

BINDURA UNIVERSITY OF SCIENCE EDUCATION



FUCULTY OF COMMERCE

**SUPPLIER DEVELOPMENT IN THE FORM OF CONTRACT FARMING, ON
PERFOMANCE OF WHEAT SUPPLY CHAINS IN MASHONALAND CENTRAL
PROVINCE**

RESEARCH PROJECT

BY

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I Declare that this project is an original copy of my own work and has not been published before or submitted to any other institution/university.

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DEDICATION

Glory to the Almighty, the Creator, the Alpha and Omega! Without His guidance, nothing would have materialised. To my beautiful wife, Puranai, my kids, Ronny Tafadzwa, Ruvimbo Talent, Rujeko Thelmah and Russel Tadiwa.

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Abstract

This study investigated on the Supplier development in the form of contract farming, on performance of wheat supply chains in Mashonaland Central Province. The study was guided by three specific objectives: To determine the relationship between supplier development in the form of contract farming and cost performance on wheat supply chains in Zimbabwe; Critically identify the link between supplier development in the form of contract farming and quality performance in wheat supply chains ;to critically determine the nexus between supplier development in the form of contract farming and delivery performance of wheat supply in Mashonaland central province. The study was premised on Coercive isomorphism theory and Explanatory research design was adopted and Data collection was done through use of questionnaires. A sample size of 49 ($n=49$) was used obtained by census. Data was analysed using SPSS version.2.1, descriptive and inferential statistics Overall, the study findings indicated that there is a positive and statistically significant relationship contract farming and performance of wheat supply chains. The study findings revealed that there was a positive and statistically significant relationship between contract farming ($p=0.003<0.05$) and cost performance of wheat supply chains. The study results showed that there was a positive and statistically significant relationship between contract farming ($p=0.018<0.05$) and quality performance of wheat supply chains. The research outcomes showed that there was a positive and statistically significant relationship between contract farming ($p=0.004<0.05$) and delivery performance of wheat supply chains in Mashonaland Central. The government should aggressively mobilize and support contract farming programmes to support further local value chains to improve NDS1and other national food security goals. There is need for the farmers to increase good working relationship with contractors. Government should also consider subsidizing inputs costs for farmers.

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ABBREVIATIONS

1. N.D.S 1	National Development Strategy 1
2. F.A. O	Food Agriculture Organisation
3. U.S	United States
4. D.R.C	Democratic Republic of Congo
5. B.U.S. E	Bindura University of Science Education
6. G.M. B	Grain Marketing Board
7. Z.F. U	Zimbabwe Farmers Union
8. Z.C.G.P. A	Zimbabwe Commercial Grain Producers Association
9. C.F. U	Commercial Farmer Union
10. T.C. O	Total Cost of Ownership
11. Z.E.S. A	Zimbabwe Electricity Supply Authority.
12. U. N	United Nations
13. C.T.C	Competitions and Tariffs Commission

CHAPTER 1

1.1 BACKGROUND

One of the most significant industries in history has always been agriculture, and wheat is one of the most widely grown crops worldwide. According to FAO (2016), 85% of all grain crop production and 78% of all cultivable land were used for cereal farming. Additionally, 30% of the traded wheat in the world is produced in Russia and Ukraine, according to the 2020 report from Shih magazine. It is believed that the war has hampered the export of wheat, corn, and barley from these countries. It is emphasized once more that a sizable amount of the world's supply of fertilizers is trapped in Russia and Belarus, which has resulted in an increase in the price of food and fertilizer. This implied that all farmers throughout the world would be impacted this year and in the near future. Other academics contend that there is a significant risk posed by the volatility of important food commodities and fertilizers because it raises market uncertainty and does so by encouraging speculation. However, only a small percentage of academics claimed that the circumstances of two significant rivals China and India, whose demand for imported food is rising, are fuelling fierce competition on the global food market.

The US and China trade war has also motivated some firms to shift their business processes to China and other Asian countries like Indonesia, India Thailand (Shih magazine, 2020). This denotes that supply chain managers reconsidered regional strategies that should rescue key goods within their regions. This is related to a notion that North America supply chains might be served by shifting its offshored business processes from China to Mexico and central America. Government policies have been more cantered on production-related issues than on how supply chains operate between production and consumption, especially in Zimbabwe and other developing nations. This was concurred when covid 19 pandemic subsided and the world looked markedly different due to exposed vulnerabilities in the production strategies and wheat supply chains. From the global wheat supply literature above it is worth noting that Supply chains maybe irrelevant globally without the consideration more strategic supplier development strategies like contract farming practices.

According to Eaton and Shepherd (2001), contract farming is an upright synchronization between agribusiness merchants and farmers of crops that require specialized inputs. To guarantee the delivery of a good within a predetermined time frame and at a predetermined cost is also a business decision (Eaton & Shepherd, 2001), as noted in Chari and Mukucha (2021). Due to the gap in agricultural funding caused by governments' decision to stop funding

agricultural activities as a result of current neo-liberal policies (Soones et al., 2018), as well as its perceived benefits on supplier performance, contract farming has recently experienced significant global growth. On the other hand, a lot of academics link contract farming and supplier development. Krause, Scannell, and Calantone (2000) define supplier development as a strategic management process for enhancing suppliers' operational performance and capabilities. Many academics believe that working with highly likely suppliers to enhance their capacities and competencies constitutes the practice of supplier development. When the current supply base is at capacity, expanding the supply base is a necessary component of supplier development (Popoolo, 2019). The buyer can help the supplier development process by investing money, training technical staff, and offering guidance on efficient operating procedures (Humphreys et al., 2004).

In Zimbabwean context, local researchers argued that generally wheat farming in Zimbabwe is a big loss. This was affirmed by Chamboko et al., (2017) who found that the domestic resource cost (DRC) for Zimbabwe's wheat production from the PAM analysis is -0.6 . A DRC of -0.6 implies that Zimbabwe is incurring high costs of production in comparison with regional costs. This study implied that it is cheaper for the country to import wheat than produce it domestically. The authors further reviewed that it is important to note that there are high prices for inputs in comparison with the wheat output price/ton. This has affected the competitiveness of the wheat sector in the country. For wheat farmers to be competitive, any policies to be implemented must address the issue of input costs. However, some few researchers argued that recently Wheat supply chains in Zimbabwe is said to be on a sharp rise however there is limited empirical evidence to support these claims. Other sources claimed that Zimbabwe was the only country to sufficiently grow wheat which could sustain the whole nation without any supplements from other foreign nations. Had it been contract farming that had taken the country to this far. Therefore, the nation cannot be kept in the dark, and if this pattern persists, neither its supply chain performance nor relevant literature on supplier development in the form of contract farming will be unrestricted. In order to enhance the fundamental contribution of wheat to the economic growth of Zimbabwe, it is critical to look into the outcomes and opportunities to lower post-harvest damages across the supply chains.

1.2 PROBLEM STATEMENT

Chamboko, Chawarika and Mutambara (2017) found that in Zimbabwe wheat production declined to about 2 t/ha, and they further reviewed that Zimbabwe imported more than 80% of

its wheat national requirements for the 2013/14 season. This was undertaken at the expense of the national budget position, as it contributed to the current account deficit. If this trend continues it may affect the vision 2030, food security and NDS 1 strategies. Nevertheless, Supplier development in the form of wheat production has not been seriously explored yet a lot is taking place in the micro business of its production. However, many studies have tried to explore on other cash crops like tobacco maize among other few cash crops in Zimbabwe. The literature on wheat supply chains is still scant neither its connection with its supply chains performance is perfectly known. It is against this background that the researcher expounds on, supplier development in the form of contract farming on performance of wheat supply chains in Zimbabwe.

1.3 Aim of the study

The goal of the study is to examine the effects of contract farming on Zimbabwe's wheat supply chains.

1.4 Study's objectives

The following goals are the ones that this research study aims to fulfil:

2. To ascertain the relationship between costs performance on Zimbabwe's wheat supply chains and supplier development in the contract farming.
3. Clearly define how contract farming supplier development and quality performance in wheat supply chains are related.
4. To evaluate the relationship between contract farming, which is a supplier development strategy, and Zimbabwe's wheat supply's performance in terms of delivery.

1.5 Hypothesis

H1: contract farming leads to cost performance on wheat supply chains in Zimbabwe

H2: contract farming leads to quality performance of wheat supply chains in Zimbabwe

H3: contract farming leads to delivery performance of wheat supply chains in Zimbabwe.

1.6 Research questions

The research study aims to find solutions to the following research questions:

2. Does contract farming improves cost performance on wheat supply chains in Zimbabwe?
3. To what extent does contract farming improves quality performance in wheat supply chains?
4. To what extend does contract farming contributes to delivery performance of wheat supplies?

1.7 Assumptions

It is assumed that:

- Respondents were honest on their responses
- The respondents understand the concept of contract farming and its dimensions
- There would be maximum cooperation from the respondents
- Respondents would be allowed access to valuable information

1.8 Significance of the study

The following categories will greatly benefit from the research:

To the investigator

It is expected that the research will give the researcher useful research skills and enable him or her to obtain a master's degree in purchasing and supply. The researcher will also gain expertise in conducting research studies, which will enable him to serve as a referee for other researchers.

The research helped the researcher understand the relationship between contract farming and the effectiveness of wheat supply chains by identifying gaps and potential solutions in the contract farming of wheat value chains. Additionally, the researcher would be able to acquire

the skills and knowledge required to conduct research in the future and to combine theoretical ideas with real-world techniques.

To the Agriculture sector

This research study goes a long way in contributing positively to the agricultural production sector in Zimbabwe, helping the wheat farmers to make sound decisions pertaining to contract farming on the performance of wheat supply chain. It reveals the importance of global sourcing and its impacts on survival of firms in the grocery retail business competitive market in Zimbabwe.

To the Government

Regarding the relationship between supplier development and wheat production performance in the Zimbabwean context, the study gave the government and wheat farmers useful information. The study's recommendations would assist lawmakers in drafting legislation that supports efforts by farming stakeholders to enhance wheat value chains and in putting effective supplier development strategies into practice.

To Bindura University

Other students or researchers who may wish to conduct a new or continue with research on the same topic may use the study as the university's primary intellectual property for literature reviews. The results of this study will add to our current understanding, making them interesting to academics and researchers who wish to conduct additional research. The research study will serve as a springboard for additional investigation into the subject, such as a replication of the study using numerous other economic sectors to ascertain how contract farming, a supplier development, has affected the performance of Zimbabwe's wheat supply.

1.9 Delimitations

The main subjects of the study were the effectiveness of the supply chains for wheat and supplier development through contract farming. The research was carried out in 2022 and 2023.

1.10 Restrictions

The time allotted for conducting the study and collecting information from respondents is constrained. Additionally, the researcher had some issues getting permission from Bindura University of Science Education (BUSE) management; as a result, the researcher had to adequately reassure them that the information would only be gathered for academic purposes.

1.11 Key Terms Definitions

The definitions of the key terms used in this research study are as follows:

Contract farming

Global Sourcing

Is the process of obtaining goods or services available in markets which involves crossing international boundaries

Globalisation

According to Crafts (2003), globalization is the movement of people, money, and goods into close proximity to one another.

Domestic Purchasing

All products must be purchased domestically, meaning they must come from within the boundaries of the company's home country. Trent and Monczka's (2005) diagram of the global sourcing evolution shows that this is the stage at which most companies, if not all of them, start their sourcing procedures. Worldwide supply chains involves coordinating business operations and resources to carry out production and guarantee ongoing, efficient on-time delivery (Cohen & Mallik, 1997).

Structure of the dissertation

This section offers an overview of the dissertation, which is divided into the following five chapters:

Chapter 1: This chapter introduces the topic of the study and acts as a roadmap. It gives background details, a statement of the issue, the study's goals, and its research questions. It also includes the definitions of terms, abbreviations, limitations, assumptions, significance of the study, delimitations of the study, and chapter summaries.

Chapter 2: Review of the literature. This chapter analyzes the effects of contract farming on the supply chain for wheat while reviewing the literature on the subject. This analysis looks at the gaps in prior studies on the price, quality, and delivery performance of wheat and directs the current investigation.

Chapter 3 The purpose of this chapter, which is titled "Research Methodology," is to discuss the techniques used to collect the data for this study's research study. It addresses issues like research design, sampling methods, research tools, data analysis, and presentation strategies.

Chapter 4's data presentation, analysis, and discussion in this chapter, data gathered through questionnaires is presented using tables. This researcher will discuss the data that is immediately below the tables. Data from qualitative interviews will be presented in a narrative episode.

Summary of Chapter 5's findings and recommendations: This chapter concludes the research project.

Summary

The study's background, problem statement, research objectives, research questions, and research assumptions were all covered in the chapter, along with the study's significance, definition of terms, delineation of the study's scope, and limitations. The literature related to the effectiveness of wheat supply chains and the growth of suppliers was examined in the following chapter.

CHAPTER 11

LITERATURE REVIEW

2.0 Introduction

This chapter aims to provide a thorough overview of contract farming's role in the wheat supply matrix. The researcher will examine the work on wheat supply chains that was done by various authors in this chapter. This entails evaluating the cost, quality, and delivery performance of wheat as well as the related works that have been published by other researchers. The researcher will also go over the theories and ideas that this research is based on in this chapter. This chapter looked at the effectiveness of wheat supply chains and a review of the literature on contract farming. According to Saunders (2009), the purpose of a literature review is to examine and assess prior research that is relevant to the topic being studied. It can be useful to learn what other people have studied and written about (Saunders, 2012). Using concepts, insights, and empirical data, the researcher will be able to identify the gaps and weaknesses in prior studies to justify a new investigation.

2.1 Theoretical framework

2.1.1 Coercive isomorphism theory

The uneven consequences of supplier development activities in the form of contract farming, in theory, can be better understood by focusing on the coercive part of the institutions theory. Some coercive isomorphism pressures exhibit power imbalances as a feature. This kind of pressure, which is often codified, is created by the laws and standards that are upheld by a particular business (North, 1990; Peng, 2008). For instance, practically every commodity class in Zimbabwe has its own regulatory agency, and the agriculture industry is subject to a lot of regulation. The Grain Marketing Board (GMB), which is in charge of managing grain, was given power over maize, cotton, and wheat by Statutory Instrument 142 of 2009, which limited ginners to only obtaining wheat from their contracted farmers.

These regulatory bodies exert pressure to promote fair competition, protect social welfare, and maintain industry stability (Golicic et al., 2014). Buyer and regulatory pressures are additional sources of coercive pressure. For instance, growing wheat demands highly skilled farmers, fully functional irrigation systems, dependable water sources, and larger commercial land.

2.2 EMPIRICAL STUDIES

Performance in Supplier development in the form of contract farming

In this perspective, improving the capabilities and competencies of high-probability suppliers in critical areas like cost, quality, and delivery performance can also be considered as a joint effort. According to Leenders (1966), supplier development is a useful procurement instrument that belongs in the upstream supply chain. When the current supply base is exhausted, expanding the supply base is an aspect of supplier development (Popoolo, 2019). Through financial investment, technical staff training, and advice on tight operating standards, the buyer supports the supplier development process (Humphreys et al., 2004). Additionally, it requires making conscious efforts to keep up a competent worker supplier network. This actually refers to enlarging the supplier network or improving supplier skills inside the dyads in order to meet the supply needs of the customers (Govindan et al., 2010). The prevalence of the supplier development idea has been demonstrated in international research conducted in countries such as Germany (Wagner, 2011), Brazil (Laksham & Parrente, 2008), Japan (Sako, 2004), India (Govindan et al., 2010), and Hong Kong (Humphreys et al., 2004). The electronic and tobacco industries, among others, have been the subject of study on supplier expansion (Mukucha & Chari, 2021; Humphreys et al., 2004). Contract farming is frequently the structure used for supplier development projects in the agricultural sector. According to Mazwi et al. (2018), studies on contract farming generally include a range of crops, including cotton, poultry, and sugarcane tobacco.

The notion that cost performance is a result of the sourcing strategy used by a purchasing organization can be explained by the normative isomorphism component of the institutions theory. Normative isomorphism, as defined by Gopal and Gao (2009), is pressure brought on by society standards and the professionalization of a sector. Performance reviews typically make sure that business firms' goals are efficiently and effectively achieved (Cherotich, 2012). Jusoh and Parnell (2008) claim that different organizations use different performance measurements. George (2005) made the point that businesses seek to develop performance measurement measures to evaluate and contrast their objectives with competitors. This is in line with what was previously said. The end-to-end supply chain performance matrix is evaluated in this study in terms of cost reductions, quality enhancements, and quicker delivery. Effectiveness and efficiency, according to Mouzas (2006), cited in Kiprotich (2015), have

taken on a major role in evaluations of public service delivery. Both theories evaluate how well services meet customer needs. Vinning and Globberman (2000) found a link between service delivery and organizational performance. According to Juran (1991), quality is "fitness for purpose." Crosby, a quality expert, stated in 1982 that quality is "conformity to requirements, not goodness." Hoyle (1995) asserts that quality must be managed because it is not an accident. The supplier defect rate was considered by Erridge and McIlroy (2001) to be a crucial operational parameter for assessing the caliber of the given contracts or services.

2.3 EMPIRICAL LITERATURE ON WHEAT CONTRACT FARMING

After the Unilateral Declaration of Independence, Zimbabwe began cultivating wheat in the early 1960s (Ngobese 1987). The author went on to discuss how a number of factors helped the crop develop. It was also proven that the nation had previously been subject to trade sanctions. The government adopted a self-sufficiency policy, which was supported by several measures to increase domestic production. These policies included significant government investments in the construction of irrigation systems, loans to farmers to help them import capital equipment, market and price guarantees through G.M.B., the primary buyer of grain, and increased efforts in research, development, and extension. All these policies led to the immense improvement in wheat production and wheat productivity such that by 1977, 2021 and 2022 Zimbabwe had achieved wheat self-sufficiency. For a number of reasons, wheat productivity and production have decreased ever since (ibid). Due to preference shifts, increased population growth, and rural to urban migration, average wheat consumption has increased as production and productivity have decreased. (Vutete and Bobo 2015) Estimated annual wheat consumption is 450 000 tons. In the 1980s and 1990s, Zimbabwe was a net exporter of wheat; today, it is a net importer. Over the past 20 years, consumption has been steadily rising while production has been declining, which has caused imports to soar. Wheat makes up the majority of the country's grain imports.

The majority of Zimbabwe's wheat is grown by large commercial farmers. Among the farmer organizations that represent the industry on various levels are the Zimbabwe Farmers' Union, the Zimbabwe Commercial Farmers' Union, and the Zimbabwe Commercial Grain Producers' Association. The ZCGPA mainly represents wheat growers with large operations. Up until 1994, the government-owned G.M.B. set the price of wheat (Keyser 2002). Despite market deregulation, G.M.B. continues to purchase the most wheat and is the owner of most of the grain storage facilities (ibid). Establishing price floors is the responsibility of GMB.

Since the implementation of dollarization in 2009, the parastatal has been announcing producer prices that are higher than the import parity price (Kapuya et al., 2012; Mutambara et al., 2012). Local processors now favor imported wheat over domestic wheat because of its lower cost and higher quality. There isn't a ready market for local wheat producers to sell into, with the exception of G.M.B., who has a bad reputation among farmers for being inconsistent and unreliable in payments.

According to Mutambara et al. (2013), there are five levels in the value chain for wheat in Zimbabwe: input suppliers, wheat producers, traders, processors, and end markets. Farmers sell their wheat to traders such as GMB, Croplink, Staywell, and others, or processors such as GMB, National Foods, and Blue Ribbon. The processors are in charge of producing flour and bran for domestic consumption, stock feed production, and end markets in the baking industry. The hiring of farmers has been a strategy used by processors to ensure a consistent supply of wheat. Vutete and Bobo (2015) claim that due to the country's limited access to credit funding, contract farming enables farmers to access inputs that are ordinarily out of reach. High input costs, severe electricity shortages, the Grain Marketing Board's inability to pay farmers their dues, and high borrowing costs are just a few of the issues that have hampered wheat production on farms (Chinyoka 2013). Other production restrictions include limited access to markets, inadequate support, and inadequate infrastructure, all of which have raised input costs.

The literature revealed that Zimbabwe has been a net importer of wheat, that imports are increasing, and that production is sharply declining. The nation of Zimbabwe used to be self-sufficient in wheat, but over the past 15 years, the country has heavily depended on imports to meet the rising domestic demand. This was also established in literature. According to a review of the literature, wheat production has been falling for the past ten years. A few of the factors that have been noted include the pricing policy issue and the high domestic producer price that is higher than the wheat import parity price. GMB's inability to pay farmers on time makes this situation worse.

Glover (1987 and 1990) said that the promise made to the farmer to specify how much agricultural produce the agribusiness firm will acquire and at what price is the fundamental element of contract farming (see also D'Silva et al. 2009; Da Silva 2005; Shepherd, 2013; FAO, 2013).

Pritchard and Connell (2011) claim that in order to handle risk and uncertainty in the upstream, agribusiness enterprises in the downstream created a set of organizational techniques known as

contract farming. In contrast to the agribusiness corporation, which supplies the fertilizer, seeds, pesticides, agricultural equipment, and technical help (Glover, 1987 and 1990; Porter & Phillips-Howard, 1997), the farmer offers the land and the labor.

However, contract farming had "positive multiplier effects" on the infrastructure and employment of Senegalese wheat farmers, according to Warning and Key (2002). After looking at 12 case studies, Goldsmith (1985) empirically showed a significant rise in rural income. He went on to claim that higher productivity was associated with higher income. Pritchard and Connell (2011) found that contract farming had a beneficial impact on participants after studying data from 76 contracted wheat farms in diverse Indian districts. Contract farming enhanced income, according to Gibbon and Jones' 2009 study of organic coffee growers in Uganda. These studies claim that contract farming helped farmers increase their income by giving them access to the financing, marketing, technical support, and inputs they needed to produce their crops. Banks have reportedly occasionally accepted the contract itself as adequate security for a loan, according to Rebher (2007). Singh (2002), who cited Hill and Ingersent (1982), claimed that contracts can provide farmers with the capital they require to grow their operations.

According to Eaton and Shepherd (2001), contract farming is a decision made for business purposes to ensure the quantity of a product within a stated timeframe and at a specified price. However, due to the agro-processing industry's reliance on agriculture as a source of raw materials, contract farming is necessary (Da Silva, 2005). Contract farming agreements, according to Prowse (2012), often include a section that details the duration of the contract, anticipated quality requirements, production quotas, agricultural procedures to be used, delivery timetables, and a formula for calculating pricing. Due to the funding gap in agriculture brought on by governments' decision to stop funding agricultural activities as a result of current neo-liberal policies (Soones et al., 2018), as well as its perceived improvements on supplier performances, contract farming has recently been seen as having a noticeable global expansion.

The five contract farming models that are currently being employed in the literature are the centralized model, nucleus estate model, multipartite model, intermediary model, and informal model (Bijman, 2008). According to Eaton and Shepherd (2001), these models differ depending on the product under consideration, the type of resources used, and the nature and extent of the relationship between a firm and a farmer. Wheat was first grown in Zimbabwe using a centralized system.

2.4 Performance metrics

Cost performance, quality performance, and delivery performance are the three main performance metrics mentioned in the literature on supply chain management that are thought to be impacted by contract farming.

2.5 Improved

Cost saving performance through contract farming

According to Chopra et al. (2016), price and cost are interconnected. The quantity of money charged for a product is known as its price (Kotler & Armstrong, 2013). Modern business analytics techniques support Total Cost of Ownership (TCO). TCO is determined by adding the buying price to any expenses incurred both before and after the product is delivered, according to Wisner et al. (2016). According to Shaba et al. (2017), contract farming, a supplier development strategy, results in superior cost performance as evidenced by improved access to pricing information and a decrease in price conflicts. The independent farming system and the contract system did not exhibit any statistically significant differences in terms of cost performance as determined by production costs, according to a study by Murthy and Madhuri (2013). Yegon et al. (2015) found that when suppliers received both financial and mechanical support, cost performance significantly improved. According to Singh (2002), contract farming boosts employment and income in less developed areas.

All direct payments made by TZTC to the farmer are approved by the area manager. These include the farmer's pay and the laborers' wages on the farm.

The price of the other inputs, such as fertilizer, seed, and farm machinery, is paid directly to the supplier. The farmers can get the majority of inputs from TZTC at prices that are less expensive than market rates by making bulk purchases. Coupons are given to farmers so they can buy fuel for their tractors. The farmer is required to deliver the cured tobacco to the TZTC warehouse at harvest time.

According to Warning and Key's findings from 2002, contract farming improved Senegalese peanut farmers' infrastructure and employment through "positive multiplier effects." After looking at 12 case studies, Goldsmith (1985) empirically showed a significant rise in rural income. He continued by saying that greater productivity was linked to higher income.

Pritchard and Connell (2011) found that contract farming had a positive impact on participants after studying 76 contracted chilli growers in diverse districts across India. Contract farming enhanced income, according to Gibbon and Jones' 2009 analysis of organic coffee growers in Uganda. The domestic resource cost (DRC) for Zimbabwe's wheat production indicated that Zimbabwe is incurring high production costs in comparison to regional costs, which was supported by Chamboko et al.'s (2017) research. Nevertheless, some local researchers argued that generally speaking, wheat farming in Zimbabwe is not cost-effective. According to this study, importing wheat is less expensive for the nation than growing it at home. The authors went on to say that it is crucial to remember that input costs are high when compared to the price per ton of wheat produced. The competitiveness of the nation's wheat industry has been impacted by this. Any policies put into place must take the issue of input costs into account if wheat farmers are to remain competitive.

H2: Improvements in cost-saving performance are made possible by supplier development through contract farming.

2.6 Increased Performance Quality

The definition of quality that has gained the most acceptance and is used the most frequently is that quality is the ability of a product to meet or exceed customer expectations (Juran et al., 2001). Contract farming has been the go-to strategy for agribusiness companies who need a reliable supply of high-quality agricultural raw materials to synchronize their supply chains. In supply chain management, one of the most crucial criteria is quality (Christopher & Towill, 2000). According to Kotler & Armstrong (2013), the fundamental problem with this concept is that customer (buyer) expectations vary greatly, introducing the dreaded element of subjectivity. Numerous empirical studies back up the claim that contract farming is necessary to obtain product of a high caliber. For instance, Mazwi et al. (2018) proposed that in Zimbabwe wheat contract farming, area managers' visit sites regularly (once or twice a week) to evaluate quality and develop protocol with farmers who have newly joined the program. This indicates that wheat contract farming quality assurance exercises were guaranteed to enhance quality farming. The author added that contract farming managers made frequent site visits to reduce asymmetry in information by comparing actual numbers to those stated by the farmer for things like the number of workers, tractors, and tools. However, it was also found that the area manager's site visits were based on their ability. Once or twice a week visits were

made to farmers who had participated in the program for two or more seasons but were not operating at their best (Mazwi et al., 2018). The author also suggested that the site visit by the manager provided a chance to update the wheat farmer's progress report. Many authors contend that the idea that contract farming is the first step toward obtaining high-quality produce is sufficiently supported by empirical data, though. For instance, Mazwi et al. (2018) argued that crops that are self-financed tend to be of lesser quality because farmers with limited finances are inclined to utilize fewer inputs. Due to the usage of illegal chemical chemicals, it has been discovered that the harvests of independent farmers who self-finance have worse quality (Mazwi et al., 2018).

H2: Contract farming as a kind of supplier development results in higher supplier quality performance.

2.7 DELIVERY PERFORMANCE

Both cost and quality performance are impacted by delivery performance (Mukucha and Chari, 2021). The authors went on to say that quality is fully reached once the required materials are delivered and made available for use in operations management. Quality performance is wholeheartedly acknowledged when delivery performance is at its best. (2008) Forslund and co. Delivery performance, according to Kotler and Keller (2016), is an evaluation of the reliability, speed, accuracy, timeliness, and precision of the material transfer from suppliers to buyers. In this study, delivery performance is defined as better wheat supplies at the right time. Delivery timeliness, in accordance with Lysons and Farrington (2016), refers to the accuracy with which materials are transferred from the supplier to the customer.

The authors Mukucha and Chari (2021) continued by discussing the impact of delivery performance on cost and quality performance, as well as the necessity of delivering and making the necessary materials accessible for use in operations management in order for quality to be fully attained. Several authors agreed that there are good reasons to believe that supplier development enhances delivery performance. These hypotheses are supported by the mimetic isomorphism dimension of institutional theory, according to Liu et al. (2010), cited in Mukucha and Chari 2021. The authors also covered how mimetic isomorphism is impacted by pressure from best practices and benchmarks drawn from other successful companies in the same industry.

Mimetic pressure, which is not codified, merely serves to indicate the shared values in a given community (North, 1990). The uncertainty that results from taking unconventional action adds to this pressure. Firms have a tendency to imitate other companies' practices when faced with uncertainty (Peng, 2002). In the sector, there may be established standards for these.

Most industries experience homogeneity due to mimetic pressure. Due to this pressure, the contract system has supplanted other sourcing methods as the preferred choice for value-added tobacco merchants. In a volatile environment, firms succumb to mimetic pressure in an effort to avoid or hedging against uncertainty (Zsdisin, 2003). Mimetic isomorphism is characterized by adopting the strategies of the most successful rivals due to the ambiguity in most business operations.

It is regarded as a well-planned precaution to prevent stumbling into the unfamiliar. The way contracting merchants have been conducting business in Zimbabwe is an illustration of this. In order to deliver the produce in good condition to the GMB or contracting organizations within the shortest lead periods feasible, contract farmers generally use efficient transportation. It makes sense to suggest that, using the institution theory's mimetic isomorphic aspect.

H3: DEVELOPMENT OF SUPPLIERS ACTIONS RESULT IN BETTER SUPPLIER DELIVERY PERFORMANCE

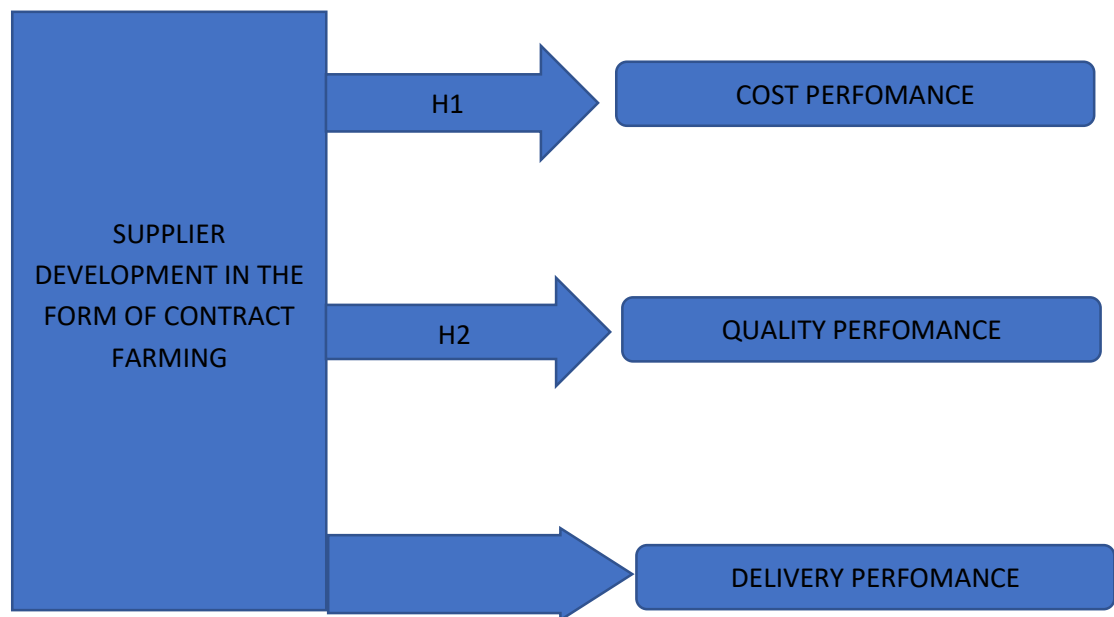
2.8 RESEARCH GAP

The majority of the literature examined comes from various nations, whose strategic stance and footing differ from those of Zimbabwe. Very few studies on contracts management were conducted in the African context, for instance. In Africa, the following studies were conducted:

2.8.1 concept-based structure

The variables in the study are represented schematically by the conceptual framework. A conceptual framework, according to Creswell (2003), is a researcher's synthesis of the literature that is currently available on how to explain a phenomenon. The framework was created to make it crystal clear how the dependent and independent variables in this study relate to one another. Thus, a link between contract farming and the efficiency of Zimbabwe's wheat supply chains is established by the framework.

The proposed conceptual model 2023



Chapter summary

This chapter looked at the theoretical underpinnings of the study and reviewed pertinent empirical research on the performance of wheat supply chains and the growth of contract farming as a type of contract supplier. The empirical literature connected the findings of other researchers regarding contract farming and emphasized the subject's research gap. The next chapter discusses the methodology.

CHAPTER III

RESEARCH METHODOLOGY

3.0 Introduction

This study section's main emphasis is on the suggested research methodology. According to Saunders et al. (2003), research methodology is the philosophy that governs how a research study must be carried out. The aim of the study is to describe the nature of the research strategy, the sample design, and the data gathering and analysis processes. This covers a variety of techniques and steps that will be used to gather relevant data for the study. This chapter includes a description of the study's methodology as well as all additional research study-related activities. The research tools will be determined by the research design, and the type of study will also have an effect.

The research approach, research population, sample size, sampling techniques, and research instruments utilized to collect the data were all included in the research methodology. It also looked at the correctness and dependability of the research instruments. According to Creswell (2009), research methodology is the general research strategy that specifies the steps taken to carry out the study and, among other things, the methodologies to be used. Both qualitative and quantitative research methods were used in the study.

3.1 Research Approach

A research approach is a strategy or method that entails a number of steps, from general hypotheses to precise steps for gathering, analysing, and interpreting data. As a result, it is focused on the kind of research problem that will be solved. Approaches to data collection and Approaches to data analysis or reasoning are the two main categories of research approaches. The three different approaches are mixed methods (pragmatic), qualitative, and quantitative, according to Creswell (2013). Therefore, when analyzing data using quantitative techniques, it is necessary to comprehend the relationships between variables through descriptive or inferential statistics. Descriptive statistics were used to facilitate approximating the parameters and drawing extrapolations about populations (Yin, 2015). Therefore, it is essential to understand the relationships between variables through descriptive or inferential statistics when evaluating data using quantitative methods. To make it easier to approximate the parameters and extrapolate about populations, descriptive statistics were utilized (Yin, 2015). Neutrality

is critically necessary in quantitative research. As a result, researchers take measures to avoid having their presence, actions, or attitudes influence the results (by, for example, changing the context of the study or getting participants to behave differently). The primary tenet of quantitative research is deductive reasoning, which moves from the general to the specific. This approach is sometimes referred to as a top-down approach. Deductions are demonstrated to be dependent on the veracity of one or more presumptions (prior assertions, discoveries, or conditions) (Creswell, 2014).

3.2 Research Framework

An technique to conducting research or a model of inquiry that has been created by the research community and used for a considerable amount of time is referred to as a research paradigm. Constructivist, interpretive, transformational, emancipatory, critical, post-positivist, positivist (post-positivist), and deconstructivist hypothetical paradigms were identified by Bryman (2012). The ideal research approach, on the other hand, is founded on presumptions about ontology and epistemology, according to Neuman (2011), who defines a paradigm as a comprehensive perspective on these two theories. Although Denzin (2011) adds that there are an increasing variety of research paradigms, the ones that are most frequently linked with social studies are the positivist and interpretive paradigms. The two paradigms have differing worldviews with regard to how reality is interpreted (ontology) and how knowledge is produced (epistemology). The study used positivism to establish a link between contract farming, supplier development, and the efficiency of wheat supply chains in Mashonaland Central Province. A positivist study, according to Holloway and Wheeler (2013), uses numerical data and aims to generalize by using a scientific methodology. For the current study, quantitative information was gathered using a closed-ended questionnaire with a five-point Likert scale. According to the positivist viewpoint, social observations are connected to physical events and can thus be examined in a manner similar to that of pure scientific inquiry, in which both the study subject and the researcher were kept apart from one another. In quantitative research, positivism employs hypothesis testing to discover "objective" truth (Desai and Potter, 2011).

According to Creswell (2014), a researcher creates a theory in the positivism school of thought as a result of earlier discoveries or unique observations. The quantitative approach to data collection used by the pure positivist paradigm relates the representation of real-world phenomena in quantifiable, observable reductive variables. A strict definition of what

constitutes science has led to criticism of the positivist purist narrative for failing to take into account limitations in the study's robustness. Despite positivism's outstanding achievements in social science and management research, puritanism has come under fire. While positivism advocates objectivity in terms of validation and falsification, Bryman and Bell (2015) demonstrate that this philosophy ignores the fact that many human judgments are made throughout the research process and that researchers are a part of a subjectivist social perspective, for instance when choosing what to research, developing research methods, and interpreting the results. Comparing positivism and interpretivism, the latter strategy was well suited for employing structured questionnaires to collect quantitative data for this study.

3.3 Research Design

According to Kumar (2012), a research design is a collection of guidelines, a strategy, a framework, and techniques that can be used to collect the data required for the study. A research design is a tool that can be used to find answers to the questions and issues raised by the study, according to Desai and Potter (2011), who provided more detail on this concept. A causal research design was employed by the researcher, which focused on creating a hypothesis in relation to the research questions and addressed at least four issues: what question to examine, what data are relevant, what data to gather, and how to analyze the results. The "why" questions were addressed using explanatory research, and this trait necessitates the use of causal explanations. The study employed an explanatory research design, also known as causal research, to achieve all of its goals. A causal research design, according to Kumar (2012), aims to determine the cause and effect connections between two study variables. Because of the careful subject selection, causal studies benefit from replication and have higher levels of internal validity. Causal studies focus on the examination of a particular circumstance or problem in order to comprehend the patterns of correlations between variables. Thus, using causal or explanatory research designs, the effectiveness of wheat supply chains can be investigated in relation to contract farming, a type of supplier development.

3.4 Target Population

According to Meslin (2012), a population is made up of particular subgroups of study participants from which the researcher anticipates and seeks to collect data. According to Kumar (2003), a population is made up of all objects that have a particular set of characteristics important to a particular research issue. The target population for this study was the A2

commercial farmers in Mash Central; there were (8) of them in Bindura, (10) in Mvurwi, (10) in Shamva, and (15) in Mazoe Farming areas. The sample as a whole had 43 respondents.

3.5 Census.

According to Bryman and Bell (2011), a census is a survey that is conducted on the entire set of observation objects that are a part of a particular population or universe. A census is a thorough count of a population or group of people with regard to specific characteristics at a particular time. Since there are only a small number of wheat farmers and only 43 people responded to the survey, the researcher chose it because the universe was not very large. The main benefit of a census was that there was no sampling error because it gave a true representation of the population.

3.6 Data collection instrument

In order to achieve results that are comparable to those of past studies, measures for this investigation were selected from the body of current literature. Jones and Suh (2000) stated that it is "unnecessary to develop new scales given the number of acceptable scales that exist in literature" (Bruner, 2003). The usage of verified measuring scales transforms a field from an art into a science. Parameter estimates in published literature are also unnecessarily varied by subtly using multiple measures for the same constructs (Slavec & Drnovseck 2012). The sources of the reliable and valid measurements used in earlier studies are provided in the sections that follow. Both the binary categorical variable of supplier development and the three dependent latent variables in this study, quality, cost, and delivery performance, were included in the data collection tool. The constructs' constituent parts came from a body of earlier supply chain management literature.

3.7 Data collection procedures

The proprietors of their respective commercial farms and those in charge of purchasing and logistics for all respondents in the sampling frame independently completed a structured data collecting instrument. The performance of their suppliers was to be evaluated overall by the respondents. In this instance, the suppliers were either independent or contract farmers. To obtain reliable evaluations, buyers rated the farmers they had dealt with in the three months before to data collection. While collecting data, specific study ethics guidelines were observed and followed. The respondents' right to privacy and confidentiality had to be upheld, and their informed consent had to be obtained (Saunders et al., 2016). Data collection for this study

included a self-administered questionnaire as part of a survey procedure. In surveys, respondents are preselected and identified, and first-hand information is gathered from them using a structured questionnaire that probes directly into their beliefs, perceptions, preferences, knowledge, motives, intentions, and awareness (Wegner, 2013). Because self-administered surveys depend on the clarity of the items in a data collecting instrument, they were employed in this study under the presumption that all respondents were highly literate.

However, self-administered surveys also have high unit response rates (Aguinis, Hill, & Bailey, 2019) despite the fact that they usually have some item non-responses (Bryman, 2016). Self-administered questionnaires are also frequently quick to complete, making this method particularly appropriate for academic investigations with constrained resources (Hair et al., 2014). According to Hair et al. (2014), self-administered questionnaires ensure respondent confidentiality, eliminate interviewer bias, and improve respondent control. The self-administered survey was impacted by the drop-and-pick procedure. According to this method, questionnaires are given to the selected respondents and they are given some time to complete them (Maholtra, 2006). After a predefined length of time had passed, the respondents were required to give the researchers their completed questionnaires (Hair et al., 2014).

3.8 Validity and reliability of the instrument

According to Polit and Beck (2010), a quality criterion known as validity relates to how well-founded and accurate a study's measurement-based results are, or how well an instrument measures what it is supposed to assess. A sort of validity that demonstrates how well the study takes into account the many components of the research questions and objectives is called content validity, according to Mugenda & Mugenda (1999). The researcher sought the advice of subject-matter experts to assess how well each of these instruments worked to collect the necessary data for the study. To make the instruments better, their suggestions, thoughts, and clarifications were taken into account. Two respondents participated in the instrument's pilot research. Considering the objectives of the study, different aspects of the questionnaires will be assessed.

According to Mugenda and Mugenda (1999), an instrument's reliability refers to how consistently it will measure the things that are expected of it. Uncertain questionnaires and unclear instructions to respondents lead to random errors. By cross-checking the questionnaires during piloting, the researcher reduced random errors. The test-retest methodology was used in this study to evaluate the dependability of the research instruments. In this study, the

reliability of the questionnaire was assessed using the Cronbach's Alpha value from the Statistical Package for Social Sciences (SPSS) Version 21.0 program.

3.9 Data Analysis and Presentation

In order to find the answers to research questions, Kerlinger (2006) claims that data analysis comprises categorizing, altering, and summarizing data. While editing, coding, and cleaning the data, the researchers looked at how complete the surveys were. After doing data analysis using the statistical package for social sciences (SPSS Version 21.0) application, reports were produced using Microsoft Excel. The mean, mode, variance, and standard deviation were calculated using descriptive analysis to see if respondents agreed or disagreed with the assertions under each variable. To investigate the association between independent supplier development in the form of contract farming and the dependent variable (cost/delivery and quality performance), inferential statistics employed Binomial Logistic Regression.

The data will be displayed using tables, pie charts, and bar graphs that were produced using SPSS version 21.0. Tables were selected as the main format for presenting data due to their clarity in dividing up different kinds of data. In order to display descriptive survey data, Gay (2011) claims that frequency tables, pie charts, and frequency polygon graphs are frequently used.

3.10 Likert scale

Respondents utilize a Likert scale to indicate whether they agree or disagree on a numerical score sheet (Kotler, 2000). According to Bassey (2005), the Likert scale should be implemented as a set of speeches that were scored on a five-point scale with no extent equaling 1, little extent equaling 2, uncertain equaling 3, big extent equaling 4, and very great extent equaling 5. A Likert scale is good for gathering the most responses, according to Kerlinger (2006), because it provides the total number of respondents for each Given Likert. Table 3.10.1 displays ratings on the Likert scale.

Questions	no extent	little extent	uncertain	great extent	very great extent

The six-item summated scale used to measure cost performance and the six-item summated scale used to measure quality performance were both derived from the contribution of Wisner et al. (2016), while the five-item summated scale used to measure delivery performance was based on the works of Chopra et al. (2016).

3.10.2 Measurement scale items

Construct	Item code	Item description
Cost performance	C1	Supplier development in the form of contract farming reduce inputs costs through economies scale of bulk inputs purchases arrangements
	C2	Contract farming reduce cost through coordination of raw materials distribution
	C3	Close monitoring of contract farming activities meets budgeted costs
	C4	Contract farming farmers are monitored in the efficient use of electricity on irrigation systems
	C5	Synergic arrangements in contract farming improves

		cost efficiency value for money
	C6	Attainment of NDS1 Cost saving strategies
Quality performance	Q1	Contracting firms regularly inspect wheat farmers' quality during contract farming/ wheat is inspected regularly
	Q2	The Contracting organization monitors wheat farmers quality performance against inputs specifications and service level agreements
	Q3	The contracting company can identify any potential issues or problems beforehand and provide prompt solutions.
	Q4	The company assesses the quantity and quality of delivered desired wheat products.
	Q5	Zero defects and attainment of NDS1 Strategies
Delivery performance	D1	Contracting firms and farmers believed that contract farming delivers NDS1 strategy in food security

D2	Wheat Contract farming improves local reserves for cereal products
D3	Wheat contract farming boosts local baking/brewing value chains
D4	Wheat contract farming minimizes reliance on foreign imports for baking consumables
D5	Achievements of NDS 1 Strategies

3.11 Ethical Considerations

Ethics are systems of moral principles that provide emphasis on how thoroughly research procedures look at ethical, legal, and social duties, according to Bethlehem and Silva (2012). After carefully weighing all available information regarding the risks associated with participating in the research, participants were given the option of participating or not, in accordance with the ethical principle of informed consent. Respondent consent was requested for the study. Before data collection, debriefing was also conducted, and participants received orientation on the purpose of the study, potential advantages, and anticipated outcomes. Respondents voluntarily expressed their freedom to participate in the study, and the researcher made sure that participants had clear instructions on how to do so. Additionally, they received the proper respect, justice, and dignity.

Summary

The techniques and tools the researcher used to gather relevant data for the study were covered in this chapter. Additionally, the chapter examined the population and sample size, sampling design, methods for presenting and analyzing data, and research methodology. The presentation, analysis, and discussion of the study's findings were the key topics of the subsequent chapter.

CHAPTER IV

4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

The findings of the study were presented using data from this chapter. the order in which the goals of the research were provided as data. Tables, pie charts, and bar graphs were used in the presentation to display data that had been SPSS-analyzed. The results of the surveys were used to examine the data. Descriptive and inferential statistics were applied to the data analysis.

4.2 Instrument Response Rates

We used a sample size of 44, so we gave questionnaires to those participants.

Table 4.2: Questionnaire response rates

	Frequency	Percentage
Questionnaires Administered	49	100%
Completed and returned	44	90%
Not returned	4	10%

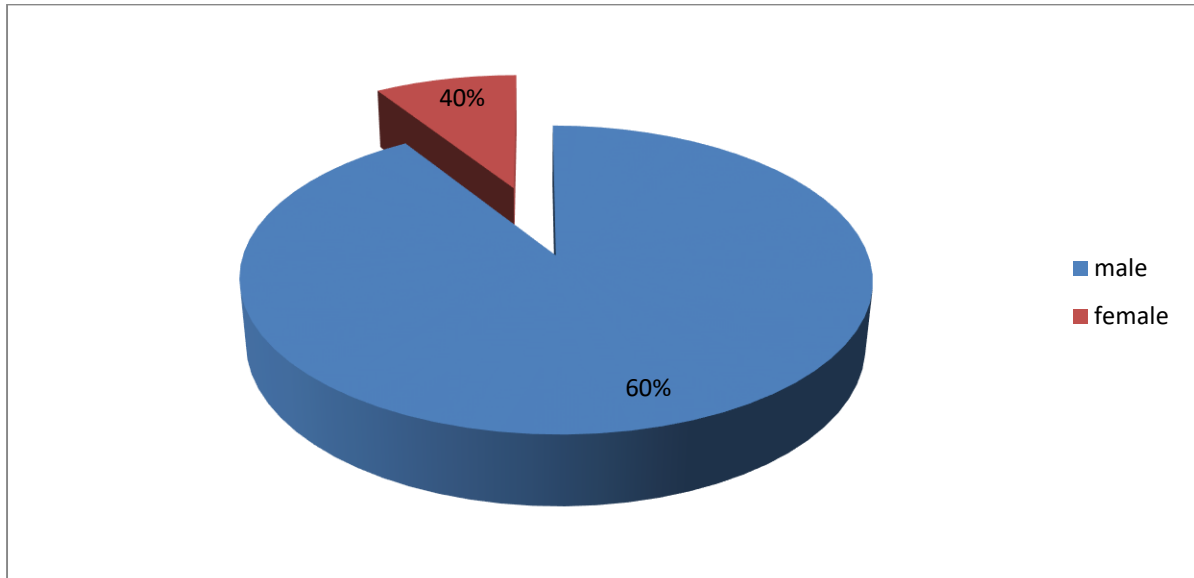
Source: Primary Data 2023

Table 4.2 demonstrates that only 44 of the 49 questionnaires that were given to participants were completed and returned, yielding a 90% response rate. The researcher closely followed up with respondents to get such a high response rate, and some of the questionnaires were completed and returned right away. 90% of the participants in the study responded, which is regarded as excellent. Punch (2008) cites the following response rates as the ideal ones: 50% adequate, 60% good, 70% very good, and above 80% is excellent. For the purposes of the study, this response rate was deemed sufficient. A response rate of 50% is considered adequate, a rate of 60% is considered good, and a rate of more than 70% is considered very well, according to Mugenda & Mugenda (2003).

4.3 Respondent demographic information

The demographic data sought from this exercise included details on the respondents' gender, age, academic background, and length of experience.

4.3.1 Gender of respondents

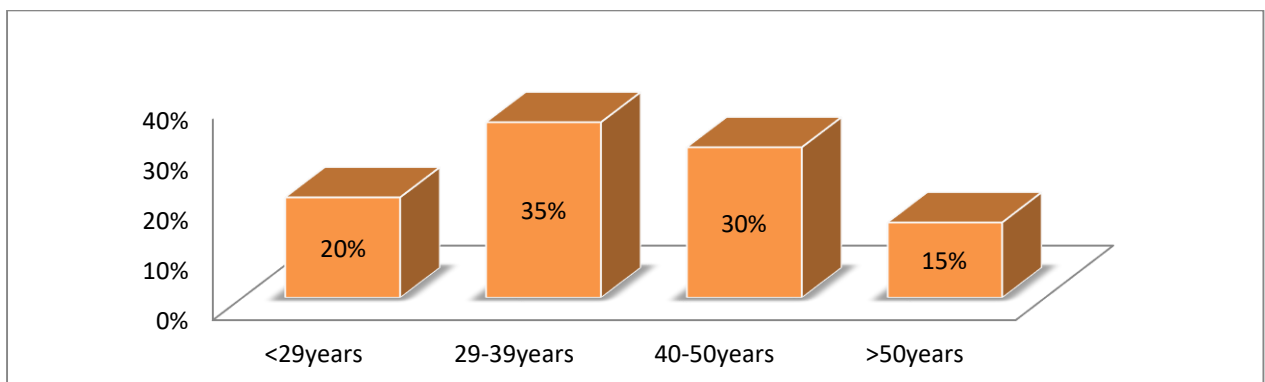


Source: Primary Data 2023

Figure 4.3.1 Gender of respondents

Fig 4.3.1 reveals the demographics used to reveal the gender of the respondents, with the findings revealing that 40% of the respondents were female and 60% of the participants were male.

4.3.2 Age of respondents



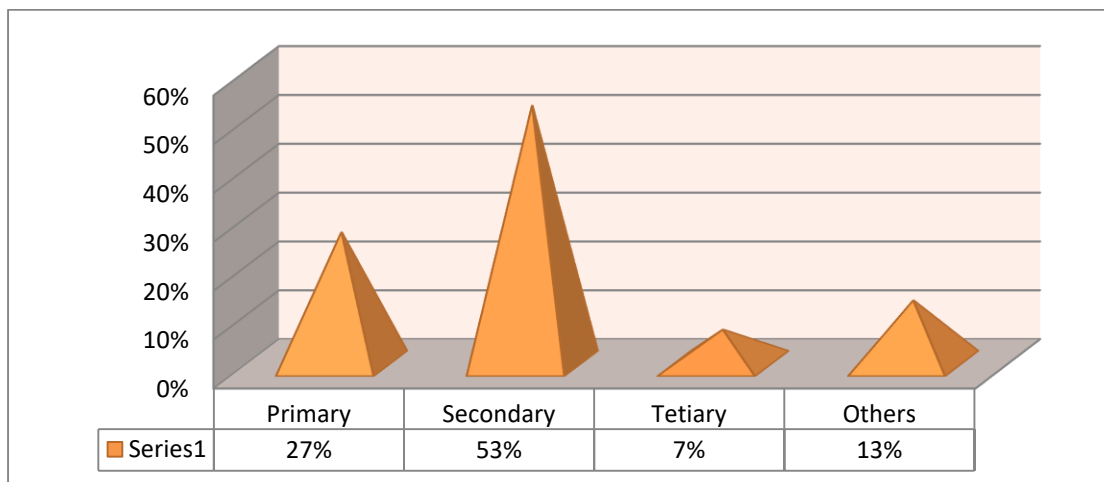
Source: Primary Data 2023

Figure 4.3.2 Age of respondents

35% of respondents, as seen in Figure 4.2, were between the ages of 29 and 44. The second-highest percentage (58%) was seen in the 40 to 50 year age group. 20% of respondents were younger than 29, and 15% of respondents were over 50.

4.3.4 Academic achievement

One of the most important things that might affect a person's behavior and how he interprets a certain phenomenon is his level of education. The respondent's educational background is crucial to understand because it can influence how they reply. The findings of determining the respondents' level of education are displayed in Figures 4.3.4 below.

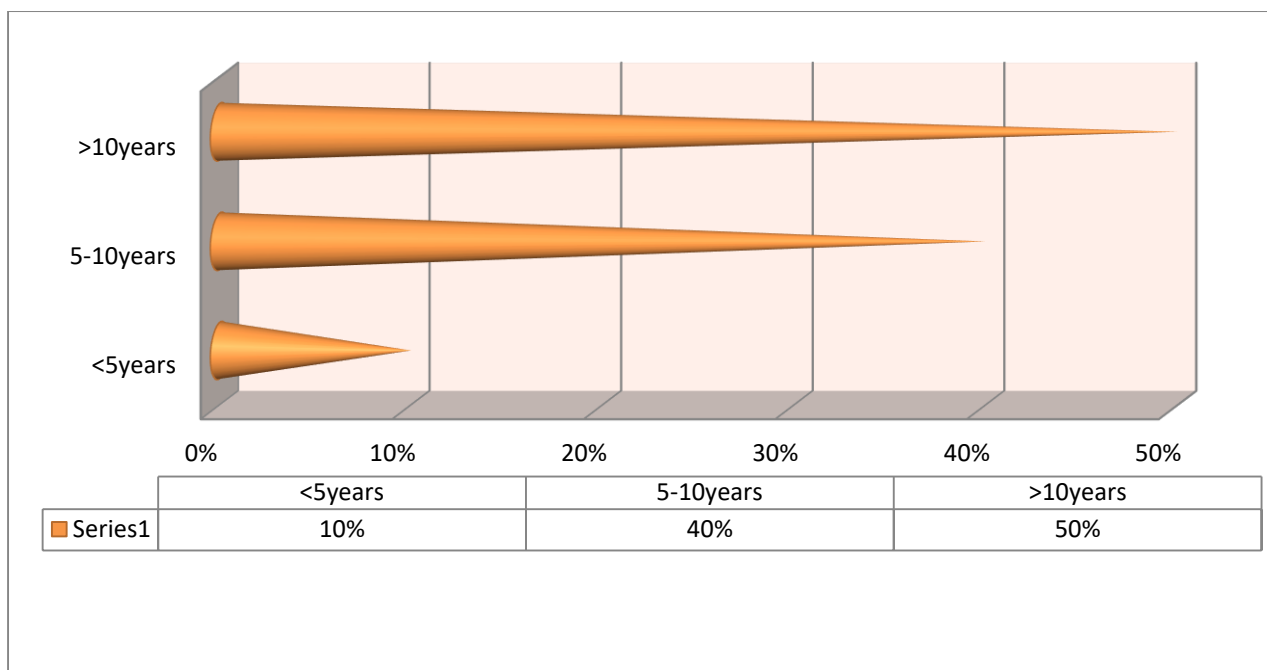


Source: Primary Data 2023

Figure 4.3.4 Level of education

In Fig. 4.3, the respondents' percentile-based educational attainment is shown together with it. Figure 4.3 shows that in the aforementioned case, 53% had finished secondary school, 27% had finished elementary school, 13% had not attended any school, and 7% had finished university education. This shows that most participants had some level of education and were able to read, interpret, and answer the questions on the questionnaire the researcher gave out as well as its contents. By accurately completing the questionnaire, they were able to convey their ideas.

4.3.5 Period of service



Source: Primary Data 2023

Figure 4.3.5 Period of service

The respondents' length of service is displayed in Fig. 4.3.5. 10% of the participants, some of whom were teaching assistants, had less than five years of work experience when asked how long they had been employed by the organization. The majority of respondents, however, had at least five years of work experience, as seen in Table 4.4. 90% of the volunteers who reported having spent at least five years working for A2 wheat growers exhibited this. This suggests that the respondents were educated about the topic under study because they had been actively participating in the organization's operations for a significant amount of time.

4.4 Reliability Statistics

Table 4.4.1 Reliability Statistics

Dimension		Reliability coefficients (Alphas)	Number of items
Cost saving performance		0.75	9
Quality performance	improvement	0.88	6

Improved performance	delivery	0.84	5
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Table 4.4.1 displays the reliability test findings for the administered questionnaire, with Cronbach alpha values for cost performance, quality improvement performance, and delivery performance, respectively, of 0.75, 0.88, and 0.84. Reliability assesses a measure's utility by defining the stability and consistency with which the instrument devised measures the idea (Sekaran and Bougie, 2013). Cronbach's alpha values range from 1 (excellent internal reliability) to 0 (no internal reliability), according to Bryman and Bell (2015). Hair et al. (2010) state that for a study's instrument to be deemed reliable, it must have a minimum acceptable Cronbach's alpha of 0.60. The researchers decided to keep all the questions in light of their findings in order to maintain the significance of Cronbach's alpha. The findings supported Smith et al. (2011)'s claim that a reliability coefficient of 0.60 and above is acceptable even though Bryman and Bell (2011) and De Vaus (2002) advised an alpha value of 0.70 as a minimum.

i. Descriptive statistics on the relationship between supplier development in the form of contract farming and cost performance on wheat supply chains

The table 4.4.2 below shows descriptive statistics findings on cost performance on wheat supply chains

Table 4.4.2 the relationship between supplier development in the form of contract farming and cost performance

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Supplier development in the form of contract farming reduce inputs costs through economies scale of bulk inputs purchasing arrangements	44	4.7667	.07854	.44418
Contract farming reduce cost through coordination of raw materials distribution	44	4.6333	.08949	.49013
Close monitoring of contract farming activities meets budgeted costs	44	4.4667	.09264	.50742
Contracted farmers are monitored in the efficient use of electricity on irrigation systems	44	4.3527	.11679	.14468
Synergic arrangements in contract farming improves cost efficiency	44	4.2541	.00123	.23561
Valid N (listwise)	44			

According to the research findings in Table 4.4.2, contract farming significantly reduces input costs (mean = 4.7; SD = 0.4); this is consistent with Lysons and Farrington's (2006) findings

that bulk input purchasing arrangements are generally regarded as being more valuable. The contract farming organization did a good job of making sure that resource distribution was centralized and that economies of scale would reduce costs for the supply chains for wheat. Contract farming companies made sure that hired farmers did not use raw materials improperly (mean=4.6; SD=0.5). This is in line with Ngosong's (2015) findings that failing to monitor contracts leads to contractors taking advantage of opportunities to perform subpar work or use materials that don't meet the necessary quality standards, which compromises service delivery and results in a loss of funds. Costs for contract farming are within budget (mean = 4.5; SD = 0.5). This helps wheat farmers and the wider supply chain as a whole achieve effectiveness in achieving value for money and other economic goals. The study also showed that, to a limited extent, the organization ensures that monitoring electricity usage had a positive impact on its wheat farming projects (mean=4.4; SD=0.2). In wheat contract farming, synergistic arrangements increased cost effectiveness.

ii. DESCRIPTIVE STATISTICS ON THE RELATIONSHIP BETWEEN CONTRACT FARMING AND QUALITY PERFORMANCE IN WHEAT SUPPLY CHAINS

Table 4.4.3

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Contracting firms regularly inspect wheat farmers' quality during contract farming wheat is inspected regularly	44	4.7667	.07854	.44418
The Contracting organization monitors wheat farmers quality performance against inputs specifications and service level agreements	44	4.6333	.08949	.49013
The contracting company can identify any potential issues or problems beforehand and provide prompt solutions.	44	4.4667	.09264	.50742
The company assesses the quantity and quality of delivered desired wheat products.	44	4.3667	.12208	.16868
Valid N (listwise)	44			

The results of the study demonstrate that wheat farmers constantly evaluate the quality of their harvest to an extremely high degree (mean = 4.7; SD = 0.4). According to the table's results (mean = 4.6; SD = 0.5), the contracting organization closely analyzes wheat farmers' quality performance in relation to input requirements and service level agreements. The contracting company is able to foresee potential challenges or problems and offer quick fixes (mean=4.5; SD=0.5). The amount and quality of the given desired wheat products are only very minimally evaluated by the contract farming organization (mean=4.3; SD=0.2).

iii. DESCRIPTIVE STATISTICS ON THE RELATIONSHIP BETWEEN CONTRACT FARMING AND DELIVERY PERFORMANCE ON WHEAT SUPPLY CHAINS

Table 4.4.4

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Contracting firms and farmers believed that contract farming delivers NDS1 strategy in food security	44	4.7667	.07854	.44418
Wheat Contract farming improves local reserves for cereal products	44	4.6333	.08949	.49013
Wheat contract farming boosts local baking value chains	44	4.4667	.09264	.50742
Wheat contract farming minimizes reliance on foreign imports for wheat products	44	4.3667	.12208	.16868
Valid N (listwise)	44			

According to the study findings on table 4.4.4, which presented descriptive statistical research findings on the performance of delivery on wheat supply chains, contracting companies and

farmers firmly believed that contract farming carries out the NDS1 strategy for national food (mean=4.8; SD=0.4). The aforementioned descriptive statistical data demonstrates that Wheat Contract farming significantly increases local cereal product reserves. The aforementioned data also demonstrates that Wheat contract farming strengthens regional value chains for baking to a greater extent (mean=4.5; SD=0.5). While Wheat contract farming reduces the need for wheat products to be imported from abroad (mean = 4.3; SD = 0.2).

4.5 Binomial Logistic Regression results (inferential statistics)

The study used binomial logistic regression analysis to look at how contract farming elements and the cost/quality and delivery performance of the wheat supply chain interact.

Table 4.5.1 Classification of accuracy

Observed				Predicted		
				Cost/quality/delivery performance		Percentage Correct
				No	yes	
Step 0	Wheat supply chain no	0	3	.0		
	cost/quality/delivery performance yes	0	41	100.0		
	Overall Percentage			93.0		

a. Constant is included in the model.

b. The cut value is ,500

The classification of accuracy test was used to evaluate the model's goodness of fit, as shown in table 4.5.1. Contract farming enhances the performance of the wheat supply chain,

according to 41 (93%) of the 44 respondents, while only three respondents (7%) disagreed. The model is effective with a 93% correct classification rate. In general, discriminant analysis performs better at accurately classifying data. A classification accuracy of more than 25%, according to Gay (2011), is considered acceptable.

Table 4.6 Model summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	78.223 ^a	.163	.440

Cost-cutting, quality improvement, and delivery improvement all have different effects on wheat supply chains, affecting them by 16.3% and 44%, respectively, according to the two pseudo-R-squared statistics of Cox and Snell, which had values of 0.163 and 0.440. The model's fitness was also assessed using -2 Log likelihood, and a likelihood ratio value of 78.223 was discovered. This outcome demonstrated a significant relationship between wheat supply chain performance and contract farming as a method of supplier development.

Table 4.7 Binomial Logistic Regression Results

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a COST PERFOMANCE	2.542	.385	9.120	1	.003	3.067
QUALITY PERFOMANCE	1.170	.008	2.167	1	.018	1.210
DELIVERY PERFOMANCE	1.044	.358	3.575	1	.004	1.357
Constant	1.809	.141	1.234	1	.008	8.085

a. Variable(s): supplier development in the form of contract farming.

The statistical significance of the dependent variable was assessed using the Wald test. According to the study, the cost performance ($p=.003$), quality performance ($p=.018$), and delivery performance ($p=.004$) all had a significant positive impact on the model's or prediction's performance. The odds ratios [Exp (B)] displayed the anticipated change in odds for a rise in a contract farming unit, the corresponding supplier development component. According to Gay (2011), odds ratios under one show a decline, odds ratios over one show an increase, and odds ratios of one show that the dependent variable is unaffected by changes in the independent variable's unit.

4.8 Discussion of the results

i. The connection between cost performance and supplier development in the form of contract farming

The study's results showed that contract farming and cost performance on wheat supply chains had a favorable and statistically significant link ($p=0.003$). This was consistent with the

findings of Shaba et al. (2017), who found that contract farming is a supplier development strategy that enhances cost performance as seen by the availability of pricing information and a decline in price conflicts. According to a study by Murthy and Madhuri (2013), there were no statistically significant differences between the independent farming system and the contract system in terms of cost performance as gauged by production costs. Yegon et al. (2015) found that when suppliers received both financial and technical support, cost performance significantly improved. As stated by Singh (2002) Contract farming increases income and employment in underdeveloped areas. According to the domestic resource cost (DRC) for Zimbabwe's wheat production, which was supported by Chamboko et al.'s(2017)research, Zimbabwe has high production costs compared to regional costs. However, some local researchers asserted that Zimbabwean wheat farming is generally not profitable. This study shows that importing wheat is less expensive for the country than domestic production. The authors continued by saying that it is critical to keep in mind that input costs are high in comparison to the cost of producing one tonne of wheat.

The relationship between supplier development in the form of contract farming and quality performance of wheat supply chains

The study's findings revealed a favorable and statistically significant relationship between contract farming and the effectiveness of wheat supply chains in terms of quality ($p=0.0180.05$). The current study's findings are consistent with Kotler & Armstrong's (2013) observation that contract farming has been widely adopted as the standard method for coordinating supply chains by agribusiness firms needing a steady supply of high-quality agricultural raw materials. Nevertheless, quality assurance relied heavily on quality monitoring. For instance, contract farming managers made frequent site visits to compare actual numbers to those provided by the farmer in order to reduce the asymmetry of information. However, it was also found that the area manager's site visits were based on their ability. This is consistent with Ngosong's (2015) findings that failure to monitor contracts leads to contractors taking advantage of opportunities to perform subpar work or use materials that don't meet the necessary quality standards, which results in a loss of funds and a failure to deliver services.

i. The relationship between supplier development in the form of contract farming and Delivery performance of wheat supply chains

The study's findings revealed a favorable and statistically significant relationship between contract farming and the effectiveness of wheat supply chains' delivery systems ($p=0.0040.05$). The results of the current study are in line with those of Kotler & Keller (2016), who suggested that delivery performance is an assessment of all elements involved in the transfer of materials from suppliers to buyers, including dependability, speed, accuracy, timeliness, and precision (Forslund et al., 2008). The authors Mukucha and Chari (2021) went on to discuss how delivery performance affects both cost and quality performance as well as how the required materials must be provided and made available for usage in operations management in order for quality to be fully attained. Several authors agreed that there are good reasons to believe that supplier development enhances delivery performance. These hypotheses are supported by the mimetic isomorphism dimension of institutional theory, according to Liu et al. (2010), cited in Mukucha and Chari 2021. Also covered by the authors was how mimetic isomorphism is impacted by pressure from standards and best practices drawn from other successful companies in the same market. The findings, however, conflict with those of Chamboko, Chawarika, and Mutambara (2017), who discovered that Zimbabwe's wheat production had decreased to about 2 t/ha and that the country had imported more than 80% of its wheat needs for the 2013–14 season. Nevertheless, according to recent sources, Zimbabwe was the only country that could produce enough wheat to feed the entire country without the need for imports from other countries.

Chapter summary

Overall results demonstrated that supplier development in the form of contracts has a significant impact on the performance of wheat supply chains in Mashonaland Central Province. In this chapter, the research's key findings were summarized and discussed. Through questionnaires and interviews, all of the research questions were addressed. The results and a discussion of the data collected were then presented. The titles of the results were displayed alongside the research questions. The subsequent chapter covered the study's recommendations and conclusion.

CHAPTER V

5.0 SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The main conclusions, recommendations, and findings in relation to the stated purpose are summarized in this chapter. Additionally, it makes recommendations for potential research areas. The study sought to improve the performance of the wheat supply chain by developing suppliers through contracts. Analyzing the effects of good contract management techniques in the central province of Mashonaland. Based on the findings presented and the literature review, we draw a conclusion and make recommendations consistent with the study's objectives.

5.2 Summary of study

The study's research goals were to ascertain the connection between contract farming and cost performance on wheat supply chains in Mashonaland central province, to critically identify the connection between contract farming and quality performance in wheat supply chains, and to

ascertain the relationship between contract farming and delivery performance of wheat supply in that province. It employed a causal research design. Questionnaires and a census were used for data collection.

5.3 Summary of findings

The study's findings showed that contract farming and cost performance on wheat supply chains had a favourable and statistically significant relationship ($p=0.0030.05$).

- According to the study's findings, contract farming and the efficiency of wheat supply chains have a positive and statistically significant link ($p=0.0180.05$).
- The study's conclusions showed that contract farming and the efficiency of wheat supply chains in central Mashonaland have a positive and statistically significant association ($p=0.0040.05$).

5.4 Conclusion

Therefore, the following conclusions can be drawn in light of the research findings:

- The government should take action to address the effects of load shading and power supply to prevent power outages. The high cost of agricultural inputs, particularly fertilizers, needs to be reviewed at the national level.
- Government should strongly support contract farming to improve NDS1 and achieve national food security goals.

5.5 Recommendations

- The government should vigorously mobilize and support contract farming programs to support additional local value chains and advance our economic goals, according to the research's findings and conclusions.
- To stop opportunistic behaviour, farmers must improve their working relationships with contracting companies through mutual trust and understanding. To avoid collusive practices, farmers should not tolerate excessive relationships with contractors.

- Input costs for farmers should be subsidized by the government, and Zesa should re-evaluate the impact of load shading in this context and lower electricity prices.

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APPENDIX 1
Introductory letter (Questionnaire)

Bindura University of Science Education

P Bag 1020, Bindura

01 November 2017

To: The Permanent Secretary

Ministry Of Transport and Infrastructural Development



REF: LETTER SEEKING AUTHORITY TO CARRY OUT MY RESEARCH IN YOUR DEPARTMENT

I do hereby request for authorization to carry out my research in your organisation. I am a student at Bindura University of Science Education (BUSE) studying a Bachelor of Commerce Honours Degree in Purchasing and Supply. I am carrying out research on a topic entitled; Supplier Development in the Form of Contract Farming, on Performance of Wheat Supply Chains in Mashonaland Central Province

Therefore, I am kindly appealing for your assistance in fulfilling the above requirement by way of filling in the attached questionnaire. Please try by all means to give truthful answers to the best of your knowledge. There's no right or wrong answer therefore every answer shall have a special contribution. I would like to assure you that this research is merely for academic purposes and that, the information you are going to give will be treated with strictest confidentiality and will be used for this study only. On behalf of my college, Bindura University, I would like to promise that, the information obtained will not be misused in any way. Your cooperation in filling the questionnaire is greatly appreciated.

Yours faithfully

.....

Ashton Dambaza

Cell: 0773 980 142/0714104218

Email: dambazaa77@gmail.com

APPENDIX 2: QUESTIONNAIRE

INSTRUCTIONS:

- | |
|---|
| <ul style="list-style-type: none">▪ Please answer all the questions honestly▪ On section A and section B indicate your answers by ticking where appropriate in the brackets provided.▪ On section C to section, I indicate by filling one of provided numbers 1-5 which are representing the extent to which you agree or disagree in the bracket at the end of each question▪ Your name or identity is not required |
|---|

SECTION A

DEMOGRAPHICAL QUESTIONS

1.1 Gender

Male []

Female []

1.2. Age of respondent

< 29 [] 29- 39 [] 40 – 50 [] over 50 []

1.3 Period of service

<5years 5-10years > 10years

[] [] []

1.5 level of education attained

Undergraduate Degree [] Master's Degree [] Doctoral Degree []

Others[]

SECTIONB: WHEAT SUPPLY CHAIN PERFOMANCE

SUPPLIER DEVELOPMENT IN THE FORM OF CONTRACT FARMING LEADS TO WHEAT SUPPLY CHAIN PERFOMANCE

Yes []

No []

SECTION C THE NEXUS BETWEEN CONTRACT FARMING AND COST PERFOMANCE

Indicate the extent to which you agree or disagree with the following about Contract farming and cost performance of wheat supply chain

No extent=1; little extent =2; uncertain =3; great extent =4; very great extent= 5

1 2 3 4 5

- a. Supplier development in the form of contract farming reduce inputs costs through economies scale of bulk inputs purchases arrangements []
- b. Contract farming reduce cost through coordination of raw materials distribution
- c. Close monitoring of contract farming activities meets budgeted costs []
- d. Contract farming farmers are monitored in the efficient use of electricity on irrigation systems []
- e. Synergic arrangements in contract farming improves cost efficiency value for money []
- f. Farmers believes that contract farming improves the attainment of NDS1 Cost saving strategies []

SECTION D: RELATIONSHIP BETWEEN CONTRACT FARMING AND QUALITY PERFOMANCE OF WHEAT SUPPLY CHAINS

Indicate the extent to which you agree or disagree with the following about the relationship between contract farming and quality performance of wheat supply chains

no extent=1; little extent =2; uncertain =3great extent =4; very great extent= 5

1 2 3 4 5

- a. Contracting firms regularly inspect wheat farmers' quality during contract farming wheat is inspected regularly []
- b. Contracting firms regularly inspect wheat farmers' quality during contract farming and wheat is inspected regularly
- c. The contracting organization can ascertain any matters or problems in advance that could arise and offer timely solutions
- d. The organization evaluates the quantity and quality of desired wheat products delivered

SECTION E: THE RELATIONSHIP BETWEEN CONTRACT FARMING AND DELIVERY PERFORMANCE OF WHEAT SUPPLY CHAINS

Indicate the extent to which you agree or disagree with the following about the relationship between contract farming and delivery performance of wheat supply chains

no extent=1; little extent =2; uncertain =3; great extent =4; very great extent= 5

1 2 3 4 5

- a. Contracting firms and farmers believed that contract farming delivers NDS1 strategy in food security []
- b. Wheat Contract farming improves local reserves for cereal products []
- c. Wheat contract farming boosts local baking value chains []
- d. Wheat contract farming minimizes reliance on foreign imports for wheat products []

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