Assessing the viability of cotton contract farming in Zimbabwe

Dissertation submitted in partial fulfilment of the requirements of a Master of Business Leadership (MBL)

BY
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MBL B1747646

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I ........................................... do hereby declare that this dissertation is a result of my own investigation and research, except to the extent indicated in the Acknowledgements, Bibliography and comments included in the body of the report, and that it has not been submitted in part or in full for any other degree to any other university.

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ACKNOWLEDGEMENTS

I would like to thank my supervisor, Dr Isaac Mabhungu for his guidance and endless patience in refining my thinking. He challenged me to go beyond my comfort zone, from then I have learned to work beyond the comfort zone.

I would like to extend my appreciation to the Graduate School of Business staff and fellow students, for refining, building and radically transforming the way I see the world. I am privileged to have had the opportunity to be part of the institute.

My appreciation goes to stakeholders in the farming sector for affording me the opportunity to undertake this study, especially to the cotton farmers, the Cotton Ginners’ Association and AMA that I engaged with during the research.
DEDICATION

I dedicate this dissertation to the Lord Almighty, my wife Charity and my lovely children. I love you all.
ABSTRACT

Contract farming has been practiced in Zimbabwe for various crops and livestock for over a decade. It has been viewed as a way of increasing productivity and alleviating stallholders’ poverty datum line. This has not happened in the cotton sector in Zimbabwe. The study, therefore, aims to answer four main questions: 1) What is the impact of contract farming on farmers’ productivity? 2) How can contract farming be improved for the benefit of all parties? 3) Is there a difference in productivity levels between contracted and non-contracted farmers? 4) What are the roles of the regulatory body in contract farming arrangements?

The researcher chose a survey research design because it best served to answer the research questions and the purposes of the study. A group of farmers was studied by collecting and analyzing data which was considered to be representative of the farmers. The study population were cotton farmers and companies engaged in cotton contract farming. The research used stratified random sampling method to select farmers who completed the questionnaire. To test the validity of the questionnaire, a pilot test was carried out in Muzarabani, Mashonaland Central using cotton growers and two companies. A sample size of 300 farmers was used based on a strata selection to collect data, while two companies were interviewed.

During the research, the researcher found out that The Cotton Company of Zimbabwe (Cottco) was the pioneer of cotton contract farming and had begun this model during the early 1990s, every other company had had experience over the years. The area under contract farming was limited to 0.5 hectares per contracted farmer. Though farmers contracted for inputs, these were perennially supplied inadequately. Extension officers were too few to service all contracted farmers. Because of inadequate supply of inputs, cotton production yields were low which hampered the viability of mostly farmers. Companies had an advantage of value addition which helped them make profit. Side marketing of the crop happened due to variances in the producer prices offered by each buyer/contractor and as a method of avoiding paying input loans.

The study showed that contracted farmers, though they received inadequate inputs, had better yield than non-contracted farmers. There were no formal agreements of contract farming signed between farmers and companies and no one enforced fulfilment of the contract farming arrangement. Side marketing, in all its forms, was prevalent. This prejudiced the contracting companies. Because of
low yields and issues of side marketing and sometimes, natural disasters such as drought, most farmers and companies were not viable, they made either a marginal profit, a loss or a breakeven.

In order to improve productivity under contract farming there was need for investors to give adequate inputs timely. There was also need to improved producer prices of agricultural commodities. There were differences in productivity levels between contracted and non-contracted farmers which therefore meant a difference in income levels of the two categories.

The most important roles of regulatory bodies were identified as providing fair play in cotton contract farming, protecting parties to contract farming, investment promotion and help in improving crop production. The study makes the following recommendations: Regulatory authorities should assist farmers to ensure that they sign contract farming agreements when all the inputs were fully delivered. Regulatory authorities should ensure fair pricing of inputs and enhance their presence in contract farming arrangements. It was key that a national contract farming framework was enacted and adhered to between contracting parties.
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<td>AMA</td>
<td>Agricultural Marketing Authority</td>
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<td>CBP</td>
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<td>CF</td>
<td>Contract farming</td>
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<td>CFRC</td>
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<td>Cottco</td>
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<td>FAO</td>
<td>Food and Agricultural Organisation</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>NGO</td>
<td>Nongovernmental organisations</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<td>TIMB</td>
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CHAPTER I: INTRODUCTION

1. Introduction

This chapter introduces the study. The chapter presents the background of the study, statement of the problem, significance of the study, research objectives, research questions, and limitation of the study and delimitation issues. This document lays the direction of the study which seeks to examine the viability of contract farming for both the contract companies and contracted farmers.

1.1 Background

Contract farming is a commercial relationship between a firm and farmers. It is a business model in which farm products are bought in advance by a firm in exchange for certain services and other benefits. Although principally a commercial initiative, contract farming is considered to be a way to overcome the challenges that small farmers face when linking to remunerative markets. It assists farmers in connecting to output markets and often provides inputs, credit, or agricultural extension (Da Silva and Rankin, 2013; Eaton and Shepherd, 2001; World Bank, 2007). These services can be provided not only by private firms, but can also come from, or be facilitated by, multiactor partnerships between companies, governments and NGOs (Prowse, 2012).

Agriculture in developing countries especially in Africa, is characterised by low productivity and underutilisation of arable land (Prowse, 2012). The role which contract farming can play in raising agricultural productivity of rural population has received considerable attention from governments and investors. Contract farming in the African context is seen as a mechanism to alleviate poverty because it has potential to raise the income of the rural farmers (Warning and Key, 2002). Warning and Key, 2002, argue that some studies have criticised contract farming because of its exploitative nature; a perception created by the large number of rural farmers recorded as having been forced into unfavorable contract farming terms.

According to (Glover, 1987; 1990), the essence of contract farming is a commitment to the farmer to specify the amount of agricultural produce the agribusiness firm will buy and at what price. (Pritchard and Connell, 2011) argue that contract farming is a set of organisational practices designed by downstream agribusiness firms to manage upstream uncertainty and risk. Typically, the agribusiness firm provides fertilizers, seeds, insecticides, farm machinery and technical advice while the farmer provides land and labour (Glover, 1987: 1990; Porter and Phillips-Howard, 1997). According to (Rural Learning Center, 2014:1), contract farming is an agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the
production and marketing of a farm product or products. Typically, the farmer agrees to provide established quantities of a specific agricultural product, meeting the quality standards and delivery schedule set by the purchaser.

Generally, companies offer a contract only to those farmers who comply with some minimum requirements such as land ownership, irrigated land, minimal plot sizes. Even if these arrangements are beneficial to farmers directly or indirectly through spillover effects, there will be heterogeneity in impacts, with certain farmers benefitting more than others, with some even losing out. It is clear that contracts will not be randomly distributed within a farming community, and contracted farmers will always have special characteristics; a situation referred to as firm-selection and self-selection biases (Barrett and Others, 2012; Minot and Ronchi, 2015).

Many resettled farmers have land which they cannot put to gainful production due to various factors among them lack financial resources for working capital and to purchase of agricultural inputs, farming experience and access to commodity markets. Lack of commodity markets became a key driver for most farmers to participate and promote contract farming in livestock and crops.

In Zimbabwe, farming is a major contributor to the economy and the overall gross domestic product (GDP) and it plays a significant role in the supply chain of agricultural produce for both export and local markets. Contract farming in Zimbabwe started at a slow pace but has evolved over the years to be existent in the following the cotton, maize, tobacco, poultry horticulture subsectors of agriculture.

Cotton is a drought resistant crop that is grown in areas that receive low rainfall. The crop is processed into cotton lint which is mainly exported, cotton cake that is used for stockfeed and the seed is crushed into crude oil. The ginning capacity in Zimbabwe is above two hundred metric tonnes, the gins are located in the Midlands (Gokwe North and South), Mashonaland West (Kadoma and Chinhoyi), Mashonaland Central (Muzarabani, Mt Darwin, Shamva and Rushinga) and the lowveldt (Chiredzi and Checheche) areas. Companies that are in the business of cotton ginning resort to contract farming in order to access the cotton crop for production in their factories. The companies create employment, seasonal and permanent, they therefore alleviate socioeconomic life in the cotton growing areas.
The horticulture sector has great potential though it was disturbed by the agrarian land reform programme as the dominant white farmers were displaced during the agrarian land reform programme. Most of the produce, flowers, fruits and vegetables, from horticulture is exported and Zimbabwe used to earn foreign currency from this sector. There are agribusiness that are engaged in contract farming of flowers, fruits and vegetables such as Matanuska, Tanganda Tea Company and Flora. The sector employs a significant number of people and it is very important in generating export earnings.

When it comes to tobacco, peasant and commercial farmers are contracted by tobacco companies to produce this crop which is a foreign currency earner. About US$700 million is earned from the export of this crop every year (TIMB, 2018). Zimbabwe has witnessed an increase in the production of the crop due to competitive producer prices being paid by merchants at the auction floors. The Tobacco Industries Marketing Board has also done very well to create a conducive regulatory environment for the participants in the sector. Notable companies which are promoting contract farming in tobacco include Tiaz Tobacco, Zimbabwe Leaf Tobacco, Tobacco Sales Floor and Chidziwa Auction Floors.

The livestock sector has witnessed tremendous growth in poultry contract farming. There has been phenomenal uptake of contract farming of chickens by both urban and peri-urban farmers from companies such as Irvine Day Old Chicks, Charles Stewart and recently Command Agriculture. Chicken meat has become a substitute of beef meat supply mainly due to its low cost and health issues. The rearing of chickens is also short term production cycle, in approximately six weeks, chickens would have matured for sale and or consumption.

Many initiatives have been taken by agribusiness companies to increase maize production to secure supply to their factories, e.g, National Foods. The government also took a policy decision to participate in maize production through Command Agriculture with the aim of obtaining food and nutrition security. The result has seen many Grain Marketing Board silos being filled up thereby seeking private storage facilities. Productivity efforts have been assisted through voluntary activities by non-governmental organisations that work to alleviate poverty in communal establishments.
Contract farming is meant to be a win-win arrangement between the farmer and the investor. This means that, in the eyes of both the investors and farmers, the arrangement must be viable. It must be able to give profit. An assessment would be necessary to explore whether contract farming has been viable in the Zimbabwean context as much as it has been in other countries that engage in contract farming. The study seeks to evaluate the viability of contract farming business in Zimbabwe.

Under the unequal power relationship, the investor possesses negotiating and financial resources power, there is great potential for trapping small-scale farmers in cycles of debt (Little & Watts, 1994). Contracts create a dependence syndrome by small farmers on the technology, credit, inputs and services provided by their contracting companies (Baumann, 2009) said that contract farming agreements have sometimes been found to be imbalanced because of this power inequity. A review by Eaton and Shepherd, 2001, of nineteen contract farming contracts from a FAO database showed how poor contracts were created from the farmers’ perspective. Of the nineteen contracts he examined in Brazil, Afghanistan, China, Honduras, South Africa, Thailand, Uganda and Zambia, only seven stipulated the duration of the partnership, and only five stated that the farmer had legal ownership of the land (Eaton and Shepperd, 2001). The review found that the contracts contained few details on the specific inputs given to farmers although pricing details of the agricultural inputs were clear in most of the examined cases. The review concluded that firms frequently fail to include basic detail in contracts, so that farmers were frequently not fully informed about the nature of the agreement they were entering into. The benefits of contract farming may be hindered by problems arising from unclear, incomplete, or poorly understood contract terms. In some cases, contracts did not include some important clauses necessary to protect the parties. While in other cases, contractual clauses were vague or ambiguous and led to misunderstandings between the parties or to manipulation by buyers (Eaton, 2001).

Though many contract farming disputes are in existence, there has not been meaningful intervention by government agents to resolve disputes and regulate the relationship of the investors and the farmers (Eaton and Shepherd, 2001). There is also no clarity on the role being played by government in contract farming in Zimbabwe in ensuring that the interest of both parties is protected. Poor coordination and conflicting demands by farmer organisations may also be a factor
that has hindered the viability of contract farming ventures (Odunze, Van Niekerk, and Ndhlovu, 2005)

1.2 Statement of the Research problem
Contract farming is an arrangement between the farmer and the investor to produce agreed agricultural produce, be it livestock or crops, and the creation of a market for the produce using agreed contractual terms towards alleviating each party’s desire for a profitable outturn. Contract farming is sometimes exploitative in nature because most agribusinesses enjoy an unequal bargaining position with farmers (Little and Watts, 1994; Masakure and Henson, 2005; Parirenyatwa and Mago, 2014). It seems there has not been significant income accruing to farmers and alleviation of poverty resulting from these arrangements. Therefore, the question of contract farming viability arises.

1.3 Research Objectives
The research study is guided by the following objectives:

1.3.1 to assess the viability of cotton contract farming in Zimbabwe

1.3.2 to investigate the contribution of contract farming on farmers’ productivity

1.3.3 to find ways of strengthening contract farming arrangements in the agricultural sector in Zimbabwe

1.3.4 To compare the differences in productivity levels between contracted and non-contracted farmers

1.3.5 To investigate the role of the regulatory bodies in contract farming

1.4 Research Questions
The research questions guiding this study are:

1.4.1 Is cotton contract farming viable?

1.4.2 What is the impact of contract farming on farmers’ productivity?
1.4.3 How can contract farming arrangements be improved to benefit of all parties?

1.4.4 Is there a difference in productivity levels between contract and non-contracted farmers?

1.4.5 What are the roles of the regulatory body in contract farming arrangements?

**Hypothesis**

H₁: There is a significant relationship between contract farming and productivity of farmers

H₂: There is a significant relationship between contract farming and profitability of farmers

H₃: There is a significant relationship between adequate inputs supply and high productivity of farmers under contract farming

H₄: There is a significant difference in productivity levels between contracted and non-contracted farmers.

**1.4 Research Assumptions**

Farmers engage in contract farming because they lack capacity to buy agricultural inputs yet they possess productive land. Both the farmers and contractors engage in contract farming on the assumption of profitability.

**1.5 Justification of the research**

Agriculture is one of the major contributors to the economy in Zimbabwe. Within the production chain, there is contract farming which plays a major role in productivity and contract farming has a socioeconomic role. Therefore, it is important to study issues of viability of farmers and companies engaged in contract farming.

**1.6 Purpose of the study**

The purpose of the study is to assess issues of viability of cotton contract farming in Zimbabwe and also to establish the relationship that exist between the parties to the cotton contract farming. The
study would further highlight concerns raised by farmers previously engaged in contract farming and understand the challenges and opportunities that are created through contract farming.

1.6 Significance of the research

There are several stakeholders will benefit from the findings of this study as indicated below:

(a) The researcher

The research study intends to enable the researcher to gain experience in the research which will be a foundation to prospects which include publishing journals, presenting conference papers and possibly publishing books. The research study goes a long way to enhance the researcher to put into practice some theoretical aspects learnt during the study process. The researcher gained significant knowledge on cotton contract farming and viability issues in general.

(b) University/Academic studies

The study will form a source of data from which fellow students can make reference during other studies. It will also contribute to a body of knowledge regarding contract farming thereby helping other researchers who may have an interest in similar research work resulting in resolving gaps that could exist.

(c) Government and Agricultural sector

The researcher intends to enlighten the Government and private sector participants the impact of cotton contracting farming on income and productivity matters and the vulnerability of farmers. This may result in the Government and the contracting companies improving policies and the framework of cotton contract farming thereby enhancing relationships and possibly boosting cotton agricultural productivity. Government can use the study to formulate investment policies for contract farming and reinforce its regulatory functions in the agricultural sector. The study results would also help other rural development agents who may be interested in promoting contract farming to use it as a tool of rural development.
1.11 Ethical considerations

Ethics refers to the matter of appropriateness of the researcher’s behaviour in so far as respecting the rights of those who are the subjects of the research or those who will be affected by the study (Saunders, Lewis and Thornhill, 2003:129). Consent of those affected directly or indirectly by the study will be highly considered such that there will be confidentiality and no deception (Silverman, 2010:155).

Use of informed consent entails giving as much information as possible about the research so that prospective participants can make an informed decision on their possible involvement. This view was also echoed by (Drew, Hardman and Hart, 1996:45) when they said that consent involves the procedure by which the subjects choose whether or not they wish to participate in a study. The participants will be allowed to express themselves voluntarily, free from any coercion so that they are able to decide to withdraw their participation at any time that they feel they should do so. The research data obtained will remain confidential unless participants agree to have the date disclosed. To reinforce issue of ethics and confidentiality, the questionnaire had a cover letter from the University to help convince the respondent that the study was duly authorised, legitimate and worth the participation of the respondents.

1.12 Research Limitations

The farming sector is huge and there are many contract farming arrangements that exist in the subsectors. Time could not permit to carry out as many studies of contract farming viability as may be expected. In order to mitigate issues of time limit, the researcher chose a sector of the farming sector and therefore restricted his study to cotton contract farming in Sanyati district. There was also a limitation caused by literacy issues on the part of the respondents, most farmers could not comprehend the questionnaire without assistance. On distribution of the questionnaire, the researcher chose to work with those that could read and understand the information sought in the questionnaire. Respondents who could not comprehend the questionnaire voluntarily decided not to receive and complete the questionnaire.
1.13 Delimitations/Scope of the research

The study was carried in Zimbabwe, a country in Southern Africa, more so with an emphasis in cotton contract farming arrangements. The study was carried out in Sanyati, a district in Mashonaland West province using a target population of 500 farmers. A sample of 200 farmers and four contracting companies were selected by random sampling to participate in the study. Questionnaires were sent to all participating farmers and employees of the companies. Personal interviews were used to gather data from management of the companies of which four executives and eight field persons were interviewed. Therefore, the sample size, including the chosen companies and its employees, was 162 respondents.

1.14 Data presentation and analysis procedures

The data collected was presented using statistical techniques including use of graphs, tables, narrations and spreadsheets. This was meant to make the presentation and analysis simpler and easier to read and interpret.

1.15 Summary

The chapter introduced the study undertaken by the researcher, when it introduced the background of the study where it premised on the foundational information of contracting farming, the research assumptions that were relevant to issues of assessing viability in contract farming, the research objectives and research questions that were pertinent in contract farming were examined. The hypothesis that underpin the study were listed. It then explored the significance and importance of the study to various stakeholders who would benefit by using the study. Issues of ethics and integrity on the part of the researcher in using information obtained from participants of the study were discussed. Limitations that were encountered by the researcher were also discussed including the mitigatory approaches used during the study.
CHAPTER II: LITERATURE REVIEW

2.1 Introduction

In this chapter, attention is given to the work of other researchers who have done similar studies on viability of contract farming and any other literature that is deemed relevant to the current area of study. Considerable attention is given to the purpose of literature review, sources of literature reviewed and discussion of the related literature.

2.2 Purpose of the literature review

Kumar, 2009 emphasised the importance of literature review when she said that every study of ongoing research needs to be connected with the work already done by others, to attain relevance and purpose; since there is hardly any research project which is totally different and unrelated with research work that has already been carried out or taken place”. Literature review is a method that can be used as the only way researchers can avoid cases of possible plagiarism, wherein a researcher may unintentionally repeat the research work that was already been carried out by other researchers (Cottrell and McKenzie, 2011). Literature review assists the researcher by identifying the relevant theories underpinning the study in question; and to show how the current study being carried out is different from what has already been published (Saunders, 2009). Literature review is also a tool that is used to highlight differences in opinion between researchers, contradictory evidence or findings and differences in conclusions and findings due to changing contexts and environment (Thornhill, 2009).

Conducting a literature review is a means of demonstrating the author’s knowledge about a particular field of study, including vocabulary, theories, key variables and phenomena, and its methods and history. Conducting a literature review also informs the student of the influential researchers and research groups in the field (Randolph, 2009).

A literature review surveys books, scholarly articles, and any other sources relevant to a particular issue, area of research, or theory, and by so doing, provides a description, summary, and critical evaluation of these works in relation to the research problem being investigated. Literature reviews are designed to provide an overview of sources you have explored while researching a particular topic and to demonstrate to your readers how your research fits within a larger field of study (Arlene, 2014).
2.3 Definition of contract farming

In literal terms, contract farming is defined as a contractual arrangement for a fixed term between a farmer and a firm, agreed verbally or in writing, before production begins, which provides material or financial resources to the farmer and specifies one or more product or process requirements, for agricultural production on land owned or controlled by the farmer, which gives the firm legal title to (most of) the crop (Minot and Ronchi, 2015).

The Contract Farming Resource Centre (CFRC) defines contract farming (CF) as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of farm products (CFRC, 2008). The institute further said that contract farming agreement may also include services such as access to technical assistance, production inputs, finance and transfer of technology (Singh, 2005). Prowse, 2012 described contract farming as a form of vertical integration within agricultural commodity chains that provides the firm with greater control over the production process as well as quantity, quality, characteristics and the timing of what is produced.

Contract Farming (CF), is defined as a system for the production and supply of land based and allied produce (crops and livestock) by farmers or primary producers under advance contracts, which has the essence of such arrangements being a commitment to provide an agricultural commodity of a type, at a specified time, price, and in specified quantity to a known buyer (Singh, 2010). In fact, CF can be described as a halfway house between independent farm production and corporate farming. Due to the efficiency (co-ordination and quality control in a vertical system) and equity (smallholder inclusion) benefits of this hybrid system, it has been promoted aggressively in the developing world by various agencies such as government, non-governmental organisations and private agrobusinesses. It basically involves four things – agreed pre-planting producer prices, quality, quantity, minimum or maximum land size to be supported and time (Singh, 2002). In the small producer contexts, CF is recommended as the only way to make small scale farming competitive as the services provided by contracting agencies cannot be provided effectively by any other agencies (Eaton and Shepherd, 2001). Contract farming also reduces transaction costs for the farmers as many of the transactions are absorbed by the contracting agency/firm (IFPRI, 2005).

Contract farming is motivated by a firm’s need to source agricultural products with specific qualities and in sufficient quantities (Minot and Ronchi, 2015) and the presence of appropriate geographical and political-economic conditions and an enabling business environment (Jia and
Bijman, 2013). Relevant geographical conditions are road infrastructure, access to water, soil types, climate, etc. Relevant political-economic conditions are land-rights policies, market regulation, trade policies and the risk of socio-economic shocks.

Contract farming is considered by most authors to be a positive development for the inclusion of farmers in markets (Minot, 1986; Eaton and Shepherd, 2001), food security (Bellemare and Novak, 2015), and global poverty reduction (Setboonsarng and Leung, 2014). Yet, there is serious concern whether smallholders are able to benefit from these arrangements, because the relative size of buyers most likely results in an unequal power relationship, which influences the terms of the arrangements (Sivramkrishna and Jyotishi, 2008; von Hagen and Alvarez, 2011).

Contract farming can further be defined as an agribusiness firm loaning out agricultural inputs, such as planting seed, fertilizers, credit facilities or technical extension services, to farmers in exchange for exclusive crop or livestock purchasing rights. It takes the form of vertical integration within agricultural commodity chains so that the agribusiness firm has the exclusive control over the production process and final product (Prowse, 2012). It is assumed that the investor has exclusive rights and control over the production of specific crop or livestock despite the presence of side marketing which is perpetrated by farmers.

Food and Agriculture Organisation, 2012 defined contract farming as an agreement between farmers and buyers: both partners agree in advance on the terms and conditions for the production and marketing of farm products. These conditions usually specify the price to be paid to the farmer, the quantity and quality of the product demanded by the buyer, and the date for delivery to buyers. The contract may also include more detailed information on how the production will be carried out or if any inputs such as seeds, fertilizers and technical advice will be provided by the buyer (FAO, 2012).

Bellemare, (2010) refer contract farming as agricultural production carried out according to an agreement between a buyer and farmers. According to (Wooded, 2003), contract farming refers to a range of initiatives taken by private agribusiness companies to secure access to smallholder produce; herein companies provide services to farmers and in return receive access to some or all of the farmers’ produce. Contracting firms are almost always relatively large processors, exporters, or supermarket chains. Rarely do small-scale traders, or even wholesalers offer farmers pre-planting contracts. This is not surprising, given the large fixed costs associated with contracting (Minot and Ronchi, 2015). Contract farming is induced by a firm’s need to source products with specific
qualities and in sufficient quantities and is more likely to be established in the presence of appropriate geographical and political-economic conditions as well as an enabling business environment (Jia and Bijman, 2013).

Under contract farming, the contracts could be of three types; (i) procurement contracts under which only produce sale and purchase conditions are specified; (ii) resource provision contracts wherein some of the inputs are supplied by the contracting firm and the produce is bought at pre-agreed prices; and (iii) total contracts under which the contracting firm supplies and manages all the inputs on the farm and the farmer becomes just a supplier of land and labour. Whereas the first type is generally referred to as marketing contracts, the other two are types of production contracts (Singh, 2010). The relevance and importance of each type varies from product to product and over time and these types are not mutually exclusive. But there is a systematic link between product and markets under the contract arrangement as contracts require definite quality of produce and, therefore, specific inputs. Also, different types of production contracts allocate production and market risks between the producer and the processor in different ways.

2.4.2 Theoretical framework guiding contract farming.

Minot, 1986 recognises Mighel and Jones, 1963 as the first proponents of contract farming formats and typologies. They said that contract farming may overcome certain constraints small-scale farmers are typically faced with in developing countries, such as access to resources (inputs, services, and information) and markets. Further they cited that in South Africa, black small farmers struggle with access to resources as a result of the discrimination which occurred using policies under apartheid (Eastwood et al., 2006). They classified contract farming into three types, namely; market specification, resource provision and production management. The market specification contract is where there is a pre-harvest agreement between farmers/producers and contractors/buyers on the conditions governing the sale of the crop (Prowse, 2012). The time, market location and the quality standards of the produce are specified. The contractor normally provides minimal material and technological input provisions, the farmer maintains the decision rights over his /her farming activities and bears most of the risk of his production activities.

Under resource provision, the contractor agrees to provide the farmers with resources such as agricultural inputs, fertilizers, seed, chemicals and extension services, to enable the farmers to
produce the product. The contractor also agrees to provide a market for the produce. The cost of the
inputs is recovered upon delivery of the commodity for sell (Bijman, 2008).

The last format is the production management contracts where the contractor/investor possesses
more control of the production processes compared to market specification contracts. The key
aspect of this type of contract is that the producer/farmer precisely agrees to follow the production
methods and adhere to the prescribed type and amount of required inputs (Minot, 1986).

Regardless of the format, the authors have agreed to the fact that contract farming is a specific form
of production supply chain system carried out by agribusiness companies to secure access to
agricultural products. Contract farming has its roots back to the 19th century when the mechanism
was used in the United States for sugar beets and peaches production (Baumann, 2000). Its early
use as a concept was also noted in Taiwan for sugar production under the Japanese colonial rule
(Runsten and Key, 1999).

2.5 An overview of contract farming

Contract farming has been practised for many years by many countries as a means by which
commercial agricultural production can be organised for both large-scale and small-scale farmers
(Eaton and Shepherd, 2001). The farmer agrees to provide land and labour to produce agreed
quantities of a specific agricultural product. Jones, (1983) said that the investors/buyers in turn
agree to offer services in the form of agricultural inputs (seed, fertilizer, chemicals, etc), finances
(production credit), and support services (extension, transport and logistics). Usually, agricultural
products should meet the desired quality standards of the buyer and the products must be supplied
at the time agreed and determined by the investor/buyer. The buyer makes a commitment to
purchase the contracted product and to make sustainable production support through the provision
of farm inputs, land preparation and technical services; whilst the farmer supplies the contractor
with the agreed farm product in the agreed quantities and quality (Will, 2013). Contract farming
agreements are by nature designed to benefit both parties; who are the contractor/buyer on one hand
and the contracted grower/ farmer on the other, a win-win relationship must exist (Eaton and
Shepperd, 2001).

It has been established that the nature, form and type of contract farming vary from crop or
livestock product (Will, 2013). Contract farming arrangements can be established formally,
informally, written or verbally. Burch, 1994 agreed with Pratab, 2007 that the agreement can be facilitated and concluded directly with the individual farmers, farmer groups or agents. Contracts can be renewed annually, seasonally or for a much longer term. In India, Nestle’ conducts contract farming through an agent to sign up dairy farmers, distribute inputs and collect milk thereby reducing operating costs.

Figure 1 diagrammatically show the relationships established under contract farming which one prerequisite to viable contract farming. Mishra, 1996 said that these components must operate and feed into each other harmoniously for contract farming schemes to be successful.

![Diagram of Contract Farming Relationship](Author)
2.6 Models of contract farming and issues of viability

Prowse, 2012 said that contract farming follows usually one of the five models, depending on the contracted product, the resources of the investor/buyer and the kind of relationship between the farmer and the investor. However, Roth, 2000 argued that all the contract farming models are somehow characterised by a formal contract entered between the farm and the agribusiness firm. Any contract farming arrangement can be modelled in either one of the following or the other;

i. Informal model

According to Minot and Daniels, 2002 this is the most transient and speculative of all contract farming models with a high risk of defaulting by both the sponsor and the farmer. In this model, contracts are simple, informal and seasonal. It is common with smallholder farmers and its success depends on the availability of quality extension services. However, interdependence of contract parties or long-term trustful relationships may reduce risk of opportunistic behaviour, Roth, 2002.

Decisions by sponsors on the type of model to follow should be made on the basis of market demand, production and processing requirements and the economic and social viability of plantation versus smallholder production. Where market requirements necessitate frequent changes to the farm technology with fairly intensive farm-level support from the sponsor, the permanent organization and maintenance of a production chain under a centralized model is vital. Organizations that require stringent processing standards rely largely on the centralized model. For crops such as tea, sugar and oil palm, with which farmers may have had little or no experience, sponsors are more likely to follow, where possible, the nucleus estate approach. Such crops require a significant long-term investment and, generally, immediate processing after harvest. However, the lack of adequate land or political opposition to estate development may dictate a centralized rather than nucleus estate approach. Where quality control is not the predominant concern, the informal model may suffice. In some examples, sponsors use third parties or intermediaries to subcontract production out to farmers, Springfellow, 1994.

If the sponsor considers that a field trial is warranted prior to the introduction of a crop to farmers or that a guaranteed minimum throughput is required for the processing facility, a nucleus estate model is often most appropriate. Where capital investment in processing facilities is considerable and the number of contract farmers is high, either the centralized or the nucleus estate structures can be used, accompanied by strong managerial inputs and backed by formal contracts. The informal
model, which may become more widespread in the future, is characterized by seasonal, short-term crops with only minimal material support to farmers, Little and Watts, 1994:8.

Often, the operational structure of projects changes over time. For example, the distinctions between the centralized model and the informal model are sometimes blurred. Successful individual informal developers may expand their operations into activities that eventually evolve into the centralized category.

In Zimbabwe’s agricultural sector, this form of model is existent as the contracting companies rarely create and issue out contracts of agreements with farmers. The relationship, for example in cotton and maize farming, is usually seasonal. The next farming season is characterised by companies and farmers scouting for new engagements.

**ii. Intermediary model**

This is where the buyer engages an agent or intermediary who then actually contracts the farmers. This model is used successfully in India by Nestle to contract a large number of small-scale milk producers (Pratab, 2007). The intermediary or agent usually provides services, such as extension services, and purchases the crop or livestock product on behalf of the contractor. Roth, (2002) argued that the model presents challenges when the contractor wants to give incentives to farmers.

The practice by Nestle’ India is also done by Nestle’ Zimbabwe where it has engaged agents to collect milk form farmers on its behalf through aggregating its purchasing processes. Colcom Foods also has an arranged that fits the intermediary model when it engages agents to aggregate pigs from farmers for pork processing (Kandutu, 2013).

**iii. Multipartite model**

This model is characterised by the involvement of various organisations like government regulatory bodies, private organisations and financial institutions.

According to Kirsten and Sartorious, 2002 it was noted that care should be taken in this model to reduce possible political interference, which would normally exacerbate the problem of defaulting.
Our contract farming model in Zimbabwe best falls in this category more so in the cotton and maize production subsectors. We have Government using Command Agriculture to reach and engage farmers while the private sector companies are doing contracting farming on same crops. Side marketing has been prevalent, and many companies have lost their investment as farmers divert their crop output to alternative buyers.

iv. Centralised model

In the centralised model the buyer’s involvement varies from minimal input provision to control of most of the production aspects. Will, 2013 said that it is the most common model and is characterised by a single buyer providing services to many small, medium and large-scale farmers, e.g. The Cotton Company of Zimbabwe’s cotton production model. Usually, issues of quantity and quality are determined at the beginning of the season. In a centralised model, all processes at the farm are closely monitored by the contractor/buyer.

v. Nucleus model

In this case the contractor or investor of the project also owns and manages an estate plantation, which is usually close to the processing plant. The estate is often fairly large in order to provide some guarantee of throughput for the plant, but on occasion it can be relatively small, primarily serving as a trial and demonstration farm. The buyer also buy from contracted farmers around the estate, e.g. Tongaat Hullet and Tanganda Tea Company. This model guarantees supplies. Eaton, 1998 said that the model is also ideal for research purposes. It is what Woodend, 2003 referred to as the out-grower model.

The nucleus estate model is common in sugar cane in Triangle and Chisumbanje and tea/coffee plantations located in Eastern Highlands where private firm organisations sponsor farmers.

2.7 Evolution of Contract farming in Zimbabwe

Many of the companies started engaging farmers in contract farming during or after the early 1990’s. Prior to this, the marketing of many agricultural products was regulated by the State through a number of statutory Marketing Boards. In 1992 the government embarked on the World
Bank’s recommended Economic Structural Adjustment Programme (ESAP) which encouraged the deregulation of agricultural marketing and liberalisation of the economy. In the agricultural sector, this saw the commencement of liberalisation programmes for some of the agricultural products that included cotton, grains and oilseeds, coffee, dairy products, beef and pork. The programme provided an increase in opportunities for companies to become involved in contract farming (Mujeyi, 2013).

In the cotton subsector, contract farming was started by the Cotton Marketing Board (CMB) in the late 1992-3 using funds sourced from the World Bank in an effort to help farmers whose crops had been devastated and impoverishing by drought of 1992 (Muroiwa, 2008). The number of contracted cotton farmers have continued to increase with each season in tandem with increasing cotton contracting companies. Poulton and Hanyani-Mlambo, (2008), said that loan recovery in the cotton sector was as high as 98% when the investors were still two company, Cargill Zimbabwe and Cottco, issues of side-marketing were low only up until the players increased thereby reducing loan recovery rates to below 60%. As a result, farmer support rate by merchants shrunk as investors tried to reduce the risk of losing funds through unpaid loans (Kupeta, 2007). According to the Agricultural Marketing Authority, (2017) and the Cotton Ginners’ Association, (2017), there were more than eight cotton contracting companies in Zimbabwe operating under the centralised system. The increase in buyers had provided cut-throat competition amongst buyers thereby promoting issues of side-marketing, dishonesty between farmers and contractors and poaching of one another’s seed cotton bales. However, there were no agents in Zimbabwe’s cotton contract farming schemes (Zhou, 1999). The companies deal directly with individual farmers, farmer organisations or groups, which facilitated dialogue and interaction between the farmers and the contractors.

Other schemes of contract farming exist in sugar cane production plantations in Triangle and Chisumbanje while there is a vast presence of tea and coffee contract farming in the Eastern Highlands being sponsored by Tanganda Tea Company and Eastern Highlands Plantations. The model in these arrangements follow the nucleus estate with out-grower schemes feeding into them.

In the poultry subsector, contract farming and out-grower arrangements are being carried out by organisations such as Irvine Day Old Chickens, Charles Stewart and Peppertree Day Old Chicks (Munyuki-Hungwe and Matondi, 2006).
Maize, wheat and other grains have had contract farming support from the government of Zimbabwe using the Command Agriculture model. The arrangement is a multipartite model (Muroiwa, 2008).

There is an increased number of small-scale farmers participation following the fast track land reform program which transferred over 90% of the commercial white owned farms to local small holder farmers. Dawes Murota, Jera, Masara, and Sola, 2009 states that the resettled farmers lack basic inputs like seed, fertilizers, transport to take their produce to the market and farm equipment. Given the present scenario in the country contract farming is of great benefit to small scale farmers.

2.8 Advantages and disadvantages of contract farming

Contract farming is an all-inclusive agribusiness model, and it is fundamental that both the farmers and agribusiness investors benefit and make profit from the arrangement (Will, 2012). Will, 2012, further defines that contract farming (CF) has a joint undertaking through which the farmers are linked to the buyer’s business model. This relationship creates an interdependence system where the buyer has total reliance that the produce from the contracted crop or livestock will feed into the agribusiness value chain (Prowse, 2012). As such, it becomes integral that production strategies formulated between the two parties agree and are executed to the advantage of the parties.

Contract farming is recognised globally as an institutional arrangement for facilitating and accelerating agricultural commercialisation (Bellemare, 2010). It entails a contractor providing farmers with inputs, technical advice, in-kind credit, and market services; while the farmer commits to produce a specified quantity and quality of an agricultural product which is sold exclusively to the contractor, usually at a predetermined price (Beets, 1990). The description above shows that contract farming is an arrangement between commercial entities and farmers that is meant to facilitate and increase agricultural productivity and commercialisation. By commercialisation, this is meant to bring out the issues of viability of contract farming. Jones, 1983 went further to indicate that the arrangement is pro-poor peasant farmers through which they are enabled to participate in a market economy through the establishment of forward and backward linkages.

Contract farming come with several advantages to the smallholder farmer such as access to credit facilities without collateral security, access to agricultural inputs and extension services, transfer of technology and more importantly gaining access to a more reliable commodity market for the
farmer’s produce (Minot, 2007). Contract farming can also help to integrate smallholders into commodity chains and allow access to appropriate technologies for improving their productivity. On the contracting firm’s side, contract farming is viewed as a solution to land problems. Most large tracts of suitable land are now either traditionally owned, costly to purchase or unavailable for commercial development. Contract farming, therefore, offers access to crop production from land that would not otherwise be available to a company, with the additional advantage that it does not have to purchase it (Coulter et al, 1999).

To summarise what (Glover, 1983; Eaton, 1998b; Dolinsky 1992; Pratab, 2007) and (Glover and Kusterer, 1990) have said, it is a fact that both parties engaged in contract farming can benefit. On one hand, farmers benefit from inputs and packaging materials are supplied by the contractor while at the same time and securing a guaranteed market for their product, thereby reducing issues of market uncertainty. On the other hand, merchants/investors benefit from having a guaranteed supply of agricultural products that meet their specifications regarding quality, quantity and timing of delivery, (www.fao.org accessed on 25/12/2018).

There are disadvantages of contract farming that contracted farmers face among them lack of contractual bargaining powers, favouritism of already resourced farmers thereby leaving out marginalised smallholder peasant farmers (Singh, 2002; Simmons et al., 2005). Contract farming does not allow value addition by farmers which could increase the selling price of their produce (De Schutter, 2011). While there is access to finance through contract farming, it was noted that the arrangement resulted in indebtedness to farmers and in most cases, it creates a dependence syndrome (Silva, 2005). Grosh, 1994 and Little, 1994 said that smallholder farmers in contract farming are faced with unequal bargaining power which eventually creates monopsony power of investors (Glover, 1990).

When assessing the viability of contract farming, certain intervening factors need to be considered because they are critical and without them it would be naïve to assume that these factors do exist (ILO, 2011). The factors include the following issues that pertain to side marketing of the contracted crop or livestock as farmers seeking better producer prices by diverting the produce to other buyers who offer attractive prices. The farmers can become profitable and viable, but the sponsoring investors loses the crop thereby affecting production and ultimately planned profitability (Poulto and Hanyani-Mlambo, 2008). The cotton sector was characterised by this factor in the seed cotton marketing season of 2009 where there was rampant and uncontrollable side marketing. The situation resulted in government mooting the idea of re-establishing the Agricultural Marketing
Authority which body would regulate the sector. The investor may give inadequate agricultural inputs which, when applied to crops or livestock, fail to improve productivity (Mujeyi, 2013). Fail to agree on viable producer price between the farmer and investors (Prowse, 2013; Will, 2013). This situation is the most common in the agricultural sector. Farmers have low bargaining power and therefore they are price-takers. Vague or ambiguous contract farming agreements that tend to favour the contractor because of inequitable bargaining power (Jones, 2011). Another factor was that in most cases there are informal contracts of contract farming. Farmers to a large extent lack knowledge of what regulations that establish the relationship with contractors. Lack of trust and understanding between the contractor and farmers and the tendency to prescribe unviable sales quotas that leave farmers vulnerable or exposed. When side marketing was perpetrated by farmers while contractor could not deliver adequate inputs, mistrust developed between the parties. The size of land under production also influence the issue of viability, small pieces of land may not necessarily produce the quantity of produce that result in profitability, also issues to do with land tenure influence viability. The experience of the farmers also plays a great role in assessing viability of contract farming. New farmers in contract farming usually face challenges up until they become experienced. The farmer's scale, years of experience, availability of inputs, crop grown, production area and access to finances were all identified as the significant factors affecting contract farming viability. (S Afr. Jnl. Agric. Ext. vol.43 n.2);

Other problems that affect viability were cited as late payments, lack of technical support and unexpected raising of high-quality standards. Farmers do not have much power from contractors, while the contractors get, at times frustrated with farmers who divert inputs to other uses outside the contract farming agreement (Pandit, Pandey, Rana and Lal, 2009).

Furthermore, it was revealed that farmers did not have information for some important questions. For example, the majority of farmers did not know the cost of cutting, loading and transportation of sugarcane. These costs become known to the farmers on the day they received their pay slips where the costs were shown as deductions (Madola, 2005)

Babatunde, 2012 said that in developing countries farming has failed to provide enough household income, therefore, farmers supplement through off farm income. It is then normal to find farmers diversifying their activities into off ventures. The practice is mostly carried out by farmers who have better education and other skills they can apply to generate income. Coincidentally, these same farmers seemed to produce much more than those on full time farming.
Productivity and viability can also be affected by the involvement of farmers advocacy groups such as associations and unions. These advocacy groups promote fairness in the way contract farming frameworks are designed and implemented (Sick, 1999 and Kolady et al., 2008). The way that farmers were organized influenced the level of services that they received from investors in the form of inputs, extension services, technology, pricing matters and conflict resolution. Further the association of farmers perform the advocacy function of negotiating favourable terms and conditions with contracting firms (Stessens, Gouet and Eekloo, 2004). The other critical role that unions or association perform is organising production, marketing linkages and value chain analysis for the betterment of the farmers (Stessens et al., 2004).

2.9 Challenges faced in contract farming that affect viability

By their nature contract farming arrangements are designed to benefit both the contractor and the contracted farmer. There are challenges which often emanate from contract farming and drawback the good cause and intended benefits. Potential disincentives are common in the negative case of badly crafted contract farming agreements, not transparent relations and deceptive practices (Will, 2013:25). Roth, 2002 elaborated ill-designed contract farming schemes as those in which the farmers risk losing their decision-making autonomy. In some cases, high production, marketing and investment risk comes about because the contract farming business was poorly planned and thus proved not viable. These articles are stating that proper due diligence, planning and well crafted contract agreements play a role in promoting good contract farming practices that result in profitable relationships.

Debt burden on the part of the farmer can be a challenge. However, this is mostly a problem where there is inadequate livelihood and asset consideration at the planning stage. In addition, the farmer may have weak negotiation power, particularly in cases where the buyer exercises monopsony market power. Zimbabwe contract farming inputs have been proved to be a bit expensive compared to neighbouring countries. Because of the inputs cost, debt burden is created on the farmers (Mujeyi; 2013)

Springfellow, (1996) pointed out that there is also the problem that farmers do not understand the terms and conditions of the contract if the contract is not printed in vernacular and no proper education and been given to the farmer about the contract. Such misunderstanding usually leads to defaulting and mistrust. This is an element of education on the part of the farmers engaging in contract farming that they must be literate enough to read and understand contracts. There are a few
cases where interpretation of agreements has been carried out, the assumption is that farmers are acknowledgeable, more so if they are repeat contract farmers.

As a result of engaging in contract farming, companies incur high costs of infrastructure for organising and assembling supplies from many dispersed producers (Bijman, 2008). Transportation of produce from farmers to the market has implications on the pricing of commodities. Dishonesty by some farmers can lead to reduced farm output due to inputs diversion by producers to competing crops. Such unreliable business attitudes of farmers lead to high credit default rates. Takavarasha, 1994 indicated that poaching by competitors and side marketing by farmers lead to the undersupply of buyer’s needs. Kupeta, 2008 defined side-marketing as occurring when the farmer sells the produce to a third party or a merchant/buyer who is not part of the contract. Defaulting is failure to perform a task or to fulfil an obligation, especially failure to meet a financial obligation. Key elements of side marketing and diversion of products is caused by poor commodity prices and inadequate supply of inputs by companies which leaves the farmers with no choice but to create avenues of dishonesty (Prowse, 2012).

2.10 The role of regulatory bodies in contract farming

Regulators may also adopt more self-contained pieces of legislation that aims to regulate all usage of contract farming in the country, regardless of the underlying commodity. Core aspects of such legislation often include the requirements that agreements be in writing, that certain minimum content clauses are included, as well as clear procedures for resolving disputes or ensuring enforcement. The scope of specific contract farming legislation is not limited to certain commodities. Its scope is limited by definition of contract farming adopted in the country (US Department of Justice, 2012). Good regulatory frameworks must be able to address issues of competition law, unfair trading, conflict resolution and bring amenity within players.

Appropriate regulatory frameworks are important for clear and balanced contract farming arrangements. Regulations recognizes people’s rights and protects those rights (DFID, 2011). Frameworks give security to contractual relations and clarifies the mechanisms available to facilitate agreed solutions (De Schutter, 2011). From a public policy viewpoint, legislation brings stability to agricultural policies, because laws by the nature of their creation process are difficult to change. For the parties involved in contract farming, the sustainability and enforceability of rights provides legal security. They know that their legal rights and obligations will be respected and that they will remain constant in the future. This can give them the peace of mind they need in order to
enter into an agricultural production contract (FAO, 2017). While governments should ensure that contract laws provide suitable protections from abuse, they should not interfere with the market terms of the agreement. For example, dictating pricing formulas or controlling the purchase price through a marketing board may unduly interfere with the market relationship (USAID, 2010).

Following the emergence of contract farming over the years, governments were found to be instrumental in regulating the arrangements. It was expected that regulatory bodies were responsible for designing the regulatory framework that provide an enabling environment for contract farming (Sharma, 2018). The government play an integrating role for the agricultural sector thereby ensuring fair play, enhancing productivity and maintaining assurance of support. This involves ensuring that farmers are paid better prices for their produce and that farmer respect contract farming agreements, and acts in dispute resolution.

Over and above the facilitation of regulatory function of the implementation of contract farming agreement, the government is also concerned with other laws such as labour laws, competition laws, safety and quality laws, property intellectual rights and human rights regulations.

It was advised that governments should focus on attracting private sector investment in the agricultural sector and mobilising farmers to engage with these investors so that a strong and competitive agrarian environment where the farmers and investors engage freely for the mutual benefit of each party (Bellemare, 2015).

There are three primary regulatory bodies in Zimbabwe which are the Agricultural Marketing Authority, Tobacco Industries and Marketing Board and Pig Industries Board. These are in the Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement. They are charged with the responsibility of carrying out the regulatory functions in the agriculture sector.

2.11 Factors affecting viability of contract farming

In general terms, viability is defined as the chances of success that contract farming can realise in monetary terms and productivity (Odunze et al., 2015). Viability in literal terms defines profitability, the surplus obtained after paying off expenses. This being the case, there are many factors that affect viability among them are the following that are depicted in the diagram:
Expenses include cost of agricultural inputs, chemicals, harvesting, labour and transport charges. In most cases farmers forget to include their family labour cost when calculating profit. (Odunze et al., 2015) pointed out that viability has factors that impact on it which include social, economic, biological and environmental.

Environmental factors look at issues such as the weather and suitability of a certain area for agricultural purposes, more so the amount of rainfall received during a rain season. Most farmers in Zimbabwe depend on rain fed agriculture, therefore, during seasons of a drought or below average rainfall, viability of contract farming activities was likely to be affected (Ndhovu et al., 2015).

Economic factor describes issues to do with credit facilities and their pricing of those facilities which affect profitability, repayment of the advances and pricing of commodities, when prices firm and the harvest is good, farmers receive a sizeable value for their crops and livestock. But when the economic events influence low prices for crops and livestock, low sales values would be received, farmers were likely to be affected and viability would be compromised (Van Niekerk, 2015).

Social factors consider land tenure, household labour, gender equality concerning contractual capacities of women. Social factors also concern the level of literacy of the contracted farmers, their capacity to interpret agreements and the power to bargain with investors. Also, social moral that both parties to contract farming do not feel obligated to observe the tenets of the agreement. The investors have no ethical conscience to give full input package as contracted while the farmers find
side marketing lucrative and divert the crop or livestock to avoid paying back advances or loans under contract farming (Rani, 2007).

Biological factors consider the experience of the farmers in producing the contracted crop or livestock. The experience impacts on issue of productivity arising from past production records, timely giving of agricultural inputs and the adequacy of the inputs given to farmers. In the cotton sector in Zimbabwe, there were cases where inputs were given to farmers who know nothing about cotton production. The inputs were diverted from production to the black market. Therefore, issues of following a due process of vetting of farmers become paramount (Gambiza, 2000).

It is fundamental to note that contract farming functions well where the relationship of the parties to the agreement have been defined and well agreed. The following diagram is a suggested relationship establishment between the farmers, investors, regulatory body and farmer associations.

Fig 2.3 Contract farming chain

![Contract farming value chain diagram]

In a study carried out on contract tomato production in Northern Nigerian state of Kano, the econometric result indicated that there was a high level of participation in contract farming. Participation in contract farming invigorated desirable effects on transaction cost, productivity, income generation, and smallholder household income and poverty alleviation. This implied that
there was viability in contract farming. There were though some factors that swayed farmers from contract farming that included the level of education, land size, extension services, and loan amounts and the interest charges, terms and conditions of the arrangement (Kutawa, 2016).

Contract farming was prevailed more in remote areas were a prime resource for contract farming especially when there was accessibility and the agroecological environment was conducive because such areas had underdeveloped markets and lack amenities (Kumar, Roy, Joshi and Adhikari, 2016). Concern was raised though that such areas can become a high breeding ground for monopsonistic powers when farmers lacked other contract farming and market options (Kumar et al., 2016). The study concluded that contract farming was significantly more profitable than independent production achieved on the back of higher price realisation, agronomical training and provision of quality agricultural inputs.

Summary

The chapter has looked at literature review that is relevant to the area of study on viability of contract farming. It discussed the definition of contract farming citing from different authors. Different models of contract farming that are practiced by companies were discussed. The theoretical and conceptual framework that guided contract farming were explained in greater detail while supporting diagrams to simplify the illustration by way of diagrams were included. Literature on factors that was relevant at looking issues affecting the viability of contract farming were looked at including the contractual relationship between contractors and growers and the producer prices offered to farmers for agricultural produce. The chapter also explained the different models of contract farming, the evolution of contract farming in Zimbabwe, the advantages and disadvantages of contract farming. The role of regulatory bodies was extensively discussed and how these bodies played their role in contract farming. Relevant authors were cited to help guide the researcher. The next chapter is going to look at the Methodology of carrying out the research.
CHAPTER III: RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter looked at literature review related to contract farming. The chapter started by reviewing the importance of literature review, followed by a citation of the sources of the literature reviewed. The literature review discussed contract farming in terms of its definition, theoretical framework, benefits, challenges and the role of the regulatory bodies in contract farming. This chapter is about the methodology used in terms of the research design, the research subjects, the research tools used, the data collection procedures, the data presentation and analysis procedures. The chapter ends with a summary of the research methodology.

3.2 Research design/plan

The researcher chose a survey research design because it best served to answer the research questions and the purposes of the study. The survey research is one in which a group of people or items is studied by collecting and analysing data from people or items considered to be representative of the entire group. Only a part of the population is studied, and findings from this are expected to be generalized to the entire population (Nworgu 1991:68). McBurney, (1994:170) defines the survey assessing public opinion or individual characteristics using questionnaire and sampling methods. Drew, Hardman and Hart, 1996:10 said that a research design is critically important and essentially involves a rigorous and meticulous planning procedure; which should include the operational details of conducting the study and recording data. Therefore, research design is an explicit plan for action showing sampling and data collection details.

3.3 Sampling method

The study used stratified random sampling to select farmers who completed the questionnaire. Farmers were attending a training session in Sanyati districts at Nemangwe Common Buying Point (CBP) in Mutimutema village, Ganyumbu and Nyatsato cotton buying points. The researcher selected Sanyati district because of its high productivity of cotton and the advantage that it was coincidentally receiving training from contracting companies during the period of the research. The training was conducted on 24 January 2019 where about 300 farmers attended.
3.4 Study Population

The target population for this research included the cotton farmers and contracting companies’ representatives. In addition, the farmers and companies were considered appropriate for the study because they constituted the key participants in the research. Most farmers and the companies have had many years of engaging each other in contract farming.

3.5 Sample size

For some studies, the population may be small enough to warrant the inclusion of all of them in the study. It is not always the case when the study involves many people or elements which all cannot be studied. That portion of the population that is studied is called a sample of the population (Nworgu, 1991:69). A sample in this study is, therefore, a smaller group of elements drawn through a definite procedure from an accessible population. The elements making up this sample are those that are studied. The sample size for the study was 300 farmers out of a population of 500. This was derived from information that the area chosen to be studied had about 500 active cotton farmers. On the day of administering the questionnaire, only 300 farmers turned up to attend a training workshop.

3.6 Sampling Techniques

A stratified random sampling procedure was used for selecting the participants in this study. This technique was employed to ensure an equal representation of the variables of the study. This was achieved by selecting equal males and females from all contracting companies to participate in the study.

3.7 Data Collection techniques

The researcher designed an interview schedule and questionnaire as two of the data collection instruments for use in collecting data from company representative and the farmers during the study.

Strategies used in counteracting the weaknesses of the techniques used in data collection are given. The interview schedule and questionnaire used in the study are given in Appendix II. The questionnaire had three sections which looked at Part A – demographical information about the
farmer, Part B was seeking responses about contract farming issues and Part C was general questions.

The interview questions were designed to gather data about contract farming from the perspective of the companies engaged in contract farming.

The questionnaire instrument was structured in the modified Likert fashion, on a 4 – point scale, ranging from “strongly agree” (SA), through “agree” (A), “disagree” (D) to “strongly disagree” (SD). Subjects were then instructed to respond to their degree of agreement with the statements contained in the instrument.

3.7.1 The questionnaire technique

Definition of the questionnaire technique

The technique involves the use of a sequence of questions designed to obtain information upon a subject from an informant (Casley and Lury, 1991). Walliman, 2005 shared the same view when he defined the questionnaire technique as a method of collecting both qualitative and quantitative data from acknowledged people by asking them questions. However, Drew et al, 1996 said that the questionnaire represents the link between the researcher and the data.

The benefits of using the questionnaire technique

The questionnaire technique is flexible. Respondents have enough time to respond given questions at their own convenient spare time. The respondents answer the questions in the absence of the interviewer thereby reducing bias which is created when answering the questionnaire in the presence of the researcher who by nature can deliberately cause bias unintentionally. The technique is somewhat cheap as it does not require a lot of trained skills for the interviewers to carry out the exercise. Questions are answered by individuals and in privacy thereby improving the possibility of the accuracy and reliability of the data gathered. The researcher observed that the questionnaire provided an instance response from the farmers. The respondents also did not require a lot of time to complete the questionnaire.

Disadvantages of the questionnaire technique

The technique is not investigative enough to unearth new insights since it does not allow for discussion or interrogation from the researcher. The informant concentrates on a given set of questions only. An attempt can be made to include questions which can cross reference and link to
solicit more data from the informant. Use of telephone can be used to follow up on questions to create enthusiasm and a sense of involvement on the part of the respondents.

The researcher delivered the questionnaire to Sanyati in time for training sessions that were to be conducted on 24 January 2019. The training of farmers was located at cotton common buying points for the convenience of the participants. After introduction of the delegates and purpose of the training, farmers were advised of the questionnaire and its purpose. They were asked to voluntarily assist by completing the questionnaire to help facilitate the study. During the process of completing the questionnaire it was observed that some respondents could not complete the questionnaire without assistance, issues of literacy become prevalent. Fifty of the respondents returned the questionnaire uncompleted.

3.7.2 Face to face interview technique

Definition of face to face interview technique

Face to face interview is a direct interaction between two parties, wherein the interviewer seeks information from the interviewee (Grey et al, 2007). Kahn and Cannel, 1957 said that it is an interview whose aim is a purposeful discussion between two or more people in which the party seeking information records what has been said accurately and completely. Conducting a face to face interview provides the researcher with an opportunity of interacting with people compared to making the respondents fill questionnaires (Blanche and Durheim, 2002).

Benefits of face to face interview technique

Face to face interviews gather information instantaneously and responses are to a large extent guaranteed. The technique gives the interviewer an opportunity to raise searching questions and seek clarity where necessary. The respondents may misunderstand or miss the meaning of the questions or some questions may be vague. The data collection become immediate, spontaneous and reliable thereby removing elements of doubt and ambiguity. The technique allows the interviewer a chance to read non-verbal responses and he/she can adjust the discussion accordingly.

The researcher arranged meeting with the employees of the contracting companies for the administration of the face to face interviews. The meetings were secured by telephone appointments and were held at the respondents’ office at their convenient time. During the meeting, the interviewee was advised that the research was an academic research in fulfilment of the degree programme. The research produced the letter of introduction from the University. First, the
researcher introduced the research subject, the objectives and the research questions to loop in the interviewee into a constructive discussion. Thereafter, the interview began as the researcher lead the interview and took notes to capture the interviewee’s responses.

**Disadvantages of face to face interview technique**

Though the responses are immediate, face to face interviews are by nature expensive as they require trained skills to carry them out. Time management is important as well as organising appropriate appointments for meetings. Training is required of the interviewer for him/her to carry out effective and efficient interviews before undertaking data gathering.

**3.7.3 Document analysis technique**

**Definition of document analysis technique**

Hart, (1998:13) said that it is the selection of available documents on the topic which contain information, ideas, data and evidence written from a particular stand point to fulfil certain aims or to express certain views on the nature of the topic and how it is to be investigated; and the effective evaluation of these documents in relation to the research being proposed. Another definition given by Strauss and Corbin, 1990 said that it is the use of research reports, theoretical papers, diaries, documents, manuscripts, catalogues and biographies as primary data. Some authors refer to it as literature review or desktop research.

During document analysis, the researcher gathered demographic information about the respondents, contract farming information and general volunteered data that was relevant to the study. The face to face interview technique gathered information about the history of the companies in contract farming, issues of productivity, pricing of cotton and challenges that faced the companies. During an interview with the regulator, AMA, matters of the role of the body in agriculture with emphasis on contract farming were discussed including issues of new investment in agriculture, challenges and opportunities within the sector.

**Advantages of the document analysis technique**

The technique gives the researcher a better understanding of the issues around the topic through use of literature that has already been done other researchers about study. The technique is relatively
cheap since it can be carried out from a desktop. It allows the researcher to make use of information that has already been gathered, filtered, organised and summarised.

**Disadvantages of the document analysis technique**

By making use of information gathered and summarised by other researchers, this can provide issues of suitability and relevance of findings and conclusions to the research problem at hand. The reason is that the purposes for which the data was gathered and documented may be different from the purpose of the current research. The researcher may want to point the areas of divergence or variance.

**3.8 Validation of the instruments**

The questionnaire designed for the study was subjected to a validation process for face and content validity. Face and content validity have been defined by McBurney (1994:123) as follows:

- Face validity is the idea that a test should appear superficially to test what it is supposed to test; and

- Content validity is the notion that a test should sample the range of behaviour represented by the theoretical concept being tested.

In the validation process of this study, copies of the questionnaire and copies of the research questions were given to some farmer and company representatives. These experts went through the research questions and the questionnaire carefully to evaluate the appropriateness and adequacy of the instruments. They suggested structuring the questionnaire in the Likert fashion, on a five-point scale instead of the 4-point scale. The researcher observed that the Likert scale was preferred because according to normal Likert scale, strongly agree assigns 5 points, agree 4 points, undecided 3 points, disagree 2 points while strongly disagree 1 point. Many researchers and educationists feel that there was no logical enough reason to assign the weight of 3 points to somebody who is undecided on a given issue. Therefore, the modified 4 Likert scale is preferred. However, the other useful observations and suggestions by the experts were modified, and the corrections were made.

After validating the questionnaire and interview schedule, a pilot testing was carried out in Muzarabani, Mashonaland Central Province, on the instruments using 5 farmers and 2 company representatives. There are two dominant cotton contract farming companies doing business in
Muzarabani and these are Cotton Company of Zimbabwe and Southern Cotton Company. Time was a limiting factor to access more farmers to do a pilot test of the questionnaire. The aim of the pilot test was to see:

- how the subjects would react to the questionnaire and interview schedule;
- whether the items of the questionnaire were clear enough and easily understood;
- whether there was the need to include more items in certain areas of the questionnaire;
- whether there were some items to which they would not be comfortable to respond; and
- to determine the workability of the proposed method of data analysis for the study.

However, from the pilot test, the researcher was able to understand the ambiguity of some items and he had to modify the questionnaire and interview schedule to suit sentiments raised by the respondents. The researcher also modified the questionnaire to use simple English for ease comprehension by the respondents.

After the pilot testing and all necessary modifications, the questionnaires were administered directly to the chosen sample of the study. Two hundred copies of the questionnaire were given out and one hundred and fifty copies were successfully completed. Fifty were returned uncompleted. The researcher worked with colleagues who were on the ground training farmers who came handy for the data gathering exercise.

3.9 Data presentation and analysis procedures

The data was captured using Statistical Package for Social Scientist (SPSS) Version 23 and was summarized using Pearson’s Correlation and descriptive statistics.

To address the impact of contract farming on farmers’ productivity the study, Frequency Distribution statistics were used to present quantitative descriptions in a manageable form. To address the third objective of the study, descriptive statistics were used to measure ways of strengthening contract farming arrangements in the agricultural sector in Zimbabwe. The analysis used a bar graph to show ways of strengthening farming arrangements in the agricultural sector. Measuring the differences in productivity and income levels between contracted and non-contracted farmers was attained using t-test statistics to obtain an inference that contract farmers have better
productivity than non-contracted farmers. To investigate the role of the regulatory bodies in contract farming a bar graph was used to present the data in a manageable form. The researcher used descriptive statistics to present quantitative descriptions in the form of bar graph to show ways in which contract farming arrangements could be improved for the benefit of concerned parties. The researcher used one tailored t-test to obtain an interference that contracted farmers have better productivity than non-contracted farmers.

3.10 Summary

The chapter looked at the research design, the researcher used the survey design to gather data from the research elements. A population of 500 farmers and contracting companies’ representatives were used. The actual sample was 300 taken using a stratified random sampling technique. In order to gather data, the researcher designed a questionnaire for use by farmers and an interview schedule for the companies. The advantages and disadvantages of the survey design, the questionnaire and interview techniques were explained to help guide the research. The research instruments were subjected to validation so that they captured relevant research information. This was achieved through pilot tests. The use of various data presentation methods were explored using bar graphs, tailored t-test, descriptive and narrative statistics so that the objectives, research questions and hypothesis of the research were fully answered.
CHAPTER IV: DATA PRESENTATION AND ANALYSIS

4.1 Introduction
Findings of the study are presented in this chapter. The main purpose of this study was to assess the viability of contract farming in Zimbabwe. The chapter presents the findings of the study. The first part presents descriptive statistics and the second presents inferential statistics.

The background characteristics of the respondents which were looked into the study include the age of respondents, marital status of respondents, source of income of respondents, type of ownership, type of farmers, experience in farming business and area of production under contract farming.

4.2 Rate of respondents
Of the distributed 200 questionnaires, 75% were completed, while 25% were returned uncompleted. The 25% advised that they did not participate due to illiteracy issues and other reasons.

4.3 Demographic Information of Respondents
4.3.1 Age of respondents
Figure 4.1 indicates that the 47.33% of the respondents were between 31 to 50 years of age, 19.33% were between 51 to 65 years of age, 18% were between 18 to 30 years and 15.33% were above 65 years. This means that the majority of the respondents were farmers in the age category of between 31-50 years old.
4.3.2 Marital Status of Respondents and Source of Income

Table 4.2 below which shows Marital Status* Source of Income cross tabulation reveals that 59% of the respondents were employed, 26% were receiving income from pension and 15% of them relied on part time jobs. However, 20% of them were single, 47% of them were married, 18% were divorced and 15% were widowed. The findings reveal that the majority of the respondents were married. This concurs well with Babatunde, (2012) who says that in developing countries farming has failed to provide enough household income, therefore, farmers supplement through off farm income. It is then normal to find farmers diversifying their activities into off ventures. This practice is mainly carried out by farmers who have better education and other skills that they can apply to generate income.

Table 4.2: Marital Status of Respondents * Source of Income Cross tabulation
### Other Sources of Income

<table>
<thead>
<tr>
<th>Marital Status of Respondents</th>
<th>Employment</th>
<th>Pension</th>
<th>Other</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>22</td>
<td>1</td>
<td>6</td>
<td>29</td>
<td>20%</td>
</tr>
<tr>
<td>Married</td>
<td>52</td>
<td>11</td>
<td>8</td>
<td>71</td>
<td>47%</td>
</tr>
<tr>
<td>Divorced</td>
<td>12</td>
<td>13</td>
<td>2</td>
<td>27</td>
<td>18%</td>
</tr>
<tr>
<td>Widowed</td>
<td>3</td>
<td>14</td>
<td>6</td>
<td>23</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>89</strong></td>
<td><strong>39</strong></td>
<td><strong>22</strong></td>
<td><strong>150</strong></td>
<td></td>
</tr>
<tr>
<td>Percentage</td>
<td>59%</td>
<td>26%</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3.3 Type of ownership * Type of farmer Cross tabulation

Table 4.3 below which shows type of ownership * type of farmer reveals that 89% of the respondents were contracted farmers while 11% were free farmers. However, the majority of these farmers were communal farmers as indicated by 71%, while 25% of the farmers were from A1 and 4% of them were from A2 models. The findings reveal that the majority of the respondents who were contracted and were from communal areas. Such farmers do not have enough resources to fully support their farming activities, hence they resort to contract farming as their source of funding.

### Table 4.3 Type of farm ownership * Type of farmer Cross tabulation

<table>
<thead>
<tr>
<th>Type of farm ownership</th>
<th>Type of farmer</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free farmers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contracted</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communal</td>
<td>10</td>
<td>97</td>
<td>107</td>
</tr>
<tr>
<td>A1</td>
<td>3</td>
<td>34</td>
<td>37</td>
</tr>
<tr>
<td>A2</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>134</strong></td>
<td><strong>150</strong></td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
<td><strong>11%</strong></td>
<td><strong>89%</strong></td>
<td></td>
</tr>
</tbody>
</table>

4.3.4 Experience in farming business

Figure 4.2 below indicates that 34.07% of the respondents had 6-10 years’ experience in farming business, 30% of them had less than 5 years of farming business, 16% of them had 11-15 years of
experience while 19.33% of them had over 16 years of experience in farming business. The findings clearly indicate that most contract farmers had 6-10 years farming experience, possibly suggesting that these farmers could be resettled farmers. However, as a result of the intervention from the contracting companies, the farmers resorted to contract farming.

![Experience in farming business](image)

**Figure 4.4: Experience in farming business**

### 4.3.5 Area of production under contract farming

Study findings in figure 4.3 indicates that 66% of the respondents had 0-5ha under contract farming, 24.67% had 6-10ha are under contract farming and 9.33% of respondents had 11-15 ha under contract farming. It became clear from the findings that most of the farmers contract for less than a hectare. There is a possibility that part of the land could be under production of other crops or underutilised. This would argument their lack of farming resources, hence their faith lies on contract farming. This concurs well with Jones, 1983 who indicates that contract farming is an arrangement for pro-poor peasant farmers through which they are enabled to participate in a market economy through the establishment of forward and backward linkages.
Figure 4.5: Area of production under contract farming
4.4 Productivity levels between contracted and non-contracted farmers

A paired difference test is a type of location test that is used when comparing two sets of measurements to assess whether their population means differ.

Paired Samples Test

<table>
<thead>
<tr>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Type of farmer - Production output in the last 5 years</td>
<td>-0.653</td>
<td>0.875</td>
<td>.071</td>
<td>-0.794 to 0.512</td>
<td>-9.149</td>
<td>149</td>
</tr>
<tr>
<td>Pair 2 Type of farmer - Contract farming is an alternative source of finance</td>
<td>-1.307</td>
<td>1.074</td>
<td>.088</td>
<td>-1.480 to -1.133</td>
<td>-14.900</td>
<td>149</td>
</tr>
</tbody>
</table>

Table 4:4 Paired test of productivity levels

Using the formular:

\[ t = \frac{\bar{d}}{\frac{s_d}{\sqrt{n}}} \]

The mean difference is -0.653 which shows some differences between type of farmer (contracted or non-contracted) and the production output in the last 5 years. The standard deviation of 0.875 shows productivity between contracted and non-contracted farmers are far from \( \bar{x_d} \). Since the research expects no differences in productivity among farmers, a one tailed t-test value was considered. The calculated t value for a one tailed was -9.149 since the value of one tailed is twice more than that of a two tailed test thus our t value is -18.299. From tables, we find \( t_{LSP}(0.05) = 1.66 \). Since -18.299<1.66, we reject the null hypothesis and conclude that there are differences in terms of productivity between contracted and non-contracted farmers. This could be as a result of the lack of enough inputs and late delivery of inputs for the contracted farmers.

The mean difference is -0.307 which shows some differences between type of farmer (contracted or non-contracted) and contract farming as an alternative source of finance. The standard deviation of
0.074 shows income between contracted and non-contracted farmers are far from $\mu_d$. Since the research expects no differences in income among farmers, a one tailed t-test value was considered. The calculated t value for a one tailed was -14.900 since the value of one tailed is twice more than that of a two tailed test thus our t value is -29.800. From tables, we find $t_{40}(0.05)=1.66$. Since -29.800<1.66, we reject the null hypothesis and conclude that there are differences in terms of income realised between contracted and non-contracted farmers. This concurs well with Grosh, 1994 and Little, 1994 who say that smallholder farmers in contract farming are faced with unequal bargaining power which eventually creates monopsony power of investors.

**Regression output analysis**

**Table 4.4 Regression coefficients**

<table>
<thead>
<tr>
<th>Model-1</th>
<th>Unstandardized Coefficients</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>Std. Error</td>
<td></td>
</tr>
<tr>
<td>Yield per hectare</td>
<td>-0.568</td>
<td>0.036</td>
<td>-15.962</td>
</tr>
<tr>
<td>Hectares under cropping</td>
<td>0.394</td>
<td>0.029</td>
<td>13.736</td>
</tr>
<tr>
<td>Income levels of farmers</td>
<td>0.295</td>
<td>0.033</td>
<td>8.822</td>
</tr>
<tr>
<td>Profitability of farming</td>
<td>0.069</td>
<td>0.047</td>
<td>1.468</td>
</tr>
</tbody>
</table>

**Independent variable: Contract farming**

**4.4.1 The impact of contract farming on productivity**

In order to test the relationship between contract farming and productivity in the agricultural sector, two hypothesis were developed namely the null and alternative hypothesis as indicated below:

$H_0$: There is no significant relationship between contract farming and productivity of farmers

$H_1$: There is a significant relationship between contract farming and productivity of farmers

The results in Table 4.4 indicates that the p value=0.121. This implies that p >0.05. Based on these results, the null hypothesis $H_0$ is not rejected at 95% confidence level and hence that there is not enough support for the alternative hypothesis. These result shows that the positive and significant influence of contract farming on productivity of farming was not confirmed and supported in this study. According to table 4.4 the research revealed that there is no relationship between the production output in the 5 years and the notion that contract farming increases productivity. The results concur well with Mujeyi, (2013) who indicates that the investor may give
inadequate agricultural inputs which, when applied to crop or livestock, fail to improve productivity, that is yield output.

4.4.2 The impact of contract farming on farmers’ level of profitability

In order to test the relationship between contract farming and profitability levels of farmers, two hypothesis were developed namely the null and alternative hypothesis as indicated below;

\[ H_0: \text{There is no significant relationship between contract farming and profitability levels of farmers} \]

\[ H_1: \text{There is a significant relationship between contract farming and profitability levels of farmers} \]

The results from the regression table 4.4 indicate that the p value = 0.000 which implies that p < 0.05. This means that the null hypothesis is rejected and the alternative hypothesis is accepted at 95% confidence level. The results imply that contract farming will result in an improvement in the profitability levels of farmers. The results concur well with Jones, (2011) who indicates that the provision of all the inputs and cash advancements under contract faring may lead to improved income levels of farmers, therefore a change in the level of profitability.

4.4.3 Impact of adequate inputs supply and high productivity of farmers under contract farming

In order to test the relationship between adequate inputs supply and high productivity in contract farming, two hypothesis were developed namely the null and alternative hypothesis as indicated below;

\[ H_0: \text{There is no significant relationship between adequate inputs supply and high productivity under contract farming} \]

\[ H_1: \text{There is a significant relationship between adequate inputs supply and high productivity under contract farming} \]

The results from the regression table 4.4 indicate that the p value = 0.000 which implies that p < 0.05. This means that the null hypothesis is rejected and the alternative hypothesis is accepted at 95% confidence level. The results imply that contract farming will result in an increase in the size of hectare under cropping. The results concur well with Prowse and Will (2013) who indicates that the provision of all the inputs and support in terms of extension services and marketing may lead to an
increase in the size of hectares under cropping. This also concurs well with Mujeyi, (2013) who indicates that the financial support given in contract farming provide the right incentive to farmers to increase the area under cropping.

### 4.4.4 Impact of contract farming on the profitability of contracted and non-contracted farmers

In order to test the relationship between contracted and non-contracted farming and productivity, two hypothesis were developed namely the null and alternative hypothesis as indicated below;

- **H0**: There is no significant relationship between productivity levels of contracted and non-contracted farming
- **H1**: There is a significant relationship between productivity levels of contracted and non-contracted farming

The results in Table 4.4 indicates that the p value=0.143. This implies that p >0.05. Based on these results, the null hypothesis H0 is not rejected at 95% confidence level and hence that there is not enough support for the alternative hypothesis. These result shows that the positive and significant influence of contract farming on profitability of farming was not confirmed and supported in this study. According to table 4.4 the research revealed that there is no positive relationship between the contract farming and profitability of farming. The results concur well with Mujeyi, (2013) who indicates that contract farming may be characterized by a number of leakages and side marketing which in turn affect the profitability of the process. This concurs well with Grosh (1994) and Little (1994) who say that smallholder farmers in contract farming are faced with a number of constrains such as transport, higher cost of inputs inefficiencies which all affect the profit margins of farmers.
4.5 Ways by which contract farming can be improved

The results above show that 59% of the respondents suggest that contract farming can be improved of inputs were supplied in time, while 18% of the respondents suggested that the producer prices were key to improving contract farming. There was 7% apiece for the need for irrigated schemes and the need to involve farmers in decision making.

4.6 Interview results findings from Contractors

Four interviews were conducted with the Cotton GINNERS’ Association, The Cotton Company of Zimbabwe, Southern Cotton Company and the regulatory authority, AMA. Findings from the interviews are herein given below.

4.6.1 Investor’s experience in contract farming

The Association indicated that its members had been in cotton contract farming for many years. Cottco had been the initiator of cotton contract farming in Zimbabwe, while Southern Cotton had started in 2011.

4.6.2 Size of land under contract farming

The researcher found out that the majority of farmers were contract for less than a hectare, on average 0.5 hectares while in a few cases some farmers were supported for between 5-10 hectares. This also concurs well with Mujeyi, (2013) who indicates that the financial support given in contract farming provide the right incentive to farmers to increase the area under cropping.
4.6.3 Inputs package given
It was found out that companies were giving less agricultural inputs under contract farming. They were not fulfilling the contracts with farmers due various reasons. One major reason was lack of foreign currency to import the inputs, fertilizers and chemicals, and woolpacks. In most cases only cotton seed and a bit of basal fertilizers were given.

4.6.4 Employment of extension officers
All the interviewed companies confirmed employing extension officers who had possessed a diploma or degree in agriculture. The extension officers deployed were not sufficient to match the number of farmers contracted. On average one extension officer covered a radius of 150 kilometres.

4.6.5 Issues of contract farming viability
It was found that the companies gave differing views regarding viability. Cottco was viable on the basis that it had been receiving free inputs from government to issue out to farmers. These inputs were not recoverable at the time of marketing. Cottco had not laid out costs associated with procuring inputs, it was a distributing agent of government. The arrangement provided an avenue of making a profitability out of contract farming. Southern Cotton and other constituent members of the CGA were either making a breakeven or a loss. Their activities were commercial, and inputs given were recoverable at the point of marketing. Most farmers were shunning these independent companies and, in most cases, would side market the crop to avoid paying back inputs loan or advances. The results concur well with Jones, (2011) who indicates that the provision of all the inputs and cash advancements under contract farming may lead to improved income levels of farmers

4.6.6 challenges being faced by investors
These included shortages of foreign currency to imports inputs and an uneven playing ground due to Cottco’s model of business. Farmers were also dishonest and would in most cases double dip through taking inputs from more than one company. Some of the inputs were taken and sold on the black market or diverted to other use. They indicated that the companies were vulnerable as government had a direct interest in cotton contract farming. There was no investor protection and fair play as the government had become a player and referee in the sector. International lint prices had been depressed which also impacted on viability of contract farming. The results concur well
with Mujeyi, (2013) who indicates that the investor may give inadequate agricultural inputs which, when applied to crop or livestock, fail to improve productivity, that is yield output.

4.6.7 Suggestion for resolving challenges
It was found that the investors wanted local production of inputs such as fertilizers and chemicals supported in Zimbabwe to reduce the need of importing. They also suggested zoning cotton contract farming where an investor would be allocated a zone and no other company would be allowed in that zone. This would resolve issues of side marketing. The government inputs scheme should be extended to all companies in the cotton. Companies would compete on producer price to buy the seed cotton from farmers. The results concur well with Mujeyi, (2013) who indicates that contract farming may be characterised by a number of leakages and side marketing which in turn affect the profitability of the process.

4.6.8 Advance producer prices
No advance producer price for seed cotton was given to farmers before contracting them. During the marketing season, producer prices were mostly determined by government. Farmers were price takers while private companies adjusted the given prices to lure farmers.

4.7 Findings from interview with the Regulatory body
4.7.1 Factors compelling farmers to engage in contract farming
The regulator indicated that most cotton contracted farmers were peasant/communal farmers and they depended heavily on contract farming. The farmers did not have resources to support their own farming activities, they did not manage to buy inputs, they therefore resorted to contract farming. Contract farming also provided a ready market for their seed cotton produce.

4.7.2 Measures to mitigate the factors above
The regulator advised that they were educating farmers to be self-reliant through increasing the area under contract farming and increasing productivity. Farmers were receiving training from cotton demonstration plots created by the regulatory body.
4.7.3 Role of the regulatory body in contract farming
The role of the regulator was to provide fair play in contract farming. The role included resolving conflicts, protecting the rights of both players and advice. The regulator was employing and deploying personnel to monitor and supervise marketing activities and monitor distribution of inputs.

4.7.4 Measures being put in place to promote viability
The regulator was deploying its employees at common buying points to curb side marketing, promote fair selling and buying of the seed cotton by monitoring the receiving weighing and payment for cotton bales. It had a team of cotton graders whose task was making sure farmers’ seed cotton was graded at the gin and paid according to grade achieved. Only registered cotton contractors could buy the crop to eliminate fly by nights cotton merchants.

4.7.5 Challenges that affect viability of contract farming
These same challenges as enunciated by cotton contractors were cited. These included high cost of inputs which resulted in high cost of production, there were hidden expenses that farmers were not made aware of such as transportation and extension services. For the private investors, the government scheme had negatively impacted on their investment. This concurs well with Grosh (1994) and Little (1994) who say that smallholder farmers in contract farming are faced with a number of constrains such as transport, higher cost of inputs inefficiencies which all affect the profit margins of farmers.

4.7.6 Investment patterns
The number of participating investors in contract farming had reduced. During 2011-2014 seasons, the number of investors were eleven companies. Only four companies were still supporting cotton contract farming in 2017/18. This signified a reduction in investment by the private sector though government had somewhat replaced the quantum of investment lost through its free input scheme.

4.7.7 Ways to improve contract farming
The regulator indicated that contract farming could be improved through adequate supply of inputs to farmers at affordable prices. Advance producer prices was also cited as a factor that could motivated farmers to engage in contract farming. On the part of the private sector, government
needed to provide a level playing field on the issue of the free inputs, either the inputs are accessed by all companies using quotas or the companies can compete at buying time using pricing.

### 4.7.8 Way farmers can improve contract farming

Farmers need to engage in contract farming knowing what was in it for them. They needed to read, understand and sign contracts with investors to avoid being short changed. They also needed to increase the land that they put to contract farming, the current pieces of land of 0.5 ha was not enough to produce enough output which could result in viability. The researcher also found out that farmers needed to take farming as a business as this was their main source of income.

### 4.7.9 Challenges faced by the regulator in contract farming

The researcher found out that challenges facing the regulator included policing a vast sector which had many players, yet it had a thin presence. Many challenges facing farmers and investors went unattended for a long time before intervention of the regulator. Though its mandate was to provide fair play in the production and marketing of agricultural products, the regulator had no control over the cost of inputs charged under contract farming and it had no input to producer prices. These were determined mainly by the investor. This was the case in Sharma, 2018 where she said that the aim of the regulator was at protecting farmers and incentivising the buyers to freely contract with each other. The government should focus on providing an enabling environment. This can be achieved by creation of market infrastructure, farmer education, and bridging information asymmetries between farmers and buyers.

### 4.8 Chapter summary

The chapter presented results based on the hypotheses of the study. The research used graphs to analyse data gathered from farmers using the questionnaire and narrative descriptions were presented based on information gathered using the interview schedule. The majority of the farmers engaged in cotton contract farming were between 31-50 years old and these were mostly family households at 47%. The majority of the farmers were communal at 71% while A1 was at 25%. The research revealed that those with 6-10 years farming experience were in contract farming tough the land size for contracted farmers was below 1 hectare. In order to improve contract farming, 59% of the farmers advocated for a full package of inputs to be distributed early before beginning of the rainfall season. There were various reasons for engaging in contract farming, amongst them, lack of
finance by farmers to buy their own agricultural inputs, ready markets provided by investors/contractor who buy the crops and marginalisation. The regulator faced capacity challenges due to the vast agricultural sector and many small-scale funded contract farming arrangements.
CHAPTER V: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter summarizes the major findings and presents conclusions and recommendations based on the results of this study. It also makes recommendations for areas of further study.

5.2 Summary
The overall aim of this research was to assess the viability of cotton contract farming in Zimbabwe.

Five research objectives were developed for addressing this aim. These objectives include investigating the impact of contract farming on farmers’ productivity, investigating the impact of contract farming on farmers’ level of income, examining the impact of contract farming on the profitability of contract farming and the to ascertain the influence of contract farming on the area under cropping.

The background characteristics of the respondents which were looked into the study include the age of respondents, marital status of respondents, source of income of respondents, type of land ownership, type of farmers, experience in farming business and area of production under contract farming. To address the first objective of measuring the impact of contract farming on farmers’ productivity, Pearson’s correlation descriptive statistics was used to present quantitative descriptions in a manageable form.

To test the hypotheses of the study, regression analysis was used to present quantitative descriptions in a manageable form.

The study showed that contract farming did not positively influence or lead to higher yield per hectare. This means that contract farming may not lead to higher agricultural productivity. Several reasons were given during interviews which includes natural disasters, late delivery of inputs, limited management and extension services. This finding is also supported by existing literature which argues that contract farming may not lead to higher productivity due to several challenges in the delivery of enough inputs, limited technical support to farmers and natural disasters (Grosh, 1994 and Little, 1994).

The study indicated that the adoption of contract farming leads to improved size of hectares under cropping. The study showed that the availability inputs encouraged farmers to increase the size of
area under cropping. Several factors contributed to the increased size of areas under cropping such as the financial support from contracting companies. This finding finds support in the existing literature. Mujeyi, 2013 argues that the concept of contract farming leads to huge area under cropping due to the technical and financial support offered under contract farming.

The study also confirmed that view that contract farming positively influences the income levels of farmers. Confirmations were also given during interviews. This finding is well supported by Mujeyi, 2013 who argued that contract farming leads to poverty reduction because the income levels of farmers will improve.

It was shown in this study that the adoption of contract farming does not lead to profitable agricultural activities. The respondents and investors were able to illustrate that contract farming may not be profitable due to a number of constraints. This finding is well supported by existing literature where it is shown that the profitability of contract farming is reduced by natural disasters and higher cost of farming (Prowse and Will 2013).

5.3 Conclusion
The following are conclusions made from this study:

(a) There was no viability for a contracted cotton farmer. The inadequate supply of inputs affected productivity and their cost was expensive resulting in high cost of production. Also, the land size under contract farming was small to produce enough crop to cover production costs and warrant a profit. The factors affected viability of many farmers across the cotton sector.

(b) Farmers engaged in contract farming did not sign any formal agreement with investors which subjected them being short-changed in the supply of inputs and pricing of the seed cotton commodity. This led farmers, in some circumstances, to side marketing their seed cotton crop to avoid paying back inputs loans in search of better prices of the seed cotton. Side marketing was practised in different forms including use of spouses, children who have become of age and other farmers who were either contracted by other companies which would be offering better prices or free farmers.

(c) Investors were at the peril of farmers who diverted inputs to either the black market or other crops. This practice affected production yields and because yields were affected, the crop output failed to produce enough to make a profit.
(d) The private sector players had also faced challenges to counter the government free inputs scheme which rendered their participation difficult and unviable. The government was on a non-recovery of cost of inputs basis while the private sector needed to recover loans from farmers. This model saw the withdrawal of many companies from cotton contract farming including Cargill Zimbabwe, Grafax Holdings and Olam Zimbabwe. The private sector business is driven by profit maximisation while government pursued a political or populist agenda.

(e) Farmer unions or associations were no longer as active as they are supposed to be. Many farmers were reluctant to join unions as the role of unions had been diluted by direct government involvement in contract farming. Also, farmers were naïve to pay farmer subscriptions to the Unions yet not tangible evidence of representation came forth from the Union leadership. Most union leaders were not farmers per se, but mere advocates of farmers.

(f) Investors were experiencing different outcomes from cotton contract farming. Some were making breakeven financial results while others were making losses. The government company, Cottco made profit from cotton contract farming as it did buy its own inputs, these were provided through the Presidential inputs scheme. Value addition also played an instrumental part on the profitability of a company. The higher the volume of seed cotton purchased from farmers, the better the quantum of cotton seed and lint that was produced and sold.

5.4 Recommendations
The study makes the following recommendations:

5.4.1 Area under contract farming
It was established in the study that most farmers were contracted for less than one hectare. This area was too small to give a good yield which could produce cotton that could cover the cost of inputs and make a profit. The study recommends that farmers and contractors must increase the area under contract farming. It would have better and cost effective to increase area under farming from .50 hectare to one hectare and manage the area to maximise yields than spread contract farming to
many farmers across many distances and incur more costs. Working with co-operatives as is the case in Cote de Ivoire and Mali would be a better model.

5.4.2 Supply of agricultural inputs under contract farming
It was also found that farmers either received inadequate agricultural inputs or these were delivered late. This affected productivity. The study recommends that investors in contract farming to make arrangements to supply and sign off farmers with adequate inputs early before the onset of the rainfall. Most farmers side marketed their crop when they failed to be adequately resourced by the contracting companies. They ended up double dipping in quest for inputs from other contractors.

5.4.3 Cost of inputs under contra farming
The cost of agricultural inputs was cited as expensive by farmers. This contributed to high cost of crop production which affected productivity and viability. The study recommends that the cost of inputs needed to be reviewed by an independent body such the regulator to see if there was fair pricing of inputs. Government could also consider giving subsidies on farming inputs to reduce their costs and improve viability of farmers.

5.4.4 Regulatory authority’s presence
During the study, it was observed that the regulatory authority’s presence in farming communities was thin and mainly focused on the cotton sector. It is recommended that the regulator be capacitated so that it can be present across many crops and livestock.

5.4.5 National contract farming framework
National contract farming framework is needed to be crafted and legislated to protect all parties engaged in contract farming. The present situation was that contract farming was found in various pieces of statutory instruments. The national policy on contract farming could also look at issues of encouraging private sector investment in contract farming. The policy could consider providing tax incentives to attract and grow investment in contract farming.
5.4.6 Value addition by farmers

Farmers needed to consider exploring ways of value adding their cotton crop so that they could earn better income. When cotton is value added it produces lint and cotton seed. Lint can be sold in the local market at better prices that are pegged in United States dollars or the equivalent Zimbabwe dollar. Cotton seed can be sold for crushing into crude oil. Once crushed, another product, cotton cake is obtained which sole to stock feed manufacturers. Raw cotton seed can also be graded to obtain planting seed.

The above recommendation would work if farmers were capacitated by way of giving them access to financial lines so that they could buy small scale gin machinery. At the same time, in order to mitigate the incapacitation, farmers could form cooperatives which pool together their financial resources and invest in small ginning machinery.

5.5 Suggested areas of further research

This study focused on assessing the viability of contract farming with emphasis in the cotton subsector. Further research could be carried out to look at improving viability of farmers through value addition in both crops and livestock.

5.6 Chapter summary

The chapter provided the main conclusions of the study which then allowed the development of recommendations with regards to contract farming. It was recommended that more could be done by the investors, farmers and government to improve issues of viability of the cotton sector through improving agricultural inputs supply, an effective and efficient pricing of those inputs, the need to establish formal contract farming agreements, increasing the area under contract crop production and issues of legislation that regulated the parties in contract farming.
REFERENCES


11. Cottrel and McKenzie (2011), pg 40 LITERATURE REVIEWS. What is a literature review?


31. Kumar, Devesh Roy, Gaurav Trpathi, P K Joshi and R P Adhikari entitled “Can contract farming increase farmers’ income and enhance adoption of food safety practices?


37. Mighel and Jones, (1963) Demythifying Contract Farming: Evidence from Rural South Africa


52. Singh (2005), Contract Farming in Developing Countries


54. Statutory Instrument 142 of 2009 (Government of Zimbabwe)


Appendix A

LETTER OF INTRODUCTION FOR THE QUESTIONNAIRE

No. 14228 Galloway Park

NORTON

Contact No. +263 772 140 562

Email: gtfinacials@yahoo.com

3 January 2019

Dear Respondent,

RE: VOLUNTARY COMPLETION OF THE ATTACHED QUESTIONNAIRE

My name is George Antony Taibo and I am a student at Bindura University of Science Education. I am studying for a Masters in Business Leadership, my student registration number is B1747646. I am carrying out a research which a compulsory module of the degree programme. My research topic is entitled “assessing the viability of contract farming in Zimbabwe”.

I have chosen you to participate by completing the attached questionnaire. You do not need to disclose your identity and the questionnaire remains anonymous. I, therefore, encourage you to complete the questionnaire honestly, freely and at your convenience.
The information disclosed in the questionnaire remain confidential and it will not be used for other purpose other than academic research studies.

I want to thank in advance for your kind assistance in completing the questionnaire.

Yours faithfully,

George Antony Taibo
Appendix B

Questionnaire on Assessing viability of contract farming in Zimbabwe.

My name is George A Taibo and I am an MBL student at Bindura University of Science Education. In partial fulfilment of the requirements of the Research Module, I am collecting data on a research topic entitled “Assessing viability of contract farming in Zimbabwe”. You are kindly requested to contribute to this study by answering the questions listed below. The responses will be used specifically for this study and will be kept private and confidential.

Section A: Demographic details

Tick in the most appropriate box

1 Indicate your age category

18-30yrs □ 31-50yrs □ 51-65yrs □ Above 66yrs □

2. What is your marital status?

Single □ Married □ Divorced □ Widowed □

3. State your level of education

Primary education □ secondary education □ Tertiary □

4. How long have you been in the farming business?

Less than 5 years □ 6-10yrs □ 11-15 yrs □ Above 16 yrs □

5. Other sources of income

Employment □ Pension □ Other □ ********************specify

Section B: Information sought
1. Type of farm ownership

Communal [ ]  A1 [ ]  A2 [ ]  Large scale [ ]

2. Type of farmer

Free farmer [ ]  Contracted farmer [ ]  3. How many years have you been in contract farming?

1-5 years [ ]  6-10 years [ ]  Above 11 years [ ]

4. What is your area of production under contract farming?

0-5 ha [ ]  6-10 ha [ ]  11-15 ha [ ]  Above 16 ha [ ]

5. What has been your cotton production output in the last 5 years?

0-600 kg [ ]  601-1000 kg [ ]  1001-1500 kg [ ]  Above 1501 kg [ ]

PART B

Use the following rating to answer the questions below:

KEY:


<table>
<thead>
<tr>
<th>Stakeholder Relationship Evaluation</th>
<th>SD</th>
<th>DA</th>
<th>N</th>
<th>A</th>
<th>SA</th>
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<tbody>
<tr>
<td>1. Contract farming is established through duly signed contract of agreement.</td>
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<td>2. There is equal recognition of each party in the agreement.</td>
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66
3. Farmers contribute to the drawing of contract farming agreement
4. The contract is fairly–worded and easy to understand.
5. I have not signed a contract though I am contracted.

<table>
<thead>
<tr>
<th>Productivity Issues</th>
<th>SD</th>
<th>DA</th>
<th>N</th>
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<tbody>
<tr>
<td>1. Adequate inputs are given.</td>
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<td>2. Extension services are provided.</td>
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<td>3. timely availability of inputs</td>
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<td>4. The cost of inputs is advised in advance</td>
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<td>5. Yield per hectare has improved with contract farming.</td>
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<td>6. Rainfall has been adequate.</td>
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<td>7. I have adequate farming experience.</td>
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<thead>
<tr>
<th>Commodity Pricing</th>
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<th>DA</th>
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</thead>
<tbody>
<tr>
<td>1. The producer price is advised in advance.</td>
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<td>2. The commodity is fairly priced.</td>
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<td>3. Payment is received soon after sell.</td>
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<td>4. There is room to negotiate the price of commodities.</td>
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<table>
<thead>
<tr>
<th>Regulatory Bodies or Farmer Associations/Unions</th>
<th>SD</th>
<th>DA</th>
<th>N</th>
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<th>SA</th>
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</thead>
<tbody>
<tr>
<td>1. There is fair play in contract farming.</td>
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<td>2. Conflicts are resolved to our satisfaction.</td>
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<td>3. Parties to contract farming are protected.</td>
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<td>4. Unions/Associations have a role to play in contract farming.</td>
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<td>5. Unions provide alternative markets to farmers.</td>
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<td>6. Associations has helped in improving crop production.</td>
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<tr>
<th>About Contract Farming</th>
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<th>DA</th>
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<tbody>
<tr>
<td>1. Contract farming provides access to markets.</td>
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<td>2. There is fair pricing of products.</td>
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<td>3. Contract farming increases productivity.</td>
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<tr>
<td>4. Contract farming is an alternative source of finance.</td>
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PART C: General Questions

1. Suggest what could be done to improve productivity under contract farming
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2. Do you think that government incentives can help improve producer prices?
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3. What challenges exist in contract farming?
   ..................................................................................................................................................................................

4. How can the challenges be resolved?
   ..................................................................................................................................................................................

5. What are the benefits of contract farming?
   ..................................................................................................................................................................................

6. What influences you to enter into contract farming?
   ..................................................................................................................................................................................

7. Do you think government is doing enough to regulate contract farming?
   ..................................................................................................................................................................................
Appendix C

FACE TO FACE INTERVIEW SCHEDULE

1. What factors compel farmers to engage in contract farming?
2. Given the factors listed above, what is the regulatory body doing to help mitigate these factors?
3. What is the role of the regulatory body in contract farming?
4. Is there regulatory framework that govern contract farming?
5. What measures are put in place by the body to address issues of viability in contract farming?
6. What do you think are the challenges that affect viability of contract farming?
7. Have you seen an increase or decrease of investment in contract farming in the last five years?
8. What do you think investors/contractors should do in order to improve contract farming?
9. What do you think farmers should do to improve contract farming?
10. What challenges do you face in regulating contract farming?
Appendix D

INTERVIEW QUESTIONS FOR CONTRACTING COMPANIES

1. How long have you been engaging in contract farming?

2. What hectarage per farmer have you been supporting?

3. What input package does your company give?

4. Do you employ extension officers and if yes, how many farmers do they work with?

5. Do you think that contract farming is viable?

6. What challenges do you face in contract farming?

7. How can the challenges be overcome?

8. Are there formal contracts that are signed between farmers and your company?

9. Do you give a pre-planting producer price to farmers before engaging them?