaker classes in rural areas (Swamy, 1980:3). Bekker (1951:319) attributes India’s agrarian problems to the pressure of the population on the land, inadequate production techniques, inability to cope with recurring disasters, uneconomic size of agricultural holdings, exploitative patterns of tenure and agricultural credit, and poor marketing facilities. Some of the reasons provided by Uppal (1969), regarding the ineffectiveness of the provisions in land reform legislation in India, are:

- The legislation has gone far enough and has fallen short of fulfilling the objectives.

- The legislation was formulated in an unsystematic and uncoordinated manner, and contains technical defects and contradictions. For example, in many states, such as Rajasthan, Punjab and Madhya Pradesh, no legal sanctions were provided against the landowner in case of a tenant being ejected unlawfully or the landowner realizing more than the statutory rent.
- The legislation has not been properly implemented because of administrative difficulties and inadequacies. The failure of the government to maintain correct and update land records has created a great lacuna. The records do not provide information in respect of the holdings of the tenants and that of the crop sharer. For example, in some cases, holdings are shown to be cultivated by proprietors who do not even live in that village.
- The spirit of the legislation is not consistent with prevailing social and economic forces. In fixing maximum rent payable or providing security of tenure for the tenants, scarcity of land and overcrowding in agriculture without alternative means of subsistence for tenants are often forgotten. In these circumstances, provisions in the legislation are not enforced because tenants may be willing to cultivate land without taking advantage of any of the tenancy provisions.

Bekker (1951:332) states that the challenges experienced in the implementation of land reforms in India were exacerbated by the following:

- remote and unorganized agricultural population is slow to take advantage of the new laws;
- the establishment of financial institutions and extension services that must complement land reform proper lags far behind the laws;
- the creation of opportunities for the removal of the agricultural surplus population is behind schedule and is, at best, a matter of many years;
- the substitution of the Government for the landlord requires the handling of a large amount of survey and administrative work, and places considerable responsibility in the hands of officials who are not experienced in this field; and
- Indian observers consider the lack of competent and honest administrators for such jobs as one of the principal impediments to land reform.

Uppal's (1969) study of land reform in two villages in India shows an increase in the number of agricultural labourer families, from 9.3 percent in 1950 to 29.4% in 1966; a decrease in the number of non-owning cultivator families (i.e., tenants), from 9.7 in 1950 to 2.4 percent in 1966; and an increase in the number of cultivating owners, from 35.8 % in 1950 to 40.1% in 1966.

4.8.3 Equity share drives from the National Perspective

According to Hall (2012:825), a combination of pressures has thrown South Africa's white commercial farmers into difficulties, which arise from the dismantling of an elaborate architecture of policy and institutional support for commercial farming – among these are:

- agricultural deregulation including the removal of direct and indirect subsidies,
- state-controlled marketing boards with floor prices and pan-territorial pricing,
- cheap credit and tax breaks;
- the rapid liberalisation of trade in agricultural products; and
- sharp increases in the price of key farming inputs, particularly diesel and electricity.

The additional pressures placed on farmers were the introduction, in the 1990s, of basic labour rights for farm workers; minimum wage regulations; the extension of tenure rights to farm workers and their families; and land claims involving commercial farmland by former black occupiers, owners and tenants, in terms of the Restitution of Land Rights Act, 22 of 1994 (Hall, 2012:825-826). Middelberg (2014:102) refers to the Mpumalanga province, which has a considerable amount of arable land but which is under prospecting by mines; the expansion of the mines results in high prices being paid for farmland and threatens the agricultural land market as well as broader commercial and subsistence agricultural sectors in South Africa. Hall (2012:823-824) notes that South African farmers are no longer migrating (to Mozambique, Zambia and several other countries) as individuals or small groups, but are now centrally organised and coordinated in the form of large concessions for newly formed consortia and agribusinesses, which rely on external financing through transnational partnerships. Lyne and Darroch (1997:566) bring another dimension to this matter, in that the sugar milling company in KwaZulu-Natal decided to sell some of its sugar cane land to black

farmers on condition of long-term cane supply agreements over 25 years, because it wanted to release capital to invest in higher-value downstream activities, help redistribute land and promote the small business sector.

Consultants and financing institutions are involved in determining a fair price for farms and the evidence provided by some researchers on equity share schemes reveals that different valuers come up with different figures for the same piece of land. However, Middelberg (2014:101-102) mentions that the valuation process for farms is intricate and complex, and that the Property Valuers Profession Act (Act No. 47 of 2000) stipulates that valuers must be independent professional valuers, who must be registered as professional valuers or professional associated valuers. Middelberg (2014:102) further states that land owners, valuers and agriculturalists are also confused regarding the appropriate valuation approach to be followed for the purpose of internal decision making, financing or statutory purposes.

Matiwane and Terblanché (2012:77) mention the general sentiment towards the expectations or needs of workers and further state that people are aware of their needs, but the project cannot provide solutions for the needs at once, as the project can handle only one need at a time. Matiwane and Terblanché (2012:77) further state that among the reasons that lead to project failure is not fully appreciating the project scope or not fully understanding user needs.

4.9 CHALLENGES OF ACCESS TO FINANCE IN FARMING

The work environment of farmers compels them to operate and make decisions in an uncertain environment characterised by business and financial risk (Lishman & Nieuwoudt, 2003:325). In a country faced with poor quality of rainfall and soil, farmers, particularly emerging farmers, are advised to carefully use these resources to ensure long-term survival (Nell, Viljoen & Lyne, 1999:455). Despite everything happening in the agricultural sector, statistics show a reasonably solvent and profitable industry, although liquidity problems and cash flow pressures are often experienced (Middelberg, 2013b:273). Attempts by the pre-1994 South African government and donor support programmes in South Africa that provided subsidized credit to small scale farmers, emerging agribusinesses and micro-entrepreneurs, failed to reduce poverty and stimulate economic growth because the programmes experienced limited

investment in productive inputs, high default rates (up to 40%), lack of savings mobilisation, and limited client coverage (Kuhn, Darroch, Ortmann & Graham, 2000:68).

The discussion on agricultural finance in South Africa began in the 1990s, but eventually subsided around 2000; amongst the possible reasons for it subsiding could be that enough guidance was generated to enable agricultural development finance to evolve (Makhura, 2008:2). It appears that agricultural finance was, ultimately, not properly monitored and guided as were other policy areas, therefore, such a move has resulted in agricultural development finance being viewed in isolation from other elements, and sometimes considered an end in itself (Makhura, 2008:2). Most programmes have failed due to the separation of the commercialisation of agriculture from other programmes in order to improve access to formal credit for smallholder farmers (Fakudze & Machethe, 2015:728).

Agricultural finance has lagged behind new developments in the agriculture business since the focus was initially on farming, but now the business covers agricultural activities across the value chain including the provision of inputs and services, production activities, as well as value-adding activities (such as processing, storage, logistics), as well as distribution, retailing and consumer behaviour (Makhura, 2008:2). Makhura (2008:3) mentions that agricultural cooperatives have been transformed into agricultural corporations, resulting in changes in the objectives and operations of such institutions from providing services to members to creating maximum value for shareholders.

Access to agricultural credit is still a challenge in most developing countries, as such financial institutions still cannot provide loans for even the purchase of land (due to poorly defined tenure), or providing seasonal working capital for production inputs and marketing (Fakudze & Machethe, 2015:729). Farmers in KwaZulu-Natal, Lebowa, Venda and KaNgwane could not make use of formal credit due to high transaction costs, low wealth and poor debt servicing capacity (Kuhn *et al.*, 2000:68). The poor debt servicing capacity, particularly for emerging farmers, could be linked to what Nell, Viljoen and Lyne (1999:455) say is the lack of experience or time for emerging farmers to develop managerial skills, such as financial management.

Farmers use short-term credit for harvesting and the storage of crops before it is sold, hence, the high demand for short-term credit during the agricultural calendar (Fakudze & Machethe, 2015:729). Despite government having reviewed the land reform (i.e. changing from Settlement Land Acquisition Grant (SLAG) to Land Redistribution for Agricultural Development (LRAD)), reviewed agricultural marketing reforms and many other developments which have taken place, agricultural finance has not been reviewed (Makhura, 2008:3). Agricultural finance helps to finance production or harvest; to purchase inputs; to fund investments; and to mitigate risk and uncertainty (Fakudze & Machethe, 2015:729). Poor farmers are struggling to secure loans due to incomplete agricultural credit markets and leading to poor crop yields (Fakudze & Machethe, 2015:729). In South Africa, financiers prefer to use agricultural land as collateral to finance farmers for long-term capital expenses or short-term production financing; this is a practise has been in place for many years (Middelberg, 2014:101). However, the use of agricultural land as collateral for production financing is not always possible, as the value of agricultural land, relative to rising input costs, is generally not sufficient to cover these expenses (Middelberg, 2013b:273).

Poorly defined land rights makes it impossible to use land as collateral, thus, South Africa embarked on land reform programmes to avail land as collateral (Fakudze & Machethe, 2015:729). Despite the existence of alternative financing models that use both expected harvest and crop insurance as collateral, the use of agricultural land is still preferred since it is regarded as the cheaper form of financing (Middelberg, 2014:101). According to Middelberg (2013b:273), agricultural finance has unique characteristics because agriculture:

- has a lengthy production cycle, which can lead to less frequent and seasonal payments of loans; and
- is capital intensive.

The agricultural sector, because of these characteristics, make its debt-servicing capacity and creditworthiness vulnerable to downward swings in commodity prices and land values, and increases the credit risk they pose to agricultural finance providers (Middelberg, 2013b:273). Agriculture is considered to be a high risk sector due to production, climate and price risk; for example, grain producers in South Africa

have been greatly affected by price risk since the deregulation of the grain market in 1996, which led to producers being price takers (Middelberg, 2013b:273). The variation of product prices is due to agricultural marketing deregulation, drought, and more variable nominal interest rates (Lishman & Nieuwoudt, 2003:325). The post 1994 South African government encouraged farmers to manage drought risks themselves in order to reduce demands on government funds as, in the past, the government used to provide for drought relief, particularly for maize producers (Lishman & Nieuwoudt, 2003:325-326).

Middelberg (2013b:275) mentions the following providers of agricultural finance:

- agricultural companies (previously agricultural cooperatives);
- commercial banks;
- the land and agricultural development bank of South Africa (Land Bank);
- other privately-owned institutions offering either agricultural finance or corporate farming initiatives; and
- development finance institutions (DFIs).

South African commercial banks have emerged as the primary lenders to agriculture, after South Africa's state-owned Land Bank showed a decline. Another contributing factor to their emergence is primary lenders is the withdrawal of access to subsidised credit for white farmers as part of the wider deregulation process of the 1980s and 1990s (Hall, 2012:837). Apparently, three commercial banks (Standard, ABSA and Standard Chartered) are involved in financing the continental expansion of Agri South Africa (AgriSA), a deracialised association of farmers' organisations formed in 1999, which is keen to recruit black membership and to build relations with the post-apartheid political dispensation (Hall, 2012:826-837). In 2009, the Land Bank contemplated repossessing approximately 350 farms from emerging black commercial farmers due to their inability to service government loans, granted under the land reform programme (Black Publishing Ltd, 2009:18341). The development finance institutions suffered a setback of incurring high transaction costs due to small loan sizes, poor credit control policies, fixed infrastructure costs, and technical assistance programmes, which forced them to be reliant on continued government support in order to remain viable (Kuhn *et al.*, 2000:68-69).

4.10 CHALLENGES OF ACCESS TO EXTENSION SERVICES IN FARMING

The South African government's drive for agricultural development is to improve the livelihoods of the rural poor, however, the majority of these development initiatives have not translated into improvements in agricultural productivity or the livelihoods of the targeted beneficiaries (Cloete, 2013:3495). Some theories are against the formation of small scale farmers, mentioning economies of scale which will affect small scale farmers, but the experience of India proves otherwise. Therefore, if an appropriate extension service is in place, the future of small scale farmers in South Africa is bright (Van Niekerk, Stroebel, Van Rooyen, Whitfield & Swanepoel, 2011:47-48).

The agricultural extension service enables farmers to determine their own problems, helps them find desirable solutions and encourages them to take action (Maoba, 2016:168). The sharing of appropriate information with farmers, at the right time, plays an important role in providing change in agriculture; there is thus a great need for effective extension and advisory services (Maoba, 2016:167). However, emerging farmers lack access to the support services and resources required to expand their farming operations (Nell *et al.*, 1999:455). In the Eastern Cape, the challenges experienced by farmers include: poorly performing breeds; unfenced fields; outdated farming systems; lack of fertilizer, irrigation and mechanization; lack of water and the associated water infrastructure; and insufficient training (Van Niekerk *et al.*, 2011:51).

The Western Cape provincial president of the National African Farmers Union (NAFU), Willy Williams, blamed government and the Land Bank for the 350 farms that were about to be repossessed due to the non-payment of loans; Williams mentions that both government and the Land Bank failed to provide adequate support to new farmers (Black Publishing Ltd, 2009:18341). The extension practitioners are criticised for lack of visibility, however, a study conducted in Nquthu, KwaZulu-Natal, provides evidence to the contrary (Hlatshwayo & Worth, 2016:175-184).

The South African government's response to the low success rate of land reform projects to introduced support programs, which include: research; technology development; technology transfer; bulk infrastructure support; land-care projects; land redistribution and administration; food safety programmes; food security initiatives;

environmental impact assessments; input and capital equipment; environmental planning; pollution control; biodiversity planning; wildlife trade and hunting industry development; and regulation and human resource development programmes – however, these did not address the challenges experienced by farmers (Cloete, 2013:3495-3496). In the North West province, insufficient institutional support was the main reason for the failure of agricultural development (Cloete, 2013:3496).

Davis and Terblanché (2016:231) state that the National Development Plan for South Africa stipulates that there is a need to train a new cadre of agricultural extension advisors, not just to respond to the needs of small-holder farmers, but to do their work effectively.

4.11 SUMMARY

This chapter focussed on equity share schemes in South Africa. In so doing, the chapter provided an overview of the history of land reform in the country, covering three areas of land reform – land restitution, land redistribution and land tenure. The various types of equity share schemes discussed in this chapter were: employee share ownership, employee stock ownership plans, joint ventures and cooperatives. The framework for implementing equity share schemes was also provided herein, based on the procedures for farm worker equity share schemes.

Success stories of farm worker equity share schemes were shared in this chapter to show what has been achieved by some schemes. An overview of international and national benchmarks for equity share schemes were provided in this chapter, in order to offer a wider range of information on equity share schemes. This overview covered equity investment from a global perspective; the international context of land reform using Japan, Taiwan, South Vietnam and India as case studies; and equity share drives from the national perspective. Access to finance and access to extension services were also explored in this chapter.

The ensuing chapter, Chapter 5, provides a hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

CHAPTER 5

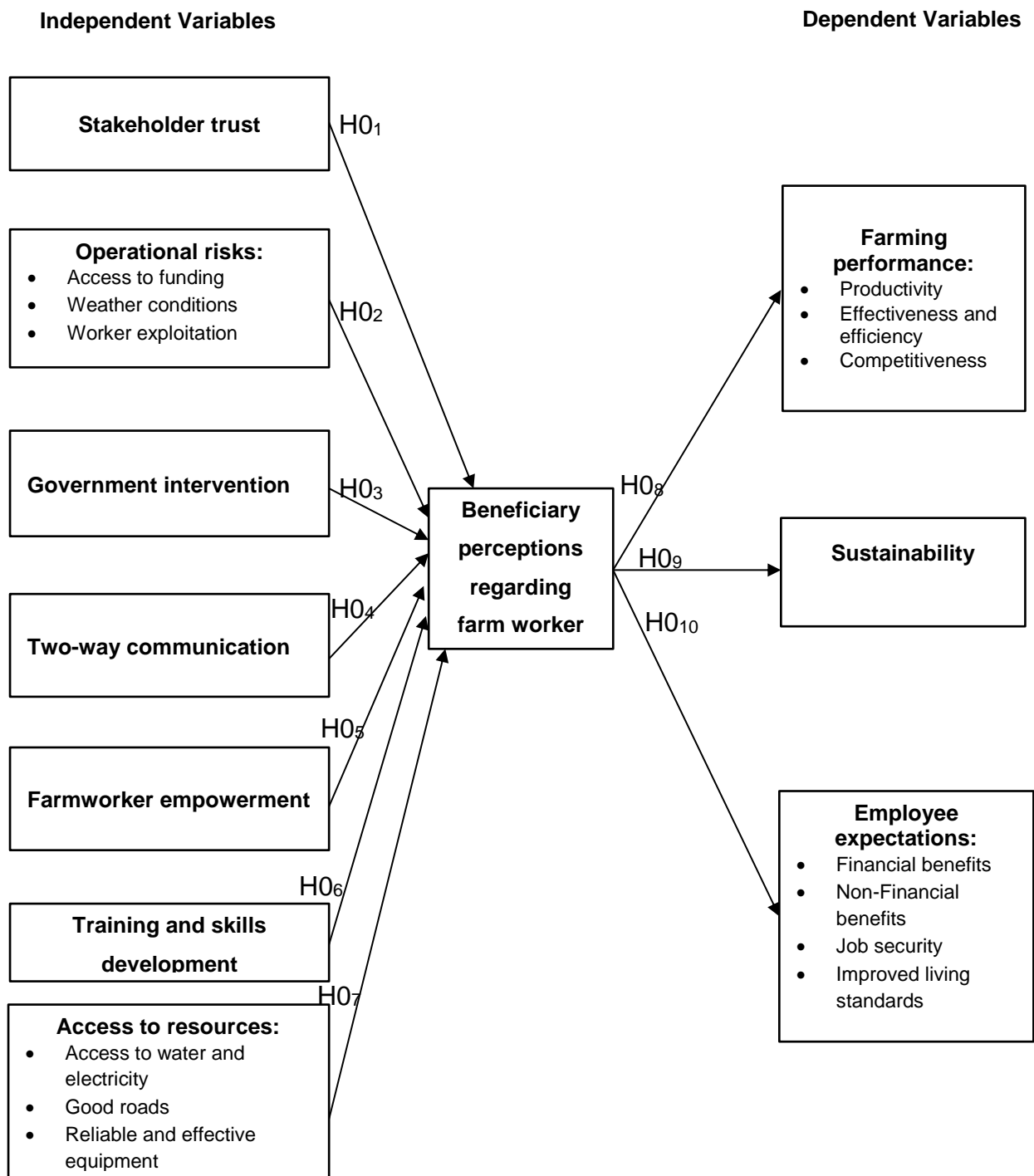
HYPOTHETICAL MODEL OF BENEFICIARIES' PERCEPTIONS REGARDING FARM WORKER EQUITY SHARE SCHEMES IN SOUTH AFRICA

5.1 INTRODUCTION

Chapter 4 of this study provided an overview of equity share schemes in South Africa. It outlined the history of land reform in the country, discussed various types of equity share schemes, provided the framework for implementing equity share schemes, and covered the success stories of farm worker equity share schemes. In addition, the chapter provided international and national benchmarks, as well as information on access to finance and access to extension services.

Chapter 5 provides a hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa, as shown in Figure 5.1 below. This model was developed based on the conceptual model of factors contributing to the performance of a farm worker equity share scheme by Knight, Lyne and Roth (2003:6); the theory of recapitalisation and development programme by Business Enterprises University of Pretoria (2012:8); and equity share schemes in the South African wine industry by Or (2011:52). The hypothetical model has ten variables, seven of which are independent variables and three of which are dependent variables. This chapter provides information on the variables and sub-variables used in the hypothetical model, in order to better understand them

Figure 5.1: Proposed hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa



Source: Author's own work

5.2 OPERATIONALISATION OF INDEPENDENT VARIABLES AND FORMULATION OF HYPOTHESES

This subsection provides information on the variables and sub-variables used in the hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

5.2.1 Stakeholder trust

Greenwood and Van Buren III (2010:426) define trust as the expectation by one person, group or firm of ethically justifiable behaviour, that is, morally correct decisions and actions based upon ethical principles of analysis on the part of another person, group, or firm in a joint endeavour or economic exchange. Trust signifies confidence and goodwill for the governing institutions, and the sharing of information with the stakeholders; furthermore, the importance of trust extends to the settings of the workplace (Turner, Addison, Arias, Bergseth, Marshall, Morrison & Tobin, 2016:505). Harris and Wicks (2010:143) caution that there is a difference between the trust individuals have in 'business', that is, institutional trust, and the trust individuals have in a particular business, that is, organizational trust. Trust leads to efficient business transactions, an increase in customer satisfaction and the enhancement of employee motivation and commitment (Pirson & Malhotra, 2011:1087).

Among the drivers for multi-stakeholder partnerships, stakeholder engagement and collaborative arrangements, are issues of improving corporate social responsibility, solving social problems, improving social welfare, achieving strategic corporate goals and enabling systemic change (Sloan & Oliver, 2013:1835). This is applicable to land reform programmes through which farmers and beneficiaries enter into certain agreements in order to manage farms. Depending on the angle from which the concept of trust is approached, it can be grouped into internal and external trust. Harris and Wicks (2010:142-144) refer to these two groups as organisational trust based on intra- and inter-organisational relations, which distinguishes whether the stakeholder is 'internal' or 'external' to the organisation. Internal trust refers to the employer and employee situation (farmer and beneficiaries) or dynamics within the organisation.

When a stakeholder has invested in an organisation (including labour, financial capital, and a location to operate, amongst others), then that organisation has a duty to

maximise benefit to that stakeholder (Greenwood & Van Buren III, 2010:425-426). This means that farm beneficiaries would expect the same when they invest their grants at a farm, if the original farm owner is still a shareholder of the farm, but when that does not happen, it will lead to the breakdown of trust.

External trust refers to the relationship between organisation and government or external stakeholders, such as financial institutions and service providers, amongst others. Policy makers and regulators are often expected to make decisions despite the existence of substantial uncertainty regarding the outcomes of their proposed decisions; however, a failure, in the process, to understand or align with public opinion could lead to the erosion of trust in the government (Capon, Gillespie, Rolfe & Smith, 2015:1-2).

Organisations have a duty to develop the trust of key stakeholders because of the importance of corporate reputation and to ensure that progress is not only limited to the everyday activities of the organisation, but also considers the survival of the organisation in case of critical situations (Matuleviciene & Stravinskiene, 2016:472). Experience shows that multi-stakeholder partnerships fall short of expectations, prove difficult to sustain, or even fail due to tensions, negative episodes and crises, amongst other reasons (Sloan & Oliver, 2013:1836). When trust between stakeholders has been broken, the repairing process is complex and involves a diverse set of stakeholders. Factors to be considered in this regard include the organization's responsiveness to key stakeholders; its resource relationships with stakeholders; the utility of the relationship; and the need to actively manage trust (Brown, Buchholtz & Dunn, 2016:181).

Amongst the stakeholders of the organisation, are those with whom the organisation interacts most often or maintains long-term relationships, and which influence the daily activities of the organisation (Matuleviciene & Stravinskiene, 2016:472). Stakeholders view the organisation differently when it shows misconduct, thus leading to stakeholders judging the systems, processes, culture, and management practices of the organisation, while attempting to recalibrate their views based on the event (Brown *et al.*, 2016:181).

A study conducted in Guinea reveals that it was faced with the challenge of building trust with Guinea counterparts and attracting private sector interest in the electricity sector, while the outbreak of the Ebola epidemic during the procurement phase worsened the situation (International Finance Corporation, 2016:1-5). However, strong marketing and interaction with potential bidders were critical for the success of the study, which also sought to conduct bid evaluation in Senegal, in order to comply with travel restrictions to Guinea due to the Ebola crisis, strengthened stakeholder trust (International Finance Corporation, 2016:5). A study on stakeholder views of risk perception with regard to nanotechnology, which examined views on several trust actors, was conducted in Australia (Capon *et al.*, 2015:1-5). The results revealed that the public perceives greater risks stemming from manufactured nanomaterials and they have less trust in scientists and the health department to provide protection from possible health effects, than they do in academic, business and government stakeholders in the nanotechnology sector (Capon *et al.*, 2015:11).

For the purpose of this study, stakeholder trust is defined as beneficiaries' confidence in the co-owner farmer or management to put all measures in place to ensure the success of the farm worker equity share scheme, which is the internal trust referred to above.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₁: There is no relationship between stakeholder trust and beneficiaries' perceptions regarding farm worker equity share schemes.

5.2.2 Operational risks

Radomska (2014:35) defines operational risk management as “a process involving identification, assessment and management of both internal and external events and threats that could hinder the implementation of the strategy and achievement of strategic objectives”. However, Delija (2015:35) states that “the definition of operational risk depends on the nature and type of organization”. Croitoru (2014:22) mentions that the concept of operational risk in sectors other than the banking sector is relatively new; which is supported by Li and Moosa (2015:2053) who state that operational risk was not recognised for a long time, since the kind of risk that was

managed was associated with banking and financing. Although Basak and Buffa (2016:1) base the definition of operational risk in financial terms by stating that it “is considered internal if the financial institution has control over it, and external if it is due to uncontrollable events such as natural disasters, security breaches, political risk”, the same concept is applicable to firms or organisations. According to Croitoru (2014:22), different views on the definition of operational risk exist, because it is analysed in terms of several aspects, as outlined below:

- operational risks were initially identified as other forms of financial risks associated with development strategy, positioning in the environment in which the entity is based or competence management;
- operational risks were associated with second financial transactions or errors in the recording of entries in the system, data processing errors, errors in performing, recording outputs of system errors or errors in financial statements. In this context, there is a risk that classification is specific only recording mode operations entry, processing and output of the system, do not take into account the risks of fraud intention, the execution of unauthorized transactions or inappropriate use of financial instruments in the nature of economic transactions;
- operational risks were associated with third internal control system implemented by management or its non-functionality;
- finally, operational risks have been associated with direct or indirect losses resulting from the improper conducting of activities, inefficient internal control measures implemented and employing unauthorized personnel as a result of external influences or obligations.

Li and Moosa (2015:2054) highlight that operational risk is not only determined by organisation specific factors, but other factors, including macroeconomics and various aspects of the environment in which the organisation operates, have an influential role in this regard. However, there is limited research output that sheds light on the determinants of operational risk. Organisations have to take mitigating measures against unpredictable threats to their survival by collecting and analysing information concerning risks because failure to do so may cause them to make decisions that are unfavourable for the organisation, or may lead to the improper execution of decisions

in practice, or could result in non-responsiveness to the changes occurring in the environment and in the organisation (Radomska, 2014:33). Well-resourced organisations have instruments in place to deal with broad operational risks in an organised manner, by following certain guidelines. However, operational risks are caused by a number of factors, which are thus sometimes difficult to formalise and model, whilst the existing approaches are directed at the solution of particular tasks within one business process (Karaseva, 2016:23).

Operational risks can be tracked with key risk indicators (KRIs), which should be relevant, measurable, predictive, easy to monitor, auditable and comparable; however, there is limited information on the guidelines for a systematic process to identifying and selecting KRIs that satisfy this criteria (Andersen, Häger & Vormeland, 2016:290). The consequences of operational risks are financial, human and reputation losses, amongst others, which are caused by the human factor, business process defects, technical system failure or external factors (Karaseva, 2016:23). Elimination of some risks, such as power system failure, personnel mistake, floods, earthquakes or terrorist actions requires significant resources (Karaseva, 2016:23). Challenges related to accessing information make it difficult to plan and operate deterministically (Kauppi, Longoni, Caniato & Kuula, 2016:484). It is suggested that, to improve the situation, the following has to happen: reduce the need to process information through slack resources and increase information processing capability through investing in information sharing (Kauppi *et al.*, 2016:484).

The results of a study that uses data on managing country disruption risks and improving operational performance, gathered from 21 countries, reveal that countries such as Japan, The Netherlands, Italy, India, China, Hungary, Malaysia and Romania, where the exposure to natural risks is medium to high, managers should take decisions to prevent or mitigate exogenous risk through different risk management strategies along their supply-chain (Kauppi *et al.*, 2016:484-493). In a study on operational risk and strategy implementation in 200 companies, selected from a list of the 500 largest Polish companies, the results reveal positive correlation between operational risk elements and the effectiveness of strategy implementation (Radomska, 2014:31-39).

For the purpose of this study, operational risks are defined as threats to the operation of the farms due to the lack of access to funding, bad weather conditions and existing worker exploitation.

5.2.2.1 Access to funding

Access to finance is the ability of individuals or enterprises to obtain financial services, including credit, deposits, payment, insurance, and other risk management services (Brav, 2009:263). The prosperity of agriculture, in terms of improved livelihoods, depends on well-functioning financial services in helping the poor to diversify their activity and to become more resilient to periodic shocks, as well as to prevent them from falling into poverty traps (Naidoo, 2015:29). In addition, sustainable agricultural production relies on access to finance for production start-up inputs such as seed, fertiliser, and for fixed capital improvements (Afful & Lategan, 2014:31). Evidence suggests that smallholder farming can be sustainable and competitive if the necessary support is available; this support is important because poverty alleviation is viewed as a means of boosting smallholder agriculture in driving broad-based economic growth and employment across a range of agricultural and non-agricultural activities (Jama & Pizarro, 2008:218). However, the agricultural sector in developing countries is faced with inadequate funding, which impacts on the growth of the agricultural sector since credit (short-term, medium-term or long-term) enables farmers to purchase the requisite agricultural inputs for growing and expanding their agricultural output; it is also used for the processing, storing and marketing of farm outputs (Adeola & Ikpesu, 2016:90).

The low level of lending by commercial banks to the agricultural sector warrants new and innovative solutions that are commercially viable (Oberholster, Adendorff & Jonker, 2015:50). It has to be noted that the rural economy, in particular, needs a diverse range of financial services and products, which no single type of financial institution is capable of efficiently providing (Naidoo, 2015:29). Farms affected by drought, veld fire, soil erosion and bad roads due to climate change experience challenges in accessing funding; one of the reasons for this is the lack of title deeds used as collateral by the financial institutions, since most of the land is tribally owned, communally owned or owned by the state (Khapayi, 2013:43-165). The results of a study of small scale farmers in Limpopo reveal that the long processing period for

securing a loan is viewed as a problem, as opposed to collateral (Afful & Lategan, 2014:31).

The stringent conditions associated with bank loans cause farmers to avoid formal financial institutions and seek credit from sources with high interest rates (Adeola & Ikpesu, 2016:90). Moreover, for successful capital acquisition, there must be a match between the requirements of the funder and the characteristics of the applicant; however, this decision has significant implications for business operations, performance and risk (Van Auken & Carraher, 2012:1). The lack of education by some owners results in the owners' preparation of documents not matching the requirements of the capital provider (Van Auken & Carraher, 2012:1-2). Some of the bottlenecks to effective rural finance markets are the result of imperfect information, lack of infrastructure, spatial distribution and covariant risk (Moyo & Coetzee, 2002:32). The beneficiaries of land reform are meant to receive credit from the Land Bank, which does not happen due to a combination of factors, including not being unaware of opportunities for credit (Afful & Lategan, 2014:31), which speaks to the issue of imperfect information mentioned above. This includes lack of knowledge of other funding sources in the form of grants from parastatal development financial institutions, and funds from other government departments, such as the National Development Agency (Afful & Lategan, 2014:31).

The increase in funding needs in rural areas has created growth opportunities for the microfinance industry, however, this industry is exposed to operational risk due to the lack of proper attention being given to the risks involved (Delija, 2015:41). Microfinance is important to meet the short-term needs of farmers and other low-income residents, and to help finance microbusinesses, but it is not suitable for larger businesses that wish to raise productivity (Naidoo, 2015:29). In Nigeria, the microfinance industry includes what is called the Community Banking Scheme, which is intended to narrow the credit gap in the rural economy and to make the sector more productive (Onugu, 2000:103). The Community Banking Scheme is regarded as a self-sustaining financial institution that is owned and managed by a community, for the provision of credit and other financial services to its members; in this regard, the community is considered to be a group of people who possess a 'common bond' arising from residence, occupation, profession or similar attributes, and who interact

fairly frequently in the pursuit of shared economic goals (Onugu, 2000:103). Microfinance organisations provide small loans to alleviate the financial constraints of the poor since banks experience high transaction costs in administering small loans, thus leading to the exclusion of the poor from the formal financial system and to their exposure to financial uncertainty and reliance on exploitative local lenders (Cobb, Wry & Zhao, 2016:2103-2105).

For the purpose of this study, access to funding is defined as the ability of equity share schemes that need funding to secure financial aid upon submitting an application for financial assistance.

5.2.2.2 Weather conditions

Agricultural production systems are influenced by unpredictable external factors such as unfavourable weather conditions (Oberholster *et al.*, 2015:50). Variations in weather conditions, such as rainfall and temperature, affect productivity in agriculture. Therefore, weather risks (temperatures, floods, droughts, hailstorms, windstorms, etc.) could lead to losses in yield and production, thus causing economic losses for producers and other sector stakeholders that depend on income from agricultural trade, transport, processing, or export (Arce & Uribe, 2015). South Africa has experienced a number of drought episodes, which have shown an increase from the 1960s to 1990s, with the most extensive episode occurring during the 1982/83 season and the most severe episode during the 1991/92 season, whilst the 2015/16 drought is comparable to the 1933 and 1982 droughts (Bahta, Jordaan & Muyambo, 2016:39-40). According to Bahta, Jordaan and Muyambo (2016:40), South African farmers lost up to R10 million in 2015 due to drought, with communal farmers at a greater risk due to:

- lack of resources,
- lack of access to financial institutions and insurance,
- imperfect market systems,
- overgrazed and highly degraded land,
- lack of knowledge and managerial skills, and
- poor extension support.

Changes in climate conditions can also be influenced by human activities such as the emission of greenhouse gases into the atmosphere from industrial processes, among others, causing earth to warm, shifting precipitation patterns, resulting in more frequent extreme events, such as droughts, floods and forest fires (Anwar, Liu, Macadam & Kelly, 2013:225-227). The significance of weather risks in developing countries is huge because of the importance of the agricultural sector in the overall economy and its contribution to household food security; however, developing countries are more vulnerable to weather risks due to factors that restrict stakeholders' abilities to manage risk (Arce & Uribe, 2015). The empirical results of a study conducted by Quaye, Yawson, Ayeh and Yawson (2012:6356-6357), on climate change and food security in Sub-Saharan Africa, reveal that the food systems can be affected by climate change in several ways; among these are a direct effect on crop and livestock production, and changes in market and food prices. However, the research findings also indicate that the impact of risk to agriculture is not solely dependent on changing climate conditions, but also on the agricultural sector's ability to adapt through changes in technology and demand for food, coupled with the management of water availability, soil quality, and crop selection.

Farmers are struggling to accurately predict weather patterns, including long-range forecasts about the evolution of climate factors affecting their crops (Ioan & Rădulescu, 2015:254). Global trends, due to the sensitivity of agriculture to the weather, has resulted in a high demand for financial protection against weather perils; this caused the insurance industry to develop a broad spectrum of insurance products, including multiple peril crop insurance, index-based weather insurance, and weather derivatives (Odening & Shen, 2014:188). However, the demand for multiple peril crop insurance is less when there are no subsidies granted to either farmers or insurers, however, countries that offer the subsidisation of premiums such as the USA, Canada, and some EU countries (i.e. Spain) have high participation rates (Odening & Shen, 2014:188-189). Apparently, when there are no subsidies, farmers follow what Ioan and Rădulescu (2015:254) refer to as being reactive in addressing weather-related challenges as they occur. The South African government provides drought relief schemes, particularly for communal farmers, but these are not received on time and are not sufficient (Bahta *et al.*, 2016:40).

For the purpose of this study, weather conditions is defined as severe temperatures, drought, hailstorms, strong winds and heavy rainfall, all of which affect agricultural production.

5.2.2.3 Worker exploitation

The global tradition on agricultural labour has witnessed the supply of labour from poor and marginalized groups, including migrants who are not able to enjoy the full protection of the law (Hall, Wisborg, Shirinda & Zamchiya, 2013:49). The agriculture industry has, over the years, been known for employing migrant workers who are subjected to exploitation such as low wages and unfavourable working and living conditions (Stockdale, 2013:756). In South Africa, migrant workers from Zimbabwe are found on farms in the northern region of the Limpopo province, and have been the subject of human rights reports and academic studies that document their abuse (Rutherford & Addison, 2007:619). It is however not clear if other migrant workers were also abused, but Rutherford and Addison (2007:620) do make reference to Zimbabwean migrant workers due to the economic disruptions and political displacements in Zimbabwe, which compelled many Zimbabweans to leave their country.

The history of South Africa has led to highly unequal labour rights, with a black worker constantly at the service of a white worker, whether the latter was his superior or not; black people were made to be the least qualified, do the most poorly remunerated jobs, their status not allowing them to contest unfair practices or dismissal, they were not provided with indirect wages such as pensions or insurance, and they were restricted from professional advancement (Pons-Vignon & Anseeuw, 2009:885-886).

The results of a study conducted by Cousins (2009:899-901), on the South African agricultural sector, reveal that pre-1994 South African farm workers living on privately owned farms were exploited and insecure; furthermore, post-1994, a number of attempts were made to improve the agricultural sector, such as the promulgation of laws to secure the land rights of black South Africans, however, the outcomes of legal empowerment are greatly disappointing. Tenure security laws are proving to be ineffective in preventing the eviction of farm workers and dwellers since, during the first decade of democracy, about one million people were evicted from commercial

farms, a figure higher than the number of farm workers who benefitted from land reform programmes in that period, compared to roughly three quarters of a million farm workers who were evicted in the previous decade (Cousins, 2009:901). Brandt and Ncapayi (2016:215) define farm dwellers to mean “individuals or families living on farms without necessarily working on the farm”.

The liberalisation of the agricultural sector since the 1980s has enabled the replacement of individual landowners with corporations in charge of the production process, the replacement of permanent and resident labour with external and casual labour, which results in farm workers and their families paying the price for the liberalisation of the sector (Brandt & Ncapayi, 2016:215). Despite the abuse of workers, not only in agriculture but in other sectors as well, industrialised nations who are well aware of the abuse of the workers still have moved a significant portion of their operations to countries with low wages in order to seek the highest profit (Pines & Meyer, 2005:155).

The rise of outsourcing, labour brokering and other forms of employment have worsened the circumstances of farm workers, whose employment is so closely linked with their ties to their place of residence, and to their entitlement to goods and services that are part of the established terms of employment (Hall *et al.*, 2013:53). The dangers to which farm workers are exposed include the chemicals used on farms, which can cause problems with eyesight, breathing and coughing (Fanning, 2011:57). In some instances farm workers are found to have been paid with alcohol instead of wages, although this practice became illegal in 1961, however, gaps in the law allowed alcohol provisions to continue as gratuity and/or reward (Gossage, Snell, Parry, Marais, Barnard, de Vries, Blankenship, Seedat, Hasken & May, 2014:7407).

For the purpose of this study, worker exploitation is defined as unfair practices directed towards workers, denying what is legally due to them in their employment.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₂: There is no relationship between operational risks (as measured by access to funding, climate conditions and worker exploitation) and beneficiaries' perceptions regarding farm worker equity share schemes.

5.2.3 Government intervention

Belsky and Wacter (2010) regard government intervention as all regulatory actions taken by a government in order to affect or interfere with decisions made by individuals, groups, or organisations regarding social and economic matters. Government intervention in agriculture, at different stages of economic development, is unavoidable across all countries (Lopez & Hathie, 2000:57). Those who support government intervention in the land market do so with respect to reducing the externalities of land use and regulating the land market, whilst opponents of government intervention do so under the pretext of inducing distortion in the land market (Huang & Du, 2016:323).

In a global context, particularly in Finland, the study reveals that government intervention in agriculture in the 1930s had been through export subsidies and import restrictions; these were followed, in the 1940s, by the income support system of small farmers and farms situated in less favoured regions, and agricultural reforms, which had far-reaching political, economic and social reasons and goals (Granberg, 1986:243-244). In Japan, before 1974, there was no significant government intervention in agricultural markets, with less than one-tenth of farmers receiving subsidies from the government; however, the oil crisis of 1974 changed things significantly. As a result, almost all agricultural producers have been included in subsidy schemes and other farm programs intending to fix the instability of the agricultural markets (Vitanov, Sakai, Jordanov, Managi, & Demura, 2007:331).

In Africa, policy-makers tend to lower the price farmers receive for their products, subsidise inputs to achieve cheap food policy goals, and impose indirect taxation through overvalued exchange rates; it is thus evident that the reasons for government intervention are political and economic (Lopez & Hathie, 2000:57). The liberalisation of the agricultural sector in Africa led to the end of marketing board price regulation for commodities, the demise of agricultural input subsidy, and credit programmes which underlay cheap food policies (Lopez & Hathie, 2000:58). The Marketing Act (Act 27 of 1937) in South Africa, was a platform upon which statutory intervention in the marketing of agricultural products was built (Vink, 2012:553).

Before 1994, commercial agriculture received generous support from the government, which has since changed, as limited impact in rural poverty would be experienced because there would be smaller impact on wages due to high unemployment (Black & Gerwel, 2014:243). In South Africa, agricultural support since 1994 has been in the form of land reform, which is taking place in the context of declining support for agriculture, which has in turn placed substantial pressure on even established commercial farmers (Black & Gerwel, 2014:246). If government fails to provide fiscal support to small and medium-scale black farmers, including the beneficiaries of land reform, the chances are that they will not be successful in this competitive and unpredictable sector (Black & Gerwel, 2014:246). Hendriks (2014:3) states that the South African government reprioritised fiscal policy in order to focus on improving food security for historically disadvantaged people by instituting the following social programmes in all spheres of government:

- School feeding schemes;
- Social grants - child support, pensions, disability, etc.;
- Free health services for children between zero and six years of age, as well as expectant and breastfeeding mothers;
- Public works programmes;
- Agricultural programmes: community food garden initiatives such as Kgoraand Xoshindlala production loan schemes, infrastructure grants for smallholder farmers and the presidential tractor mechanisation scheme; and
- Land reform and farmer settlement programmes.

For the purpose of this study, government intervention is defined as the visible role played by government towards ensuring the wellbeing of beneficiaries, through measures put in place to assist farm worker equity share schemes to prosper.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₃: There is no relationship between government intervention and beneficiaries' perceptions regarding farm worker equity share schemes.

5.2.4 Two-way communication

According to Lombard (2011:3489), two-way communication is regarded as an interactive dialogue between an organisation and its customers or stakeholders. According to Versosa and Garcia (2009:1), strategic two-way communication refers to the design of action plans intended to promote voluntary changes in the behaviour of stakeholders whose endorsements are crucial to the success of reform initiatives. The commitment of employees in an organisation or work environment depends on the quality of information, accuracy and communication flow (Nordin, Sivapalan, Bhattacharyya, Hashim, Ahmad & Abdullah, 2014:1047). Usually, employees are not involved in decision making, and are often just sent one-way messages about decisions made elsewhere in the organisation, which is a failure of companies to utilise the full potential of their employees (Uusi-Rauva & Nurkka, 2010:300).

Previous studies show that team members who primarily exchange information by anticipating one another's needs do better than those who use less anticipatory communication (Butchibabu, Sparano-Huiban, Sonenberg & Shah, 2016:596). Butchibabu *et al.* (2016:596) state that anticipatory information sharing is regarded as implicit coordination, whilst explicit coordination happens when there are prompts or requests for information amongst team members, matching increased communication overhead (exchange of information that requires time and cognitive resources).

Information flows smoothly in an open environment, which is an environment in which workers feel free to voice complaints, express opinions and give suggestions to their supervisors and superiors, however, information is blocked in a close communication environment (Nordin *et al.*, 2014:1048). Research shows that people prefer to speak up when working in open organisational environments, sharing resources amongst themselves, and receiving empowerment from their leaders (Chan, 2014:668).

The importance of communication cannot be overemphasised, particularly when it involves changes that take place within farm workers equity share schemes, considering Kleasen and Foster's (2002:203) statement that "everyone responds to change in a variety of ways, depending on the circumstances, the change and what other changes there may be in their lives". However, Kleasen and Foster (2002:204) point out that there is a misperception that people resist change and cause managers

not to communicate some information to their employees; this should not be the case, as most employees will be supportive of managers who share information and engage with their employees. The role of developing a culture that fosters employee voice and upward communication is to be played by the chief executive officer of an organisation (Adelman, 2012:134).

In a study conducted by Butchibabu *et al.* (2016:597-608) in Massachusetts and the Greater Boston area, on classifying effective communication strategies that teams can adopt during the conduct of tasks with varying degrees of complexity, it has been revealed that training team members to proactively communicate information about their next goal to their teammates could improve team performance. In Malaysia, the results of the study on organizational communication climate reveal that the top management group is found to have a different view of the overall communication climate in the organization (Nordin *et al.*, 2014:1049-1052).

For the purpose of this study, two-way communication is defined as the smooth flow of information from farm management to beneficiaries and vice-versa.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₄: There is no relationship between two-way communication and beneficiaries' perceptions regarding farm worker equity share schemes.

5.2.5 Farm worker empowerment

Ogato, Boon and Subramani (2009:85) define empowerment as a “term used generally to describe the process by which powerless people become conscious of their own situation and organize collectively to gain greater access to public services or to the benefits of economic growth”. Furthermore, Osahon and Odoemelam (2016:1) define empowerment as “the process of strengthening the existing capacities of the disadvantaged groups in society so as to enable them to perform towards improving themselves, their families and the society as a whole”, with the provision of an enabling environment for their productive and intellectual abilities to be realised. The empowerment of farm workers should consider various aspects, among which is the empowerment of women. Women feel helpless about life on farms because the environment does not allow space for dreams, though they recognise and appreciate

the free courses offered by some organisations to improve their employability (Kleinbooi, 2013:11). From the little they get, they manage to save for their children's education and some support their children through college and university with their own savings (Kleinbooi, 2013:11).

It has to be pointed out that class, poverty, ethnicity and physical location affect gender inequalities in access to resources and development opportunities, which is exacerbated by gender factors (Ogato *et al.*, 2009:85). Empowering women to take part in economic life ensures the improvement of the quality of life for women, men, families and communities (Subramaniam, Tan, Maniam & Ali, 2013:885). This is because women in rural areas, where subsistence agriculture is a predominant source of livelihoods, play multiple roles throughout the production process, as well as the handling and preparation of food, which assists in the reduction of poverty and vulnerability to food insecurity (Sharaunga, Mudhara & Bogale, 2015:196).

Kalazani-Mtya (2011:11) states that history reveals that women strategically use agriculture to address poverty and improve livelihoods, and to maintain the stability and sustainability of their families, cultures, villages, towns and communities. Studies show a positive correlation between empowerment and the performance of employees because highly empowered employees allow other employees to make collective decisions through their participation in negotiated decision-making (Jiang, Flores, Leelawong & Manz, 2016:63). Empowerment is believed to boost motivation, proactivity (degree to which employees look for opportunities, show initiative, and take action until they reach closure by bringing about desired changes), and mental/physical health (Yoon, 2001:195-196).

Since 1994, the South African government attempted to empower rural people through interventions in agriculture (Sharaunga *et al.*, 2015:196). A Korean study conducted by Yoon (2001:203) – on the role of structure and motivation for workplace empowerment, measuring proactivity, fatigue, self-efficacy, organizational support, autonomy, variety and workload – revealed the following:

- Workload can be a problem, but employees who suffer from work overload are more likely to initiate something more creative, to solve problems, and to adapt to change or uncertainty.

- As for pay, employees who receive higher salaries tend to be less proactive but experience more efficacy.

In a study conducted by Kirkman and Rosen (1999:64-69), in the South-eastern and Southwestern United States, on testing the multidimensionality of team empowerment, it was determined that team empowerment was significantly related to productivity, customer service, job satisfaction, organizational commitment and team commitment.

For the purpose of this study, farm worker empowerment is defined as those opportunities provided by the co-owner farmer or management which allow beneficiaries to grow within the farming business.

Upon consideration of these facts, the following hypothesis has been formulated:

H05: There is no relationship between farm worker empowerment and beneficiaries' perceptions regarding farm worker equity share schemes.

5.2.6 Training and skills development

Laird, Naquin and Holton (2003) regard training and skills development as the official and ongoing educational activities within an organisation, which are designed to enhance the fulfillment and performance of employees. Mmbengwa, Botes, Gundidza, Nephawe and Maiwashe (2011:387) state that South Africa institutionalised skills development for workers in 1998 by enacting the Skills Development Act (No. 97 of 1998). This act provided a framework for developing and improving the skills of South African employees. Paterson (2003:1) concurs that the central focus of the National Skills Development Strategy is to address significant disparities in educational, skill and wage levels in the working population, and to utilise the workplace as an active learning environment. To fulfil this mission, five objectives have been identified to drive the National Skills Development Strategy (Erasmus & van Dyk, 2003:29): developing a culture of life-long learning; fostering skills development in the formal sector for productivity and employment growth; stimulating and supporting skills development in small, medium and micro enterprises; promoting opportunities for skills development in social development initiatives, and assisting new entrants into employment in the labour market.

The South African labour market has experienced challenges resulting from the apartheid government that restricted skills development for non-white citizens, therefore, in the democratic South Africa one of the major challenges is addressing the existing inequalities in the labour market in developing skills and knowledge amongst members of previously disadvantaged groups (van Rensburg, 2014:2). Most rural areas experience severe skills deficits, which are largely inherited from the past (Jacobs & Hart, 2012:5). Farm workers lack behind in their development because they are still struggling with basic issues such as illiteracy (Kleinbooi, 2013:11). Due to skills shortages, Mmbengwa *et al.* (2011:387) mention that, in 1998, South Africa institutionalised skills development for workers by enacting the Skills Development Act, No.97 of 1998, which provided a framework for developing and improving the skills of the South African employees by attempting to:

- Increase the level of investment in education and training and to improve the return on investment;
- Encourage employers to provide employees with appropriate opportunities to acquire new skills and to gain work experience by using the workplace as an active learning environment;
- Encourage workers to participate in learnerships and other training programmes;
- Improve the employment prospects of persons who were previously disadvantaged by unfair discrimination, and to redress those disadvantages through training and education;
- Ensure the quality of education and training in and for the workplace.

There is a need for a long-term government strategy to increase job opportunities in low-skills activities and to reduce the vulnerability of low-skilled workers to low wages, insecure employment, poor conditions and, ultimately, unemployment (Jacobs & Hart, 2012:7). The Strategic Plan for the Department of Agriculture, Forestry and Fisheries emphasises the reform and redistribution of agricultural land, whilst the National Skills Development Strategy 2011/12 – 2015/16 focuses on the development and empowerment of previously disadvantaged groups (van Rensburg, 2014:2). A study conducted by Mmbengwa *et al.* (2011:388) reveals that the training of farm workers

would bring about efficiency and productivity within the Food and Agricultural sector in South Africa.

For the purpose of this study, training and skills development is defined as a structured approach introduced by a co-owner farmer or management to develop the beneficiaries in order that they are able to better perform and understand various areas that are important to manage farming.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₆: There is no relationship between training and skills development and beneficiaries' perceptions regarding farm worker equity share schemes.

5.2.7 Access to resources

The United States Department of Agriculture (2016) states that a resource is something people can use to satisfy their needs; it could be anything from ground water, grass, land, people, to musical compositions. Improving access for small scale farmers to productive resources proves to be one of the best mechanisms for ensuring sustainable human development (Ogato *et al.*, 2009:85). On the same note, facilitating access to productive resources such as land and water infrastructure by the poor, should not be a once-off event, but an institutional process that requires permanent adaptation to changing circumstances of power, economics, and culture (Ogato *et al.*, 2009:86). A popular misconception in this regard is that interventions in areas such as technology, infrastructure and market access produce the same impacts on both men and women, when they may in fact not; as a result, many agricultural policy and project documents fail to differentiate between the resources available to men and women, their roles and the constraints they face (Food and Agriculture Organization of the United Nations, 2011:3). Osahon and Odoemelam (2016:2) mention that if women and men were to have the same level of access to productive resources, then women's contribution could reduce the total number of hungry people by 12%–17%.

For the purpose of this study, access to resources is defined as the existence of water; electricity; good road infrastructure, for reasonable distances; as well as reliable and effective equipment that would improve the management of operations.

5.2.7.1 Access to water and electricity

This subsection covers information on access to water and electricity separately, as these two items are treated differently.

(a) Water

Food production is considered the most water-intensive activity in society, therefore, water is the number one food-limiting factor in many parts of Asia and sub-Saharan Africa, with agriculture in developing countries accounting for approximately 90% of human fresh water use (Wenhold, Faber, van Averbek, Oelofse, van Jaarsveld, van Rensburg, van Heerden & Slabbert, 2007:331). Water is central to South Africa's increased agricultural productivity, but the country is reaching physical water scarcity due to increasing water use, as well as competition between agricultural and urban industries (Mapedza, van Koppen, Sithole & Bourblanc, 2016:93). Water bodies and ecosystems are becoming increasingly polluted and degraded, groundwater is getting depleted, and existing supplies of water are often wasted, whereas developing new sources of water is increasingly expensive. Nonetheless, growing populations, expanding industries and farms, and concerned environmentalists are all demanding more usable supplies of this finite resource (Rosegrant & Ringler, 2004:8).

Rainfall is unreliable in many areas of Africa, and less than five percent of farmland is irrigated, whilst the average fertilizer application is less than 10 kg/ha, therefore, farm-level expenditures for fertilizers, seeds, and other inputs are risky in areas where rainfall is uncertain as drought often causes crops to fail (Jama & Pizarro, 2008:220-221). Naidoo, Rodda, Stenström, Schmidt, Dent, Bux, Hanke, Buckley and Fennemore (2016:457) state that South Africa is a largely semi-arid water-stressed country, with an average annual rainfall estimated at 464mm, whilst an estimated world average is 860mm. Water Allocation Reform in South Africa, which started in 2008, is intended to ensure that 60 percent of water resources are re-allocated, however, little is known about the implementation of the water reform and its relation with land reform (Mapedza *et al.*, 2016:92).

Manzungu, Sithole, Tapela and van Koppen (2009:81) highlight that Integrated Water Resources Management (IWRM), which inspired the water reform process, was sponsored by the developed North. The confusion about IWRM is its focus on second

generation water issues such as demand management, water quality, environmental flow requirements, etc., which assumes the existence of water infrastructure; hence, others perceive this as a distraction from addressing real development challenges, considering that the water rights of millions of the black majority population were systematically expunged due to unjust legislation and underinvestment in water infrastructure (Manzungu *et al.*, 2009:81). Giordano and de Fraiture (2014:175) state that “Comprehensive Assessment of Water Management in Agriculture identified individual and small scale investments in irrigation and groundwater use as a major trend in agricultural water management”.

Reliable access to water and growing domestic, regional and international markets, provide farmers with confidence to invest in productivity-enhancing fertilizers, agricultural management strategies and agrochemical inputs, thus supporting intensification and diversification (Giordano & de Fraiture, 2014:175). However, all water uses, besides the fundamental right of access to water for basic human needs, require a license; the responsible water management authority issues a notice calling for license applications, after which users and prospective users should prepare and submit such applications (Speelman, Farolfi, Frija & Van Huylenbroeck, 2010:1135).

The involvement of both public and private investments to improve access to water is necessary but may not be sufficient since improvements in human capital in the form of education and health are needed to ensure that lack of information or poor health do not constrain improvements in land productivity (Hanjra, Ferede & Gutta, 2009:1063). Water access has been a stumbling block for most land reform farms since it has not be available for production, because land transfer excludes ownership of the moveable assets needed for farming, such as irrigation equipment, farm machinery or vehicles – all of which necessitate further finance (Woodhouse, 2012:849-862). Woodhouse (2012:862) points out that the failure of farms can be “attributed to inadequate appraisal of farm potential (marginal farms have been offered for sale) and unrealistic business plans designed to maximize advisors’ commissions paid by government”.

For the purpose of this study, access to water – other than reliance on rainwater – is defined as having borehole, dam or tap water in the neighbourhood for agricultural activities.

(b) Electricity

Most African countries are grappling to achieve their development and social obligations due to an acute lack of modern energy services. Apparently, electricity access is the cause for this deficiency because only 17% is available to Sub-Saharan Africa as a whole, and less than five percent in the rural areas (Davidson & Mwakasonda, 2004:26). Ismail, Mabuza, Pillay and Xolo (2014:570) mention that in order to meet the demand for electricity there must be investment in electricity infrastructure.

The findings of a study conducted by Bonthuys, van Dijk and Bhagwan (2016:528) reveal that the electrification figures in South Africa are higher than those in Sub-Saharan Africa, since the South African Electrification Programme is shifting from urban to rural areas because approximately 80% of urban areas are electrified compared to 45% of rural areas. The study conducted by Ismail and Khembo (2015:66) shows that an estimated 2.5 million rural and urban households in South Africa are not connected to the national electricity grid.

Access to modern forms of energy is important for the rural poor since it assists them to enhance their production, and improve their standards of living, incomes, expenditure and educational outcomes; however, Africa has both low electricity generation capacity and limited interconnections (Development Support Monitor, 2012:12). The agricultural sector is crucial for local food security, however, since electricity and fuel inputs have no substitutes, it is more likely that farmers (particularly large commercial farmers) will increase mechanisation, thereby substituting technology for labour because mechanisation enables them to maintain productivity and efficiency, and manage higher wage costs (Von Bormann & Gulati, 2014:19). Agriculture is dependent on oil, electricity and fertiliser, with the primary agricultural sector in South Africa consuming about three percent of the total electricity generated in the country; this consumption has risen by three percent per annum (between 1999/2000 and 2010/11), whereas the annual electricity bill for the agriculture sector (during the same period) has increased by over 20% (Von Bormann & Gulati, 2014:12).

The volatile nature of agricultural markets exposes farm businesses to a high level of risk, with changes in commodity and input prices having a significant impact on the risk position and subsequent financial stability of a farm business. Therefore, with increases in electricity tariffs, farmers are expected to experience substantial pressure on profit margins (National Agricultural Marketing Council, 2010:5-6).

For the purpose of this study, access to electricity is defined as access to Eskom's or the municipality's electricity grid, or off-grid electricity from solar panels.

5.2.7.2 Good roads

The success of the emerging farmers depends on the availability of road infrastructure and transport facilities to move produce to the market (Khapayi, 2013:56). The Development Support Monitor (2012:5) indicates unimpressive results in Africa: only 34 percent of rural communities live within two kilometres of an all-season road, whereas the figure is 65 percent in other developing regions. Moreover, the lack of connectivity in rural roads seriously constrains agricultural production and increases the cost of transporting produce. Most rural roads, where the farmers live, are poor in quality and need to be repaired and upgraded, whereas some farmers have to walk long distances to the nearest road served by public transport vehicles (Khapayi, 2013:23). Chaminuka, Senyolo, Makhura and Belete (2008:367) state that poor rural infrastructure services lead to poorly functioning domestic markets with little spatial and temporal integration, low price transmission, and weak international competitiveness.

Farmers who are within close proximity to the road and transport system are better linked to the markets than farmers who are not (Khapayi & Celliers, 2016:34). However, a study conducted in King William's Town in the Eastern Cape shows that most farmers' localities were situated away from public roads, and that farmers had to make use of gravel roads which were not well maintained and unusable in rainy conditions (Khapayi & Celliers, 2016:34). Strides towards improving the competitiveness of emerging farmers should consider, amongst other things, critical issues in infrastructural factors that have a direct impact on their production activities and how they could access the market (Chaminuka *et al.*, 2008:366). Poor road infrastructure and a lack of transportation infrastructure destroy the quality of produce,

thus causing farmers' produce to be uneconomical since farmers have to travel long distances to formal markets on gravel roads with their commodities packed on poor transportation (Khapayi & Celliers, 2016:38).

The benefits of good roads are: reduced transport and input costs; increase of timely input availability; higher agricultural productivity; greater nonfarm production; lower poverty; and greater urban economic activity (Stifel, Minten & Koru, 2016:1335). Lower transport costs for inputs (such as fertiliser) and market outputs are achieved as a result of reduced travel times for delivery to market and the reduced frequency of transport damages (e.g. vehicles and produce) (Knox, Daccache & Hess, 2013:6). However, hesitance towards investment in rural feeder roads is linked to low returns because of the low productivity and commercial surplus of smallholders, as well as the underuse of rural road infrastructure (Stifel *et al.*, 2016:1335).

For the purpose of this study, access to good roads is defined as the existence of well-maintained roads in the area, which can be used regardless of weather conditions.

5.2.7.3 *Reliable and effective equipment*

Agricultural machinery and equipment are used to increase the performance of activities on farms and in agri-businesses, especially in the tasks of crop growing, harvesting and livestock-raising (Mehta & Gross, 2007:69). Tillage, which is described as "an operation to improve soil conditions for optimal crop emergence and yield", experiences problems when the transfer of technology from one ecological region to another does not take into consideration soil, environmental and socio-economic factors; thus, a number of projects in Africa have failed as a result of ill adapted tillage techniques and inappropriate equipment (Olaoye & Adekanye, 2015:1-2). In addition, thousands of motors used by South African farmers for irrigation pumps, to cool their broiler houses and cold stores, and to heat and cool their greenhouses are largely inefficient pieces of equipment for these operations (Eskom, 2014:1).

The move by the European Union to tighten European standards on the effectiveness of low-voltage AC motors, in June 2011, puts South Africa under risk of cheap imports of energy inefficient motors which are no longer permitted in Europe (Eskom, 2014:1). In the agricultural sector, fund allocation for infrastructure renewal and equipment

replacement is still highly inadequate, and presents a challenge for the relevant workers. This could place significant physical and psychological demands on workers, which may cause them strain and consequently affect their performance on the job (Asiwe, Hill & Jorgensen, 2015:3).

Ashburner and Kienzle (2011:6) propose the creation of an Agricultural Machinery Development Trust Fund, which would impose levies/tariffs on all food imports; a percentage of the national budget should be transferred into the fund, and contributions should be made from commercial banks, commodity boards, equipment suppliers, development banks and donors. From 2000 to 2005, the global demand for agricultural machinery increased, with tractors and harvesters remaining the two largest categories by accounting for nearly half of all product shipments (Mehta & Gross, 2007:66). However, a study conducted by Mehta and Gross (2007:66) revealed that the situation is dire in Africa, as farm incomes are still low, capital is scarce, and equipment often consists of hand-held ploughs.

For the purpose of this study, access to reliable and effective equipment is defined as having in one's possession equipment that constantly operates without fail and without the need for regular maintenance, and which performs its duties satisfactorily.

Upon consideration of these facts, the following hypothesis has been formulated:

H07: There is no relationship between access to resources (as measured by access to water and electricity, good roads, and reliable and effective equipment) and beneficiaries' perceptions regarding farm worker equity share schemes.

5.3 OPERATIONALISATION OF MEDIATING VARIABLE

This section focusses on operationalising the mediating variable, which is about beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

5.3.1 Beneficiaries' Perceptions

In Knight's (2003:86) study on equity share schemes, the results show that the perceptions of farm worker equity share schemes have improved since a previous

study conducted by the Surplus People 's Project in 1998, which indicated that perceptions of these schemes were largely negative. Furthermore, the results show that many of the concerns raised in the study had been addressed, such as beneficiary participation and expectations, power relations between management and worker-shareholders, skills transfer and labour relations. However, some areas of concern still remain, namely, beneficiaries' tenure security, different skill and wage levels between men and women, literacy amongst worker-shareholders, and exit procedures (Knight, 2003:86).

The study conducted by Fast (1999b:31) shows that the government was allocating grants of R15 000 per household which, technically, would allow both men and women to be shareholders; however, the man of the household would usually sign for the grant and thereafter assume that he was the shareholder on behalf of his household.

At the Vuki farming scheme, no dividends were paid to beneficiaries and the scheme reflected negative capital growth; however, the farm was regarded as one of the well-paying farms in the area (Klaas, 2011:69). The management claims that beneficiaries were aware of the supposed dividend payment, but also accepted non-payment, due to the overdraft, debt repayment and the replacement of equipment, machinery and the orchards (Klaas, 2011:70).

The findings of a study conducted by Or (2011:72), on equity share schemes in Stellenbosch, indicate that the trust had pledged to pay dividends in five (5) years; as a result, all members had not yet experienced an increase of total income from the equity scheme, and there was gender balance within the equity share scheme.

The case of the Arabie-Olifants scheme shows that the design of the scheme and consequent decisions about the size and number of irrigation plots were carried out by the officials without consultation with the intended occupants (Lahiff, 2000:53). Lahiff (2000:56) further states that males were entitled to land; furthermore, some believed that married women were entitled to apply for land, while others felt they were obliged to do so through their husbands or a male relative.

For the purpose of this study, beneficiaries' perceptions regarding farm worker equity share schemes are views associated with the scheme.

5.4 OPERATIONALISATION OF DEPENDENT VARIABLES AND FORMULATION OF HYPOTHESES

This section seeks to operationalise all the variables used in the hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

5.4.1 Farming Performance

Al-Matari (2014:25) states that performance measurement is the process of measuring an action's efficiency and effectiveness. The performance measurement is intended to support the setting of objectives, evaluating performance, and determining future courses of action on a strategic, tactical and operational level (Ondersteijn, Wijnands, Huirne & van Kooten, 2006:18). The importance of performance measurement has long been acknowledged, with metrics needed to evaluate how work is done in order to direct specific activities; this is because what is measured indicates how to deliver value to customers, as incorrect performance measurement systems (PMS) can create disincentives and unwanted behaviour (Ondersteijn *et al.*, 2006:13). However, there is a gap in understanding how small and medium enterprises (SMEs) measure their performance (Harif, Hoe & Ahmad, 2013:81). Performance measurement is a new concept in the agricultural sector (with particular emphasis being placed on farmers not exceeding the consumption of inputs which do not ensure maximum profits), however, its major elements have long been present, known and practiced in other sectors (Brezuleanu, Brezuleanu, Brad, Iancu & Ciani, 2015:110).

In the past, organisations measured performance by paying more attention to accounting measures, however, things have since changed as non-financial measures are currently being used; examples of these measures are the balanced scorecard approach and the European Foundation for Quality Management scheme, which is similar to the balanced scorecard, amongst others (Neely, 2002:3-17). The numerous limitations of traditional performance measurement systems and environmental challenges have led to the development of new performance measurement systems including the performance pyramid, the performance measurement matrix, the results and determinants framework, the SMART pyramid, the macro process model, the performance prism, and the closed-loop management system (Vij & Bedi, 2016:605).

Moreover, new critical success factors include speed, flexibility, integration and innovation (Harif *et al.*, 2013:82). Some of the criticism of accounting-based financial measures is that they are static; difficult and complex to understand; too financial; present short term view; are mainly internal rather than externally focused; provide little indication of future performance; have little regard for competitors and customers; unclear as to linkage between activity measures and strategic objectives of the enterprise system (Vij & Bedi, 2016:605). According to Neely (2002:17), the performance measurement elements developed by the General Electric company in the 1950s include:

- short-term profitability,
- market share,
- productivity,
- product leadership,
- personnel development,
- employee attitudes,
- public responsibility,
- balance between short-range objectives and long-range goals.

Significant emphasis is placed upon productivity because arable land is becoming a limiting input factor in most countries, due to environmental policies and urbanization (Machek & Špička, 2014:191). For business enterprises to remain competitive in a dynamic environment, they must monitor and measure the performance of their enterprises (Harif *et al.*, 2013:81).

Agricultural enterprises in the European Union are forced to actively seek new ways to increase their competitiveness; to achieve this they must boost their economic performance, which depends on both internal and external factors (Růžičková & Vavřina, 2012:4). This is due to what Ondersteijn *et al.* (2006:13) regard as the pressure induced by customers in Western-European markets for placing new demands on attributes of food such as quality (guarantees), integrity, safety, diversity and associated information (services). In the Southern African region, agriculture is the primary source of subsistence, employment and income for 61% (142 million) of the total population of 232 million, however, growth rates in the agricultural sector have

been low and highly variable across the region, averaging only 2.6% per annum in the last decade (Olubode-Awosola, Chilonda, Minde & Bhatt, 2008:1).

The performance of the South African agricultural sector, which has relatively poor natural resources, is heavily dependent on weather conditions (Vink & Van Rooyen, 2009:4). History shows that there has been a severe country-wide drought in at least one year of each of the preceding decades (the most severe being in 1966, between 1982 and 1984, and from 1992 to 1993), excluding the period from 1994 to 2008, as there had not been a country-wide drought for more than a decade (Vink & Van Rooyen, 2009:4). Although these results do not cover information since 2009, it has to be noted that South Africa experienced severe drought again during the 2015/16 period, which had a significant impact on the agricultural sector.

For the purpose of this study, farming performance is defined as being productive, effective and efficient, and competitive in terms of farming operations.

5.4.1.1 Productivity

Agricultural productivity measures performance that acts as a guide to the efficiency of the sector, by determining the proportion of output to input (Dwesini, 2015:12). Although productivity has been the subject of research for quite some time, it has regained attention in the context of poverty alleviation within the Millennium Development Agenda and, more recently, the Sustainable Development Goals, both of which are critical for developing countries that are exposed to globalised economic environment, in order for them to remain competitive, and for them to ensure the prosperity of agriculture and to contribute to poverty reduction (Moreira & Bravo-Ureta, 2016:8356). It is important to measure workers' productivity for public policy and private-sector decision-making, however, the lack of reliable methods to determine workers' productivity has led firms and the public sector to often use specific performance measures, such as how different incentives affect employee behaviour (Sauer mann, 2016:1).

Labour productivity has been associated with wages, which has led to previous studies finding a positive relationship between the two variables (labour productivity and wages), especially in the short term, with companies paying higher compensation to

those employees who experience greater labour productivity (Larraz, Gené & Pulido, 2017:12-18). Daveri and Parisi (2015:892) mention that a negative correlation exists between labour productivity and the share of workers employed for less than a year.

Dwesini (2015:3) states that poverty leads to malnutrition and illness, which reduces income and economic productivity. In addition, the productivity of workers is identified as dependent on their experience and other traits, such as education, skills, motivation, intellectual and physical abilities (Daveri & Parisi, 2015:892).

In Australia, increasing productivity for the farm sector has long been recognised as the most important source of output growth and income improvement, with productivity growth playing an important role in increasing efficiency in the production of the industry and maintaining international competitiveness in the face of declining terms of trade, increasing climate variability and tightening the constraints placed on natural resource use (Sheng, Jackson, Zhang & Zhao, 2013:2). To measure agricultural productivity performance, the total factor productivity (TFP) index has been widely used because it provides a broad indication of how efficiently farmers combine all market inputs to produce total output (Sheng *et al.*, 2013:2). To determine TFP, there must be at least two different sets of period data for a particular firm (Iliyasu, Mohamed & Hashim, 2015:1015). Aside from the use of the TFP index, productivity can also be measured using Partial factor productivity (PFP) and Multi factor productivity (Dwesini, 2016:12). Between 1940 and 1990, the total factor productivity for South Africa grew by 1.25 percent (Conradie, 2016:100).

Technology plays a major role in productivity and, as a result, developed countries are leading in technological change and innovation, while developing countries lag behind in the technological frontier and tend to adopt those technologies developed in technology-leading countries, however, some technology is not appropriate for developing countries (Tebaldi, 2016:1-2). It has been decades since the Department of Agriculture, Forestry and Fisheries has been involved in improving agricultural production and minimizing the cost of inputs of farmers, however, government has reduced funding to the commercial sector in order to promote improved efficiency and productivity in the sector, and it has started to support the small scale farming sector (Ramaila, Mahlangu & du Toit, 2011:4). In this regard, Conradie (2016:99) points out

that there are a number of reasons why a weak public extension service might cause farm productivity to fall:

- Firstly, there is a coverage issue, since providing a service to all farmers might not be profitable. Smaller and more remote operations, where the unit cost of extension would be higher, are the most vulnerable.
- Secondly, society's objectives and planning horizons may not coincide with that of private advisors, which does not bode well for sustainability.
- Thirdly, private advisors might overstate their own expertise in order to compete in congested markets or, in some cases, private advisors might find it profitable to distribute the wrong information.

Contract farming – defined as an “alternative market institution that establishes an agreement (formal or informal) between grower(s) and firm(s) (exporters or processors) to produce a particular agricultural commodity under forward contract” – is believed to be a game changer, with the private sector playing a major role in increasing crop productivity and output growth in the agricultural sector by delivering better technology, as well as coordinating producer's and consumer's market (Swain, 2016:211). Agro-processing firms that are involved in growing contract crop usually provide improved and better technical assistance more effectively than do the government's agricultural extension services, because of their direct interest in improving the product quality (Swain, 2016:212).

For the purpose of this study, productivity is defined as the performance of the operation showing an increase in production, improved quality of products and increased revenue over the period.

5.4.1.2 Effectiveness and efficiency

Tanel (2012:40) points out that both effectiveness and efficiency are part of productivity. The definition of effectiveness is based on a certain criteria and the criteria used for ranking companies include: the ability to attract and retain talented people, quality management, innovativeness, quality products or services, long-term investment value, financial soundness, social responsibility, wise use of corporate assets, and effectiveness in conducting business globally (Iwu, Kapondoro, Twum-

Darko & Tengeh, 2015:9562). Iwu *et al.* (2015: 9562) define effectiveness as “a construct that is measured in terms of doing the right things in the resource market, the production process, and the final product market”. Lee and Johnson (2012:1) add that effectiveness considers the selection of the best action; therefore, an effective firm identifies appropriate strategic goals.

According to Henri (2003), the outcome of organisational activities is represented by organisational effectiveness, while performance measurement consists of an assessment tool that measures effectiveness. For profit making organisations, organisational effectiveness is usually determined using financial measures (Iwu *et al.*, 2015:9561). Organisations assess their performance using effectiveness in order to achieve their mission, goals and vision (Bartuševičienė, 2013:46). Domanovic (2013:33) states that “an effective performance measurement system enables a company to check if the defined aims have been realized and if the company as a whole has made progress, identifying the position, clarifying the aims and highlighting the areas which should be improved, and at the same time making the reliable prediction possible”. However, organizational factors (top management support, training, involvement of employees, connection between performance and rewards), affect the effectiveness of the implementation of performance measurement (Domanovic, 2013:34).

Operational efficiency is about making use of assets and resources to deliver quality services, where higher service quality and lower cost of assets translate to higher operational efficiency (Masson, Jain, Ganesh & George, 2016:896). Lee and Johnson (2012:1) refer to this as the ability to deliver products and services cost effectively without sacrificing quality. Tanel (2012:40) summarises efficiency to mean doing things with the least wasted effort. Lee and Johnson (2012:1) mention that, within engineering and management, efficiency is associated with how well a relevant action is performed, that is, “doing things right”, which is different from “doing the right things” as referred to above, under effectiveness. Lee and Johnson (2012:1) add that an efficient firm achieves strategic goals with minimal resources. Singh, Dey, Rabbani, Sudhakaran and Thapa (2009:185) use farming as an example to illustrate the concept of efficiency; they state that efficient farms either produce more output than others for a given set of inputs or produce a given output with minimum levels of input. However,

Koliński, Śliwczyński and Golińska-Dawson (2016:129) are of the view that providing a definition for the concept of efficiency is difficult, as the actual definition is dependent on whether one is referring to economic efficiency, production process efficiency or some other efficiency.

Johansson and Öholmér (2007:5) state that economic efficiency is a wider measure and involves both technical and allocative efficiencies. In contrast, there is an observation that poor economic performance could result from low levels of technical efficiency, where technical efficiency, although regarded as an elusive concept, is associated with the role of management in the production process (Page, Jr., 1980:319-321). Singh *et al.* (2009:186) mention that, in farming, technical efficiency reflects the ability of a farm to obtain maximum outputs from a given set of inputs. Technical efficiency is influenced by the educational level of the head of the farm (schooling years), farm size, quantity of fertilizer, age of farmer, credit availability, and farming experience of the farmer (Mburu, Ackello-Ogotu & Mulwa, 2014:3). Allocative efficiency in a farming business is the ability of the farmer to consider cost aspects when combining inputs (Johansson & Öholmér, 2007:5).

Singh *et al.* (2009:186) state that allocative efficiency indicates the ability to use the inputs in optimal proportions given their respective prices. DeSilva (2011:8) highlights that a technically efficient farm is not automatically cost efficient if it is unable to achieve allocative efficiency. In agriculture, technical efficiency has an impact on productivity, both directly and indirectly (Bhatt & Bhat, 2014:28).

For the purpose of this study, effectiveness and efficiency are defined as the most productive use of available resources and attainment of intended objectives within the specified time.

5.4.1.3 Competitiveness

Despite the vast literature on competitiveness, its theory is elusive, with various studies adapting their own definitions, variables and methods of measurement (Sultan, Saurabh & Jain, 2016/2017:56). As this may be, competitiveness is not just important, but it is more important now than ever for a firm's survival and success (Akben-Selcuk, 2016:1). Competitiveness can be considered in terms of the following categories:

global, country, sector and enterprise (Matyja, 2015:368). In agriculture, and the entire value chain, competitiveness is becoming recognised as an effective approach to generating growth and reducing the rural poverty dominant in the region; this changes the perception that limits agriculture to survival, by considering its capacity to tap into both local and international markets (Webber & Labaste, 2010:2). Apparently, practitioners who make decisions related to enhancing or sustaining competitiveness do not use the various theories of competitiveness widely (Ambastha & Momaya, 2004:45-46). This could be the result of what Notta, Vlachvei and Samathrakis (2010:211) term controversy and misunderstanding of the concept of competitiveness, due to the lack of an acceptable definition and theory to explain it; however, they mention that at a firm level, competitiveness is readily defined, but the concept is vague when applied at the industry and national levels.

Latruffe (2010:5) mentions the definition of competitiveness adopted by the Organisation for Economic Co-operation and Development (OECD): “the ability of companies, industries, regions, nations, and supranational regions to generate, while being and remaining exposed to international competition, relatively high factor income and factor employment levels on a sustainable basis”. According to van der Merwe, Cloete and van Schalkwyk (2016:412), competitiveness can be defined by using productivity as an example: the declining production of wheat in South Africa is attributed to lower levels of competitiveness when compared with the rest of the world, whereas, the declining competitiveness can be ascribed to certain quality-related characteristics of wheat, such as protein content, which is a determining factor for wheat-buying decision. Competitiveness can also be regarded as the ability to be in competition and be successful when facing competition, or the ability to market products that meet demand requirements (price, quality, quantity), at the same time, thus ensuring profits over time that would enable the firm to prosper (Latruffe, 2010:5). Notta, Vlachvei and Samathrakis (2010:212) state that a firm is competitive if it can produce products and services of high quality at lower costs compared to its domestic and international competitors. To address the complex nature of competitiveness, this needs a clear understanding of the wide range of micro-economic factors that can contribute to or hinder it (Cloete, Bezuidenhout, Idsardi, Kuhn, Le Clus, Spies, Steenkamp, van der Merwe & van der Zwan, 2013:1). However, Cloete *et al.* (2013:2)

warn that competitiveness is not just about being productive, but also requires adaptability to adjust to structural changes.

Researchers use the concept of competitiveness to analyse the sector that can contribute the most to a nation's economic growth (Latruffe, 2010:5). The growing interest in comprehensive frameworks and data for competitiveness-related decision-making is shown by the existence of Global Competitiveness Reports, World Competitiveness Yearbooks, and National Competitiveness Reports (Ambastha & Momaya, 2004:46). Ortmann (2005:287) adds that, in 2005, the World Bank ranked South Africa 25th in its business competitiveness index, and 41st in terms of its growth competitiveness index, out of the 103 countries considered for the benchmark. Dunmore (1986:29) mentions that competitiveness can be measured using total trade volume, market shares and relative trade shares.

The changing landscape of business competition together with global trade dynamics have forced industries and firms throughout the world to be more robust and competitive, since the survival and success of firms in domestic and international markets require the competitive capabilities of said firms in an industry (Sultan *et al.*, 2016/2017:55). Ambastha and Momaya (2004:45) mention that, due to the changing criteria of competitiveness with time, it is important for theories and frameworks to be flexible enough to integrate the change with key strategic management processes if their utility is sustained in practice. Maskell and Malmberg (1999:12) note that for firms in the world's high cost areas to be competitive in the globalised market, they must do some of the following:

- Some raise their capital/labour ratio through massive investments, while others outsource or relocate part or all of their activities to low-cost areas. 'Automate, emigrate or evaporate', as the saying goes.
- Many firms do, however, meet the challenges in a less habitual way by no longer chiefly aspiring to obtain competitiveness through cost-reduction, but by generating entrepreneurial quasi-rents through enhanced knowledge creation.

In a study that investigated the financial and non-financial determinants of firm competitiveness, the variables that showed a significant impact on firm competitiveness measured by three variables (return on assets, return on equity or

return on sales) are leverage, centrality of location, firm size, export activity, liquidity and management competence (Akben-Selcuk, 2016:3). Ortmann (2005:287) states that some agricultural sectors and value-adding activities in South Africa lack competitiveness due to low productivity (leading to high unit costs), poor business strategies and the “unfair” trade practices of the country’s competitors. One possibility to increase competitiveness of an industry or product on the global market is to produce more efficiently by measuring the agricultural value added per worker (Webber & Labaste, 2010:4). In the short-term, relative prices and competitiveness are swayed by policies, exchange rates, and stochastic events such as weather and production levels (Dunmore, 1986:24).

For the purpose of this study, competitiveness is defined as produce reaching the market, either locally, nationally or internationally, despite the existence of competitors.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₈: There is no relationship between beneficiaries’ perceptions regarding farm worker equity share schemes and farming performance (as measured by productivity, effectiveness and efficiency, and competitiveness).

5.4.2 Sustainability

Sriboonlue, Ussahawanitchakit and Raksong (2016:15) define firm sustainability as “the firm’s ability to meet and satisfy the direct and indirect stakeholder demands, without compromising its ability to meet the need of future stakeholders”. Business sustainability deals with economic, social and environmental factors but, in the past, there has been a tendency to focus only on economic matters, while neglecting the other two equally important factors (social and environment); it is however evident that things are changing, albeit that they have not changed that much (Buranapin & Ratthawatankul, 2015:109). The emphasis here is placed on sustainability due to business activities, which are the root cause of many environmental and social problems (Schaltegger, Lüdeke-Freund & Hansen, 2016:266).

Mukute (2010:22) is of the view that concerns related to sustainability came about due to the challenges associated with industrialisation and its exploitation of natural

resources at an unsustainable rate, which coincided with a period of relatively high population growth. The idea of sustainability in agricultural systems “incorporates concepts of both resilience (the capacity of systems to buffer shocks and stresses) and persistence (the capacity of systems to continue over long periods), and addresses many wider economic, social and environmental outcomes” (Pretty, 2008:447). This is supported by Tilman, Cassman, Matson, Naylor and Polasky (2002:672) who mention that, in agriculture, sustainability refers to the ability to maintain high yields during major shocks and agricultural practices that have acceptable environmental impacts.

It is clear that agricultural researchers all over the world recognise the importance of sustainable agricultural production systems and the need to develop appropriate methods to measure sustainability (Pacini, Lazzerini, Vazzana, Giesen & Wossink, 2002:432). However, business sustainability is not possible without thorough consideration of the philosophical elements (moderation, reasonableness, and self-immunity) and conditions (knowledge and morality) in place, which are known as the “three rings and two conditions” model (Buranapin & Ratthawatankul, 2015:108). Nisa (2015:35-36) defines the Sustainability Business Model (SBM) as “one where sustainable development plays an integral role in shaping the core objectives of the firm and consequently its decision making”, with the ultimate goals for the model being to create, deliver and capture value in a sustainable manner by bringing products and services that improve the quality of people’s lives within the environmental limits.

In their study of small companies in comparison to their competitors’ performance, Urban and Naidoo (2012:153) measured business sustainability over a two-year period, using the following indicators: employment growth, growth in sales turnover, growth in profits, and growth in market value. This is in line with Kaosa-ard and Rerkasem’s (1999:2) understanding that for sustainability to be able to maintain environmental quality, it should also be aligned to the need for enhancing productivity, and the need to meet the increasing demands of growing populations. Lindahl, Baker, Rist and Zachrisson (2016:400) mention that “sustainability should consequently be recognised as a contested and plastic concept facilitating arguments about diverse pathways to different futures”. Small and medium enterprises still lag behind in terms of sustainability and the environmental aspect of their operations, while large

companies are becoming aware of these. Thus, in Europe, large companies are more likely to be more resource efficient (i.e. save energy and materials) by recycling, offering green products and services, and implementing an environmental management system, than are SMEs (Jansson, Nilsson, Modig & Vall, 2017:70). Urban and Naidoo (2012:147) mention that the SMEs lag behind in matters of sustainability due to their lack of technical and industry-specific competencies, which are fundamental for sustainability.

Lindahl *et al.* (2016:399) note that everyone agrees on the concept of sustainable development or sustainability, which is confirmed by the range of actors and organisations that have made declaratory commitments to promote this normative goal, but progress in implementation is slow due to environmental controversies. Schaltegger *et al.* (2016:265) distinguish between sustainable development and sustainability, by stating that sustainable development refers to a process and sustainability to an outcome. Among the factors that cause companies to consider sustainability and environment in their operations is that customers are becoming more aware of these two issues, hence, pressure is exerted on companies to explore opportunities to meet and exploit changing customer needs and wants (Jansson *et al.*, 2017:70).

Sriboonlue *et al.* (2016:15) state that previous studies have revealed that stakeholders (i.e. any group or individual that can affect or be affected by the activity of an organization that it engages with while said organisation seeks to accomplish its goals) can positively influence the firm's image and reputation, business decision quality, efficiency, organisational success, and corporate sustainability. Khan, Serafeim and Yoon (2016:1697) state that there is a new concept of corporate investments, known as sustainability investments, which has attracted firms, institutional investors, societal advocacy groups and academics; sustainability investments involve investors committing to the integration of environmental, social, and governance (ESG) data in their capital allocation process. The sustainability indicators developed for the quantification of the sustainability of agricultural production make it possible to find the right balance between production economics and environmental goals right where production decisions are made (Pacini *et al.*, 2002:433).

The concern about sustainability in agricultural systems lies in the importance of developing technologies and practices that do not affect environmental goods and services, and which are accessible to and effective for farmers, and which result in improvements in food productivity (Pretty, 2008:447). According to Pretty (2008:447), the new ways of doing things in agriculture should “integrate biological and ecological processes into food production, minimize the use of those non-renewable inputs that cause harm to the environment or to the health of farmers and consumers, make productive use of the knowledge and skills of farmers, so substituting human capital for costly external inputs, and make productive use of people’s collective capacities to work together to solve common agricultural and natural resource problems, such as for pest, watershed, irrigation, forest and credit management”.

For the purpose of this study, sustainability is defined as a good financial position held by the operation, which would allow it to continue operating in years to come; it also encompasses environmental consideration and the societal matters.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₉: There is no relationship between beneficiaries’ perceptions regarding farm worker equity share schemes and business sustainability.

5.4.3 Employee expectations

Employee expectations are defined as the beliefs that individuals hold about what leads to what in the work environment; however, employee expectations are contingent upon, and constantly modified in respect of, the environment, communications and employee interactions (Hubbard & Purcell, 2001:19). Employees, like customers, have their own performance expectations (what they hope to achieve) and perceptions of accomplishment (what they are able to achieve), therefore, when management promises to provide employees with specific roles, including the manner in which they could contribute to the success of the organisation, they would likely do their best (Tay, Lees & Lin Dar, 2016:13). Apparently, as employees create their own job performance expectations, they would also appreciate the opportunity to evaluate their achievements, since they expect management to trust their judgements instead of stereotypically relying on the opinions of either their

supervisors or customers (Tay *et al.*, 2016:13). Employee trust, employer trustworthiness and sustained employment relationships are built on realistic, consistently applied, clearly and coherently communicated, as well as well-understood performance expectations (Audenaert & Decramer, 2016:1024).

Previous studies have identified a link between perceived expectations and job performance (Audenaert & Decramer, 2016:1025). The best organisations create a platform upon which they discuss how they meet their employees' expectations and the kind of behaviour they expect employees to exhibit in order to help them succeed (Aquila, 2014:17). Employees assess the seriousness of an organisation's willingness to meet their expectations by checking the organisation's selection, training, health and safety, industrial relations, compensation and benefits, which are identified as implicit codes of ethics (Mason & Simmons, 2013:52). Kritzinger (2002:558) mentions a study of fruit farms in South Africa, which revealed that women farm workers have high expectations regarding their children's education and future employment; however, Kritzinger's (2002:563) study on teenage girls living on farms found that parents exert pressure on their children, particularly girls, to stop their schooling in order to find employment and contribute to the household income. The formation of a democratically elected government in 1994 raised expectations for farm workers and farm dwellers regarding rural development, among which were the expectation of increased job opportunities, better wages, improved working conditions, and access to land (Hall, Kleinbooi & Mvambo, 2001:2).

Farm worker expectations of a better life and improved living standards were, in some instances, jeopardised by what Atkinson (2007:230) indicates as farmers' "mixed feelings about the training of farm workers because while a skilled labour force would improve productivity, it would also raise farm workers' expectations about wages and living conditions". Atkinson (2007:230) mentions that "farm schools had the advantage that farmers were allowed to use the learners' labour during school hours, under the official rationale that this amounted to 'training in agriculture'".

For the purpose of this study, employee expectations is defined as beneficiaries' anticipations of receiving better financial and non-financial benefits, job security, and improved living standards.

5.4.3.1 Financial benefits

Generally, a cash wage is paid on a weekly or monthly basis and a bonus payment is made at the end of the year (Newman, Ortmann & Lyne, 1997:3). According to Visser and Ferrer (2015:64), farm workers' wages can be determined by any of the following:

- the duration of employment (e.g. a fixed weekly wage),
- the number of days or hours worked during that period of employment (e.g. a fixed daily wage for days worked),
- measures of productivity, such as the number of tasks completed by the individual or the overall productivity of a team of workers, and
- various combinations of the above (e.g. a fixed wage plus a productivity-related bonus).

Lemke and van Rensburg (2014:847) add that wages vary according to geographical area (rural/urban), job description, gender differences and specific deductions at the respective farms. In 1999, a detailed minimum wage schedule covering 11 sectors was developed in South Africa in order to ensure that workers in low-paid, vulnerable occupations are guaranteed a basic subsistence income and protected from exploitation (Bhorat, Kanbur, & Stanwix, 2014:1403).

In 2003, government introduced a minimum wage in the agricultural sector. Conradie (2005:139) notes that the minimum wage laws do not cause unemployment, as unemployment is determined by the elasticity of labour demand, which varies from one industry to another, instead jobs are lost when real wage grows faster than productivity or where mechanisation is regarded as cheaper than labour costs. However, mechanisation is less likely in some production processes, such as fruit picking; this appears to be the reason why, during this period, the Western Cape lost fewer jobs than the rest of the country (Conradie, 2005:139). According to Bhorat *et al.* (2014:1403), the minimum wages for farm workers in rural areas were initially set at R650 per month, whilst in urban areas farm workers were earning R800 per month, with plans to adjust the minimum wage upwards each year. In 2009, the minimum wage increased from R1 090 to R1 232 per month, which was still not sufficient for workers due to high food prices; this resulted in workers compromising on their own

diets and cutting their home visits down to one per month in order to make ends meet (Hall *et al.*, 2013:59).

Information shows that male farm workers received higher wages than females (Roberts, 2009:85). Another new minimum wage was introduced in 2013, after a long strike in the Western Cape; just before the new minimum wage was implemented, approximately 2000 farm workers were issued with retrenchment notices (Black Publishing Ltd, 2013:19840). The strike lasted almost 3 months, interrupted fruit harvests and, as a result of the minimum wage announcement, farmers threatened mechanisation; in return, the leader of the labour force threatened that farmers would lose their land if they cannot use it to the benefit of the workers (New York Amsterdam News, 2013:2). In 2013, the minimum wage increased from R69 to R105 per day (Anker & Anker, 2013:3). Upon increasing the wages, farmers they took away some of the benefits that were given to workers free of charge, and started charging rent, electricity and transport costs (Kleinbooi, 2013:3).

Bhorat *et al.* (2014:1404) state that the level of employment is not only determined by the wage, but that other factors also contribute to this; these factors include the size of a farm's output, the price of inputs such as fuel, and the extent to which mechanization can replace labour. To reduce their total wage bill, farmers have adopted a strategy of reducing the number of hours worked by farm workers (Bhorat *et al.*, 2014:1404). On average, women worked 10 hours a day and 6.5 days per week (Johnston, 2007:501).

For the purpose of this study, financial benefits are defined as legally acceptable financial rewards for the service rendered, as per the agreed upon terms and conditions.

5.4.3.2 Non-Financial benefits

Over and above cash wages, farm workers also receive extensive free benefits that are not accurately quantified, such as free electricity (Conradie, 2005:144). Bhorat *et al.* (2014:1403) state that the introduction of the minimum wage is likely to cause employers to offset higher wages against other nonmonetary benefits such as food, housing and transport, in order to limit the gains of workers. As far as housing is

concerned, a farmer either provides housing or allocates an area for workers to build their own dwellings (Newman *et al.*, 1997:3). The additional labour costs incurred by farmers include paying for staff cattle to be dipped and dosed, repairs to housing and transport needed for special trips such as going to the clinic/hospital, church/school/recreational events, and for shopping (a trip undertaken typically once a month or once a year at Christmas) (Roberts, 2009:95). Some farmers even provide their workers with grazing rights and cultivation rights; therefore, payment in kind varies from one farm to another (Newman *et al.*, 1997:3). Regarding cultivation rights, a farmer allows a worker to cultivate a certain area of land, and provides seed and fertilizer for this endeavour (Newman *et al.*, 1997:3).

For the purpose of this study, non-financial benefits are defined as legally acceptable non-financial rewards for services rendered, as per the agreed upon terms and conditions.

5.4.3.3 Job security

Job security is the basis for decent work, where job loss is more than the loss of income, but has far-reaching consequences for the dignity of employees as well as their families' and communities' stability (Cohen & Moodley, 2012:329). Van Zyl, van Eeden and Rothmann (2013:75) state that job insecurity is a major cause of stress in the work place, specifically because it is associated with uncertainty. Workers in formal employment experience job security due to the constitutional guarantee of fair labour practices and legislative protection against unfair dismissal, unfair labour practices and unfair discrimination, however, workers in informal employment face insecure and unstable working conditions (Cohen & Moodley, 2012:329). According to van Zyl *et al.* (2013:75), the global changes taking place at various organisations, such as restructuring, are increasing the job insecurity experienced by employees due to the likelihood of involuntary job loss.

In the agricultural sector, farmers have opted for labour contractors to provide temporary employment to farm workers, effectively taking the legislative responsibility away from farmers as the farmer does not have to employ permanent workers and pay wages all year round, but the temporary worker receives employment in times of need; therefore, there is no job security for the worker (Jacobs, 2008:5). Labour

casualisation has come with deterioration in levels of pay and security (Di Paola & Pons-Vignon, 2013:631). This leaves temporary workers with no benefits, such as social security and bonuses, since casual workers do not qualify for such (Jacobs, 2008:7). Seasonal workers are also classified as temporary workers and the problems they experience include unfair treatment and inadequate benefits in comparison to those who are employed as farm workers full time (Centre for Rural Legal Studies, 2009:4). The situation is worse for the migrants who have little or no access to rights when they seek better employment opportunities in other countries. On arrival in the countries of their choice they, especially women, may experience many problems including lack of access to formal employment, social security and health services (Centre for Rural Legal Studies, 2009:8).

For the purpose of this study, job security is defined as having permanent employment and remaining on good terms with management.

5.4.3.4 *Improved living standards*

Anker and Anker (2013:4) state that a “decent standard of living includes food, water, housing, education, healthcare, transport, clothing and other essential needs including provision for unexpected events”. However, the situation in poor households is worsened by the fact that workers’ wages are their main safety net, therefore, low paid workers’ wages have to support even the unemployed (Di Paola & Pons-Vignon, 2013:631). Roberts (2009:2) states that, in Mhala and Mapulaneng in South Africa, women’s wages and working conditions on all types of farms are the critical determinants of the standard of living of many tens of thousands of households. For wages to be regarded as sufficient, they should ensure that workers and their families are able to afford a basic but decent lifestyle that is considered acceptable by the society at its current level of economic development (Anker & Anker, 2013:4).

The conditions on different farms vary considerably in terms of the wages and living conditions being offered, which differentiates between jobs (Roberts, 2009:14). The heart breaking part of this, as reported by Kruger, Lemke, Phometsi, van’t Riet, Pienaar & Kotze (2006:833), is that retiring farm workers often lose the right to stay on the farm and, therefore, lose the security of residence.

Some farm workers live without basic services such as water and basic sanitation; instead, they experience poor quality of water and sanitation. When their basic conditions of employment are compared to those of the period preceding 2013, the situation is found to be worse-off (Kleinbooi, 2013:5): workers still use pit toilets and bucket systems (Hartwig & Marais, 2005:942) and some workers live in two room houses, without a toilet and shower. In these instances, the nearest shower and toilet are located about 20 meters away, and are shared with a dozen other families living in the same housing compound (Wilderman, 2015:4). The needs of farm workers, including tenure security, are increasing and becoming increasingly diverse (Visser & Ferrer, 2015). The poor living conditions of farm workers contribute to the level of stress they experience (Hartwig & Marais, 2005:934). Sithole (2005:1) mentions a study which revealed that “children living on farms are very vulnerable and more likely to be stunted and underweight than any other children in South Africa”.

Botes, van der Westhuizen and Alpaslan (2014:44) report that some farm workers value the tranquillity, peacefulness and safety of living on farms; moreover, they receive benefits that contribute to affordable lifestyle. The number of workers living in formal houses increased from 21.4% in 1991 to 55.6% in 1994, while 22.4% lived in mud houses and 8.4% lived in shacks (Husy & Samson, 2001:11).

For the purpose of this study, improved living standards are defined as living a better life than prior to beginning employment.

Upon consideration of these facts, the following hypothesis has been formulated:

H0₁₀: There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and employee expectations (as measured by financial benefits, non-financial benefits, job security and improved living standards).

5.5 SUMMARY

This chapter provided information on the variables and sub-variables used in the hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa. Furthermore, these variables and sub-variables were defined for their use in the context of this study.

The most important purpose of this chapter was to provide information that would be used in the measuring instruments of the study, so as to operationalise the variables. The measuring instruments assist in designing the questionnaire for the study, in order to ask questions and test the variables identified for the study.

The hypotheses have been outlined at the end of each discussion of the relevant variables, as these present the information to be tested in the study.

Chapter 6 provides a detailed discussion of the research methodology used in this study.

CHAPTER 6

RESEARCH METHODOLOGY

6.1 INTRODUCTION

Chapter 5 provided a detailed discussion of the variables and sub-variables to be used in the hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa. These variables and sub-variables were defined together with a discussion of the findings from previous studies pertaining to each variable and sub-variable, where available, in order to operationalise them. The current chapter, Chapter 6, provides a detailed description of the research methodology adopted for this study. Instead of just listing the approaches and techniques used in this study, the chapter provides additional information regarding a range of available options for the analysis and their applicability to the social sciences and related disciplines, in order to give the reader an understanding of the selections made and other available options, whether applicable to this research study or not.

6.2 RESEARCH PARADIGMS

There are two basic research paradigms that could be adopted: positivistic and phenomenological. In research in the social sciences, the quantification of human behaviour is important, making use of measurement instruments belonging to the widely accepted positivist view or the empirical-analytic approach, to discover reality by observing human behaviour (Drost, 2011:105). Wilson (2010:13-14) indicates that quantitative studies emphasise the measurement and analysis of causal relationships between variables, not processes. Gill and Johnson (2010:148) define qualitative research as an approach in which quantitative data are not used and the research is less structured, and it focuses on the belief that the world is socially constructed and subjective.

Small samples are utilised through in-depth investigations over time, by means of qualitative methods (Gray, 2009). A qualitative study follows an inductive approach, whereby theory becomes an outcome rather than applied from the beginning of the research (Wilson, 2010:13). Table 6.1 shows the difference between quantitative and qualitative research.

Table 6.1: Comparison of quantitative and qualitative methods

	Quantitative	Qualitative
Philosophical Foundation	Deductive, reductionalist	Inductive, holistic
Aim	To test pre-set hypotheses	To explore complex human issues
Study plan	Step-wise, predetermined	Iterative, flexible
Position of researcher	Aims to be detached and objective	Integral part of research process
Assessing quality of outcomes	Direct tests of validity and reliability using statistics	Indirect quality assurance methods of trustworthiness
Measures of utility of results	Generalizability	Transferability

Source: Marshall (1996:524)

This study adopts a quantitative approach. A positivistic research design by means of quantitative research was used during the empirical study. This was achieved through a descriptive research approach to describe the characteristics of a population by assessing beneficiaries' perceptions regarding equity share schemes in South Africa. An exploratory research approach was also followed as there were no previous studies pertaining beneficiary perceptions regarding farm worker equity schemes.

6.3 POPULATION

Population refers to the total number of cases that can be included as research subjects (Matthews & Ross, 2010:154). The population of this study includes all farm worker equity share schemes operating in South Africa. At the commencement of the study, the Department of Rural Development and Land Reform (DRDLR) was contacted to obtain the most recent list of farm worker equity share schemes. Although the DRDLR has not provided the researcher with its database of the equity share schemes, it is likely that about 88 or more farm worker equity share schemes exist, as per the information contained in the confidential study report produced in 2010 (Hall & du Toit, 2014). The same figure of 88 farm worker equity share schemes is mentioned by Cousins (2016:8), however, it is further stated that a few pilots have been announced but no details are available. There is no updated published information on registered farm worker equity share schemes in South Africa, which makes it difficult to determine the population and sample of this study. Most of this information is

confidential and not published by the relevant Department. Due to a delayed response from the DRDLR, a database of the equity share schemes was self-created from a Google search and with the assistance of the existing farmers' associations (e.g. the Citrus Growers Association and Agri South Africa).

6.4 SAMPLING

Sampling can be divided into two techniques: probability and non-probability. Probability sampling is defined as having the “distinguishing characteristic that each unit in the population has a known, nonzero chance of being included in the sample” (Etikan, Musa & Alkassim, 2016:1). According to Reynolds, Simintiras and Diamantopoulos (2003:88), with nonprobability sampling, this chance is unknown. Probability sampling techniques are, by definition, not suitable for qualitative research because members of the universe to be sampled are not known a priori, therefore, it is not possible to draw elements for study in proportion to an as yet unknown distribution in the universe sampled (Luborsky & Rubinstein, 1995:10). Teddlie and Yu (2007:79) provide the following examples of probability sampling:

- Random sampling - occurs when each sampling unit in a clearly defined population has an equal chance of being included in the sample.
- Stratified sampling - occurs when the researcher divides the population into subgroups (or strata) such that each unit belongs to a single stratum (e.g. low income, medium income, high income) and then selects units from those strata.
- Cluster sampling - occurs when the sampling unit is not an individual but a group (cluster) that occurs naturally in the population such as neighborhoods, hospitals, schools, or classrooms.
- Sampling using multiple probability techniques - involves the use of multiple quantitative techniques in the same study.

According to Luborsky and Rubinstein (1995:10), the five major types of nonprobability sampling techniques for qualitative research are:

- Convenience (or opportunistic) sampling – uses an open period of recruitment that continues until a set number of subjects, events, or institutions are enrolled. Here, selection is based on a first-come, first-served basis. This approach is

used in studies drawing on predefined populations such as participants in support groups or medical clinics.

- Purposive sampling – is the practice of intentionally selecting subjects to represent some explicit predefined traits or conditions. This is analogous to stratified samples in probability-based approaches. The goal here is to provide for relatively equal numbers of different elements or people so as to enable the exploration and description of the conditions and meanings occurring within each of the study contexts. The objective, however, is not to determine prevalence, incidence, or causes.
- Snowballing or word of mouth techniques – make use of participants as referral sources. Participants recommend others they know who may be eligible.
- Quota sampling – is a method for selecting numbers of subjects to represent the conditions to be studied rather than to represent the proportion of people in the universe. The goal of quota sampling is to ensure the inclusion of people who may be underrepresented by convenience or purposive sampling techniques.
- Case study samples – select a single individual, institution, or event as the total universe. A variant is the key-informant approach, or intensity sampling, where a subject who is an expert in the topic of study serves to provide expert information on the specialized topic.

The sampling for the current study was guided by the analyses to be employed in the study, among which was factor analysis which is discussed later in this chapter. Yong and Pearce (2013:80) state that factor analysis requires a sample size of at least 300 participants. Williams, Onsman and Brown (2010:4) state that Tabachnick's rule of thumb suggests at least 300 cases. A total of 20 farms utilising worker equity share schemes were selected from the self-developed database. As the population was self-created and some information was outdated, the researcher opted to use non-probability sampling. Convenience and purposive sampling were used to select the 20 farms for participation in this study. It is noted that some farms were eliminated from the list because their contact details were not working and others had gone out of business, whilst a few did not want to participate in the study. Ideally, a total of 15 farm workers were targeted per farm, to whom the measuring instrument was to be administered. However, due to a variation in these farm worker equity share schemes,

less than 15 workers were selected on some farms while more than 15 workers were selected in others; this resulted in a total sample size of 341 farm workers. Previous studies by Or (2011), Knight, Lyne and Roth (2003) and Fast (1999a) have indicated that the farms that have existent equity share schemes farms are primarily located in the Western Cape, Mpumalanga, KwaZulu-Natal and Limpopo. However, none of the schemes in Limpopo and KwaZulu-Natal were willing to participate in the study. The farms selected for this study were located in the Eastern Cape, Gauteng, Mpumalanga and the Western Cape, covering a variety of farming activities such as citrus fruits, crops, vegetables and wineries. Among the determinants of the sample size are level of accuracy and the availability of resources to conduct the research. Buckingham and Saunders (2004:32) state that large national surveys are expensive and that the state is one of the few players with the resources to carry out large surveys.

6.5 DATA COLLECTION

According to Neuman (2003:8), data can be defined as the empirical evidence or information that one carefully gathers according to the rules and procedures applicable to the study. Wilson (2010:134) notes that there are two basic types of data, namely, secondary and primary data. However, Cheng and Phillips (2014:371) note that there is usually confusion about the use of the terms 'primary data', 'primary data analysis', 'secondary data' and 'secondary data analysis', due to a lack of clarity as to whether the data employed in an analysis should be considered as primary or secondary data.

6.5.1 Secondary data

Emanuelson and Egenvall (2014:300) define secondary data in research as "data which have not been collected with the specific research question in mind" and further state that the main advantage of secondary data is that it is already available and is steadily increasing amount due to the digitalization of many records. The practice expects that before undertaking any primary research study, researchers should complete an exhaustive search of existing or secondary data (Castleberry, 2001:195). Secondary analysis of existing data is regarded as new analysis of data collected either for research studies or for other purposes, which includes registry data, regardless of whether or not the persons conducting the new analysis participated in the collection of the data (Bradley, Cunningham, Lowell, Nagel & Dunn, 2017:78).

Previous studies concluded that secondary data sources provide a valid alternative to fieldwork, however, others have expressed the need for caution in this regard (Clary & Kestens, 2013:5). Sociologists and economists tend to analyse data that they did not collect; this is called secondary data analysis (Hofferth, 2005:891).

6.5.2 Primary data

Emanuelson and Egenvall (2014:299) define primary data as data that has been collected with a specific research question (hypothesis) in mind, and further state that the validation of data starts when the information is recorded. Primary data research collection includes surveys, focus groups, experiments, observation research and in-depth interviews, and so forth (Castleberry, 2001:195). Malhotra and Grover (1998:409) state that survey research involves the collection of information from a large group of people or a population and that it has three distinct characteristics:

- It involves the collection of information by asking people for information in some structured format. Depending on the quality and cost trade-offs involved, the collection of information or data could take place using mail questionnaires, telephone interviews, or face-to-face interviews. Depending on the unit of analysis, the individuals surveyed could be representatives of themselves, their project, their expertise, or their organization.
- Survey research is usually a quantitative method that requires standardized information in order to define or describe variables, or to study the relationships between variables.
- Information is gathered via a sample, which is a fraction of the population, with the need to be able to generalize findings from the sample to the population.

Focus groups are grouped individuals who are selected and assembled by researchers in order to discuss and comment on, from personal experience, the topic of the research (Powell & Single, 1996:499). The description of experiments provided by Rosenbaum (2005:1), with reference to treatments, is that, ideally, the effects caused by treatments are investigated in experiments that randomly assign subjects to treatment or control, thereby ensuring that comparable groups are compared under competing treatments. Observation research is defined as an etiologic or effectiveness study using data from an existing database, a cross-sectional study, a case series, a

case-control design, a design with historical controls, or a cohort design (Stroup, Berlin, Morton, Olkin, Williamson, Rennie, Moher, Becker, Sipe & Thacker, 2000:2008). In-depth interviews is a technique designed to elicit a vivid picture of the participant's perspective on the research topic (Milena, Dainora & Alin, 2008:1279).

This study was conducted by collecting primary data through the survey method. Buckingham and Saunders (2004:13) define a social survey as a technique for gathering statistical information about the attributes, attitudes or actions of a population by administering standardised questions to some or all of its members. Due to the sensitive nature of this study, the questionnaire was administered to farm workers or beneficiaries to complete on their own during group sessions in a face-to-face interview style.

6.6 QUESTIONNAIRE DESIGN

A questionnaire is a tool of data collection that comprises a set of questions designed to generate data suitable for achieving the objectives of a research project, and it has the capacity to collect vast quantities of data from a variety of respondents (Wilson, 2010:148). The questionnaire enables the collection of information in a standardised manner which, when gathered from a representative sample of a defined population, allows for the inference of results to the wider population (Rattray & Jones, 2007:235). Questionnaires should be designed so as to minimise respondent and interviewer errors in the understanding of the questions and the recording of answers, as well as to maintain the interests and cooperation of the respondent (Meadows, 2003:562). Zikhali (2009:135) argues that the use of a questionnaire guarantees anonymity, privacy and confidentiality where respondents answer questions without fear of victimisation. The questionnaire used in this study consists of four sections:

- Section A uses a seven-point Likert type ordinal scale to assess the impact of the seven independent variables on beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.
- Section B analyses beneficiaries' perceptions regarding farm worker equity share schemes in South Africa by means of a seven-point Likert-type ordinal scale.

- Section C analyses the impact of farm worker equity share schemes in South Africa on the dependent variables (outcomes) using a seven-point ordinal Likert-type scale.
- Section D consists of nominal-scaled questions meant to solicit background information from the respondents (biographical characteristics), such as their gender, age, ethnic group, educational background and employment level.

The use of a seven-point scale, ranging from strongly agree to strongly disagree, produces better results than a two-point agree or disagree scale because, with multiple response choices (e.g. strongly agree, moderately agree, slightly agree, neutral, slightly disagree, moderately disagree, strongly disagree), those who feel strongly can be distinguished from those with moderate feelings (Vaske, Beaman & Sponarski, 2017:164). Likert-type scales are used to gather information in the social sciences, marketing, medicine and business, relative to the attitudes, emotions, opinions, personalities and descriptions of people's environments (Gliem & Gliem, 2003:82).

Based on this information, a seven-point Likert-type scale was used in this study. Moreover, two Professors in the Department of Business Management and one statistician at Nelson Mandela University were consulted before finalising the questionnaire. The questionnaire was pilot tested with 15 farm workers at one of the farm worker equity share schemes selected for the study.

The major variables in this study are: stakeholder trust; operational risks; government intervention; two-way communication; farm worker empowerment; training and skills development; access to resources; beneficiaries' perceptions regarding farm worker equity share schemes; farming performance; sustainability; and employee expectations. The models used to develop the model for this study are adapted from the work of Knight, Lyne and Roth (2003), Business Enterprises University of Pretoria (2012), and Or (2011). However, the information used to develop the model for this study and its variables was also taken from the literature review conducted prior to designing the model. A total of 73 questionnaire items were tested using a seven-point Likert-type scale with the following options: strongly disagree (1), disagree (2), somewhat disagree (3), neutral (4), somewhat agree (5), agree (6) and strongly agree

(7). The questionnaire items in Sections A to C were meant to measure the variables of the study, as discussed below.

- **Stakeholder trust**

In this study, stakeholder trust is defined as beneficiaries' confidence that the co-owner farmer or management will put all measures in place to ensure the success of the farm worker equity share scheme, which is internal trust. This is an independent variable, the items of which are adopted from Krot and Lewicka (2012:229) and Mayer and Gavin (2005:875-877).

- **Operational risk**

Operational risk is defined as threats to the operation of a farm due to the lack of access to funding, bad weather conditions and/or existing worker exploitation. This is an independent variable and the items were self-developed using the relevant literature on operational risk.

- **Government intervention**

In this study, government intervention is defined as the visible role of government, in relation to the beneficiaries, due to measures put in place to assist farm worker equity share schemes to prosper. This is an independent variable, and its items are adopted from Tshuma (2013:383-384).

- **Two-way communication**

Two-way communication is defined as the smooth flow of information from farm management to beneficiaries, and vice-versa. This is an independent variable, the items of which are adopted from Hayase (2009:66-71).

- **Farm worker empowerment**

In this study, farm worker empowerment is defined as opportunities provided by the co-owner, farmer or management to beneficiaries that would allow them to grow within the farming business. Strydom (2003:242) regards empowerment as the process through which personal, interpersonal, socio-economic and political powers are

gained in order for a community to change their circumstances. This is an independent variable, and its items are adopted from Spreitzer (1995:1464-1465).

- **Training and skills development**

In this study, training and skills development is defined as a structured approach introduced by the co-owner farmer or management to develop the beneficiaries so that they are able to better perform and understand various areas important to managing farming. This is an independent variable, the items of which are adopted from Amadi (2012:150-152).

- **Access to resources**

Access to resources is defined as the existence of water, electricity, good road infrastructure for a reasonable distance, as well as reliable and effective equipment that would enable better management of operations. This is an independent variable, and the items were self-developed using the relevant literature on access to resources.

- **Beneficiaries' perceptions regarding farm worker equity share schemes**

This study is testing beneficiaries' perceptions regarding farm worker equity share schemes. This is the mediating variable, the items of which are adopted from Knight and Lyne (2002:364), Knight, Lyne and Roth (2003:238), and Mazibuko (2000).

- **Farming performance**

In this study, farming performance is defined as being productive, effective and efficient, and competitive in farming operations. This is a dependent variable, and its items are adopted from Muzvidzwa (2015).

- **Sustainability**

Sustainability is defined as the good financial position of the operation that would allow it to continue operating in years to come, as well as consideration of environmental and the societal matters. This is a dependent variable, and its items are adopted from Van Calker, Berentsen, Giesen and Huirne (2005:61-62) and Muzvidzwa (2015).

- **Employee expectations**

In this study, employee expectations is defined as beneficiaries' anticipation of better financial and non-financial benefits, job security, and improved living standards. This is a dependent variable, the items of which are adopted from Knight and Lyne (2002:364) and Knight, Lyne and Roth (2003:238).

6.7 PILOT STUDY

The reliability of the questionnaire is assessed by conducting a pilot test (Bolarinwa, 2015:198). As the questionnaire for this study has not previously been used and tested, a pilot study was conducted amongst 15 farm workers or beneficiaries of one of the existing farm worker share equity schemes. Bolarinwa (2015:199) comments on the use of 20 to 30 subjects not included in the sample used to test for reliability. In this study, the pilot study was important to ensure that the wording and language used in the measuring instrument were properly understood by respondents. The literacy levels and home language of the respondents was also taken into consideration by means of translation into both English and Afrikaans.

6.8 DEMOGRAPHIC PROFILE OF RESPONDENTS

Table 6.2 shows that to the main study, 56.4% of the respondents were male, 41.3% female and 2.3% did not disclose their gender.

The age of respondents is spread as follows: 1.7% were below 15 years of age, 6.6% between 16-20 years, 40.6% between 21-30 years, 20.1% between 31-40 years, 18.2% between 41-50 years, 7.9% between 51-60 years, 2.3% above 60 years, and 2.6% did not disclose their age.

Regarding the benefits offered by the schemes, 72.3% of the respondents indicated that the schemes only offer dividends, 9.2% only receive assets, 13.9% receive both dividends and assets, and 4.6% did not respond.

Regarding the type of farming, 24.1% produce wine, 1.7% produce dairy, 11.9% produce summer crops, 0.7% produce winter crops, 0.3% produce oilseed crops, 0.7%

produce subtropical fruit, 56.4% produce citrus fruit, 1.0% focus on animal production, 0.3% produce vegetables, and 3.0% did not indicate type of farming.

Regarding the employment contract, 49.2% indicated that they are full-time employees, 7.6% part-time, 16.8% seasonal, 0.7% casual, 22.4% indicated other, and 3.3% did not disclose their employment status.

Regarding their employment period at a farm, 48.2% of the respondents have been working at the farm for a period between one and five (1-5) years, 17.2% for a period between six and ten (6-10) years, 10.2% for a period between 11-15 years, 9.2% for a period between 16-20 years, 12.2% for a period of 21 years or more, while 3.0% did not indicate period of employment.

Regarding the period of existence of the scheme, 23.4% indicated that the scheme to which they are attached has been in existence for a period between one and four (1-4) years, 13.2% for a period between five and eight (5-8) years, 34.7% for a period between nine and twelve (9-12) years, 23.8% for a period between 13-16 years, 2.3% for a period of 17 years or more, while 2.6% did not indicate the period of existence of the scheme to which they are attached.

Regarding membership of a scheme, 42.6% indicated that they are still active members of equity share schemes, whilst 55.1% used to be members of the initial scheme, and 2.3% did not provide a response.

Table 6.2: Demographic profile of respondents

Demographics	Range	Number	Percentage (%)
Gender	Male	171	56.4
	Female	130	41.3
	No answer given	2	2.3
Total		303	100

Demographics	Range	Number	Percentage (%)
Age (Years)	below 16	5	1.7
	16 – 20	20	6.6
	21 – 30	123	40.6
	31 – 40	61	20.1
	41 – 50	55	18.2
	51 – 60	24	7.9
	Above 60	7	2.3
	No answer given	8	2.6
Total		303	100
Scheme Benefits	Only Dividends	219	72.3
	Only Assets	28	9.2
	Dividends & Assets	42	13.9
	No answer given	14	4.6
Total		303	100
Type of Farming	Wine	73	24.1
	Dairy	5	1.7
	Summer Crops	36	11.9
	Winter Crops	2	0.7
	Oilseed Crops	1	0.3
	Sugar Cane	0	0.0
	Deciduous Fruit	0	0.0
	Subtropical Fruit	2	0.7
	Citrus Fruit	171	56.4
	Animal Production	3	1.0
	Dairy Production	0	0.0
	Vegetables	1	0.3
	Other	0	0.0
	No answer given	9	3.0
Total		303	100
Employment Contract	Full-Time	149	49.2
	Part-Time	23	7.6
	Seasonal	51	16.8
	Casual	2	0.7
	Other	68	22.4
	No answer given	10	3.3
Total		303	100

Demographics	Range	Number	Percentage (%)
Employment Period (Years)	1 – 5	146	48.2
	6 – 10	52	17.2
	11 – 15	31	10.2
	16 – 20	28	9.2
	21 and more No answer given	37 9	12.2 3.0
Total		303	100
Existence of Scheme (Years)	1 – 4	71	23.4
	5 – 8	40	13.2
	9 – 12	105	34.7
	13 – 16	72	23.8
	17 and more No answer given	7 8	2.3 2.6
Total		303	100
Member of Scheme	Yes	129	42.6
	No	167	55.1
	No answer given	7	2.3
Total		303	100

Source: Author's own work

6.9 CRITERIA FOR EVALUATING MEASURING INSTRUMENTS

The areas in which measurement instruments are widely used include clinical, research and policy decision making purposes in many professional disciplines (Zumbo & Chan, 2014:9). In the social sciences, where behavioural research happens within the paradigm of discovering reality, the measurement instrument must be valid and reliable (Drost, 2011:105). Zohrabi (2013:254) mentions that the available data collection procedures include tests, questionnaires, interviews, classroom observations, diaries and journals, amongst others. These procedures can be categorised as follows:

- Quantitative designs rely on tests and closed-ended questionnaires in order to gather, analyse and interpret data.
- Qualitative methods depend on interviews, diaries, journals, classroom observations and open-ended questionnaires to obtain, analyse and interpret data.

- The mixed method approach uses closed-ended questionnaires (numerical data), interviews and classroom observations (text data) to collect information.

Zohrabi (2013:254) states that the questionnaire should be designed in such a way that the researcher is able to ensure that it is “valid, reliable and unambiguous” and can be structured as: closed-ended (or structured) questionnaires, open-ended (or unstructured) questionnaires, or as a mixture of closed-ended and open-ended questionnaires.

Data from behavioural research studies is prone to measurement errors in the form of systematic error or random error; however, random error is cancelled out when the measurement is repeated, but that is not the case with systematic errors; therefore, systematic errors are a primary concern in relation to validity (Drost, 2011:106-107). Hofmann (2005:1) defines measurement error as the difference between distorted information and undistorted information about a measured product, expressed in its units. In short, an error is defined as real value at the output of a measurement system minus ideal value at the input of a measurement system. More information on systematic and random errors follow the discussion of reliability and validity, below.

6.9.1 Reliability

The main emphasis in any research process is on the reliability of the data and the findings (Zohrabi, 2013:259). However, the required level of reliability is a function of the research purpose that is, whether the research is exploratory, applied, and so forth (Peterson, 1994:381). Reliability refers to the degree to which the results from a measurement and procedure can be replicated; the three aspects of reliability are equivalence, stability and internal consistency (homogeneity) (Bolarinwa, 2015:195). This is in line with Mohamad, Sulaiman, Sern and Salleh’s (2015:164-165) statement that, when determining reliability, the scores of an instrument should be stable, even when the instrument is administered repeatedly at different times, and should be consistent. The elements of equivalence, stability and internal consistency are depicted in Figure 6.1.

According to Zohrabi (2013:259), reliability covers the consistency, dependability and replicability of the results; furthermore, it is easy to obtain similar results in quantitative

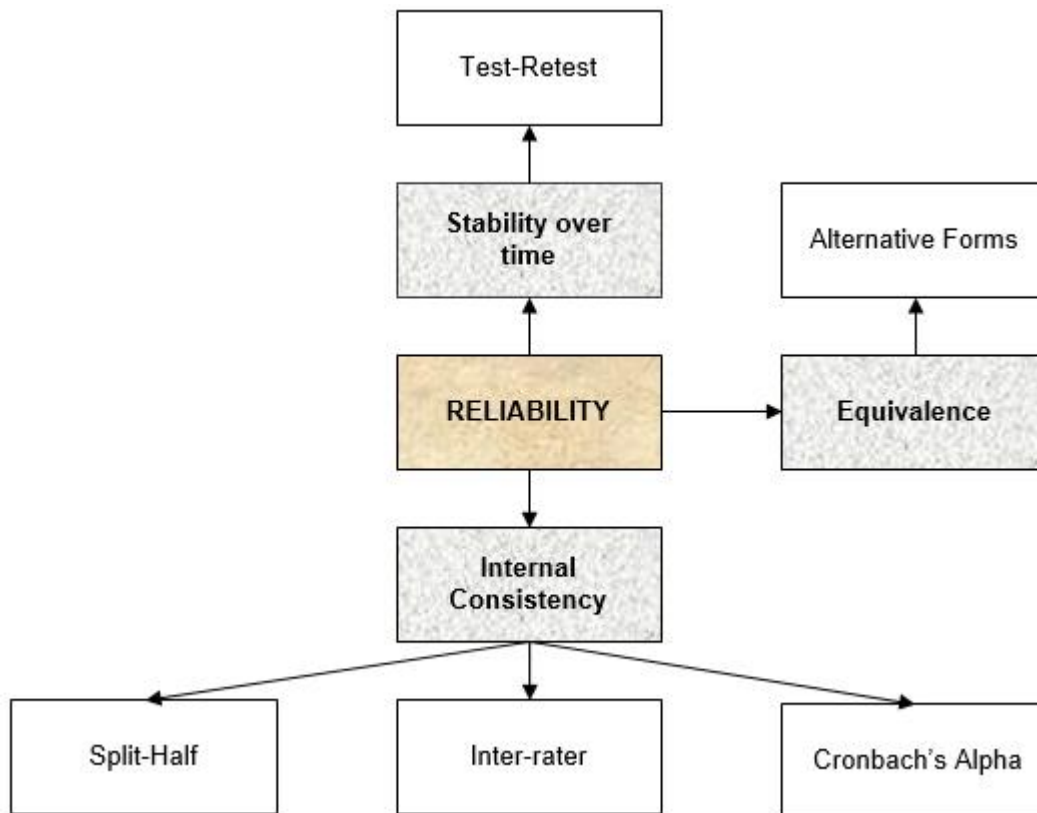
research because the data is in numerical form, but this is not the case in qualitative research since the results are fairly demanding and difficult to analyse, in addition to which the data is in narrative form and subjective. Moreover, instead of obtaining the same results, it is better to think about the dependability and consistency of the data. In this study, which deals with beneficiaries' perceptions, establishing reliability of data is crucial in order to be able to draw a conclusion.

In relation to the requirement that measurement instruments must be valid and reliable, Drost (2011:105-106) notes the following questions regarding reliability, which usually occupy the minds of researchers:

- What affects the reliability of a test?
- How can a test be made more reliable?
- What is a satisfactory level of reliability?

Stevens, Lyles and Berke (2014:78) state that researchers worry about reliability because when they do not or cannot provide evidence that their data are reliable, it raises doubts regarding the meaning of the data, and any subsequent analyses performed on those data (including cross-study comparisons) become difficult to justify. The most commonly used technique to estimate reliability is the correlation coefficient, sometimes called the reliability coefficient, which is the correlation between two or more variables that measure the same thing (Drost, 2011:108). In behavioural research, the methods used to test reliability are: test-retest reliability, alternative forms, split-halves, inter-rater reliability and internal consistency, as shown in Figure 6.1 below (Drost, 2011:108). Each type of coefficient makes an estimation of consistency across different parameters, with internal consistency coefficients estimating the degree to which scores measure the same concept (Ritter, 2010:6).

Figure 6.1: Reliability of measurement tests



Source: Drost (2011:109)

It has to be noted that measures of reliability are not restricted to the approaches mentioned above, as there are also Kappa statistics or the Kappa coefficient and Krippendorff's alpha, amongst others. The approaches to reliability testing represented in Figure 6.1, together with the Kappa coefficient and Krippendorff's alpha, are discussed to show how they differ and what each is intended for. Ritter (2010:6) highlights that there is no preference for a single method; however, the deciding factor should be the context of the research being conducted. Tavakol and Dennick (2011:53) make an important observation regarding Cronbach's alpha, that although it is widely used in the literature, its meaning, proper use and interpretation are not clearly understood.

6.9.1.1 Test-retest reliability

Test-retest coefficients lead to estimating the stability of scores over a period of time (Ritter, 2010:6). It compares measurements done by the same observer or rater at two points in time, within a short timeframe so that the construct itself has not changed

(Weiner, 2007:12). The procedure involves administering the test to a group of respondents and at a later date repeating the same test with the same respondents; however, some of the limitations of this technique are that when the interval between the two tests is short, the respondents might remember the answers that they provided in the first test (Drost, 2011:108). Further, when the interval is too long, the level of maturation, such as exposure to things that have changed the respondents' opinions, feelings or attitudes about the behaviour under study, might have taken place (Drost, 2011:108). Although this approach assumes no substantial change in the construct being measured between the two occasions, the time allowed between measures is critical: the shorter the time gap, the higher the correlation; the longer the time gap, the lower the correlation (Trochim, 2006a:2).

6.9.1.2 *Alternative forms*

This technique is closely related to the test-retest except that different measures of a behaviour (instead of the same measure, that is general spelling versus business vocabulary) are gathered at different times, and low correlation of alternative forms signals the presence of considerable measurement error (Drost, 2011:110). Based on Trochim's (2006a:3) observation, it is evident that the split-half approach is similar to the parallel-forms reliability, the difference is that parallel forms are constructed so that the two forms can be used independent of each other, and considered equivalent measures; one can thus deduce that parallel-forms reliability is another name for alternative forms reliability.

6.9.1.3 *Split-half approach*

The assumption in this approach is that when a number of items are available to measure behaviour, half of the items are combined to form one new measure and the other half to form a second measure. This results in two tests and two measures testing the same behaviour, however, in this approach the tests are done at the same period (Drost, 2011:110). The items that measure the same construct are randomly divided into two sets (Trochim, 2006a:5).

6.9.1.4 Inter-rater reliability

This approach makes use of raters or judges to measure behaviour, therefore, the reliability of their judgements or combined internal consistency of judgement is assessed, where correlation between the ratings is determined and effective reliability is calculated using the Spearman-Brown formula (Drost, 2011:111). The Spearman-Brown correction formula states the relationship between test length and reliability (Schmitt, 1996:350). In the extreme case of a two-item test, the Spearman-Brown prediction formula is more suitable than Cronbach's alpha (Manerikar & Manerikar, 2015:117). When the study is going to run for a long time, it is important to re-establish inter-rater reliability from time to time in order to ensure that raters are not changing (Trochim, 2006a:1).

6.9.1.5 Kappa coefficient

Kappa is a statistical measure introduced by Cohen in 1960, also known as Cohen's Kappa (CK). This measure is used to assess the degree of agreement or inter-rater reliability among raters who assign categorical values, more specifically to assess concordance between two raters or between an individual and a reference (Rinderer, Komakech, Müller, Wiesenberg, & Seibert, 2015:3509). The comparison is not restricted to two categories, but can work with more categories as well, including assessing the agreement between alternative techniques of categorical assessment when new techniques are under study (Hazra & Gogtay, 2017:23). CK is zero and when there is a perfect agreement, CK is one; however, the maximum attainable CK value is smaller than one in cases where the codes are not equally probable and both raters do not assign all classes similarly often; in addition, CK is sometimes represented as the ratio (Rinderer *et al.*, 2015:3509).

6.9.1.6 Krippendorff's alpha

Krippendorff's alpha coefficient (α -coefficient) was introduced in the late 1960s, with its initial implementation being in relation to the analysis of communication content; however, since its inception it has been applied in numerous research endeavours (Krippendorff & Craggs, 2016:182). Krippendorff's alpha is a measure to assess the degree of agreement within a group of raters, with a value of one when all raters perfectly agree and zero as observed and expected disagreement among all raters

would be equal (Rinderer *et al.*, 2015:3509). Ergai, Cohen, Sharp, Wiegmann, Gramopadhye and Shappell (2016:396) consider Krippendorff's alpha as a robust version of Cohen's Kappa applicable to both inter- and intra-rater reliability, where alpha values of 0.8 are considered reliable, values between 0.667 and 0.8 are considered tentatively reliable and values less than 0.667 are considered unreliable. Its application is independent of the number of observers, levels of measurement, sample sizes, and presence or absence of missing data; however, the disadvantage of it is that Krippendorff's alpha cannot be calculated by popular statistical packages used in the social sciences (Hayes & Krippendorff, 2007:77-78). Krippendorff's alpha is not used in this study, as no comparison of raters is done; furthermore, the Statistica computer programme is used to analyse data.

6.9.1.7 Cronbach's alpha

Cronbach's alpha is the most popular approach in behavioural sciences, popularised by Cronbach in 1951. whose value increases with an increase in the number of items for a particular point, for example, a five-item test might correlate 0.4 with true scores, and a 12-item test might correlate 0.8 with true scores (Drost, 2011:111-112). It measures the internal consistency of a test or scale and produces a number between zero and one (Tavakol & Dennick, 2011:53). It is possible to get negative alpha when the items are not positively correlated amongst themselves (Vaske *et al.*, 2017:165). In this approach, the computer program selects the random subsets of items and computes the resulting correlations (Trochim, 2006a:5).

Cronbach's alpha is not only popular in behavioural sciences, but also in other fields such as in medical education. Tavakol and Dennick (2011:53) mention that it is used in medical education research because it allows multiple-item measures of a concept or construct to be employed, and it only requires the administration of one test. Tavakol and Dennick (2011:53) caution that a high coefficient alpha does not automatically translate to a high degree of internal consistency, since alpha is also affected by the length of the test, with the too short test length reducing the value of alpha; they also recommend the inclusion of more related items testing the same concept to increase alpha. When alpha is one, it means the items are all the same, but when it is zero, it means none is related to another (Bland & Altman, 1997:572).

According to Tavakol and Dennick (2011:54), alpha is calculated for each of the concepts or constructs rather than for the entire test or scale and, the factor analysis, it is used to determine the dimensions of the test. The acceptable values of alpha from different reports show values ranging 0.7 to 0.95, and a case of low value of alpha could be due to a low number of questions, poor interrelatedness between items or heterogeneous constructs (Tavakol & Dennick, 2011:54). Panayides (2013:688) brings another dimension regarding the number of items, as they indicate that many scale designers are tempted to include an unnecessarily high number of items in the hope of achieving high alphas as they believe this to be an indication of a good psychometric scale. Where low alpha is the result of poor correlation between items, then some should be revised or discarded, this is done by computing the correlation of each test item with the total score test; items with low correlations (approaching zero) are deleted (Tavakol & Dennick, 2011:54). In contrast, a too high alpha may either indicate item redundancy as a result of numerous items that relate weakly to the construct or items with high inter-item correlations which exhibit a narrow coverage of the construct under consideration, thus causing construct underrepresentation and lowering the validity of the scale (Panayides, 2013:688). A maximum alpha value of 0.9 nine is recommended (Tavakol & Dennick, 2011:54). Cronbach's alpha values are calculated in this study.

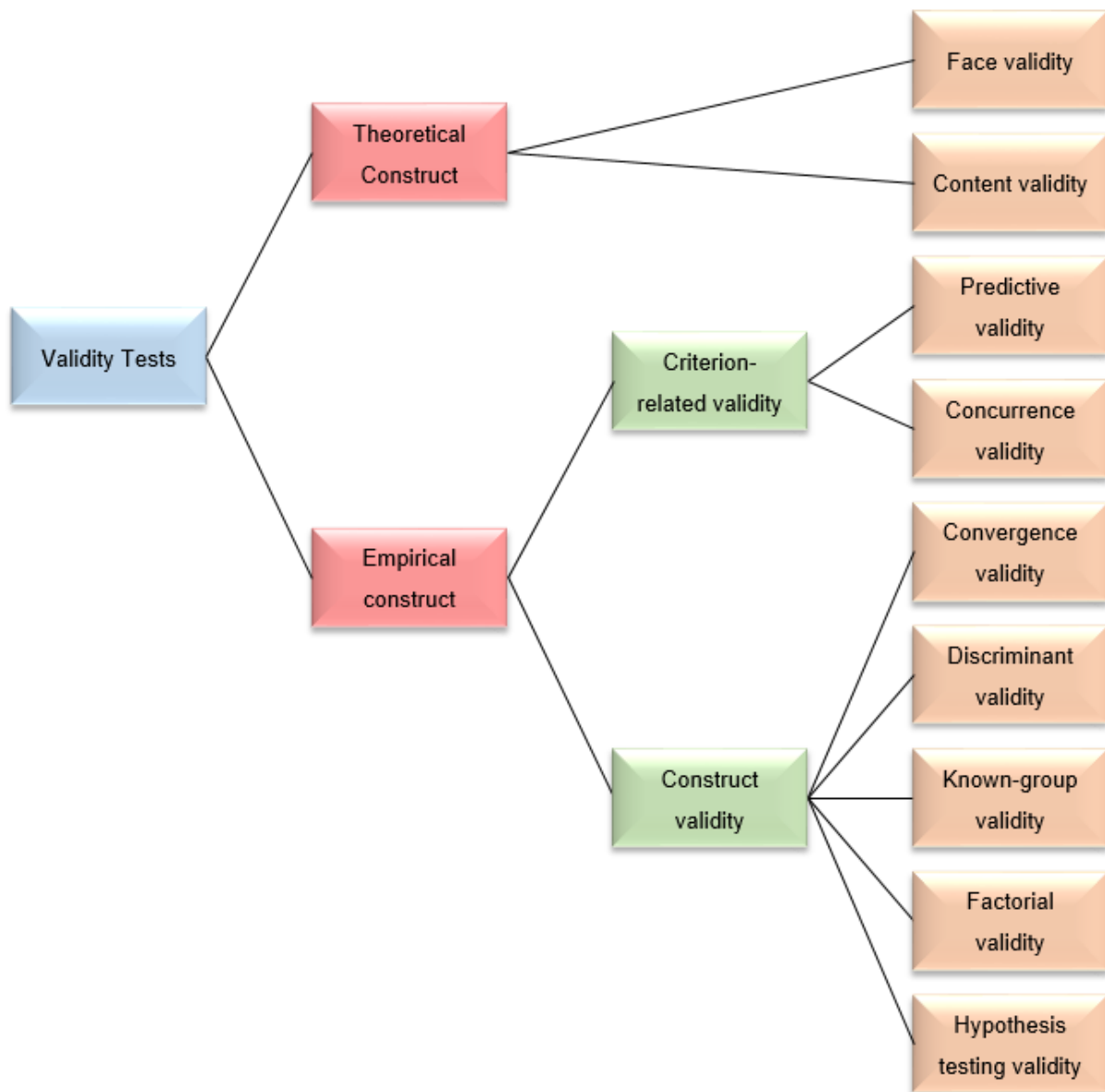
6.9.2 Validity

Hazra and Gogtay (2017:19) equate validity to accuracy and state that it is the level of conformity of a measured or calculated quantity to its actual or true value. Validity ensures that the individual scores of an instrument are meaningful and that they enable the researcher to draw good conclusions from the sample population being studied (Mohamad *et al.*, 2015:165). It considers the quality of the inferences, claims, or decisions drawn from the scores of an instrument (Zumbo & Chan, 2014:9). It indicates the degree to which a measurement measures what it purports to measure in regard to face validity, construct validity, content validity and criterion validity (which could be concurrent and predictive validity), with validity tests categorised into two broad components: internal and external validities (Bolarinwa, 2015:195). However, Mohamad *et al.* (2015:167) only refer to three validity types: criterion related, content, and construct validity. The inconsistency in the classification of validity is attributed to

Ryu's (2005:82) statement that the classification of validity may vary across fields and among researchers. Ryu (2005:82) notes that some people confuse construct validity and criterion-related validity due to the fact that the same correlation information among items can serve the purpose of either theory-related (construct) validity or purely predictive (criterion-related) validity.

Mohamad *et al.* (2015:169) define content validity to mean the level to which the questions on the instrument and the scores from these questions cover all possible questions to be used in regard to content or skill. This study makes use of explanatory factor analysis, therefore, construct validity will be used through discriminant validity. Figure 6.2, below, provides a graphical representation of the subtypes of various forms of validity tests.

Figure 6.2: Graphical representation of the subtypes of various forms of validity tests



Source: Bolarinwa (2015:196)

6.9.2.1 Theoretical construct

The importance of theory in research cannot be taken lightly since research requires a sound theoretical basis and strong methodology. The three reasons that support the importance of theory in research, as provided by Udo-Akang (2012:89), are that:

- it provides a framework for analysis,
- it provides an efficient method for field development, and

- it provides a clear explanation for the pragmatic world.

Wilson (2001:206-207) states that there is a serious distinction between theoretical constructs (i.e. the verbal products of scientists interacting with events of interest) and the crude events themselves, and that scientific constructs are divided into abstractive and hypothetical types. Abstractive constructs refers to events, or properties of events, selected from a total event field, while hypothetical constructs aim not to describe the events observed, but to explain them in terms of some proposed unobserved variable. The eight constructs of theory, which are based on the fact that theory generates research and research generates and refines theory, are: descriptive ability, explanatory power, heuristic value, testability, integration, parsimony, clarity, comprehensiveness, and delimitation world (Udo-Akang, 2012:89).

The development of theory places emphasis on the relationship between constructs, including the direction, sign and form of these relationships, and explains why and under what conditions these relationships occur; in addition, it addresses the relationship between constructs and measures and how these abstract constructs connect to observable phenomena (Wong, 2014:2-3). Abeysekera (2014:8) notes that previous studies in environmental practice did not examine in detail whether the variables used do in fact represent the construct in question, which is an important step towards building theoretical foundations. In terms of theoretical constructs, the variables should describe constructs in research in order to advance theories, since theories are statements that describe the relationship between constructs within set boundaries and constraints (Abeysekera, 2014:8).

In this study, theoretical construct is not applicable, instead empirical construct is used, considering that empirical issues, as stated by Demetriou, Spanoudis and Shayer (2013:744-746) are resolved by evidence, where empirical evidence is about exploring how constructs in different paradigms relate to each other.

6.9.2.2 Empirical construct

In defining the empirical domain, Smith and Johnston (2014:11) state that the empirical domain is what people can experience and note that things in the actual world, such as events, cannot be perceived. However, events leave empirical traces including

perceptions. Smith and Johnston (2014:11) further note that, since experiences are obtained via empirical traces of actual things, experiences are also empirical. Practical examples that capture the interactions underlying relations between empirical constructs are space-time and gravity in relativity, and mass and energy, amongst others (Demetriou *et al.*, 2013:748).

(a) Criterion-related validity

Criterion validity is about the extent to which a measure is empirically associated with relevant criterion variables, which may either be assessed at the same time (concurrent validity), in the future (predictive validity), or in the past (postdictive validity) (Western & Rosenthal, 2003:609). It demonstrates the accuracy of the measure by comparing it to a previously established and valid instrument or some other external criterion such as comparing scores from a short and long version of the same instrument (Burton & Mazerolle, 2011:28). To assess criterion-related validity, the correlation between measures of interest (e.g. the questionnaire scale under development) and a different concurrent or predictive measure (e.g. the existing questionnaires) have to be checked (Ryu, 2005:82). Typically, this type of validity provides evidence as to how well scores on the new measure correlate with other measures of the same construct or very similar underlying constructs that should theoretically be related; it is also crucial that these criterion measures are valid themselves (Kimberlin & Winterstein, 2008:2279). Evidence for criterion-related validity typically involves a demonstration of a relationship (via statistical significance testing or establishing confidence intervals) between the results of a selection procedure (predictor) and one or more measures of work-relevant behaviour or work outcomes (criteria). However, the choice of predictors and criteria should be based on an understanding of the objectives for test use, job information, and existing knowledge regarding test validity (Society for Industrial and Organizational Psychology, Inc., 2003:13). Criterion related validity is associated with both concurrent and predictive validity (Muller & Schepers, 2003:88).

(b) Construct validity

The development of construct validity has received attention from both theoretical and empirical perspectives for a number of years, especially in personality, clinical,

educational, and organizational psychology, where measures of individual differences between hypothesized constructs are important factors of research (Western & Rosenthal, 2003:608). Burton and Mazerolle (2011:28) suggest that construct validity is the degree to which an operational measure correlates with the theoretical concept being investigated. Construct validity can make use of the Rasch model to evaluate whether the scores of an instrument are significant, meaningful, useful, and purposive (Mohamad *et al.*, 2015:167). According to Sullivan and Niemi (1979:22-23), construct validity is dealt with whenever no criterion or universe of content is accepted as entirely adequate to define the quantity to be measured. The three distinct steps of construct validation are:

- The theoretical relationship between the concepts themselves must be specified.
- The empirical relationship between the measures of the concepts must be examined.
- The empirical evidence must be interpreted in terms of how it clarifies the construct validity of the particular measure.

Construct validation takes place whenever a test is to be interpreted as a measure of some attribute or quality that is not "operationally defined" (Cronbach & Meehl, 1955:282). The aim of construct validity is to create its relation to other variables with which it should, theoretically, be associated positively, negatively, or practically not at all (Western & Rosenthal, 2003:608). This type of validity will be assessed through exploratory factor analysis.

(i) Convergence validity

Convergent validity is the degree to which several attempts to measure the same concept produce results that are in agreement (Bagozzi, 1993:52). According to Strauss and Smith (2009:1), it is the connection between different measures of the same construct. Convergent validity becomes apparent when strong correlations occur between two methods measuring the same trait (Greyling, Visser & Fourie, 2003:11). Ryu (2005:82) states that it is established if independent measures of the same construct converge or are highly correlated.

(ii) Discriminant validity

Discriminant validity refers to the degree to which measures of different concepts are diverse (Bagozzi, 1993:52-53). According to Strauss and Smith (2009:1), it shows no relationship between a measure of a construct and indicators of theoretically irrelevant constructs in the same domain. Discriminant validity happens when there are weak correlations between two different traits measured by the same method (Greyling *et al.*, 2003:11). Ryu (2005:82) mentions that, for discriminant validity to exist, a measure must not correlate too highly with those measures from which it is supposed to differ.

6.9.3 Random error

Random errors have unpredictable fluctuations, or random noise, and their mean is expected to be zero, and to be uncorrelated with each other and with all other variables (Kane, 2008:12). According to Hofmann (2005:2), random error is a temporary dispersion of values around a mean value. Random error occurs as a result of any factors leading to the random impact of the measurement of the variable across the sample (Trochim, 2006b:1). The effect of random error in measurements is usually assumed to be neutral because those erroneous measurements which overestimate the parameter will be matched by those that underestimate it, therefore, effectively cancelling each other out (Grellety & Golden, 2016:2). This makes random error easier to deal with, since it is generally easy to detect and estimate, and can usually be controlled to some extent (Kane, 2008:12).

A typical example of random error is each person's mood (feel good or depressed), which can inflate or deflate his or her performance on any occasion. It is further stated that it is against this backdrop that most survey guidelines consider the possible effects of random error as having a minor effect, where the emphasis is placed on the sampling frame and increasing the sample size to improve precision and the assumed accuracy of the estimated parameter (Grellety & Golden, 2016:2). Random error can be estimated by recording repeated observations on persons and determining the variability in these observations for each person, or by getting two measurements on each person and estimating a reliability coefficient, and thence the average standard error of measurement (Kane, 2008:12).

Determining the magnitude of random error from available data, if the variability around the calculated mean of the variable under consideration is small, suggests the random error is not very large and that any observed score provides a good estimate of the true score (Kane, 2008:10). However, random error cannot be corrected on an individual measurement basis, and statistical methods are used to express random error for the measured data (Hofmann, 2005:2). The standard deviation is an index representing the spread in a set of scores; when the scores are clustered tightly around their average value, the standard deviation will be small, while if the scores are spread out, the standard deviation will be large (Kane, 2008:10).

6.9.4 Systematic error

Systematic error is the result of any factors that systematically impact on the measurement of the variable across the sample (Trochim, 2006a:2). Systematic errors, also referred to as bias errors, are caused by the physical properties of the measuring system. These errors are unchanging under constant measuring conditions and change as conditions change, for example, the length of a tape changes as the temperature changes (Arneson, 2011:4). The constant nature of systematic errors make them predictable (Kane, 2008:12). Systematic error (bias) is a permanent deflection in the same direction from the true value and can be corrected (Hofmann, 2005:2). If the cause of systematic errors is the physics of the measurement system, then the errors can be mathematically modelled and corrected (Arneson, 2011:5). For cases where systematic errors are known, these can be eliminated by correcting the measuring instrument, like calibrating a measuring instrument, however, when these errors are not known but there is a reason to suspect that systematic errors exist, they cannot be removed (Kane, 2008:13).

6.10 DATA ANALYSIS

The data collected during this study was transferred to an MSExcel spreadsheet and was analysed using the Statistica computer programme. Various statistical methods are used in this study. Descriptive statistics through measures of central tendency (mean) and dispersion (standard deviation) are provided herein. Frequency distributions, expressed as percentages, are presented in the form of tables. The measuring instrument was assessed for validity and reliability. Both face and content

validity were assessed through a pilot study and subject to the expert judgement of management, agriculture and statistical experts. Exploratory factor analysis was used to assess construct validity through both convergent and discriminant validity. A cut-off point of 0.4 was used and at least three items were loaded per factor in order to be regarded as acceptable. The reliability of the measuring instrument refers to its internal consistency, that is, the extent to which a measuring device will produce the same result when applied more than once to the same person under similar conditions (Gill & Johnson, 2010:143). Cronbach's alpha coefficient was used to assess the internal reliability of the study variables. Regression and correlation analysis were used to test relationships between the dependent and independent variables, and to test the stated null-hypotheses of the study. The following section provides additional information pertaining to some of the techniques applied in this study.

6.10.1 Descriptive statistics

Statistics is a broad mathematical discipline involving techniques for the collection, analysis, interpretation, and presentation of numerical data, where data is used to produce information for reasoning, discussion or calculation (Larson, 2006:76). Thereafter, upon collecting data, statistical analysis usually begins by calculating descriptive statistics (numbers that characterise features of those specific data) and by presenting the descriptive statistics in tables or graphs (Larson, 2006:76). According to Keller (2012:2), descriptive statistics involves methods of organising, summarising and presenting data in a convenient and informative manner. The two forms of descriptive statistics are:

- One form of descriptive statistics uses graphical techniques that allow statistics practitioners to present data in ways that make it easy for the reader to extract useful information.
- Another form of descriptive statistics uses numerical techniques to summarise data.

Hussain (2012:741) states that researchers experience great difficulty in analysing data due to their unawareness of the statistical tools to be used as per their objectives. Descriptive analysis pertains to the description of data using frequencies, proportions, mean, median, quartiles, standard deviation, and inter-quartile range, amongst others.

6.10.2 Factor analysis

In broad terms, factor analysis is intended to summarize data so that relationships and patterns can be easily interpreted and understood, usually by regrouping variables into a limited set of clusters based on shared variance (Yong & Pearce, 2013:79). Williams *et al.* (2010:1) provide a historical background of factor analysis, and indicate that it was used primarily within the fields of psychology and education. However, its use within the health sciences has become much more common in the past two decades. Yong and Pearce (2013:79) add that factor analysis also finds its use in behavioural and social sciences, medicine, economics and geography, due to technological advancements. Whilst the availability of statistical software and personal computers make the analysis of data easier and more accessible, the underpinning statistical knowledge of measurement theory is not as straightforward. There are two types of factor analysis: exploratory factor analysis and confirmatory factor analysis (Williams *et al.*, 2010:1-3).

Ryu (2005:75) describes factor analysis as a statistical procedure applied to examine correlations among questionnaire items in order to discover groups of related items. It consists of a set of techniques designed to identify order and structure in data by providing a parsimonious and meaningful explanation for the observed variation and covariation in surface attributes (Tucker & MacCallum, 1997:2). Factor analysis, a multivariate statistical procedure, has many uses, including the three uses listed by Williams *et al.* (2010:2):

- Firstly, factor analysis reduces a large number of variables into a smaller set of variables (also referred to as factors).
- Secondly, it establishes underlying dimensions between measured variables and latent constructs, thereby allowing the formation and refinement of theory.
- Thirdly, it provides construct validity evidence of self-reporting scales.

Yong and Pearce (2013:80) state that factor analysis operates on the notion that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable, known as reducing dimensionality. For several decades dating back to the early 1900s, factor analysis has contributed to advancing psychological research, but there is no systematic assessment in place on

how factor analysis has actually been applied in empirical work (Ford, MacCallum & Tait, 1986:291-292).

There are two basic types of factor analysis, namely, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA); it is up to the researcher to decide which one is appropriate for an applicable study (Costello & Osborne, 2005:8).

6.10.3 Confirmatory factor analysis

Confirmatory factor analysis (CFA) tries to confirm hypotheses and makes use of path analysis diagrams to represent variables and factors (Yong & Pearce, 2013:79). CFA differs from exploratory factor analysis (EFA), since CFA requires a researcher to specify a specific number of factors as well as to specify the pattern of zero and non-zero loadings of the measured variables on the common factors. Otherwise, a researcher might specify a priori a small set of competing models postulating differing numbers of factors, different patterns of factor loadings, or both (Fabrigar *et al.*, 1999:277). In CFA, a researcher tests a proposed theory (CFA is a form of structural equation modelling) or model and makes use of assumptions and expectations based on a priori theory regarding the number of factors, as well as which factor theories or models best fit (Williams *et al.*, 2010:3). Normally, CFA is used when a researcher has a hypothesised structure explaining the relationship between variables and aspires to validate the fit of a model using data taken from a sample (Baglin, 2014:2).

6.10.4 Exploratory factor analysis

Exploratory factor analysis (EFA) is a mass of common methods for exploring the underlying pattern of relationships between multiple observed variables (Baglin, 2014:1). It is a statistical tool intended to be used for many purposes (Osborne, 2015:1). In EFA, an investigator does not have expectations of the number or nature of the variables, hence, this approach is exploratory in nature (Williams *et al.*, 2010:3). EFA attempts to find complex patterns by exploring the dataset and testing predictions (Yong & Pearce, 2013:79). Exploratory factor analysis is primarily a data-driven approach, without an a priori number of common factors specified; there are also few restrictions placed on the patterns of relations between the common factors and the measured variables (i.e. the factor loadings). Therefore, EFA provides procedures for determining an appropriate number of factors and the pattern of factor loadings

primarily from the data (Fabrigar *et al.*, 1999:277). Osborne (2015:3-4) notes that unrotated results from a factor analysis are not easy to interpret, although the plot helps, and further mentions that a number of rotation methods exist, these fall into two broad categories: orthogonal and oblique (referring to the angle maintained between the X and Y axes).

The use of EFA in validation studies of psychological tests is intended to determine the minimum number of common factors required to adequately reproduce the item correlation matrix (Izquierdo, Olea & Abad, 2014:395). According to Yong and Pearce (2013:80), a larger sample size diminishes error in the data, hence, EFA generally works better with larger sample sizes. However, Guadagnoli and Velicer (1988) proposed that if the dataset has several high factor loading scores (> 0.8), then a smaller size ($n > 150$) should be sufficient. However, Izquierdo *et al.* (2014:395) are of the view that as far as sample size is concerned, there are no specified minimum limits on ratios between the number of subjects and variables. Conway and Huffcutt (2003:147-148) mention challenges encountered in the use of exploratory factor analysis, such as which factor extraction model to use (i.e. principal components rather than common factors), what criteria to use for deciding on the number of factors to retain (e.g. eigenvalues greater than one) and what type of rotation to use (such as orthogonal rather than oblique).

6.10.5 Regression analysis

Regression analysis covers different mathematical methods that combine observations such that a dependent variable is a mathematical function of independent variables, often in a way that allows for a statistical inference regarding the parameters of the function outside the specific sample (Ron, 1999:3). It is applicable in almost every field; for instance, in scientific research projects it allows a researcher to predict the future, which is one of the most important missions of science (Coşkuntuncel, 2013:2151). Campbell and Campbell (2008:3) define regression as a statistical technique that is used to determine the linear relationship between two or more variables, and they highlight that it is primarily used for prediction and causal inference. Fechete (2014:2) notes the following uses of regression analysis:

- estimation of a variable holding values of another / other variables;

- assessment of the measure so that the dependent variable can be explained by the independent variable or a set of independent variables;
- identification of a subset of several independent variables to be taken into account in order to estimate the dependent variable.

6.10.6 Correlation analysis

Correlation is a statistical tool to assess the degree of association between two quantitative variables measured in each member of a group by means of a correlation coefficient (also better known as Pearson's correlation coefficient or "r-value"), whose values can vary between -1.0 and +1.0 (Aggarwal & Ranganathan, 2016:187-188). Samuel and Okey (2015:23-26) mention that the Pearson product moment correlation coefficient (Pearson's correlation coefficient) is referred to as linear correlation coefficient since it measures the strength and the direction of a linear relationship between two variables; however, the correlation is not causality since correlational data do not indicate cause-and-effect relationships. Spearman's rank correlation coefficient is denoted as ρ_s for a population parameter and as r_s for a sample statistic. It is appropriate when one or both variables are skewed or ordinal and is robust when extreme values are present (Kozak, Krzanowski & Tartanus, 2012:1147). A correlation is considered to exist if one variable (X) increases and another variable (Y) increases or decreases (Curtis, Comiskey & Dempsey, 2016:21). Two variables are "positively" correlated when their values are directly related, that is, increasing values of one are associated with increasing values of the other. The variables are considered to be "negatively" correlated when their values are inversely related, i.e. decreasing values of one are associated with increasing values of the other, while "no correlation" is found when variables have no or little visible relationship (Mukaka, 2012:69).

However, correlation has in the past been misused, as a result of which some statisticians have wished that the method had never been devised (Mukaka, 2012:69). Kozak *et al.* (2012:1148) highlight that there is a misconception of reporting correlation as a part of regression analysis but, in reality, this should not be the case, since correlation measures different phenomena and different types of variables than does regression analysis. The calculation of the correlation coefficient only becomes a meaningful measure of strength of association if the relationship between the two variables is a linear one. However, if a relationship is non-linear then it may be possible

to linearise it by transforming one or both variables; the most common among such transformations are the logarithmic or root square ones. Alternatively, if the relationship is not linear, but monotonic, then Spearman's rank correlation coefficient is an appropriate measure of association (Kozak *et al.*, 2012:1148-1149).

6.11 ETHICAL CONSIDERATIONS

Due to the sensitive nature of the study, permission was obtained from the Department of Rural Development and Land Reform (DRDLR) to conduct the study on the selected farms. The acknowledgement of receipt of the request was received from the DRDLR, although the actual database requested was not provided by the Department. However, the acknowledgement response noted that the responsible unit within the DRDLR was requested to pull the relevant information together. Ethical clearance to conduct the study was obtained from the Research Ethics Committee of Nelson Mandela University. Permission was obtained from farm owners to conduct the study amongst farm workers. The purpose of the study was clearly explained to all farm owners and beneficiaries, and consent from beneficiaries was obtained prior to their participation in the study.

6.12 SUMMARY

This chapter provided a detailed discussion of the research methodology adopted in this study. However, it was imperative to also cover various other available options, as it is important before conducting any research to know the type of data that would be required for the research and the analysis to be carried out on the data. The available data analysis techniques are described in this chapter, although the advancement of computer technology does not require one to know the equations to be used, as that is a built-in functionality of the programmes used for analysis; however, it is important to understand and interpret the results. It is for that reason that the details on the applicable equations were not provided in this chapter. Moreover, the measuring instruments discussed herein were based on information gathered from previous studies and self-developed items.

The ensuing chapter, Chapter 7, will present the empirical results of the study.

CHAPTER 7

EMPIRICAL REVIEW OF BENEFICIARIES' PERCEPTIONS REGARDING FARM WORKER EQUITY SHARE SCHEMES

7.1 INTRODUCTION

The previous chapters in this study provided extensive detail on the background of equity share schemes in South Africa, the agricultural sector within which the schemes are operating, theories related to equity share schemes, operationalisation of the hypothetical model and the research methodology employed in this study. This chapter focusses on the analysis and interpretation of the empirical results of the research on beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

7.2 HYPOTHESES AND OBJECTIVES OF THE STUDY

This empirical study investigates the beneficiaries' perceptions regarding farm worker equity share schemes in South Africa. The *independent variables* used in the study are stakeholder trust; operational risk; government intervention; two-way communication; farm worker empowerment; training and skills development; and access to resources. The *mediating variable* of this study is beneficiaries' perceptions regarding farm worker equity share schemes. The *dependent variables* in this study are farming performance; sustainability and employee expectations. Figure 7.1, below, provides information on the variables used in this study. The null-hypotheses tested in this study are as follows:

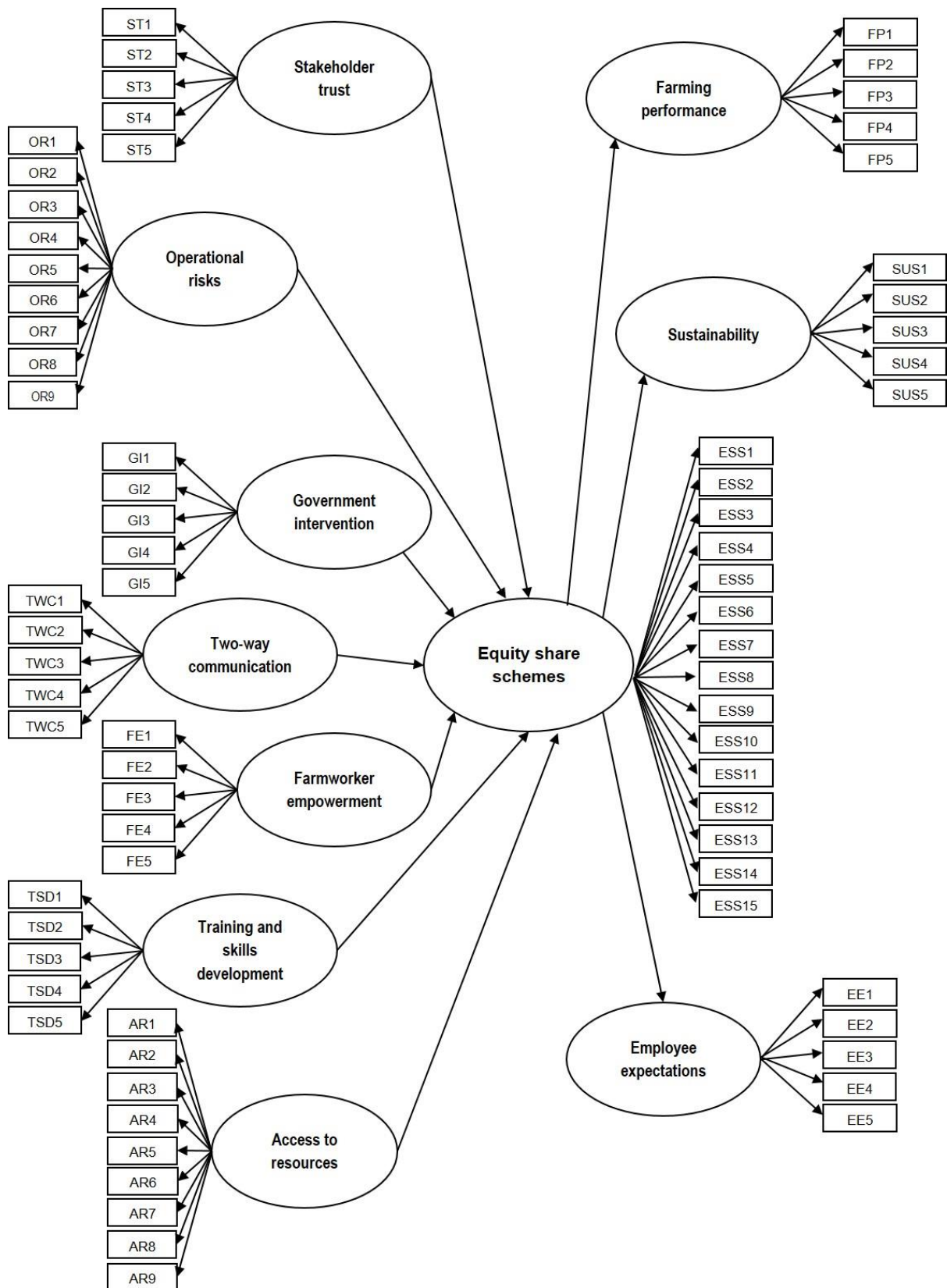
Hypothesis H0₁: There is no relationship between *stakeholder trust* and beneficiaries' perceptions regarding farm worker equity share schemes.

Hypothesis H0₂: There is no relationship between *operational risks* (as measured by access to funding, climate conditions and worker exploitation) and beneficiaries' perceptions regarding farm worker equity share schemes.

- Hypothesis H0₃:** There is no relationship between *government interventions* and beneficiaries' perceptions regarding farm worker equity share schemes.
- Hypothesis H0₄:** There is no relationship between *two-way communication* and beneficiaries' perceptions regarding farm worker equity share schemes.
- Hypothesis H0₅:** There is no relationship between *farm worker empowerment* and beneficiaries' perceptions regarding farm worker equity share schemes.
- Hypothesis H0₆:** There is no relationship between *training and skills development* and beneficiaries' perceptions regarding farm worker equity share schemes.
- Hypothesis H0₇:** There is no relationship between *access to resources* (as measured by access to water and electricity, good roads, and reliable and effective equipment) and beneficiaries' perceptions regarding farm worker equity share schemes.
- Hypothesis H0₈:** There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and *farming performance* (as measured by productivity, effectiveness and efficiency, and competitiveness).
- Hypothesis H0₉:** There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and *business sustainability*.
- Hypothesis H0₁₀:** There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and *employee expectations* (as measured by financial benefits, non-financial benefits, job security and improved living standards).

Figure 7.1, below, shows the hypothetical model of the study and the empirically tested hypotheses.

Figure 7.1: Theoretical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa



Source: Researcher's own construction

7.3 DATA EVALUATION FINDINGS

In this study, the data analysis was performed through the following distinct phases, and the empirical results were grouped as follows:

- The first phase of data evaluation was intended to determine the internal reliability of the measuring instruments by calculating Cronbach's alpha values of each instrument, using the statistical programme STATISTICA (version 13.2).
- In the second phase of the analysis, the focus was on evaluating the construct validity of the various instruments used to measure the considered construct. Exploratory factor analysis was used to test for validity in order to assess whether individual items measured what they were supposed to measure.
- Descriptive statistics were calculated by means of measures of central tendency (mean scores) and measures of variability (standard deviation scores).
- Multiple regression analysis was done to evaluate the impact of the independent variables on the dependent variables (see Figure 7.1).
- Correlation analysis was done to assess the hypothesised relationships.

Table 7.1, below, provides a list of the abbreviations for the variables used during the data analysis.

Table 7.1: Abbreviations of study variables

VARIABLE	ABBREVIATION
Stakeholder trust	ST
Operational risk	OR
Government intervention	GI
Two-way communication	TWC
Farm worker empowerment	FE
Training and skills development	TSD
Access to resources	AR
Equity share schemes	ESS
Farming performance	FP
Sustainability	SUS
Employee expectations	EE

7.3.1 Reliability of the original measuring instruments

Cronbach's alpha is the most popular approach to determination of data reliability in behavioural sciences (Drost, 2011:111-112). It measures the internal consistency of a test or scale and produces a number between zero and one (Tavakol & Dennick, 2011:53). In this study, Cronbach's alpha coefficient was used to measure internal consistency reliability. The internal consistency of each of the factors was assessed by calculating Cronbach's alpha: the value more than >0.5 was considered to represent a sufficient standard of reliability. Felder and Spurlin (2005:107) state that alpha of 0.5 or greater is acceptable for attitude assessment. Thus, for instruments of perception, Cronbach's alpha coefficients of 0.5 or greater is an acceptable value for reliability tests as this is an exploratory study.

The results presented in Table 7.2, below, indicate Cronbach's alpha values between 0.6 and 0.8. This means that all instruments have a fair degree of reliability of 0.60 (Maden & Köker, 2013:574). In this study, the internal reliability for the initial and final values remained the same because there was no need to remove any item during the analysis. In conclusion, the study retains ST, OR, GI, TWC, FE, TSD, AR, ESS, FP, SUS and EE, since their Cronbach's alpha values were above 0.5.

Table 7.2: Cronbach's alpha values of measuring instruments: Theoretical model

Measuring instrument	Initial value	Final value
Stakeholder trust (ST)	0.76	0.76
Operational risk (OR)	0.61	0.61
Government intervention (GI)	0.76	0.76
Two-way communication (TWC)	0.75	0.75
Farm worker empowerment (FE)	0.71	0.71
Training and skills development (TSD)	0.78	0.78
Access to resources (AR)	0.81	0.81
Equity share scheme (ESS)	0.87	0.87
Farming performance (FP)	0.80	0.80
Sustainability (SUS)	0.72	0.72
Employee expectations (EE)	0.69	0.69

7.3.2 Validity of the measuring instruments

Hazra and Gogtay (2017:19) equate validity to accuracy and state that it is the level of conformity of a measured or calculated quantity to its actual or true value. Validity ensures that the individual scores of an instrument are meaningful and, above that, enable the researcher to draw good conclusions from the sample population being studied (Mohamad *et al.*, 2015:165). Various validity tests were discussed in the methodology chapter of this study, but the focus of the study is on discriminant validity.

Discriminant validity refers to the degree to which measures of different concepts are diverse (Bagozzi, 1993:52-53). According to Strauss and Smith (2009:1), it shows no relationship between a measure of a construct and indicators of theoretically irrelevant constructs in the same domain. Discriminant validity happens when there is weak correlation between two different traits measured by the same method (Greyling *et al.*, 2003:11). The factor analysis was instrumental in testing for discriminant validity, with some items moving from one domain to another.

7.3.2.1 *Exploratory factor analysis*

According to Tavakol and Dennick (2011:54), alpha is calculated for each of the concepts or constructs rather than for the entire test or scale, and the factor analysis is used to determine the dimensions of the test. In this study, exploratory factor analysis (EFA) was used to determine which variables could be retained for further analysis.

The following variables were used in the initial theoretical model:

- *Independent variables*: stakeholder trust, operational risk, government intervention, two-way communication, farm worker empowerment, training and skills development, and access to resources.
- *Mediating variable*: beneficiaries' perceptions of farm worker equity share schemes.
- *Dependent variables*: farming performance, sustainability and employee expectations.

In the factor analysis, all factor loadings were expected to be at least 0.4 in order for the items to confirm the discriminant validity of the measuring instrument used in the study. According to Witcher and Onwuegbuzie (1999:9), the minimum cut-off correlation loading factor is 0.3, but for the purpose of this study a value of 0.4 was used to align with the study by Carola, D'Olimpio, Brunamonti, Mangia and Renzi (2002:54), which did not load factors less than 0.4. The sample size used in this study was 341, however, only 303 were eligible for the analysis as some questionnaires were incomplete. The sample size of 303 is in agreement with the value of at least 300 participants recommended by Yong and Pearce (2013:80) in order to do the factor analysis.

STATISTICA (version 13.2) was used to analyse data and three sets of exploratory factor analyses were conducted:

- The first set involved general beneficiaries' perceptions of farm workers equity share scheme towards *stakeholder trust (ST)*, *operational risk (OR)*, *government intervention (GI)*, *two-way communication (TWC)*, *farm worker*

empowerment (FE), training and skills development (TSD) and access to resources (AR).

- The second factor analysis involved *beneficiaries' perceptions of farm worker equity share schemes (ESS)*.
- The third factor analysis involved the impact of beneficiaries' perceptions of farm worker equity share schemes on *farming performance (FP), sustainability (SUS) and employee expectations (EE)*.

(a) Beneficiaries' perceptions of farm worker equity share schemes towards stakeholder trust, operational risk, government intervention, two-way communication, farm worker empowerment, training and skills development and access to resources

Table 7.3, below, shows the EFA results for beneficiary perceptions of farm worker equity share schemes towards the independent variables.

Table 7.3: Factor loadings: Perceptions of farm workers towards stakeholder trust, operational risk, government intervention, two-way communication, farm worker empowerment, training and skills development and access to resources

Items	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7
	Farm owner support	Access to resources	Risks: worker exploitation	Government intervention	N/A	Risks: weather conditions	Shareholder trust
TWC3	0.775148	0.048659	0.089531	0.120033	0.009415	-0.023107	0.117817
TWC2	0.685769	-0.021456	0.112379	0.149042	0.267526	0.071107	0.147049
TSD4	0.489719	0.119300	-0.248682	0.331626	0.200215	0.006575	0.284690
FE1	0.475404	0.256131	0.292182	0.033004	-0.066904	-0.147355	0.348741
TWC1	0.432232	0.040784	-0.113679	0.484243	0.246841	-0.004727	0.269775
TSD1	0.413856	0.272740	-0.021427	0.091683	0.104559	-0.095757	0.562568
OR3	0.406404	-0.059496	-0.161713	0.130166	0.429130	0.235398	0.167456
AR7	0.020761	0.697169	0.062899	0.023478	-0.061683	0.002502	0.279014
AR8	0.162676	0.688380	-0.052867	-0.018186	0.133366	0.070305	0.207459
AR9	0.123207	0.686301	0.061554	0.093376	0.201888	0.042117	-0.024936
AR4	-0.060269	0.641109	-0.071028	0.149840	0.114578	-0.036744	-0.048664
AR2	-0.023257	0.631283	0.148771	-0.037103	-0.095053	0.030880	0.177744
AR5	-0.108745	0.563548	-0.080829	0.292880	-0.029493	0.155062	-0.020747
AR6	-0.085269	0.541331	-0.020676	0.251744	-0.252594	0.067544	0.028700

Items	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Factor7
	Farm owner support	Access to resources	Risks: worker exploitation	Government intervention	N/A	Risks: weather conditions	Shareholder trust
AR3	0.038866	0.527613	0.196760	-0.045597	-0.002652	-0.003146	0.123958
AR1	0.196019	0.526434	0.163211	0.074501	0.059881	-0.045893	0.299038
TSD5	0.354308	0.501207	0.174041	-0.018786	-0.002641	-0.127478	0.390251
OR9	0.083562	0.049951	0.724220	0.112715	0.030063	0.058409	0.075377
OR8	-0.012354	0.166748	0.631457	0.131961	-0.099473	0.268099	0.157738
OR7	0.278934	-0.143777	0.412910	0.147512	-0.018937	0.141572	0.289470
GI4	0.138196	0.102702	0.129341	0.765263	0.015558	0.066481	0.104373
GI3	-0.023113	-0.007859	0.144021	0.731356	-0.043941	0.105927	0.151630
GI2	0.222984	0.256009	0.069310	0.613653	0.109454	-0.247799	0.096314
GI1	0.341709	-0.084997	-0.128177	0.492821	0.264556	-0.069656	0.133170
GI5	0.338462	0.054210	0.088048	0.484914	0.174832	-0.227883	0.162582
OR1	0.073248	0.030199	-0.058177	0.082870	0.768444	0.053958	0.132724
OR2	0.279812	0.097315	0.079936	0.046904	0.603409	-0.029542	0.142928
OR4	-0.098390	-0.099083	0.032787	0.056541	-0.075817	0.729676	0.215817
OR5	0.110546	0.174315	0.141785	-0.135202	0.241666	0.706804	0.004233
OR6	0.035136	0.132793	0.194796	0.191729	-0.116342	0.533710	-0.093899
ST2	-0.053634	0.131774	0.058380	0.169013	0.259317	0.122243	0.692783
ST1	0.049311	-0.080631	0.305741	0.045192	0.144314	0.193320	0.687205
ST4	0.057368	0.130599	-0.032463	0.224374	0.272290	-0.163262	0.615533
TSD2	0.334238	0.112113	-0.077264	0.115768	-0.132937	0.033771	0.600780
FE4	0.088703	0.160044	0.187920	-0.022881	0.050604	0.151967	0.584211
TSD3	0.354535	0.200434	0.069489	0.169553	0.059819	-0.020373	0.566828
TWC4	0.229492	0.198376	0.010882	0.158149	-0.150598	0.019823	0.565293
FE2	0.325539	0.200471	0.179222	0.058427	-0.041480	-0.004738	0.553591
FE5	0.342000	0.110873	-0.098877	0.168347	0.097165	0.147075	0.551848
ST3	-0.035751	0.078672	0.357972	0.296827	0.390163	0.006365	0.450364
TWC5	0.383820	0.015267	-0.150390	0.364513	0.077243	0.148084	0.430736
ST5	0.140033	0.195316	0.291147	0.013362	0.306588	-0.160003	0.425760
FE3	0.227077	0.260446	0.065218	0.374145	0.176678	0.123342	0.120857
Expl.Var	3.532709	4.349078	2.002643	3.233897	2.186456	1.886187	5.233835
Prp.Totl	0.082156	0.101141	0.046573	0.075207	0.050848	0.043865	0.121717

Loadings greater than 0.4 were considered significant.

The first exploratory factor analysis results shown in Table 7.3, above, reveal that two of the five items (TWC2, TWC3) expected to measure 'two-way communication' and

one of the five items (TSD4) expected to measure 'training and skills development' as well as one of the five items (FE1) expected to measure 'farm worker empowerment' loaded on factor one (1). This means that respondents viewed these items as measures of a single construct renamed 'farm-owner/manager support'.

Table 7.3 also indicates that all nine items (AR1, AR2, AR3, AR4, AR5, AR6, AR7, AR8, AR9) that were expected to measure 'access to resources' and one of the five items expected to measure 'training and skills development' (TSD5) loaded on factor two (2). This means that respondents viewed these items as a single construct termed 'access to resources'.

Table 7.3 further shows that respondents perceived the individual underlying dimensions of 'operational risk' (access to funding, weather conditions and worker exploitation) as separate dimensions. This means that respondents view 'operational risk' as a two-pronged variable. This indicates that respondents viewed 'operational risk' as consisting of a dimension related to 'weather conditions' on the one hand and 'worker exploitation' on the other. Three (OR7, OR8, OR9) of the nine items that were expected to measure 'operational risk' loaded onto factor three (3); this is termed 'risks related to worker exploitation'. Three items (OR4, OR5 and OR6) loaded onto factor six (6), which is termed 'risks related to weather conditions'. One item (OR3) cross-loaded and was deleted as it lacks sufficient discriminant validity for further analysis. Only two items (OR1 and OR2) loaded onto factor five (5); all other items that loaded onto factor 5 were deleted on the basis of lack of sufficient validity. The fact that items that were expected to measure operational risks as measured by 'weather conditions' and 'worker exploitation' loaded onto two different factors, with values greater than 0.4, demonstrates sufficient discriminant validity for further analysis.

Table 7.3 further indicates that five items (GI1, GI2, GI3, GI4, GI5) that were expected to measure 'government intervention' loaded on factor (4). This means that respondents viewed these items as a single construct termed 'government intervention'. All five items (ST1, ST2, ST3, ST4, ST5) that were expected to measure 'stakeholder trust', two (TWC4, TWC5) of the five items that were expected to measure 'two-way communication', and three of the five items that were expected to measure 'farm worker empowerment' (FE2, FE4, FE5), as well as two of the five items that were expected to measure 'training and skills development' (TSD2, TSD3) loaded on factor

seven (7). This means that respondents viewed these items as a single construct termed 'stakeholder trust', as illustrated in Table 7.3.

One of the five items expected to measure 'two-way communication' (TWC1) and one item expected to measure 'training and skills development' (TSD1) cross-loaded. All these items were deleted, as they lack sufficient discriminant validity for further analysis. One item (FE3) that was expected to measure 'farm worker empowerment' could not load to a significant extent ($p < 0.4$); this led to the deletion of this item and was not used in subsequent analyses. It can therefore be concluded that the items that were expected to measure 'two-way communication', 'operational risk', 'farm worker empowerment' and 'training and skills development' are not sufficiently valid for the respondents to interpret as expected, thus, some of these items were interpreted by respondents as measures of 'farm owner/manager support', 'risks related to weather conditions' and 'risks related to worker exploitation' as well as 'stakeholder trust'.

(b) Beneficiaries' perceptions towards farm worker equity share schemes

Table 7.4, below, indicates that seven (ESS1, ESS2, ESS3, ESS4, ESS5, ESS6 and ESS8) of the fifteen items used to measure 'perceptions of farm worker equity share schemes' loaded onto factor one (1). This indicates that respondents viewed these items as measures of a single construct termed 'perceptions of farm worker equity share schemes'. Table 7.4 further indicates that two items (ESS11 and ESS12) that were expected to measure 'beneficiaries' perceptions of farm worker equity share scheme' loaded onto factor two (2), and one item (ESS15) that was expected to measure 'beneficiaries' perceptions of farm worker equity share scheme' loaded onto factor three (3), and two items (ESS10 and ESS14) that were expected to measure 'beneficiaries' perceptions of farm worker equity share scheme' loaded onto factor four (4). All the items that loaded onto factor 2, factor 3 and factor 4 were deleted due to a lack of sufficient discriminant validity for further analysis. Table 7.4 also indicates that three items (ESS7, ESS9 and ESS13) cross-loaded and are therefore not considered for further analysis.

Table 7.4: Beneficiaries' perceptions regarding farm worker equity share schemes

Items	Factor1	Factor2	Factor3	Factor4
	Perceptions of equity share schemes	N/A	N/A	N/A
ESS2	0.776166	0.098724	-0.112392	0.200596
ESS3	0.739801	0.307541	0.067428	0.037880
ESS6	0.684162	-0.047112	0.265851	0.238383
ESS4	0.673264	0.192490	0.096680	0.056852
ESS5	0.646916	0.141515	0.382286	0.043359
ESS7	0.558090	0.170392	0.498518	0.053667
ESS1	0.529178	0.326184	0.044539	0.305990
ESS8	0.519409	0.059435	0.378242	0.227481
ESS13	0.406917	0.627172	0.224379	0.028337
ESS12	0.097346	0.787654	-0.173356	0.150245
ESS11	0.118464	0.728509	0.340055	0.043359
ESS15	0.017174	0.107969	0.811938	0.127210
ESS9	0.300922	-0.063854	0.554367	0.404152
ESS14	0.192331	0.001167	0.080899	0.828807
ESS10	0.029255	0.315436	0.191528	0.705739
Expl.Var	3.668667	1.962292	1.842745	1.641636
Prp.Totl	0.244578	0.130819	0.122850	0.109442

Loadings greater than 0.4 were considered significant.

(c) Beneficiaries' perceptions regarding outcomes of farm worker equity share schemes: farming performance, sustainability and employee expectations

Table 7.5, below, shows that four of the five items (FP1, FP2, FP3, FP4) expected to measure 'farming performance' and one item expected to measure 'employee expectations' (EE5) loaded on factor one (1), and were regarded as a measure of 'farming performance'. Table 7.5 indicates that four of the five items expected to measure 'employee expectations' (EE1, EE2, EE3 and EE4) loaded on factor two (2). This means that respondents viewed these items as measures of a single construct

termed 'employee expectations'. Table 7.5 further shows that four (SUS1, SUS2, SUS4 and SUS5) of the five items that are expected to measure 'sustainability' loaded on factor three (3). The respondents perceived these items as a measure of a single construct referred to as 'sustainability' in the empirical study results.

One item (FP5) expected to measure 'farming performance' and one item (SUS3) expected to measure 'sustainability' cross-loaded. These items were deleted as they did not demonstrate sufficient discriminant validity.

Table 7.5: Factor loadings: Outcomes of farm worker equity share schemes

Items	Factor1	Factor2	Factor3
	Farming performance	Employee expectations	Sustainability
FP1	0.686414	0.303150	0.097360
FP3	0.671926	0.174029	0.314754
EE5	0.636488	0.067053	0.214942
FP2	0.624481	0.179083	0.360674
FP4	0.613081	0.165938	0.261165
SUS3	0.521999	0.010121	0.485722
FP5	0.427558	0.248065	0.493945
EE3	0.316103	0.764428	-0.064919
EE1	0.030088	0.718363	0.280110
EE4	0.386582	0.696211	-0.210718
EE2	-0.119121	0.694807	0.392617
SUS1	0.229524	-0.027206	0.725081
SUS5	0.392377	0.133967	0.587735
SUS4	0.185867	0.289622	0.572662
SUS2	0.300020	0.038766	0.562530
Expl.Var	3.144560	2.419860	2.629731
Prp.Totl	0.209637	0.161324	0.175315

Loadings greater than 0.4 were considered significant.

7.3.3 Cronbach's alpha values of latent variables based on the results of the factor analysis: Theoretical model

The assessment of discriminant validity test led to the deletion of some items and the formation of new variables, therefore, the original theoretical model had to be revised. This required the reassessment of the new and adapted variables.

Table 7.6, below, summarises the factor loadings of Cronbach's alpha coefficients of the latent variables based on the comprehensive exploratory factor analysis. The internal consistency of each of the factors was assessed by calculating Cronbach's alpha; the value >0.5 was considered to represent a sufficient standard of reliability after the exploratory factor analysis has been performed. The acceptance of a value >0.5 was in accordance with the work of De Leng, Stegers-Jager, Husband, Dowell, Born and Themmen (2017:247) and Felder and Spurlin (2005:107). Thus, the reliability test results of the Cronbach's alpha values of the newly formed variables, namely, 'risk related to weather conditions' and 'risk related to worker exploitation' are acceptable for further analysis.

The results in Table 7.6 indicate Cronbach's alpha values between 0.5 and 0.8. This indicates that all instruments have a fair degree of reliability of 0.50. In this study, the internal validity of the newly formed variables "risk related to weather conditions (RWC)" which is >0.53 and "risk related worker exploitation" which is >0.55 , were accepted for exploratory research and, therefore, retained for further analysis.

The study retains ST, RWC(1), RWE(2), GI, FOS, AR, ESS, FP, SUS and EE since their Cronbach's alphas were above the cut-off point. Table 7.6 indicates that all Cronbach's reliability coefficients are above 0.5 which is regarded as acceptable for the purpose of this study. This indicates that all instruments have a fair reliability of 0.5 and above. These results are summarised in Table 7.7, also below, by means of an empirical factor structure used for regression analysis.

Table 7.6: Factor loadings: Cronbach's alpha coefficients of the latent variables based on the comprehensive exploratory factor analysis

Latent variable	Items	Alpha
Stakeholder trust (ST)	ST1, ST2, ST3, ST4, ST5, TWC4, TWC5, FE2, FE4, FE5, TSD2, TSD3	0.87
Risk: weather conditions (RWC1)	RWC4, RWC5, RWC6,	0.53
Risk: worker exploitation (RWE2)	RWE7, RWE8, RWE9	0.55
Government intervention (GI)	GI1, GI2, GI3, GI4, GI5	0.76
Farm owner support (FOS)	TWC2, TWC3, FE1, TSD4	0.71
Access to resources (AR)	AR1, AR2, AR3, AR4, AR5, AR6, AR7, AR8, AR9, TSD5	0.82
Perceptions of equity share schemes (ESS)	ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8	0.84
Farming performance (FP)	FP1, FP2, FP3, FP4, EE5	0.81
Sustainability (SUS)	SUS1, SUS2, SUS4, SUS5	0.65
Employee expectations (EE)	EE1, EE2, EE3, EE4	0.73

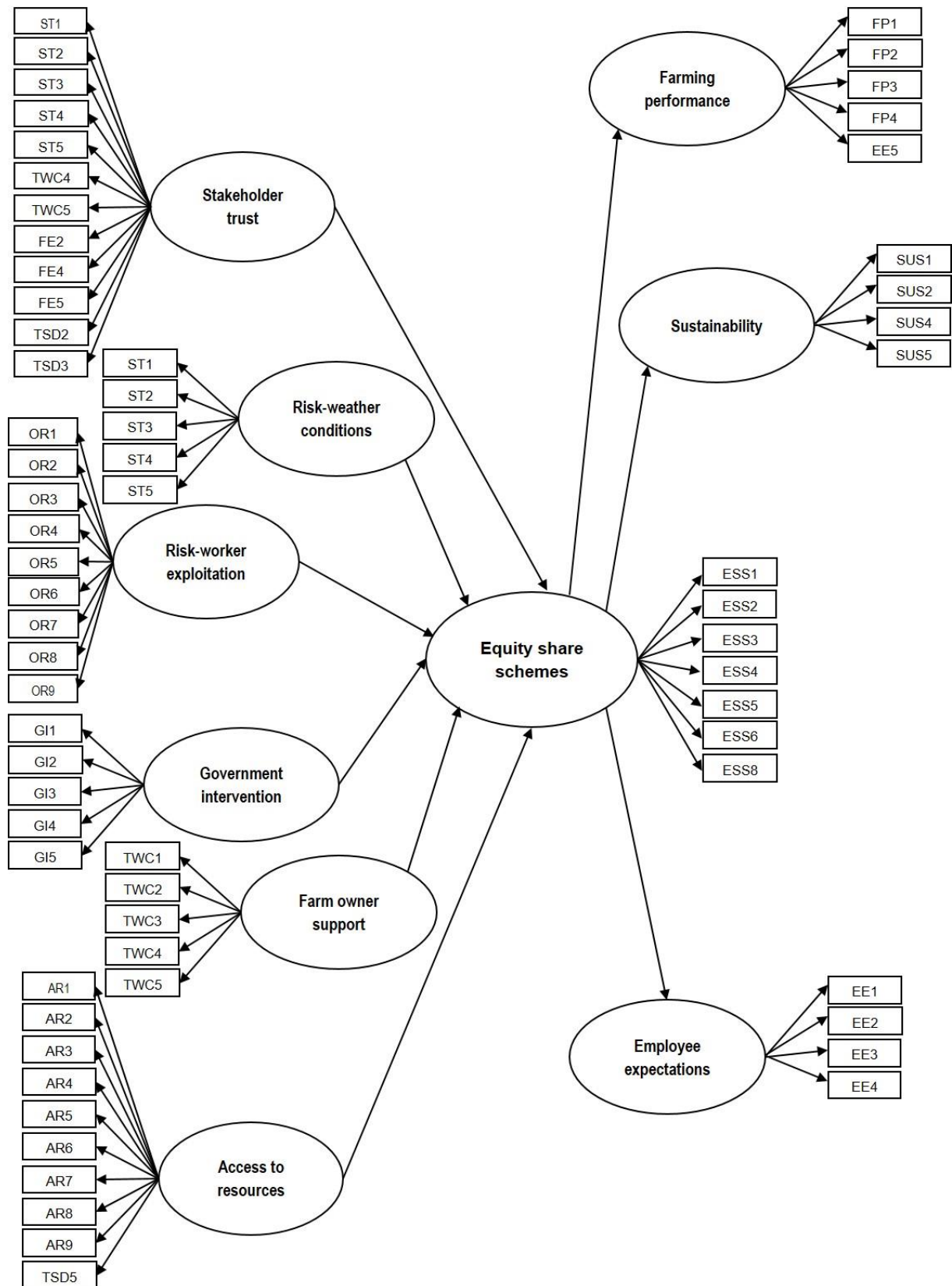
Subsequent to the reliability and validity assessment, six independent variables (stakeholder trust, risk: weather conditions, risk:worker exploitation, farm owner support and access resources), one intervening variable (perceptions of equity share schemes) and three dependent variables (farming performance, sustainability and employee expectations) remained in the empirical model. The latent variables, and the individual items measuring them, are summarised in Table 7.7 below.

Table 7.7: Empirical factor structure for regression analysis

Latent variable	Items
Stakeholder trust	ST1, ST2, ST3, ST4, ST5, TWC4, TWC5, FE2, FE4, FE5, TSD2, TSD3
Risk: weather conditions	RWC4, RWC5, RWC6,
Risk: worker exploitation	RWE7, RWE8, RWE9
Government intervention	GI1, GI2, GI3, GI4, GI5
Farm owner support	TWC2, TWC3, FE1, TSD4
Access to resources	AR1, AR2, AR3, AR4, AR5, AR6, AR7, AR8, AR9, TSD5
Perceptions of equity share schemes	ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8
Farming performance	FP1, FP2, FP3, FP4, EE5
Sustainability	SUS1, SUS2, SUS4, SUS5
Employee expectations	EE1, EE2, EE3, EE4

As a result of the scale purification process, the original model (see Figure 7.1) had to be substantially modified, as shown in Figure 7.2 below.

Figure 7.2: The adapted model of the relationships between variables based on beneficiaries' perceptions regarding farm worker equity share schemes



7.3.4 Reformulation of hypotheses

The hypotheses tested had to be reformulated as a result of the formulation of the adapted model. The hypotheses subjected to further empirical verification (see Figure 7.3) are discussed below.

7.3.4.1 *First set of hypotheses: Beneficiaries' perceptions of farm worker equity share schemes regarding the independent variables*

- **Hypothesis H0₁:** There is no relationship between *stakeholder trust* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₂ is modified into H0_{2.1} and H0_{2.2}:

- **Hypothesis H0_{2.1}:** There is no relationship between *operational risk related to weather conditions* and beneficiaries' perceptions regarding farm worker equity share schemes.
- **Hypothesis H0_{2.2}:** There is no relationship between *operational risk related to worker exploitation* and beneficiaries' perceptions regarding farm worker equity share schemes.
- **Hypothesis H0₃:** There is no relationship between *government interventions* and beneficiaries' perceptions regarding farm worker equity share schemes.

H0₄, H0₅ and H0₆, modified into H0_{4.1}

- **Hypothesis H0_{4.1}:** There is no relationship between *farm owner support* and beneficiaries' perceptions regarding farm worker equity share schemes.
- **Hypothesis H0₇:** There is no relationship between *access to resources* and beneficiaries' perceptions regarding farm worker equity share schemes.

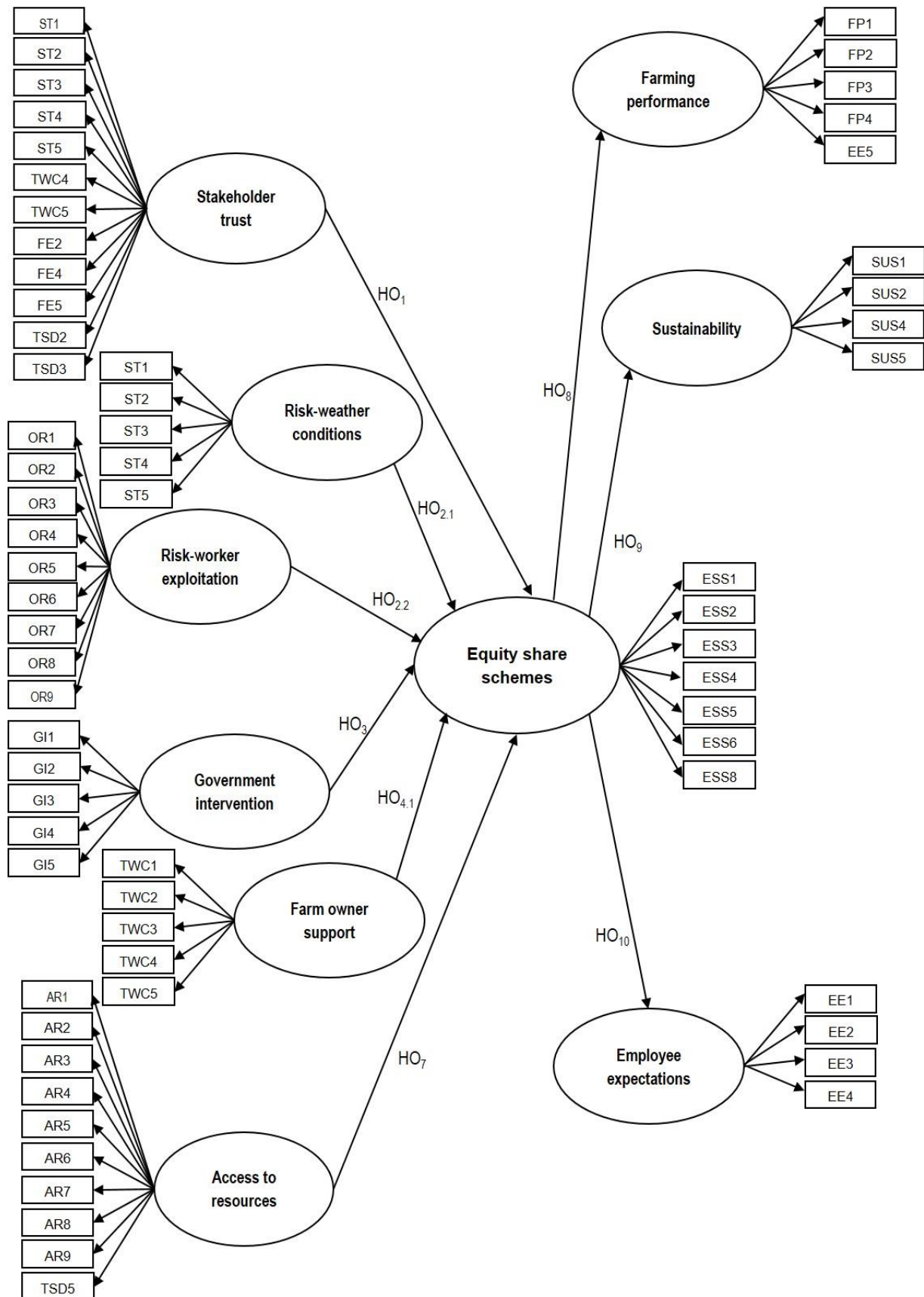
7.3.4.2 *Second set of hypotheses: Beneficiaries' perceptions of farm worker equity share schemes regarding the dependent variables*

- **Hypothesis H0₈:** There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance (as measured by productivity, effectiveness and efficiency, and competitiveness).

- **Hypothesis H0₉:** There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and business sustainability.
- **Hypothesis H0₁₀:** There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and employee expectations (as measured by financial benefits, non-financial benefits, job security and improved living standards).

Two-way communication (TWC), farm worker empowerment (FE) and training and skills development (TSD) did not load as separate factors and, as a consequence, the three hypotheses **H0₄**, **H0₅** and **H0₆** were not tested in the modified model (see Figure 7.2) as it did not include the variables TWC, FE and TSD. The assessment of hypotheses in this study was done using the modified theoretical model presented in Figure 7.3 below.

Figure 7.3: The hypothesised model of beneficiaries' perceptions regarding farm worker equity share schemes



7.3.5 Descriptive statistics

Table 7.8, below, shows the descriptive statistics (mean and standard deviation) of the newly formed study variables measured on a seven-point Likert-type scale. Options 1 to 3 represented the degree to which the respondents disagreed with the statements, option 4 represented indifference, and options 5 to 7 represented the degree to which respondents agreed with the statements.

Table 7.8: Descriptive statistics for each variable

VARIABLE	MEAN	STANDARD DEVIATION
Stakeholder trust (ST)	4.602	1.218
Risks related to weather conditions (RWC)	4.570	1.310
Risks related to worker exploitation (RWE)	4.947	1.595
Government interventions (GI)	3.924	1.258
Farm owner support (FOS)	4.286	1.322
Access to resources (AR)	4.601	1.290
Perceptions of equity share schemes (ESS)	3.674	1.230
Farming performance (FP)	4.155	1.309
Sustainability (SUS)	4.206	1.238
Employee expectations (EE)	4.952	1.458

The results show that respondents tend to agree that stakeholder trust (mean score 4.602) is important in farm worker equity share schemes. This implies that the respondents value stakeholder trust. Table 7.8, above, further shows that the respondents agree that risks related to weather conditions (mean score of 4.570) influence farm worker equity share schemes. These farm workers are of the opinion that severe droughts, climate change and ground erosion could impact farm worker equity share schemes. The results also show that respondents agree that risks related to worker exploitation (mean score of 4.947) have an impact on farm worker equity share schemes. The respondents take worker exploitation in terms of unequal pay, child labour and long working hours seriously. The results also show that most respondents are neutral regarding government interventions (mean score of 3.924). This means that the respondents lack information on the role of government in equity share schemes. It appears that the respondents are not convinced that government officials explain land reform and provide support in terms of conflict resolution, mobile medical clinics and transport for farm workers. Tables 7.8 further shows that the

respondents consider farm owner support (mean score of 4.286) to be important for equity share schemes and that they value farm owner support. The aspects valued by respondents in this regard include providing negotiation practices, allowing constructive criticism, providing training to be able to serve as office bearers of the scheme and ensuring that farm workers are confident in using their abilities/skills to do their job effectively. The results also show that the respondents agree that access to resources (mean score of 4.601) plays an important role in farm worker equity share schemes. This means that the success of farm equity share schemes depends on the availability of resources such as an adequate supply of water and electricity, modes of transport, well-maintained roads and safe equipment. Table 7.8 further shows that the mean scores for general beneficiaries' perceptions of farm worker equity share schemes (mean score of 3.674) tend to cluster between three and four (somewhat disagree and neutral). This implies that respondents do not agree or are neutral towards most of the statements regarding perceptions of the implementation of farm worker equity share schemes (refer to Section B of the questionnaire).

The results also show that respondents are neutral on whether farming performance (mean score 4.155) plays an important role in the success of the equity share scheme. This means that some respondents are not aware of the role of farming performance (in terms of effectiveness, productivity and profitability) in the success of equity share schemes. The results further show that the respondents are neutral regarding the statements on farming sustainability (mean score of 4.206). This means that the farm workers are neutral towards farming sustainability in terms of having long-term business plans, well-functioning storage or warehouse facilities, engaging in social responsibility initiatives and mitigating strategies to combat climate change.

Table 7.8 also shows that the respondents agree somewhat that farm workers have expectations (mean score of 4.952) when joining equity share schemes. This means that farm workers expect something for being part of the schemes, such as regular dividend payouts, improved housing or residential rights and acquiring land for farming purposes. It is noted that relatively high standard deviation scores are indicated for all the variables (scores > 1), indicating variability around the mean scores.

7.4 REGRESSION ANALYSIS

Regression analysis covers different mathematical methods that combine observations such that a dependent variable is a mathematical function of independent variables, often in a way that allows a statistical inference regarding the parameters of the function outside the specific sample (Ron, 1999:3). Campbell and Campbell (2008:3) define regression as a statistical technique to determine the linear relationship between two or more variables and is primarily used for prediction and causal inference. In this study, during the construction of the modified conceptual model, regression analyses were performed to establish the relationships formulated in the relevant set of hypotheses.

In this study, two regression analyses procedures were conducted to assess the influence of selected variables on farm worker equity share schemes and their outcomes in South Africa (Figure 7.3). In so doing, some hypotheses were either accepted or rejected based on the outcome of these regression analyses procedures.

7.4.1 The influence of beneficiaries' perceptions regarding aspects of farm worker equity share schemes

(a) The influence of stakeholder trust, risks related to weather conditions, risks related to worker exploitation, government interventions, farm owner support and access to resources on farm worker equity share schemes

In total, the R^2 of 0.416 explains 42% of variability in the model as explained by the moderating variable (farm worker equity share schemes), as indicated in Table 7.9 below. Table 7.9 further shows that operational risks related to weather conditions ($r = 0.084$, NS) and worker exploitation ($r = -0.035$, NS) as well as access to resources ($r = -0.035$, NS) do not exert a significant influence on 'farm worker equity share schemes'.

Table 7.9 further indicates that stakeholder trust ($b = 0.163$, $p < 0.01$) and government interventions ($b = 0.285$, $p < 0.001$) as well as farm owner support ($b = 0.263$, $p < 0.001$) are positively related to farm worker equity share schemes. This implies that farm workers tend to trust farm owners or managers when they are allowed to share

their opinions before final decisions regarding farm equity schemes are made. Farm workers also feel that government should timeously monitor the implementation of equity share scheme policies based on a legal framework. Furthermore, when farm workers receive training which enables them to serve as office bearers for the equity share scheme to which they belong, they feel that they are empowered as beneficiaries.

Table 7.9: Regression analysis: Influence of stakeholder trust, operational risks related to weather conditions and worker exploitation, government interventions, farm owner support and access to resources on farm worker equity share schemes

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: FARM WORKER EQUITY SHARE SCHEMES						
Parameter	Beta b*	Std. Error	B	Std Error	T value	P-value
ST	0.162	0.062	0.163	0.063	2.605	0.009**
RWC	0.084	0.047	0.079	0.044	1.793	0.739
RWE	-0.035	0.050	- 0.027	0.039	-0.694	0.488
GI	0.292	0.053	0.285	0.052	5.451	0.000***
FOS	0.284	0.059	0.263	0.055	4.826	0.000***
AR	0.067	0.049	0.064	0.047	1.356	0.176
R	R²	F	Std Error of estimate P			
64%	0.41566050	35.092	0.94890	p< .00000		
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

7.4.2 The influence of farm worker equity share schemes on farming performance, sustainability and employee expectations

(a) The influence of farm worker equity share schemes on farming performance

Table 7.10, below, shows that the R² of 0.401 indicates that 40% of the variability in the model is explained by the variable 'farming performance'. This means that farming performance (b = 0.674, p < 0.001) has a positive relationship with farm worker equity share schemes. This means that when farm workers are aware that government is

responsible for providing them with the grant to buy shares in the equity scheme, productivity increases and the profitability objectives of the farm are effectively used.

Table 7.10: Regression analysis: Influence of farm worker equity share schemes on farming performance

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: FARMING PERFORMANCE						
Parameter	Beta b*	Std. Error	B	Std Error	T value	P-value
Farm worker equity share scheme (ESS)	0.633	0.045	0.674	0.047	14.179	0.001***
R	R²	F	Std Error of estimate P			
63%	0.40124153	201.04	1.0147 p<0 .00000			
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

(b) The influence of farm worker equity share schemes on sustainability

Table 7.11, below, shows that the R² of 0.243 indicates that 24% of the variability in the model is explained by the variable ‘sustainability’. This means that farming sustainability (b = 0.500, p < 0.001) has a positive relationship with farm worker equity share schemes.

This implies that farm workers feel that the implementation of a long-term business plan and formal dispute resolution procedures regarding equity share scheme matters by farm owners, create stability in farming activities and in the farm worker equity share scheme.

Table 7.11: Regression analysis: Influence of farm worker equity share schemes on sustainability of the farm

	REGRESSION SUMMARY FOR DEPENDENT VARIABLE: SUSTAINABILITY					
Parameter	Beta b*	Std. Error	B	Std Error	T value	P-value
Farm worker equity share scheme (ESS)	0.493	0.050	0.500	0.051	9.821	0.001***
R	R²	F	Std Error of estimate P			
49%	0.24327970	96.448	1.0791 p<0 .00000			
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

(c) The influence of farm worker equity share schemes on employee expectations

Table 7.12, below, shows that the R² of 0.016 indicates that 2% of the variability in the model is explained by the variable ‘employee expectations’. This relationship is not strong. Although the employee expectations of farming (b = 0.152, p < 0.001) has a positive relationship with farm worker equity share schemes, government intervention can assist in ensuring that employees’ expectations are considered to some extent. Furthermore, farm workers expect that the power they exercise in decision-making should be at least equal to their share of equity in the scheme.

Table 7.12: Regression analysis: Influence of farm worker equity share schemes on employee expectations

REGRESSION SUMMARY FOR DEPENDENT VARIABLE: EMPLOYEE EXPECTATIONS						
Parameter	Beta b*	Std. Error	B	Std Error	T value	P-value
Farm worker equity share scheme (ESS)	0.128	0.057	0.152	0.068	2.237	0.03*
R	R²	F	Std Error of estimate P			
13%	0.01640690	5.0042	1.4480 p<0 .00000			
* = p < 0.05						
** = p < 0.01						
*** = p < 0.001						

According to Table 7.9 operational risks related to weather conditions and worker exploitation as well as access to resources do not exert a significant influence on farm worker equity share schemes. The t-values reported in Table 7.9 indicate that the higher the t-values, the stronger the impact of the independent variables on 'farm worker equity share schemes'. In addition, the t-values of the intervening variables indicate a high to moderate as well as low impact on the dependent variables. Government intervention with the t-value (t = 5.451) and farm owner support with the t-value (t = 4.826) have a moderate impact followed by a weak impact of stakeholder trust with a t-value of (t = 2.605) on farm worker equity share schemes as shown in Table 7.9.

Furthermore, Table 7.10 indicates a strong impact of farm worker equity share schemes on farming performance with a highest t-value (t = 14.179). Equally significant, in Table 7.11, there is evidence of a strong impact of farm worker equity share schemes on sustainability of farming with a high t-value of (t = 9.821). Alternatively, Table 7.12 indicates that farm worker equity share schemes have a weak impact on employee expectations with a low t-value (t = 2.237).

7.5 CORRELATION ANALYSIS

Correlation is a statistical tool used to assess the degree of association between two quantitative variables measured in each member of a group by means of a correlation

coefficient (also better known as Pearson’s correlation coefficient or “*r*-value”), whose values can vary between –1.0 and +1.0 (Aggarwal & Ranganathan, 2016:187-188). Table 7.13, below, indicates the correlation matrix of the study variables.

Table 7.13: Correlation matrix of variables of the study

Variable	FOS	AR	RWE	GI	RWC	ST	ESS	FP	EE	SUS
FOS	1.000	0.317	0.269	0.517	0.072	0.597	0.547	0.479	0.153	0.465
AR	0.317	1.000	0.238	0.264	0.112	0.434	0.306	0.379	0.174	0.531
RWE	0.269	0.238	1.000	0.239	0.300	0.405	0.217	0.348	0.309	0.383
GI	0.517	0.264	0.239	1.000	0.068	0.466	0.528	0.492	-0.039	0.359
RWC	0.072	0.112	0.300	0.068	1.000	0.181	0.151	0.293	0.352	0.266
ST	0.597	0.434	0.405	0.466	0.181	1.000	0.497	0.605	0.369	0.592
ESS	0.547	0.306	0.217	0.528	0.151	0.497	1.000	0.633	0.128	0.493
FP	0.479	0.379	0.348	0.492	0.293	0.605	0.633	1.000	0.414	0.610
EE	0.153	0.174	0.309	-0.039	0.352	0.369	0.128	0.414	1.000	0.349
SUS	0.465	0.531	0.383	0.359	0.266	0.592	0.493	0.610	0.349	1.000

Farm owner support (FOS)
 Access to resources (AR)
 Risks related to weather conditions (RWC)
 Government intervention (GI)
 Risks related to worker exploitation (RWE)
 Stakeholder trust (ST)
 Farm worker equity share schemes (ESS)
 Farming performance (FP)
 Employee expectations (EE)
 Sustainability (SUS)

Table 7.13, above, shows the correlations between the variables used in the study. It indicates that there is a positive correlation between farm owner support and farm worker equity share schemes with a coefficient of 0.547. This implies that the support provided by the farm owner could impact on the successful implementation of the equity share scheme and that there is transparency and farm workers are engaged.

Table 7.13 further shows that government interventions are positively correlated to farm worker equity share schemes with a coefficient of 0.528. This means that the role of government helps achieve the intended objectives of equity share schemes, where farm workers understand the formation of the equity share schemes and the kind of support provided by government for the benefit of farm workers. Furthermore,

stakeholder trust has a positive relationship with farm worker equity share schemes with a coefficient of 0.497. This means that if the involved parties trust each other and work towards the same goal there are positive results to be derived from the equity share schemes. Even though access to resources such as adequate supply of water and electricity, roads, modes of transport and safe and effective farming equipment have a positive correlation with farm worker equity share schemes with a coefficient of 0.306, this relationship is weak. Furthermore, Table 7.13 shows that risk related to worker exploitation with a coefficient of 0.217 and risk related to weather conditions with a coefficient of 0.151 do not significantly correlate with farm worker equity share schemes. This implies that access to resources, risks related to worker exploitation and risks related to weather conditions do not translate to the intended purpose of the equity share schemes.

Table 7.13 also reveals that farm-worker equity share schemes are highly correlated to farming performance with a coefficient of 0.633. This implies that when farm workers fully understand the equity share schemes they will be motivated to ensure good farming performance in terms of effectiveness, productivity and profitability. Although there is a positive correlation between farm worker equity share schemes and employee expectations with a coefficient of 0.128, this relationship is weak. This implies that farm workers have low trust in the formation of equity share schemes due to what they experience after participating in these equity share schemes. They might feel that expectations regarding regular dividend payouts, residential rights and the acquisition of land for farming purposes do not always materialise after the formation of the scheme.

Table 7.13 further indicates that farm worker equity share schemes are positively related to farming sustainability with a coefficient of 0.493. This implies that farm workers have noticed the continual operation of the farm over the years, growth of the business in some respects, plans to deal with certain operational challenges and contribution made to the society, which have led to a positive relationship between equity share schemes and farming sustainability.

7.6 FINDINGS ON HYPOTHESISED RELATIONSHIPS

7.6.1 Findings on the first set of hypotheses

- **Hypothesis H0₁:** *There is no relationship between stakeholder trust and beneficiaries' perceptions regarding farm worker equity share schemes.*

Table 7.9 reports a statistically significant positive relationship between stakeholder trust and farm worker equity share schemes ($p < 0.01$). This means that there is a significant positive correlation between stakeholder trust and beneficiaries' perceptions regarding farm worker equity share schemes with $r = 0.162$ and t value = 2.605. Therefore, H0₁ is rejected and the alternative hypothesis is accepted.

- **Hypothesis H0_{2.1}:** *There is no relationship between operational risks related to weather conditions and beneficiaries' perceptions regarding farm worker equity share schemes.*

Tables 7.9 indicates that operational risk related to weather conditions is not significantly related to beneficiaries' perceptions regarding farm worker equity share schemes ($r = 0.084$, NS). This means that there is no significant correlation between operational risks related to weather conditions and beneficiaries' perceptions regarding farm worker equity share schemes. Therefore, H0_{2.1} is accepted.

- **Hypothesis H0_{2.2}:** *There is no relationship between operational risks related to worker exploitation and beneficiaries' perceptions regarding farm worker equity share schemes.*

Tables 7.9 indicates that operational risk related to worker exploitation is not significantly related to beneficiaries' perceptions regarding farm worker equity share schemes ($r = -0.035$, NS). This means that there is no significant correlation between operational risk related to worker exploitation and beneficiaries' perceptions regarding farm worker equity share schemes. Therefore, H0_{2.2} is accepted.

- **Hypothesis H0₃:** *There is no relationship between government interventions and beneficiaries' perceptions regarding farm worker equity share schemes*

Table 7.9 reports a statistically significant positive relationship between government

interventions and beneficiaries' perceptions regarding farm worker equity share schemes ($p < 0.001$). This means that there is a significant positive correlation between government interventions and beneficiaries' perceptions regarding farm worker equity share schemes with $r = 0.292$ and t value ($t=5.451$). Therefore, H_{03} is rejected and the alternative hypothesis is accepted.

- **Hypothesis $H_{04.1}$:** *There is no relationship between farm owner support and beneficiaries' perceptions regarding farm worker equity share schemes.*

Table 7.9 reports a statistically significant positive relationship between farm owner support and beneficiaries' perceptions regarding farm worker equity share schemes ($p < 0.001$). This means that there is a significant positive correlation between farm owner support and beneficiaries' perceptions regarding farm worker equity share schemes with $r = 0.284$ and t value ($t=4.826$). Therefore, $H_{04.1}$ is rejected and the alternative hypothesis is accepted.

- **Hypothesis H_{07} :** *There is no relationship between access to resources and beneficiaries' perceptions regarding farm worker equity share schemes.*

Table 7.9 indicates that access to resources is not significantly related to beneficiaries' perceptions regarding farm worker equity share schemes ($r = -0.067$, NS). This means that there is no significant correlation between access to resources and beneficiaries' perceptions regarding farm worker equity share schemes. Therefore, H_{07} is accepted.

7.6.2 Findings on the second set of hypotheses

- **Hypothesis H_{08} :** *There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance (as measured by productivity, effectiveness and efficiency, and competitiveness).*

Table 7.10 reports a statistically significant positive relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance ($p < 0.001$). This means that there is a significant positive correlation between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance ($r = 0.633$ and a high t value $t= 14.179$). Therefore, H_{08} is rejected and the alternative hypothesis is accepted.

- **Hypothesis H0₉:** *There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming sustainability.*

Table 7.11 reports a statistically significant positive relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming sustainability ($p < 0.001$). This means that there is a significant positive correlation between beneficiaries' perceptions regarding farm worker equity share schemes and farming sustainability $r = 0.493$ and a high t value ($t = 9.821$). Therefore, H0₉ is rejected and the alternative hypothesis is accepted.

- **Hypothesis H0₁₀:** *There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and employee expectations (as measured by financial benefits, non-financial benefits, job security and improved living standards).*

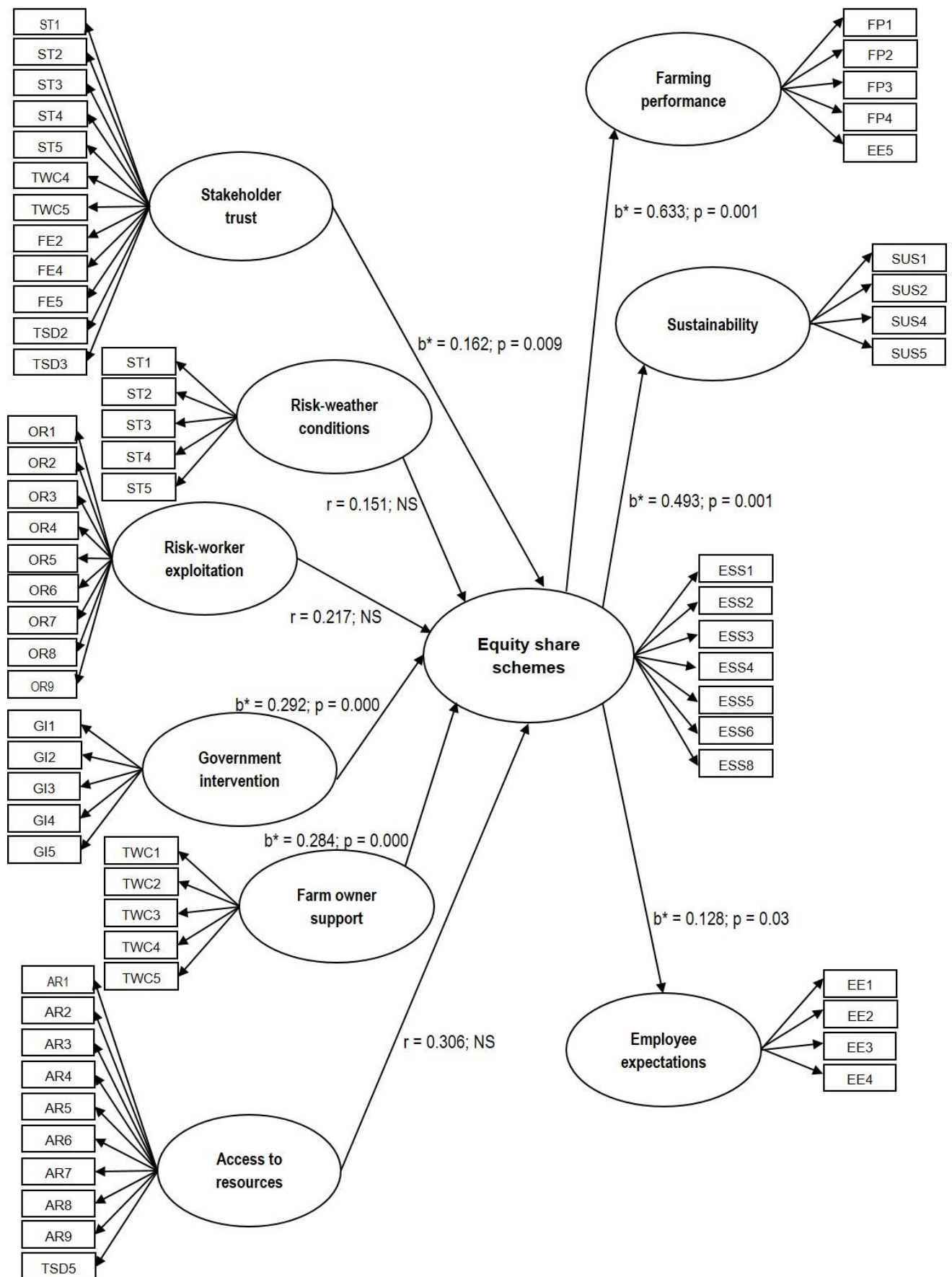
Table 7.12 reports a statistically moderate positive relationship between beneficiaries' perceptions regarding farm worker equity share schemes and employee expectations ($p < 0.05$). This means that there is a positive correlation between beneficiaries' perceptions regarding farm worker equity share schemes and employee expectations ($r = 0.128$ and a t value of $t = 2.237$). Therefore, H0₁₀ is rejected and the alternative hypothesis is accepted. Table 7.14, below, provides a summary of all the tested hypotheses.

Table 7.14: Summary of all tested hypotheses

Hypothesis	Accepted / rejected
First set of hypotheses:	
H0 ₁ : There is no relationship between stakeholder trust and beneficiaries' perceptions regarding farm worker equity share schemes	Rejected
H0 _{2.1} : There is no relationship between operational risk related to weather conditions and beneficiaries' perceptions regarding farm worker equity share schemes	Accepted
H0 _{2.2} : There is no relationship between operational risk related to worker exploitation and beneficiaries' perceptions regarding farm worker equity share schemes	Accepted
H0 ₃ : There is no relationship between government interventions and beneficiaries' perceptions regarding farm worker equity share schemes	Rejected
H0 _{4.1} : There is no relationship between farm owner support and beneficiaries' perceptions regarding farm worker equity share schemes	Rejected
H0 ₇ : There is no relationship between access to resources and beneficiaries' perceptions regarding farm worker equity share schemes	Accepted
Second set of hypotheses:	
H0 ₈ : There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance (as measured by productivity, effectiveness and efficiency, and competitiveness)	Rejected
H0 ₉ : There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming sustainability	Rejected
H0 ₁₀ : There is no relationship between beneficiaries' perceptions regarding farm worker equity share schemes and employee expectations (as measured by financial benefits, non-financial benefits, job security and improved living standards).	Rejected

Figure 7.4, below, provides a summary of the results of the regression analysis.

Figure 7.4: Summary of the results of the regression analysis



7.7 SUMMARY

This chapter provided an analysis of the results obtained from the questionnaires administered to a total of 341 respondents. However, the number of analysed questionnaires was reduced from 341 to 303 since some questionnaires were returned incomplete. Data was analysed using STATISTICA (version 13.2). Four phases of the analysis were followed, with the first phase determining internal reliability by calculating the Cronbach's alpha values. The second phase determined validity, by making use of the factor analysis to help with the regrouping of the original items in order to form new variables where applicable. The third phase focussed on multiple regression analysis and checked for correlations. The fourth and final phase assessed the hypotheses where some were rejected and others accepted, based on the screening criteria of correlation coefficients, t and p-values.

In the concluding chapter, Chapter 8, the empirical results of the study of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa are discussed, including the limitations of the study. The empirical results show that farm worker equity share schemes are influenced by stakeholder trust, government intervention, farm owner support, but not by worker exploitation and access to resources. The results further showed that farm worker equity share schemes influence farming performance, farming sustainability and employee expectations.

CHAPTER 8

SUMMARY, CONCLUSIONS, MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

This chapter provides a summary of the empirical findings of this study, as per the information provided in the previous chapter. The empirical findings of the study are compared to the findings of earlier researchers, and the managerial implications of the findings are discussed herein. This chapter further summarises all the preceding chapters in this study, draws conclusions based on the empirical findings of the study, and outline possible areas for further research. Moreover, the chapter highlights the contribution that this study makes to the discipline of business management and discusses the limitations of the study.

The primary objective of this study was to examine beneficiaries' perceptions regarding farm worker equity share schemes in South Africa.

8.2 SUMMARY OF PREVIOUS CHAPTERS

This section provides a summary of all the chapters in this study.

Chapter 1 introduced farm worker equity share schemes in South Africa by tracing the background to the establishment of the equity share schemes; the chapter further outlined how the equity share schemes were structured. The chapter also introduced the problem statement, the significance of the study, the primary and secondary objectives, the research questions and the hypotheses guiding the study. Furthermore, the chapter introduced the three previous conceptual models that were used to develop a proposed theoretical model for the study, with independent variables, mediating variable and dependent variables. A brief literature review on farm worker equity share schemes was provided in this chapter, followed by an outline of the research methodology, as well as details of the scope and delimitations of the study.

Chapter 2 provided an overview of the agricultural sector in South Africa, as that is the sector in which the farm worker equity share schemes are based. Background information on the agricultural sector was provided in this chapter, covering the

applicable value-chain. Different branches of the agricultural sector, as far as farming is concerned, were detailed in this chapter in order to show how produce is categorised. The chapter also mentioned where in the country is most suited for the production of each type of produce. The production and export data for some of the produce was provided in this chapter in order to indicate all available opportunities. The chapter also provided details of the existing industry associations for certain types of produce; farmers in those fields are able to seek membership with these associations and liaise with them on certain matters.

The chapter also showed that agricultural waste serves as input material in other sectors such as energy, pulp and paper. The chapter further provided examples of how some agricultural waste can be put to good use. Furthermore, the chapter presented the challenges experienced in the agricultural sector, which include the challenges faced by small scale farmers in the agricultural sector in South Africa, shortage of skills in the agricultural sector, gaps pertaining to breakeven points for commercialising farms, competing with recognised brands, and the dynamics of exporting produce.

Chapter 3 presented a review of the theories relevant to equity share schemes. Each theory was outlined in significant detail, and was presented together with information on the founder(s) for each theory. Some of the theories are interrelated, however, the information provided in the chapter allows for the distinction of each theory. The list of available theories is not limited to the theories included in Chapter 3, as it would be impossible to include every theory. However, the information provided in the chapter clearly shows that a wealth of theories exist and that it is impossible to use only one theory to explain a particular phenomenon at a farm. The theories covered include: new institutional economics, stakeholder theory, managerial power theory, tournament theory, agency theory, theory of choice, motivational theory and expectancy theory, amongst others.

Through the discussion of theory in this chapter, it became clear that there are always different schools of thought for a particular theory, with some scholars for and others against a particular theory. This creates a challenge for someone who is not well educated to establish which approach would be best to follow and to identify their reason for making that decision.

Chapter 4 provided a detailed discussion of equity share schemes in South Africa. Background information on land reform was given in this chapter in order to show where equity share schemes are placed, considering that land reform is divided into three elements: restitution, redistribution and tenure. This chapter also provided the history of land reform in South Africa, reviewed previous studies on land reform and equity share schemes in South Africa, outlined the various types of equity share schemes, and provided details on the framework for implementing equity share schemes, success stories of farm worker equity share, international and national benchmarks, access to finance in farming, and access to extension services in farming.

Chapter 5 presented the hypothetical model of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa. This chapter operationalised each of the independent variables, the mediating variable and the dependent variables. Each variable was defined in this chapter, and a hypotheses guiding the analysis were put forward herein.

The most important part of this chapter was to provide information that was used for the measuring instruments in order to operationalise the variables. The measuring instruments assist in designing the questionnaire for the study, in order to ask questions to test the variables identified for the study.

Chapter 6 provided an overview of the research methodology of the study. The chapter provided a detailed discussion of the following aspects of the methodology employed in this study: data collection, questionnaire design, pilot study, criteria for evaluating measuring instrument, data analysis, and ethical considerations. The measuring instruments were based on information gathered from both previous research and self-developed items.

Chapter 7 constituted an empirical review of beneficiaries' perceptions regarding farm worker equity share schemes. This chapter presented information on the hypotheses and objectives of the study, and the findings of the data evaluation using four distinct phases covering internal reliability, validity, regression analysis and assessment of hypothesised relationships.

8.3 CONCLUSIONS ON PROBLEM STATEMENT AND RESEARCH QUESTIONS OF THE STUDY

In this study, an attempt was made to explain, using both the literature review and the empirical results, the problems related to farm worker equity share schemes in South Africa.

8.3.1 According to the problem statement, farm worker equity share schemes are under performing, therefore the study attempted to understand the influence on under performance

In the management of business, operations and farming, amongst others, under performance is a concern not just for management, but also for the workers because everyone could be directly or indirectly affected over the period. Under performance could mean different things to different people but, according to the problem statement, government's major concern was the non-payment of dividends to farm workers, where only nine out of 88 farm worker equity share schemes managed to pay out dividends. According to government, the payment of dividends is one of the measures for the performance of the schemes. This is supported by Hall and du Toit (2014) who state that poor farm performance refers to small dividends received by individuals, as that is what appears to be government's focus. It is important to separate employee expectation and farming performance to ensure that farm workers have a grasp not just on what they expect, but also on what can have an impact on their expectations, such as lack of productivity. Grubb (2016:12) argues that the productivity of workers leads to more products, exports, business sustainability and the profitability of the company and government.

The non-publication of the results of the study commissioned by government, other than the number of equity share schemes which paid out dividends, left many questions unanswered, such as how each farm has been performing, if each farm managed to be profitable and has been immune to some of the risks associated with farming. Cousins (2016:4) raises another point in this regard by making reference to the first five years of land reform, in that the majority of the problems experienced were associated with cumbersome and slow government processes, including poor co-ordination between different government departments. It is against this backdrop that

a hypothetical model was developed to assess the impact of the variables as far as the equity share schemes are concerned.

In the formation of the equity share schemes, there are at least three key players: the farm owner, farm workers and the government who provides financial resources to farm workers in the form of grants, amongst other services. In this research, it was anticipated that there could be different levels of understanding the actual status of the farm in terms of performance and others; however, a common understanding is that equity share schemes should pay dividends and provide houses, amongst others, to farm workers. This common understanding is derived from the reasons for the establishment of the schemes: for farm workers not to remain only farm workers but also to be shareholders in a farm, to receive dividends, to gain the rights to occupy land, access to better housing, amongst others. This is supported by Gray *et al.* (2004:378) who mention that the success of these schemes is determined by the redistribution of wealth, worker empowerment, retaining or attracting quality management, creditworthiness, improved worker productivity and power relations, and provision for ownership and control to be fully transferred to previously disadvantaged shareholders. If the information is well shared amongst the involved parties when the schemes are established, as it should be, there could be common understanding.

Operational risks influence the performance of equity share schemes, as argued by Lloyd (2016:2). For instance, heat and drought could affect the size of the products and, consequently, the quantity of what can be extracted from farming products, as well as the resultant income of the farm. Government intervention is important and happens in different forms, however, as far the land market is considered, Kloppers and Pienaar (2014:692-693) state that the new government made a commitment not to intervene in the land market, but instead of getting involved in the purchase of land for redistribution, the government to adhere to the principle of “willing-buyer, willing-seller”, by providing resources to finance market-led redistribution transactions without government becoming the owner of the land. However, government has realised the weaknesses of this principle, hence, they have considered abolishing it and moving towards a more aggressive approach of expropriation (Kloppers & Pienaar, 2014:693). A study conducted by Xaba and Roodt (2016) mentions lack of support for farmers once they become landowners as the common cause of failure, because government

neglected them. Regarding matters involving stakeholder trust, Xaba and Roodt (2016) point out that infighting within communities contributes to the failure of equity share schemes.

There is a link between rewards and performance, which indicates that rewards are not automatic. There is thus a reason why there are individual and organisational performance measures. Individual performance is exclusive as only good performers are rewarded according to their performance, whilst organisational performance is inclusive as everyone within the same category gets almost an equal share based on the performance of the organisation.

A misperception that is likely to happen with the farm worker equity share schemes is that rewards or benefits are automatic, that farm workers should receive everything that the equity share schemes try to address regardless of the situation, which is not the case. Some benefits, such as land acquisition and land rights, of land reform should ideally not be linked to farming performance. However, the dividends and building of houses are linked to productivity and profit generation. This linkage is common practice in the corporate world, which should be applicable to every business. A study conducted by Gray *et al.* (2004:379), on equity share schemes, revealed that most farm workers did not understand the term dividend; however, those farm workers understood that they would receive a share of the business profits. It is not the intention of this study to assess the relationship between dividends and the building of houses to both productivity and profitability. However, this study does assess the relationship between beneficiaries' perceptions regarding farm worker equity share schemes to both farming performance (as measured by productivity, effectiveness and efficiency, and competitiveness) and employee expectations (as measured by financial benefits, non-financial benefits, job security and improved living standards). If farm workers have no understanding of such linkages, some of their expectations could be misaligned to the reality of the operation. It is against this backdrop that this study assessed, amongst others, the relationship between beneficiaries' perceptions regarding farm worker equity share schemes and both farming performance and employee expectations.

The results of the study found that beneficiaries' perceptions regarding farm worker equity share schemes have a positive relationship with farming performance and

employee expectations. However, there was a stronger correlation between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance, than there was with employee expectations. This shows that despite beneficiaries viewing farming to be performing well, the level of benefits they receive is not proportional. This lack of proportionality could be linked to a number of factors such as insufficient net profit to meet the expectations of the farm workers. A good example of this is Solms-Delta farm in the Western Cape, as reported by Jordan (2017:8), which placed much emphasis on social responsibility in anticipation of government funding – the farm found itself under business rescue due to delayed funding from government. This means that the money it spent on social responsibility was from net profit, which was not sufficient to meet those needs and the delayed funding made things worse.

This information shows that the under performance of the equity share schemes in terms of meeting the needs of farm workers is a matter that cannot be separated from the farm's ability to make sufficient net profit.

8.3.2 According to the problem statement, the study attempted to understand the influences of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa

The literature review revealed that some farm worker equity share schemes experience a number of challenges, amongst which are: skills development, quality of roads, as well as access to water and electricity. For the purpose of this study, it was then decided to identify the relationship between stakeholder trust, operational risk (as measured by access to funding, weather conditions and worker exploitation), government intervention, two-way communication, farm worker empowerment, training and skills development, and access to resources (as measured by access to water and electricity, good roads, and reliable and effective equipment) in comparison to beneficiaries' perceptions regarding farm worker equity share schemes. The analysis eliminated some of these and regrouped others; this result in the comparison of stakeholder trust, operational risks related to weather conditions and worker exploitation, government intervention, farm owner support, access to resources, and beneficiaries' perceptions regarding farm worker equity share schemes.

The study found that there is a positive relationship between stakeholder trust, government intervention, farm owner support and beneficiaries' perceptions regarding farm worker equity share schemes. The farm workers consider stakeholder trust important so as to ensure a good working relationship and to work towards the same goals as stipulated in, or as should be stipulated in, the formation of the equity share schemes. Where stakeholder trust is lacking, it has the potential to destabilise the good intentions of equity share schemes. The case of Mmatshela Trust project in the Morebeng area shows that nearby abattoirs did not trust black farmers (Aliber & Maluleke, 2010:14-15). Stakeholder trust is defined, for the purpose of this study, to mean the confidence that beneficiaries have that the co-owner farmer or management will put in place all necessary measures to ensure the success of farm worker equity share schemes, which is internal trust. Stakeholder trust is earned through transparency, honesty, engagement and fairness, amongst others, and it is built over a number of years. Harris and Wicks (2010:142-144) note that stakeholder trust is divided into 'internal' and 'external' trust. In regard to the equity share schemes researched in this study, internal trust refers to employer and employee situation (farmer and beneficiaries); alternatively, external trust refers to trust between a farm and government or external stakeholders, such as financial institutions and service providers, amongst others. The establishment of equity share schemes stimulates some hope amongst farm workers, based on employee expectations; if the expectations are not realised, the level of trust diminishes. However, when the information on the equity share schemes is communicated and the reasons for what is happening are provided, the level of trust is maintained.

Government intervention is defined, for the purpose of this study, as the visible role played by government towards beneficiaries in terms of the measures put in place to assist farm worker equity share schemes to prosper. The farm workers believe that government intervention is important for the establishment of equity share schemes. This is so because when the government is involved in equity share schemes, the farm workers feel protected in the sense that there is someone to ensure that their expectations are fulfilled. However, if there is no government presence, farm workers feel that they are on their own in realising their expectations. The presence of government is not enough, as its support should be felt. In the case of the Solms-Delta, farm which implemented the equity share schemes, Jordan (2017:8) reports

that it experienced cash flow problems due to delayed government promises for financial support; this farm is a good example of the importance of government intervention, not just government presence without the necessary support. Jordan (2017:8) reported that Minister Nkwinti of the Department of Rural Development and Land Reform visited Solms-Delta farm and commended the owners for setting a land reform benchmark. Furthermore, the government agreed to fund a business turnaround strategy to make the farm profitable, however, these funds were delayed.

Tumwesigye (2010:943) defines perceived organisational support to mean the beliefs held by the individuals that their contributions in the organisation are valued, and that the organisation cares about their welfare. Babin and Boles (1996:60) define supervisor support to mean the extent to which employees perceive that they receive support, encouragement and concern from their supervisors. In this study, farm owner support refers to the support provided by the owner to the beneficiaries in order to assist them to improve their work performance and be independent. Farm owner support was identified by the farm workers as one of the key components required for them to be involved in the equity share schemes. Farm owner support comes in different forms, including transferring skills to farm workers to ensure that they are able to work independently and without reliance on the farm owner. When farm workers have to rely on the farm owner to make decisions, it makes them feel disempowered however, when farm workers are given the opportunity to be in control, they feel inspired and recognized in the sense that the farm owner is encouraging them to take charge of their tasks, whilst encouraging them to consult when they encounter difficulties along the way. Everyone is provided an equal opportunity to deliberate on any issue before reaching a consensus, and constructive criticism is allowed. Davis and Terblanché (2016:245) note that knowledge sharing is important for supporting social, economic and environmental development.

Although the study did not establish the existence of a relationship between operational risks – related to weather conditions, worker exploitation, and access to resources – and beneficiaries' perceptions regarding farm worker equity share schemes, operational risks related to weather conditions tend to hinder the operation by causing a lot of havoc. Agriculture is a weather sensitive industry, therefore, there is a growing trend of farmers demanding financial protection against weather perils

(Odening & Shen, 2014:188). Dry weather conditions impact those areas without sufficient irrigation systems, which results in a decline in production. Similarly, severe rain leads to soil erosion and the destruction of plantation. Considering that farm workers have seen and experienced such weather conditions over the years, it creates fear and worries the farm workers to such an extent that they acknowledge that weather conditions are a concern for them.

Risks related to worker exploitation are related to employing under-age workers, underpaying salaries, workers doing similar tasks but receiving unequal pay, working overtime, and so forth. The exploitation of farm workers in the Western Cape led to the farm worker protests of 2012 and 2013 (Brandt & Ncapayi, 2016:218). Workers are fully aware of such working conditions, which are a concern because they deprive the workers of what is due to them. Furthermore, farm workers feel exploited by farm owners or managers in terms of receiving unequal pay, as one gender receives better pay than the other; furthermore, some workers are under the legal age of 16 years, and workers are made to work overtime.

For the purpose of this study, access to resources refers to access to good roads, water, electricity as well as reliable and effective equipment that would enable better management of operations. Sustainable human development is ensured by improving small scale farmers' access to productive resources (Ogato *et al.*, 2009:85). Bad roads can be a challenge for deliveries, especially when it is raining or for general use as they limit movement from one area to another. Water access makes it easier to irrigate the plantation and makes water available for farm operations. Similarly, access to electricity enables the electrical equipment needed for operation to work without any challenges. Less reliable and ineffective equipment can impact the operation negatively. However, the farm workers' experiences regarding access to resources confirms that there are still challenges related to access to resources. However, the results reveal that access to resources is not significantly related to equity share schemes, as envisaged.

In this study, training and skills development is defined as a structured approach introduced by the co-owner farmer or management to develop beneficiaries so as to better perform and understand various areas important in the management of farming. Training and skills development was found not to be significantly related to farm worker

equity share schemes. The reason for this is the high illiteracy rates of the beneficiaries and the fact that they depend on experience. Furthermore, the beneficiaries have not seen other members promoted to better positions due the establishment of farm worker equity share schemes; for this reason they do not have hope that training and skills development will benefit them.

8.3.3 According to the problem statement, the study attempted to understand whether the beneficiaries' perceptions of farm worker equity share schemes contribute to the promotion of farming performance and sustainability

In this study, farming performance is defined as being productive, effective and efficient, and competitive in terms of the farming operation. This study found that there is a positive relationship between beneficiaries' perceptions regarding farm worker equity share schemes and farming performance. This implies that when farm workers fully understand the equity share schemes, they will be motivated to ensure good farming performance. According to the information provided by Knight (2003:3), on farming performance, productivity increases on farms where workers are also owners. This shows that the perceptions that farm workers have of equity share schemes encourage them to perform better in order to assist the farm to perform well, for their benefit. This shows the level of seriousness with which workers regard the equity share schemes, and the impact that they want their contribution to make on the farms.

In this study, farming sustainability is defined as the good financial position of the operation to allow it to continue operating in years to come, environmental consideration and the society. In this study, beneficiaries' perceptions regarding farm worker equity share schemes were found to have a positive relationship with farming sustainability. There is general recognition, by agricultural researchers, of the importance of sustainable agricultural production systems and the need to develop appropriate methods to measure sustainability (Pacini *et al.*, 2002:432). Farm workers believe in sustainable farming to ensure the lasting operation of farms for the benefit of the workers, their families and the community at large, considering the experience they have acquired over the years and the limited opportunities available to them. A farm in the neighbourhood is a source of hope for everyone including farm workers,

therefore, farm workers believe that the farming operation should restore that hope all of the time and make its presence felt.

8.3.4 Conclusions on the research questions of the study

Table 8.1, below, lists the research questions governing the study alongside the conclusions drawn for each question.

Table 8.1: Research questions with conclusions drawn

Research questions	Conclusions drawn
<p>1. Does <i>stakeholder trust</i> impact on beneficiaries' perceptions of farm worker equity share schemes?</p>	<p>Greenwood and Van Buren III (2010:426) define trust as the expectation by one person, group or firm of ethically justifiable behaviour, that is, morally correct decisions and actions based upon ethical principles of analysis on the part of another person, group, or firm in a joint endeavour or economic exchange.</p> <p>Depending on the angle from which trust is approached, it can be grouped into internal and external trust. This is in agreement with the work of Harris and Wicks (2010:142-144). In this study, internal trust refers to the employer and employee situation (farmer and beneficiaries).</p> <p>Generally, when a stakeholder has invested in an organisation (including labour and financial capital, among others), then that organisation has a duty to maximise the benefits to that stakeholder (Greenwood & Van Buren III, 2010:425-426). The same applies in equity share schemes, in that the farm beneficiaries would expect the maximisation of their benefits upon investing their grants from the government into a farm, if the original farm owner is still a shareholder of the farm; when that does not happen, it will lead to the breakdown of trust. There are a number of benefits for beneficiaries to consider; these can be grouped into both financial and non-financial benefits, including being trusted with the work and given the opportunity to make decisions rather than the farm owner being the sole decision maker for all decisions.</p> <p>The study findings revealed that farm workers would trust farm owners if they are allowed to share their opinions before final decisions are made and if they are provided with the relevant information regarding the operation of the equity share scheme. Furthermore, trust would be strengthened when the farm owner keeps his/her promises regarding work-related matters and when beneficiaries are able to raise their concerns with the farm owner.</p>

Research questions	Conclusions drawn
<p>2. Does <i>operational risk</i> impact farm worker equity share schemes?</p>	<p>Operational risk is regarded as the range of risks that the management and staff encounter on a daily basis, which require constant monitoring so as not to affect the implementation of activities (Croitoru, 2014:21).</p> <p>Li and Moosa (2015:2054) highlight that operational risk is not only determined by organisation specific factors, but other factors such as macroeconomic factors and various aspects of the environment in which the organisation operates also have an influential role. However, there is limited research output that sheds light on the determinants of operational risk.</p> <p>In this study, operational risk was measured by access to funding, weather conditions and worker exploitation. However, the findings of the study indicated that, it became evident that there is a lack of understanding and misconceptions of the funding framework regarding farmworker equity share schemes. It also became apparent that weather conditions and worker exploitation became stand-alone operational risks; as a result, there were two operational risks – operational risks related to weather conditions and operational risks related to worker exploitation.</p> <p>The farm workers have perceived these risks as insignificant for the establishment of equity share schemes. Regarding operational risks related to weather conditions, the insignificance could be linked to a lack of information pertaining to the quantification of the losses experienced at the farms due to severe drought conditions or climate change; these views were also divided per farm. This is in agreement with the work of Gray <i>et al.</i> (2004:386) on equity share schemes, which discovered that the deciduous fruit industry was affected by climate variability. Therefore, it must be lack of information and divided views that led to the insignificance of the operational risk related to weather conditions, considering that in 2015 the agricultural sector was heavily affected by droughts. In regard to operational risks related to worker exploitation such as unequal salaries and the age of workers, there seem to be divided views or lack of information pertaining to these matters, which led to the insignificance of this risk. In a study done by Tom (2006:50), it was found that men and women are not paid the same at farms.</p>

Research questions	Conclusions drawn
<p>3. Is <i>government intervention</i> not in some way failing the beneficiaries of farm worker equity share schemes?</p>	<p>Belsky and Wacter (2010) regard government intervention as all regulatory actions taken by a government in order to affect or interfere with decisions made by individuals, groups, or organisations regarding social and economic matters. In a global context, particularly in Finland, the study reveals that government intervention in agriculture in the 1930s was evident in export subsidies and import restrictions, which were followed in the 1940s by the income support system of small farmers and farms situated in less favoured regions, as well as agricultural reforms that had far-reaching political, economic and social reasons and goals (Granberg, 1986:243-244).</p> <p>In the context of farm worker equity share schemes, government intervention takes place through the issuing of agricultural grants and providing extension services to farm workers.</p> <p>The findings of this study revealed that government interventions should include government officials explaining land reform to the beneficiaries of equity share schemes and monitoring the implementation of equity share scheme policies based on a legal framework. This is supported by Tom (2006:4), who states that policy makers have a duty to include a comprehensive monitoring programme and to perform an evaluation of equity share schemes.</p>
<p>4. Do <i>two-way communication</i> practices impact upon beneficiaries' perceptions of farm worker equity share schemes?</p>	<p>According to Lombard (2011:3489), two-way communication is regarded as an interactive dialogue between an organisation and its customers or stakeholders.</p> <p>For the purpose of this study, two-way communication is defined as the smooth flow of information from farm management to beneficiaries, and vice-versa. However, in this study, farm workers believe that two-way communication has no impact on equity share schemes.</p>
<p>5. Does <i>farm worker empowerment</i> impact upon beneficiaries' perceptions of farm worker equity share schemes?</p>	<p>Smit and de J Cronjé (2002:208) state that empowering employees involves giving them the opportunity to design their own jobs, motivating them and increasing their productivity. Osahon and Odoemelam (2016:1) define empowerment as "the process of strengthening the existing capacities of the disadvantaged groups in society so as to enable them perform towards improving themselves, their families and the society as a whole", with the provision of an enabling environment for the realisation of their productive and intellectual abilities.</p> <p>For the purpose of this study, farm worker empowerment is defined as the opportunities provided by the co-owner farmer or management for beneficiaries to grow within the farming business. However, in this study, farm workers believed that farm worker empowerment has no impact on equity share schemes.</p>

Research questions	Conclusions drawn
<p>6. Do <i>training and skills development</i> influence beneficiaries' perceptions of farm worker equity share schemes?</p>	<p>Laird, Naquin and Holton (2003) regard training and skills development as the official and ongoing educational activities within an organisation, which are designed to enhance the fulfillment and performance of employees. Most rural areas experience severe skills deficits that are largely inherited from the past (Jacobs & Hart, 2012:5).</p> <p>For the purpose of this study, training and skills development is defined as a structured approach introduced by the co-owner farmer or management to develop the beneficiaries to better perform and understand various areas that are important to the management of farming. However, in this study farm, workers believed that training and skills development have no impact on equity share schemes.</p>
<p>7. Does <i>access to resources</i> impact beneficiaries' perceptions of farm worker equity share schemes?</p>	<p>Farmer capacity to employ improved technology and investment depends on access to productive resources (Anaglo, Boateng & Boateng, 2014:13). Investment in infrastructure in general and in transport, water and energy in particular, is considered a crucial prerequisite for sustainable economic development (Frosch, 2010:2).</p> <p>For the purpose of this study, access to resources is defined as the existence of water, electricity, and good road infrastructure within reasonable distance, as well as reliable and effective equipment to enable better management of operations. However, the farm workers who participated in this study believe that access to resources has no impact on equity share schemes.</p>
<p>8. Do beneficiaries' perceptions of farm worker equity share schemes impact <i>farming performance</i>?</p>	<p>Aluko (2003:172) defines performance as the accomplishment of work, tasks or goals according to a certain level of desired satisfaction. Performance measurement is a new concept to the agricultural sector (emphasising that farmers should not to exceed the consumption of inputs that do not ensure maximum profits); nonetheless, its major elements have been present, known and practiced for quite some time in other sectors (Brezuleanu, Brezuleanu, Brad, Iancu & Ciani, 2015:110).</p> <p>In this study, farming performance is defined as the farming operation's ability to be productive, effective and efficient, and competitive. The study findings revealed that employee effectiveness and productivity should improve upon participation in the equity share scheme. This is in line with Knight's (2003:86) finding that beneficiary participation improves. This is also noted by Gray <i>et al.</i> (2004:378) who indicates that a successful equity share scheme improves worker productivity.</p>

Research questions	Conclusions drawn
<p>9. Do beneficiaries' perceptions of farm worker equity share schemes impact <i>business sustainability</i>?</p>	<p>Sriboonlue, Ussahawanitchakit and Raksong (2016:15) state that organisational sustainability refers to the ability to meet and satisfy direct and indirect stakeholder demands without compromising the ability to meet the needs of future stakeholders. Business sustainability deals with economic, social and environmental factors; however, in the past, there has been a tendency to focus only on economic matters, while neglecting the other two equally important factors (social and environment) – things are changing in this regard, but have not changed much (Buranapin & Rattawatankul, 2015:109). In this study, sustainability is defined as the good financial position held by the operation that would allow it to continue operating in years to come, it also encompasses environmental consideration and the societal matters. The findings of this study revealed that equity share schemes should have a long-term business plan that the farm owner implements. The importance of business plans came out in a study by Knight (2003:9-18) who conducted interviews with companies contracted to assist with project planning for wine farms that had plans to plant vines, make wine and market their products.</p>
<p>10. Do perceptions of farm worker equity share schemes impact <i>employee or beneficiary expectations</i>?</p>	<p>Employees have certain expectations regarding their employers and jobs. Employees' unmet job expectations could be related to various negative outcomes such as emotional exhaustion, reduced satisfaction and organisational commitment, and increased turnover intentions (Maden, Ozcelik & Karacay, 2016:5). The employees, like customers, have their own performance expectations (what they hope to achieve) and perceptions of accomplishment (what they are able to achieve). Therefore, when management promises to provide employees with specific roles, including the manner in which they could each contribute towards the success of organisations, they would likely do their best (Tay, Lees & Lin Dar, 2016:13). In this study, employee expectations is defined as beneficiaries' anticipation of receiving better financial and non-financial benefits; job security; and improved living standards. The study findings revealed that beneficiaries expect improved housing and dividend pay-outs by participating in the schemes. This is supported by Knight (2003:51) who indicates that beneficiaries expect improved housing and Gray <i>et al.</i> (2004:379) who state that employees do not understand the term dividend, but understand that they will receive a share of the profit.</p>

8.4 EMPIRICAL FINDINGS AND MANAGERIAL IMPLICATIONS OF THE STUDY

Figure 8.1, below, shows that there is a total of six influences and three outcomes used for the model created to test beneficiaries' perceptions regarding farm worker

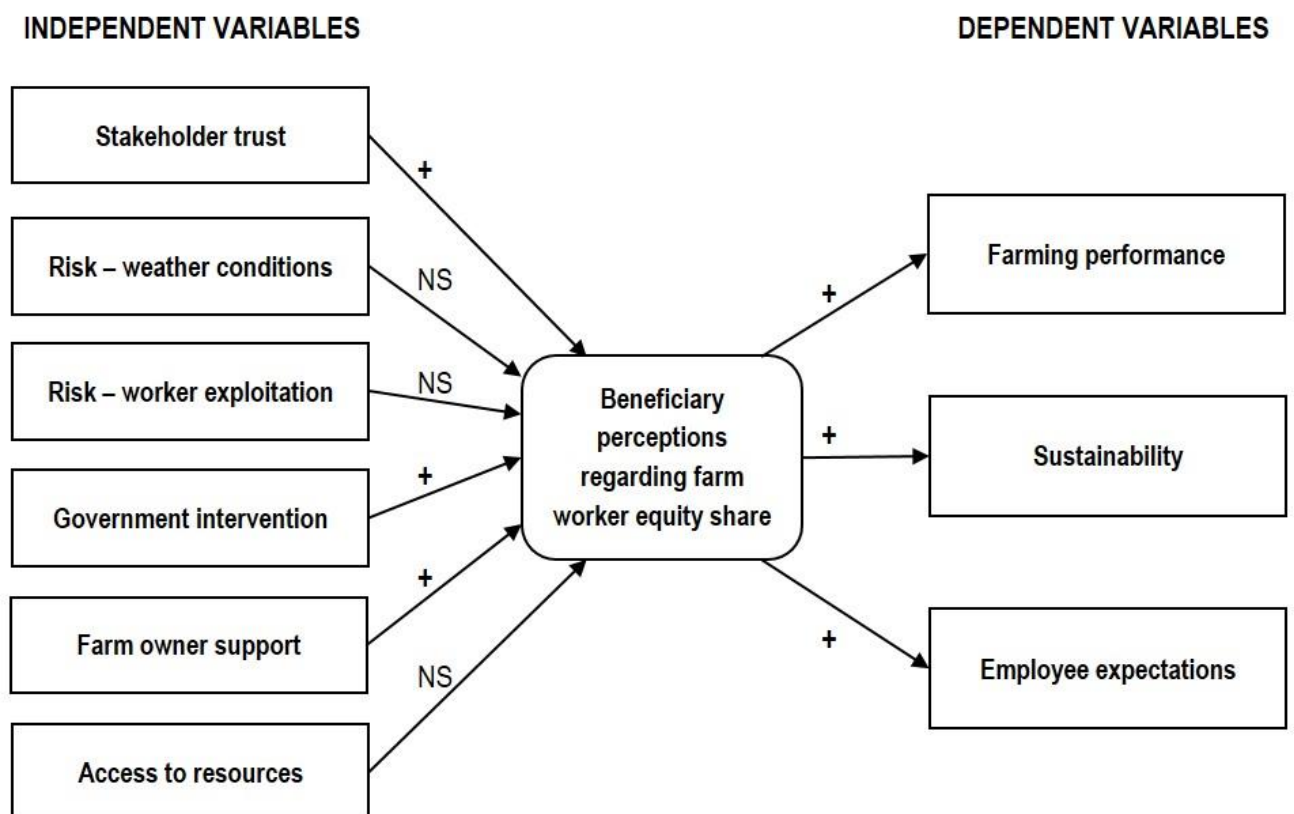
equity share schemes. These came from the revision or modification that happened after the analysis, as some influences and outcomes were removed or modified.

These influences and outcomes are: stakeholder trust, operational risks related to weather conditions, operational risks related to worker exploitation, government intervention, farm owner support, access to resources, farming performance, farming sustainability and employee expectations. Out of the nine influences and outcomes, six were found to be significant and three were identified as insignificant. Only six of these are discussed herein. These six influences and outcomes in this study are defined as follows:

- Stakeholder trust – for the purpose of this study, stakeholder trust is defined as beneficiary confidence in the co-owner farmer or management to put all measures in place to ensure the success of the farm worker equity share scheme, which is the internal trust referred to above.
- Operational risks related to weather conditions – for the purpose of this study, this operational risk is defined as any threat to the operation of the farm due to bad weather conditions.
- Operational risks related to worker exploitation – for the purpose of this study, this operational risk is defined any threat to the operation of the farm due to existing worker exploitation.
- Government intervention – for the purpose of this study, government intervention is defined as the visible role played by the government towards the beneficiaries through measures that are put in place to assist farm worker equity share schemes to prosper.
- Farm owner support – for the purpose of this study, farm owner support is defined as support provided by the owner to the beneficiaries to assist them to improve their work performance and be independent.
- Access to resources – for the purpose of this study, access to resources is defined as the existence of water, electricity, and good road infrastructure within reasonable distance; as well as reliable and effective equipment that would improve the management of operations.

- Farming performance – for the purpose of this study, farming performance is defined as the farming operation’s ability to be productive, effective and efficient, and competitive.
- Farming sustainability – for the purpose of this study, farming sustainability is defined as the good financial position of the operation that would allow it to continue operating in years to come, environmental consideration and the society.
- Employee expectations – for the purpose of this study, employee expectations are defined as beneficiaries’ anticipation of better financial and non-financial benefits, job security, and improved living standards.

Figure 8.1: Empirical evaluation of the proposed influences and outcomes of beneficiaries' perceptions regarding farm worker equity share schemes in South Africa



Source: Author’s own work

8.4.1 Empirical findings and implications based on beneficiaries' perceptions regarding stakeholder trust

Trust signifies confidence and goodwill for the governing institutions, and the sharing of information with the stakeholders; furthermore, trust extends even into the workplace setting (Turner, Addison, Arias, Bergseth, Marshall, Morrison & Tobin, 2016:505). Furthermore, trust leads to efficient business transactions, an increase in customer satisfaction and enhanced employee motivation and commitment (Pirson & Malhotra, 2011:1087). In this study, stakeholder trust is defined as beneficiary confidence that the co-owner farmer or management will put all the necessary measures in place to ensure the success of the farm worker equity share scheme, which is the internal trust referred to above.

In this study, it was postulated that stakeholder worthiness exerts a significant influence on farm worker equity share schemes. The empirical findings reveal that there is a significant relationship between stakeholder trust and beneficiaries' perceptions of farm worker equity share schemes. The beneficiaries believe that they participate in equity share schemes effectively when the farm owner or manager has good motives or intentions towards farm workers.

The empirical findings reveal that beneficiaries believe that they can safely raise concerns with the farm owner or manager regarding their participation in the farm worker equity share scheme. The farm workers further believe that they participate effectively in the farm worker equity share scheme when the farm owner or manager keeps his or her promises regarding work-related matters.

The empirical findings reveal that beneficiaries believe that they participate effectively in the farm worker equity share scheme when they are able to share their opinions on sensitive issues with the farm owner or manager. Furthermore, the beneficiaries believe that they participate effectively in the farm worker equity share scheme when they are able to tell the farm owner about mistakes they have made at work, even if they might damage their reputation.

The beneficiaries believe that they participate effectively in the equity share scheme when there is an open discussion with the farm owner or manager regarding the beneficiaries' performance on the farm. Furthermore, the empirical results reveal that

the beneficiaries believe that they participate effectively in the farm worker equity share scheme when they are allowed to share their opinions before final decisions are made regarding the equity share scheme.

The study findings further reveal that beneficiaries believe that they participate effectively in the farm worker equity share scheme when they have a great deal of control over what happens in their job, and when the farm owner or manager gives them significant autonomy in determining how to do their job.

The empirical results report that beneficiaries believe that they participate effectively in the farm worker equity share scheme when the farm owner or manager provides them with information that is relevant to the operation of the equity share scheme. According to the research findings, beneficiaries believe that they participate effectively in the farm worker equity share scheme when literacy training is offered to all farm workers. Furthermore, beneficiaries believe that they participate effectively in the farm worker equity share scheme when the skills development programmes offered are make decent jobs accessible to all workers.

8.4.2 Empirical findings and implications based on beneficiaries' perceptions regarding government intervention

Belsky and Wacter (2010) regard government intervention as regulatory actions taken by a government in order to affect or interfere with decisions made by individuals, groups, or organisations regarding social and economic matters. The intervention of government in agriculture, at different stages of economic development, is unavoidable across all countries (Lopez & Hathie, 2000:57). In this study, government intervention is defined as the visible role played by government towards beneficiaries through measures that are put in place to assist farm worker equity share schemes to prosper.

The empirical results of this study, as depicted in Figure 7.1, reveal that there is a significant correlation between government intervention and beneficiaries' perceptions regarding farm worker equity share schemes. Beneficiaries believe that they participate effectively in farm worker equity share schemes when government officials

are involved in explaining the land reform implications related to their participation in the equity share scheme.

The study findings reveal that farm workers believe that they participate effectively in the farm worker equity share scheme when government provides additional financial and non-financial support to members of the scheme (e.g. conflict resolution, mobile medical facilities and transport). Furthermore, beneficiaries believe that they participate in the farm worker equity share scheme effectively when government monitors the implementation of the equity share scheme policies, based on a legal framework. The empirical findings of the study also reveal that beneficiaries believe that they participate effectively in equity share schemes when government eradicates corrupt practices in order to promote the effective management of the equity share scheme.

8.4.3 Empirical findings and implications based on beneficiaries' perceptions regarding farm owner support

The qualifying of management support presented by Kotey and Meredith (1997:40) is that management has the greatest influence in dynamic, unpredictable, and changing environments. Andrews and Rogelberg (2001:120) recognise that organisations differ, however, in an organisation with a positive service climate, employees perceive reward, support and encouragement to be stimuli for providing high quality service. Amabile, Schatzel, Moneta and Kramer (2004:6) state that the support provided by immediate supervisors exerts an influence on subordinates' creativity; such support is provided through direct help with the project, the development of subordinate expertise, and the enhancement of the subordinate's intrinsic motivation. In this study, farm owner support is defined as the extent to which farm owners value farm workers' performance, care about their well-being and encourage them to be independent. The empirical findings presented in Chapter 7 of this study support this notion. In this study, it was hypothesised that there is a significant relationship between farm owner support and beneficiaries' perceptions regarding farm worker equity share schemes. The research findings of the study concur that beneficiaries believe that, when the farm owner or manager ensures that farm workers are confident in using their abilities or skills to do their job then farm workers participate effectively in the equity share schemes. The empirical results reveal that beneficiaries believe that effective

negotiation practices promote consensus regarding work-related matters. Furthermore, beneficiaries believe that when constructive criticism regarding work-related matters is allowed, they effectively participate in the farm worker equity share schemes. The empirical findings further reveal that beneficiaries believe that they participate effectively when they receive training that enables them to serve as office bearers for the equity share scheme.

8.4.4 Empirical findings and implications based on beneficiaries' perceptions regarding equity share schemes

Bostrom (1997:102) defines perceptions as an individual's beliefs, attitudes, judgments and feelings, including the social or cultural values and dispositions adopted by people regarding hazards and their benefits. For the purpose of this study, beneficiaries' perceptions regarding farm worker equity share schemes are the benefits associated with joining the scheme.

The empirical results reported in Chapter 7 reveal that beneficiaries believe that initial discussions between the provincial office or government, farm owner and workers regarding the establishment of the equity share scheme enable them to participate effectively in their jobs. Furthermore, beneficiaries feel that it is important for them to understand that the equity share scheme is obligated to obtain legal services and to form a legal entity, and that formal dispute resolution procedures should be in place for all matter relevant to the equity share scheme.

The empirical findings reveal that beneficiaries feel that it is necessary for them to be made aware of the role of government in providing them with grants to buy shares in the equity share scheme. Furthermore, the beneficiaries believe that they participate effectively in the farm worker equity share scheme when they are offered dividends or assets, and when the power they exercise in decision making is at least equal to their share of equity in the share scheme.

According to the empirical findings of this study, beneficiaries feel that they should be allowed to influence the financial or operational decisions of the equity share scheme. Furthermore, the beneficiaries feel that the share received from the scheme is not transferable to multiple heirs or outsiders.

8.4.5 Empirical findings and implications based on beneficiaries' perceptions regarding farming performance

Al-Matari (2014:25) states that performance measurement is the process of measuring an action's efficiency and effectiveness. Performance measurement is intended to support the setting of objectives, evaluating performance, and determining future courses of action on a strategic, tactical and operational level (Ondersteijn, Wijnands, Huirne & van Kooten, 2006:18). According to Neely (2002:17), the performance measurement instruments developed by the General Electric company in the 1950s include short-term profitability, market share, productivity, product leadership, personnel development, employee attitudes, public responsibility, as well as balance between short-range objectives and long-range goals. For the purpose of this study, farming performance is defined as the farming operation's ability to be productive, effective and efficient, and competitive.

The empirical results reported in Chapter 7 of this study reveal that the beneficiaries' perceptions of equity share schemes are positively correlated to farming performance. This implies that the beneficiary effectiveness improves upon participation in equity share schemes, productivity increases, resources are optimally used upon formation of the equity share scheme, and profitability objectives are effectively achieved. Furthermore, beneficiaries believe that continuous assessment of farm management by the government, investor or bank promotes transparency in management and increases farming performance.

8.4.6 Empirical findings and implications based on beneficiaries' perceptions regarding farming sustainability

Sriboonlue, Ussahawanitchakit and Raksong (2016:15) define firm sustainability as "the firm's ability to meet and satisfy the direct and indirect stakeholder demands, without compromising its ability to meet the need of future stakeholders". Business sustainability deals with economic, social and environmental factors; however, in the past, there was a tendency to focus only on economic matters, while neglecting the other two equally important factors (social and environment) – things are changing in this regard, but they have not changed much (Buranapin & Rattawatankul, 2015:109). For the purpose of this study, farming sustainability is defined as the good

financial position held by the operation that would allow it to continue operating in years to come, it also encompasses environmental consideration and the societal matters.

The empirical findings in this study suggest that beneficiaries' perceptions of equity share schemes are positively correlated to farming sustainability. This implies that beneficiaries believe that the existence of a long-term business plan that is implemented by the farm owner or manager increases the sustainability of farming.

Furthermore, the beneficiaries feel that the availability of well-functioning storage or warehouse facilities, to keep produce fresh, promotes the sustainability of farming activities. Beneficiaries also believe that the availability of strategies to mitigate and adapt to the potential harmful effects of climate change effectively sustain farming activities. The empirical findings of the study suggest that beneficiaries feel that engaging in social responsibility initiatives will increase farming sustainability.

8.4.7 Empirical findings and implications based on beneficiaries' perceptions regarding employee expectations

Employees, like customers, have their own performance expectations (what they hope to achieve) and perceptions of accomplishment (what they are able to achieve); therefore, when management promises to provide employees with specific roles, including the manner in which they could each contribute towards the success of the organisation, they would likely do their best (Tay, Lees & Lin Dar, 2016:13). Apparently, as employees create their own performance expectations, they would also appreciate the opportunity to evaluate their achievements, since they expect management to trust their judgements instead of stereotypically relying on the opinions of either their supervisors or customers (Tay *et al.*, 2016:13). For the purpose of this study, employee expectations is defined as beneficiary anticipation of receiving better financial and non-financial benefits, job security, and improved living standards.

The empirical results reported in Chapter 7 suggest that beneficiaries' perceptions are positively correlated to employee expectations. This implies that beneficiaries expect regular declarations of dividend pay-outs from the scheme, and they expect that their participation in the scheme should earn them improved housing or more secure

residential rights as well as a piece of land for farming. Furthermore, the empirical findings of the study reveal that beneficiaries expect the equity share scheme, as a legal entity, to negotiate the value of the equity to be purchased with them.

8.5 RECOMMENDATIONS FOR THE FARM WORKER EQUITY SHARE SCHEMES IN SOUTH AFRICA

8.5.1 Stakeholder trust

Stakeholder trust can make or break the established equity share schemes, therefore, it is important to maintain a high level of trust at all times. When stakeholders experience a lack of trust amongst each other, they have the opportunity to engage on the matter and explain their concerns to each other, as deliberation on the matter would bring clarity and provide an opportunity for the matter to be resolved before it is put aside. Among the drivers of lack of trust is poor communication of information and a trend of unfulfilled promises; improvement on these issues improves the level of trust. It is also important to note that, when one is respected and not deprived of any opportunities, it raises enthusiasm and creates a positive attitude towards work.

Down (1999:273) suggests that government should use its powers of persuasion to exert a very powerful moral influence in encouraging the relevant parties to trust one another. Therefore, farm owners should have good motives or intentions towards farm workers, they should keep their promises regarding work-related matters and should give beneficiaries significant autonomy in determining how to do their work. In turn, beneficiaries should share their opinions on sensitive issues with the farm owner or manager, and they should be able to tell the farm owner about mistakes made at work even if they might damage their reputation; furthermore, there should be open discussion with the farm owner regarding the beneficiaries' performance on the farm.

8.5.2 Government intervention

Government intervention brings hope to all parties, simply because they feel supported and recognised by government which, in principle, has an upper hand on many issues related to the country. Government can be a mediator and leader within, or the creator of, an enabling environment for equity share schemes; it is therefore important that government visibility is recognised all the times.

A mistake that government should not make is to visit farms with equity share schemes only once and disappear thereafter. It is important that government contacts equity share schemes regularly in order to monitor progress and to understand the challenges in place to meet the set targets for equity share schemes and, where possible, to work together to resolve these challenges.

This is in agreement with Down's (1999:273) statement, which recognises that although policy should be targeted and used selectively, the aim of policy should be to support all, or the majority, of the targeted firms through a combination of direct and indirect financial and information assistance. Therefore, government officials should explain land reform to the beneficiaries of the equity share scheme, and the government should provide additional financial support to the equity share scheme, it should also provide non-financial support to scheme members (e.g. conflict resolution, mobile medical facilities and transport), and government should monitor the implementation of equity share scheme policies based on a legal framework.

8.5.3 Farm owner support

The fact that the farm owner supported the move to establish the farm worker equity share scheme, makes it the duty of the farm owner to ensure that the well-intentioned objectives of establishing the scheme are realised. This will happen when the farm owner ensures that the farm workers are provided with all the support that they need all the time and, where the farm owner does not have the expertise, such help should be sourced from those with the expertise.

It is the duty of the farm owner to identify the type of support needed by farm workers, and to devise and institute a strategy that would support farm workers. There will be a need to review the support provided to farm workers in order to establish if this support is effective, and where it is found not to be, it must be improved.

This is in agreement with Andrews and Rogelberg (2001:122) who indicate that when an owner values quality service, such a move encourages employees to deliver quality service and may establish practices and procedures to aid in the service delivery; therefore, employees may perceive this emphasis on service and report higher service climate ratings. Therefore, farm owner support should have effective negotiation

practices to reach consensus regarding work-related matters, constructive criticism regarding work-related matters should be allowed amongst all stakeholders, and members should receive training that enables them to serve as office bearers for the equity share scheme.

8.5.4 Beneficiaries' perceptions of equity share schemes

Farm workers join equity share schemes because they have certain perceptions regarding equity share schemes. It is important that everyone involved discusses beneficiaries' perceptions so that everyone is well informed and aligned to the reality of the equity share schemes, what can be achieved and what they intend to achieve in future.

Therefore, beneficiaries' perceptions of equity share schemes should include initial discussions between the provincial office or government and the farm owner and workers regarding the establishment of the equity share scheme. Furthermore, it should include obtaining legal services to form a legal entity (e.g. trust), making beneficiaries aware that government is responsible for providing them with grants in order to buy shares in the equity share scheme, and formal dispute resolution procedures on all equity share scheme matters.

8.5.5 Farming performance

Farm workers also have a duty to ensure that farm worker equity share schemes are not just established, but that they perform well. If the schemes do not perform well, the farm workers cannot realise what they joined the equity share schemes for.

The farm workers have a duty to work harder than before by ensuring that the productivity of the farm increases, time is not wasted on unproductive matters, and that things which might impact on productivity are not taken for granted. No one should turn a blind eye to matters that might have unpleasant consequences for equity share schemes at large. Therefore, farming performance should improve upon the participation of beneficiaries in equity share schemes; productivity should increase upon the formation of the equity share schemes; and profitability objectives should be effectively achieved. Furthermore, there should be continuous assessment of farm management by the government, investor or bank.

8.5.6 Farming sustainability

The farm owner and farm workers have a duty to ensure that the established equity share scheme does not fail along the way. Plans must be in place to deal with a variety of issues such as the environmental, social and economic matters.

A plan without a timeframe and how it will be executed is like a non-existent plan. Some matters might have a timeframe, while others are attended to as and when they happen; however, it should be clear what takes priority in the execution of plans. In a case where something has to be delayed due to certain things taking priority, the delay should be commuted to the affected parties in order to avoid confusion and frustration, which can affect the operation of equity share schemes, or just credibility. Therefore, farming sustainability of the equity share scheme should have a long-term business plan that is implemented by the farm owner, there should be well-functioning storage or warehousing facilities to keep produce fresh and there should be strategies available to mitigate and adapt to the potential harmful effects of climate change.

8.5.7 Employee expectations

It is normal for employees to have expectations; however, when the employees keep their expectations to themselves, it might be difficult for the farm owner to know what the employees' expectations are. It is important that the farm owner and farm workers have a thorough discussion regarding employee expectations and how they will be fulfilled, where possible.

Some of the expectations would require financial resources, therefore, the expectations that require financial resources cannot all be fulfilled at the same time or within a short period of time, since money has to be saved towards a particular goal. The realisation of the expectations will be determined by how well the farming operation is doing; if it is doing badly, it is unlikely that the expectations which require financial resources will be realised, but when the farming operation is doing well, there are good chances for their realisation. Therefore, farm workers have to work very hard to ensure that the farm is performing well. Moreover, employee expectations should include regular declarations of dividend payouts from the scheme, negotiating the value of the equity to be purchased with the beneficiaries and the beneficiaries earning themselves improved housing or more secure residential rights.

8.6 CONTRIBUTIONS OF THE STUDY

- This is an academic study that has contributed to the body of knowledge on farm worker equity share schemes in South Africa. This is one element in addressing the challenges facing the country in terms of inequality, unemployment, poverty and past injustices, amongst others.
- The equity share schemes have been around since the early 1990s; however, challenges related to equity share schemes are still present. Therefore, this study has contributed by proposing how some of the following challenges could be addressed: stakeholder trust, government intervention, farm owner support, farming performance, farming sustainability and employee expectations.
- Very few hypothetical models exist to deal with equity share schemes, hence, some of the models used to establish the model for this study were not necessarily taken from equity share schemes, but from similar parallel processes to that of equity share schemes, such as the recapitalisation and development programme. Therefore, this study has contributed to the number of hypothetical models that can be used for similar studies in the future.
- This study covered more equity share schemes and provinces, and different types of produce, than did previous studies; the results of this study are therefore a better representation of equity share schemes in South Africa.
- This study brought another dimension to the field in that it sensitises those interested in agriculture to the endless opportunities available to them, including the use of agricultural waste to make certain products for the benefit of the country at large.
- This study raises awareness, amongst those in farming, regarding the difficulties faced by the agricultural sector, and which impact on its operations and profitability. Among those covered in this study are: the shortage of skills in the agricultural sector, gaps in the research pertaining to breakeven points for commercializing farms, competing with recognized brands and dynamics of exporting produce – these items are not discussed in previous studies regarding the farm worker equity share schemes.
- The results of the study can be used by the applicable government departments to establish the intervention mechanisms to be implemented for the benefit of the schemes.

- The study tried to close the gap between previous studies by bringing the latest available information applicable to this period, as opposed to relying solely on information from studies conducted years ago.
- The study further explored equity share schemes and land reform in a global context, which has never been done before in South Africa, in order to fully understand the establishment of the schemes and the challenges experienced in realising their intended objectives.
- The study used a sound and well-developed research design and methodology, which has been justified and applied. This can be utilised by other similar studies to conduct empirical research in the field of farm worker equity share schemes.
- This study provided useful and practical guidelines to farm owners and administrators of equity share schemes so as to ensure effective strategising that could enhance their competitiveness and long term survival.
- The findings of this study can inform strategy policy formulation and its implementation in the agricultural sector as relevant to farm worker equity share schemes.
- The developed hypothetical model and measuring instrument can be utilised in other developing countries to test beneficiaries' perceptions of farm worker equity share schemes, or in any other related industry.
- It is envisaged that the results and recommendations of this study could be used to implement effective strategies that could ensure the effective functioning of farm worker equity share schemes.

8.7 LIMITATIONS OF THE STUDY

During the initiation of the study, the intention was to cover all provinces in the country and different types of produce in order to have the results of the study resemble the situation in South Africa as closely as possible. However, the lack of a database containing information pertaining to existing farm worker equity share schemes in South Africa, and the lack of support from other institutions, made it difficult to realise this objective; therefore, some provinces and types of produce were not covered in the study.

This study was also affected by the lack of cooperation of some of the identified farms that have implemented equity share schemes, as they refused to participate in the study, thus reducing the number of provinces covered in the study. It was also discovered that some of the farm worker equity share schemes identified in the search had stopped operating due to the challenges they experienced.

8.8 IMPLICATIONS FOR FUTURE RESEARCH

This study has created a new platform that can be put to good use by researchers interested in equity share schemes, and who wish to use the most recent information as a benchmark. The study did not cover all subjects pertaining to farm worker equity share schemes, therefore, there are opportunities to build on existing information in order to understand the challenges experienced by equity share schemes in South Africa.

The study focused on beneficiaries' perceptions; however, there is an opportunity to conduct research on farm owners' perceptions regarding equity share schemes in order to understand a perspective that is focussed on in this study.

There is an opportunity to unpack the establishment of equity share schemes, by exploring the process and the parties involved, and comparing that to what should be done theoretically as per the established framework for equity share schemes, which was introduced in this study.

There is also an opportunity to revisit the equity share schemes that have failed, and to try to understand the challenges that they encountered in the process, which have led to their failure. This will assist in treating the real problem, as opposed to dealing with potential problems, which are equally important as the real problems. However, such an approach would ensure that different views are considered so as to avoid a one-sided approach to equity share schemes in South Africa.

8.9 CONCLUSIONS

This study provided an opportunity to understand equity share schemes in South Africa based on the latest available information pertaining to their operation and the challenges they face. The equity share schemes provide an opportunity for the farm

owner and farm workers to learn from each other as opposed to the previous setting in which workers did not have shareholding rights and were, therefore, deprived of some opportunities.

This study highlighted the importance of stakeholder trust, government intervention, farm owner support, farming performance, farming sustainability and employee expectations as critical for the farm workers in equity share schemes.

The success of the equity share schemes relies on a team effort from all the relevant stakeholders who should contribute to the subject; thus, this study was initiated to assist all those involved and to make this study's findings on equity share schemes benefit all stakeholders, particularly the farm workers who are being uplifted one way or another.

There are good prospects for the success of equity share schemes if the coordinated approach is adopted and is regularly monitored.

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APPENDIX A: ETHICS CLEARANCE



Ref: H-17-BES-BMA-016 [Approved]

**Chairperson: Faculty RTI Committee
Faculty of Business and Economics Sciences
Tel. +27 (0)41 504 2504**

June 2017

Prof NE Mazibuko
NMU
Department of Business Management
South Campus

Dear Prof Mazibuko

PROJECT PROPOSAL: BENEFICIARY PERCEPTIONS REGARDING FARM WORKER EQUITY SHARE SCHEMES IN SOUTH AFRICA (PHD)

PRP: Prof NE Mazibuko
PI: Mr SN Xolo

Your above-entitled application for ethics approval served at Fac RTI.

We take pleasure in informing you that the application was approved by the Committee. However, please note that the approval is on condition that permission to conduct the study is also obtained from the other relevant individuals, parties, organisations and/or role players to which the study pertains.

The ethics clearance reference number is **H-17-BES-BMA-016**, and is valid for three years. Please inform the Faculty RTI Committee, via the faculty representative, if any changes (particularly in the methodology) occur during this time.

Please inform your co-investigators of the outcome.

Yours sincerely

A handwritten signature in black ink, appearing to read "MEyk".

**Dr M van Eyk
Faculty of Business and Economic Sciences**

APPENDIX B: LETTER TO THE DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM



• PO Box 77000
• Nelson Mandela University
• Port Elizabeth
• 6031
• South Africa
• www.nmu.ac.za

8 June 2017

Acting Director General Ms Leona Archary
Department of Rural Development and Land Reform
184 Jeff Masemola Street
Pretoria
0001
DGOffice@drrlr.gov.za
For attention: Ms Archary

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN FARMS WITH EQUITY SHARE SCHEMES

Dear Ms Archary

My name is Siyavuya N. Xolo, and I am a Business Management student at the Nelson Mandela University in Port Elizabeth. The research I wish to conduct for my Doctoral thesis involves farm worker perceptions regarding farm worker equity share schemes in South Africa. This project will be conducted under the supervision of Prof Noxolo Eileen Mazibuko (NMU, South Africa) and Prof Elroy E. Smith (NMU, South Africa).

I am hereby seeking your consent to access the database of all farms that are currently participating in farm worker equity share schemes in South Africa to invite a selected sample of farm workers to participate in this project.

I have provided you with a copy of my thesis research proposal, which includes copies of the questionnaire (measuring instrument) and a preamble letter used by the student or a fieldworker in the research process, as well as a copy of the approval letter, which I received from the NMU Research Ethics Committee (Human).

Upon completion of the study, I undertake to provide the Department of Rural Development and Land Reform with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me on [Cell no: 0845558670, and email address: siyavuya.xolo@nmmu.ac.za].

Thank you for your time and consideration in this matter.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Siyavuya N. Xolo', written in a cursive style.

Siyavuya N. Xolo

APPENDIX C: LETTER TO FARM OWNERS



Faculty of Business and Economic Science
NMU
Tel: +27 (0)41 504-2031, Fax: +27 (0)41-1830
E-mail: noxole.mazibuko@mandela.ac.za

Date: 8 June 2017

Ref: H-17-BES-BMA-016

Contact person: Prof NE Mazibuko & Prof EE Smith

Dear Director

You are being asked to participate in research study. We will provide you with the necessary information to assist you to understand the study and explain what would be expected of you (participant). These guidelines would include the risks, benefits, and your rights as a study subject. Please feel free to ask the researcher to clarify anything that is not clear to you. The purpose of the study is to establish how you as a farmworker shareowner participant perceive the benefits of equity share schemes. We also assure you that all information will be dealt with in the strictest confidence.

To participate, you will be required to complete a questionnaire. You may withdraw your completion of the questionnaire at any time should you not want to further participate as the completion of the questionnaire is voluntary. No personal details will be required. If you do partake, you have the right to withdraw at any given time, during the study without penalty or loss of benefits. Although your identity will at all times remain confidential, the results of the research study may be presented at conferences or in specialist publications. Telephone number of the researchers are provided. Please feel free to call these numbers.

Furthermore, it is important that you are aware of the fact that the ethical integrity of the study has been approved by the Research Ethics Committee (Human) of the university. The REC-H consists of a group of independent experts that has the responsibility to ensure that the rights and welfare of participants in research are protected and that studies are conducted in an ethical manner. Studies cannot be conducted without REC-H's approval. Queries with

regard to your rights as a research subject can be directed to the Research Ethics Committee (Human), Department of Research Capacity Development, PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031. If no one could assist you, you may write to: The Chairperson of the Research, Technology and Innovation Committee, PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031.

The informed consent statement has been prepared in compliance with current statutory guidelines. Please feel free to contact us should you have any questions.

Yours sincerely



Mr Siyavuya Xolo



Prof NE Mazibuko



Prof EE Smith

APPENDIX D: LETTER TO RESPONDENTS AND QUESTIONNAIRE



Department of Business Management
Nelson Mandela University
Tel: 041-5042031
Noxolo.Mazibuko@nmmu.ac.za
June 2017

Dear Respondent/Farm worker

Mr S.N. Xolo is a registered PhD student in the Department of Business Management at the Nelson Mandela University, in Port Elizabeth. His empirical study focuses on assessing perceptions regarding farm worker equity share schemes in South Africa. It is envisaged that this study will provide useful insights into the functioning of farm worker equity share schemes in South Africa.

All data sources will be treated confidentially and will be used solely for research purposes. The majority of the data will be reported in statistical form. Individual respondents will not be identified in the reporting and dissemination of the data, and respondents will remain anonymous.

Thank you very much for your willingness and time to complete this questionnaire.

Kind regards

A handwritten signature in black ink, appearing to read "N.E. Mazibuko".

Supervisor: Prof N.E. Mazibuko

A handwritten signature in black ink, appearing to read "E.E. Smith".

Co-supervisor: Prof E.E. Smith

A handwritten signature in black ink, appearing to read "S.N. Xolo".

Researcher: Mr S.N. Xolo

QUESTIONNAIRE

Please indicate by means of a cross [X] the extent to which you agree or disagree with the following statements.

(1) Strongly disagree; (2) Disagree; (3) Somewhat disagree; (4) Neutral; (5) Somewhat agree; (6) Agree; and (7) Strongly agree

SECTION A

Perceptions regarding the influences on farm worker equity share schemes

	ON OUR FARM	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	I believe that the motives/intentions of the farm owner/manager towards farm workers are good.	1	2	3	4	5	6	7
2	I can safely raise any concerns with the farm owner/manager.	1	2	3	4	5	6	7
3	The farm owner/manager keeps his/her promises regarding work-related matters.	1	2	3	4	5	6	7
4	I could share my opinion about sensitive issues with the farm owner/manager.	1	2	3	4	5	6	7
5	I could tell the farm owner/manager about mistakes I have made on the job, even if they might damage my reputation.	1	2	3	4	5	6	7
6	We are aware of possible available financial resources to support our equity share scheme.	1	2	3	4	5	6	7
7	All financial resources are utilised to the benefit of our equity share scheme.	1	2	3	4	5	6	7
8	We have received dividends/grants from the equity share scheme to grow our business.	1	2	3	4	5	6	7
9	The equity share scheme has been negatively affected by severe drought conditions.	1	2	3	4	5	6	7
10	The cost of managing the effects of climate change impacts on the equity share scheme.	1	2	3	4	5	6	7
11	Ground erosion destroys available land for agricultural use.	1	2	3	4	5	6	7
12	Workers who are doing similar tasks receive equal pay, irrespective of gender.	1	2	3	4	5	6	7

	ON OUR FARM	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
13	All farm workers are 16 years and older, which is regarded as an acceptable age to work on the farm.	1	2	3	4	5	6	7
14	Workers are not forced to work overtime.	1	2	3	4	5	6	7
15	Government officials explained land reform to the beneficiaries of our equity share scheme.	1	2	3	4	5	6	7
16	Government is providing additional financial support for the equity share scheme.	1	2	3	4	5	6	7
17	Government provides non-financial support to members of the scheme (e.g. conflict resolution, mobile medical facilities and transport).	1	2	3	4	5	6	7
18	Government monitors the implementation of equity share scheme policies based on a legal framework.	1	2	3	4	5	6	7
19	The absence of corrupt practices by government contributes to the effective management of the equity share scheme.	1	2	3	4	5	6	7
20	Farm workers are asked for feedback as to whether they understand the information shared regarding the equity share scheme.	1	2	3	4	5	6	7
21	There are effective negotiation practices to reach consensus regarding work-related matters.	1	2	3	4	5	6	7
22	Constructive criticism regarding work-related matters is allowed amongst all stakeholders.	1	2	3	4	5	6	7
23	There is open discussion with the farm owner/manager regarding my performance on the farm.	1	2	3	4	5	6	7
24	I am allowed to share my opinions before final decisions are made regarding the equity share scheme.	1	2	3	4	5	6	7
25	The farm owner/manager ensures that I am confident in using my abilities/skills to do my job effectively.	1	2	3	4	5	6	7
26	The farm owner/manager gives me significant autonomy in determining how to do my job.	1	2	3	4	5	6	7
27	The impact of my performance makes a difference in realising the set objectives of the equity share scheme.	1	2	3	4	5	6	7

	ON OUR FARM	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
28	I have a great deal of control over what happens in my job on the farm.	1	2	3	4	5	6	7
29	The farm owner/manager provides us with relevant information regarding the operation of the equity share scheme.	1	2	3	4	5	6	7
30	Regular skills training programmes are provided to all workers.	1	2	3	4	5	6	7
31	Literacy training programmes are offered to all farm workers.	1	2	3	4	5	6	7
32	Skills development programmes enable access to decent jobs for all workers.	1	2	3	4	5	6	7
33	Members receive training which enables them to serve as office bearers for the equity share scheme.	1	2	3	4	5	6	7
34	We receive on-the-job training that reduces the number of incidents/accidents on the farm.	1	2	3	4	5	6	7
35	There is an adequate supply of water resources.	1	2	3	4	5	6	7
36	There is a regular supply of electricity to the farm.	1	2	3	4	5	6	7
37	There are restrictions regarding water/electricity usage for our household purposes.	1	2	3	4	5	6	7
38	Roads to the farm are accessible regardless of severe weather conditions.	1	2	3	4	5	6	7
39	All farm roads are well-maintained by the authorities.	1	2	3	4	5	6	7
40	There are adequate modes of transportation for the distribution of produce.	1	2	3	4	5	6	7
41	All farm equipment needed for operation functions effectively.	1	2	3	4	5	6	7
42	All farm equipment is safe to operate.	1	2	3	4	5	6	7
43	All farm equipment (e.g. storage and warehousing) needed for operation is user-friendly.	1	2	3	4	5	6	7

SECTION B

Perceptions of beneficiaries regarding farm worker equity share schemes

	ON OUR FARM	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	We are offered dividends/assets by our equity share scheme.	1	2	3	4	5	6	7
2	There were initial discussions between the provincial office/government, farm owner and workers regarding the establishment of the equity share scheme.	1	2	3	4	5	6	7
3	Our equity share scheme obtains legal services to form a legal entity (e.g. trust).	1	2	3	4	5	6	7
4	I am aware that government is responsible for providing me with a grant in order to buy shares in the equity scheme.	1	2	3	4	5	6	7
5	All stakeholders agreed that in the case of failure to pay the scheme, assets can be accepted as collateral.	1	2	3	4	5	6	7
6	Workers are allowed to influence the financial/operational decisions of the equity scheme.	1	2	3	4	5	6	7
7	I feel that the power I exercise in decision-making is at least equal to my share of equity in the scheme.	1	2	3	4	5	6	7
8	Shares received from the scheme cannot be transferred to multiple heirs/outside.	1	2	3	4	5	6	7
9	I am expected to sell my shares when I leave the job.	1	2	3	4	5	6	7
10	I receive proportionally more voting rights as my shareholding increases in the equity share scheme.	1	2	3	4	5	6	7
11	I do believe that the farm worker equity scheme is functioning effectively.	1	2	3	4	5	6	7
12	All employees, irrespective of gender, participate equally in the equity share scheme.	1	2	3	4	5	6	7
13	Formal dispute resolution procedures, regarding equity share scheme matters, are in place.	1	2	3	4	5	6	7
14	All employees are allocated shares according to their tenure.	1	2	3	4	5	6	7
15	I am allowed to sell shares when the exercise period has expired.	1	2	3	4	5	6	7

SECTION C

Perceptions regarding the outcomes of farm worker equity share schemes

	ON OUR FARM	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	Employee effectiveness has improved since participation in the equity scheme.	1	2	3	4	5	6	7
2	Productivity has increased since the formation of the equity scheme.	1	2	3	4	5	6	7
3	Profitability objectives are effectively achieved.	1	2	3	4	5	6	7
4	All resources are optimally used.	1	2	3	4	5	6	7
5	We are regarded as a cost effective leader in the farming industry.	1	2	3	4	5	6	7
6	The equity share scheme has a long-term business plan that the farm owner/manager is implementing.	1	2	3	4	5	6	7
7	There are well-functioning storage/warehousing facilities to keep produce fresh.	1	2	3	4	5	6	7
8	We continue to make profit to sustain the farm's survival.	1	2	3	4	5	6	7
9	We engage in social responsibility initiatives (e.g. donations to children's homes or schools).	1	2	3	4	5	6	7
10	Strategies are available to mitigate, and adapt to, the potential harmful effects of climate change.	1	2	3	4	5	6	7
11	We expect regular declarations of dividend payouts from the scheme.	1	2	3	4	5	6	7
12	The equity share scheme must negotiate the value of the equity to be purchased with me.	1	2	3	4	5	6	7
13	My participation in the scheme will earn me improved housing or more secure residential rights.	1	2	3	4	5	6	7
14	My participation in the scheme will help me to acquire a piece of land for farming.	1	2	3	4	5	6	7
15	There is a continuous assessment of farm management by the government/investor/bank.	1	2	3	4	5	6	7

SECTION D
Biographic information

Please mark the appropriate box by means of a cross [X].

1. Gender

Male	1
Female	2

2. Age group in years

15 and younger	1
16-20	2
21-30	3
31-40	4
41-50	5
51-60	6
Over 60	7

3. Type of equity share scheme benefits offered (financial and non-financial)

Only shares/dividends	1
Only assets	2
Both shares/dividends and assets	3

4. Type of farming activity (if more than one type, indicate the biggest one in terms of scope and profitability)

Wine	1
Dairy	2
Summer crops (e.g. maize, sorghum and dry beans)	3
Winter crops (e.g. wheat and oats)	4
Oilseed crops (e.g. sunflower seed and groundnuts)	5
Sugar cane	6
Deciduous fruit (e.g. pome fruit, stone fruit and table grapes)	7
Subtropical fruit (e.g. pineapple, litchi, avocado and mango)	8
Citrus fruit (e.g. orange and grapefruit)	9
Vegetables	10
Animal production	11
Other (Please specify)	12

5. Your type of employment contract

Full time employee	1
Part time employee	2
Seasonal	3
Casual employee	5
Other (please specify)	6

6. Number of years working on the farm

1-5	1
6-10	2
11-15	3
16-20	4
21+	5

7. Number of years of scheme's existence

1-4	1
5-8	2
9-12	3
13-16	4
17+	5

8. Please indicate if you are a member of the equity scheme or not

Yes	1
No	2

THANK YOU FOR YOUR TIME AND COOPERATION

APPENDIX E: EDIT LETTER



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November 2017

To Whom it May Concern

I herewith confirm that I have proofread the following thesis:

Title of Study: *BENEFICIARIES' PERCEPTIONS REGARDING FARM
WORKER EQUITY SHARE SCHEMES IN SOUTH AFRICA*
Student Name: Siyavuya N. Xolo
Student Number: 216440394
Institution: Nelson Mandela University
Qualification: PHILOSOPHIAE DOCTOR (Business Management)

I suggested relevant changes, where I saw fit, using the "Track Changes" function in MSWord; the student could thus either accept or reject the suggested changes at his own discretion.

I trust that this is in order.

Kind regards,

A handwritten signature in blue ink, appearing to read 'Nancy Morkel'.

Nancy Morkel

MA English (NMMU), PGDHET (UFH), BA Hons English (UPE), BA MCC (UPE)
Editing Methodology (SU), Editing Practice (SU)
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