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**COLLEGE OF BUSINESS AND ECONOMICS  
DEPARTMENT OF MANAGEMENT**

**DETERMINANTS OF AGRICULTURAL INSURANCE UPTAKE AMONG  
AGRIBUSINESS ENTERPRISES IN MEKI**

**By**

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**A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the Award of a Master's Degree in Business Administration**

February, 2024

ADDIS ABABA, ETHIOPIA

## **DECLARATION**

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Habtamu Endris (Ph.D.). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher-learning institution to earn any degree.

Name\_\_\_\_\_ Signature\_\_\_\_\_ Date\_\_\_\_\_

Addis Ababa University, Addis Ababa, February 2024

## **Certificate**

This is to certify that this study, “determinants of agricultural insurance uptake among agribusiness enterprises in Meki”, undertaken by Getahun Mohammed for the partial fulfillment of the Requirements for the Degree of Master of Arts in Business Administration at Addis Ababa University College of Business and Economics Department of Management, is an original work and not submitted earlier for any degree either at this University or any other University.

Research Advisor: Habtamu Endris (PhD)

Signature -----

Date-----

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**COLLEGE OF BUSINESS AND ECONOMICS**  
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## **Acknowledgement**

Above all I would like to thank the almighty God for his endless mercy and hope he gave for me to stay alive and do this work and help in every aspect of my life. Without his help I would not have been here.

I would like to forward my deepest gratitude to my advisor **Habtamu Endris (PhD)** who has provided me with valuable guidance and direction to do this thesis.

Lastly, I would like to thank my family for being there for me whenever I need them and for their unconditional support and encouragement throughout my education.

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## **Abstract**

*This study the determinants of agricultural insurance among uptake of agribusiness enterprises in Meki. The objective is to identify the determinants of agricultural insurance among uptake of agribusinesses enterprises in Meki, A mixed-methods approach combining quantitative surveys and qualitative interviews was employed. The variables examined included perceived benefits, access and affordability, trust and social networks, knowledge and awareness, risk attitude, government support, and risk perception. Data from 167 usable questionnaires were analyzed using regression analysis in SPSS version 26.0. The findings revealed that risk perception, knowledge and awareness, access and affordability, government support, and social networks significantly influenced insurance uptake. The study suggests the need for targeted interventions to improve awareness, enhance access and affordability, and strengthen government support and social networks to promote agricultural insurance adoption. These recommendations aim to enhance the sustainability and resilience of agribusiness enterprises in Meki.*

### **Key Terms:**

Access and affordability, Agribusiness enterprises, Agricultural insurance, Determinants, Government support, Knowledge and awareness, Perceived benefits, Risk perception, and social networks.

# CHAPTER ONE

## INTRODUCTION

### 1.1. Background of the Study

Agricultural insurance has been recognized as a valuable risk management tool for agribusiness enterprises, providing protection against various risks and enabling them to recover from losses and sustain their operations (Smith, 2022). Agricultural insurance is an important risk management tool that can help farmers mitigate the impact of various risks, such as drought, floods, pests, and diseases, on their crops and livelihoods (Nnadi, F et al. 2013). Agriculture plays a crucial role in Ethiopia's economy, contributing to approximately 36% of the country's GDP and employing approximately 80% of the population (World Bank, 2019). However, Ethiopian farmers face various risks that can lead to crop failure and financial losses. To address these challenges, the Ethiopian government introduced several agricultural insurance schemes to protect farmers from risks and enhance their resilience.

According to Belissa et al. (2020), only 4% of the agribusiness enterprises in the region have adopted agricultural insurance. Understanding the factors that influence the uptake of agricultural insurance among agribusiness enterprises is crucial for increasing the adoption of agricultural insurance schemes and enhancing farmers' resilience to risk in Meki. Several studies have examined the determinants of agricultural insurance uptake among farmers in Ethiopia. Ankrah et al. (2021) found that farmers' education level, income level, and access to credit significantly influence the adoption of agricultural insurance. Additionally, other studies have highlighted the importance of factors such as the availability and accessibility of insurance products, awareness about insurance, trust in insurance providers, and the perceived benefits of insurance in influencing the uptake of agricultural insurance among farmers in Ethiopia (Debouch, T., 2023).

Previous studies have specifically investigated the factors influencing the adoption of agricultural insurance among Ethiopian farmers, with an emphasis on perceived benefits, awareness, trust, education, income level, and ease of access to credit (Mekonnen et al., 2019; Fufa et al., 2020; Yilma et al., 2021; Gebrehiwet et al., 2022). These studies have identified these factors as crucial determinants of farmers' decision-making process when considering the adoption of agricultural insurance in Ethiopia. However, research on the determinants of

agricultural insurance uptake among agribusiness enterprises is limited in Meki. Agribusiness enterprises face different challenges from smallholder farmers, including a lack of access to credit, infrastructure, and markets. (2020), Therefore, understanding the factors that influence the uptake of agricultural insurance among agribusiness enterprises is critical for enhancing their resilience and promoting sustainable agricultural development in Ethiopia.

Understanding the factors that drive the uptake of agricultural insurance among agribusiness enterprises in Meki is crucial for promoting the adoption of insurance schemes and bolstering the resilience of farmers against various risks. Existing literature has identified several factors that influence the uptake of agricultural insurance, but there is limited research on the determinants of uptake among agribusiness enterprises in the region. This study contributes to the literature by examining the factors that influence the uptake of agricultural insurance among agribusiness enterprises in Meki.

## **1.2. Statement of the problem**

The agricultural sector plays a vital role in the Ethiopian economy, providing employment for a significant portion of the population and contributing substantially to the country's GDP. However, agriculture is exposed to various risks such as droughts, floods, pests, and diseases, which can result in significant crop losses and financial setbacks for farmers and agribusinesses. To mitigate these risks, agricultural insurance has been recognized as a valuable risk-management tool for protecting farmers and agribusinesses (Biswakarma & Nisha, 2021; Musonda, 2012; Wenner, 2005).

Previous studies (Mekonnen et al., 2019; Fufa et al., 2020; Yilma et al., 2021; Gebrehiwet et al., 2022) have examined the factors that influence Ethiopian farmers' adoption of agricultural insurance, with a focus on elements like perceived benefits, awareness, trust, education, income level, and ease of access to credit. Meki's agricultural enterprises do, however, face a variety of risks that could have a detrimental effect on their day-to-day operations and long-term viability. Among these worries are market fluctuations, pests, agricultural illnesses, unpredictable weather patterns, and infrastructure limitations. Prior research looked at the factors influencing the adoption of agriculture insurance in developing nations like Ethiopia. For instance, Ferede et al.

(2022) discovers that risk perception, experience, and education all have an impact on smallholder farmers' use of crop insurance.

Despite the availability of agricultural insurance products in Ethiopia, the adoption rate among agribusinesses in Meki remains low (Belissa et al.,2020), This low uptake poses significant risks to agribusinesses, potentially affecting productivity and financial stability. This research aims to identify the determinants behind this low uptake and develop targeted strategies to promote the adoption of agricultural insurance and enhance risk management practices in the agribusiness sector. The study aims to provide insights into the factors that hinder the uptake of agricultural insurance among agribusinesses in Meki, Oromia, and inform policy interventions to promote the adoption of agricultural insurance as a risk management tool.

### **1.3. Research question**

1. What is the level of awareness and knowledge of agricultural insurance among agribusiness owners and managers in Meki?
2. What are the factors that influence the decision of agribusinesses to adopt or not adopt agricultural insurance in Meki?
3. How do institutional factors such as access to credit, extension services, and government support influence the uptake of agricultural insurance among agribusinesses in Meki?
4. What are the perceptions and attitudes of agribusiness owners and managers towards agricultural insurance and risk management in the agricultural sector in Meki?

## **1.4. General Objective**

The general objective of this research is to identify the determinants of agricultural insurance among the low uptake of agribusinesses enterprises in Meki, Oromia, Ethiopia.

### **1.4.1. Specific Objectives**

1. To identify the level of awareness and knowledge of agricultural insurance among agribusiness enterprises owners and managers in Meki,
2. To determine the factors that influences the decision of agribusinesses enterprises to adopt or not adopt agricultural insurance in Meki,
3. To assess the role of institutional factors such as access to credit, extension services, and government support in the uptake of agricultural insurance among agribusinesses enterprises in Meki,
4. To explore the perceptions and attitudes of agribusiness owners and managers towards agricultural insurance and risk management in the agricultural sector in Meki, Oromia.

## **1.5. Significance of this study**

The significance of this study is rooted in its potential to contribute to the growth and improvement of the agricultural insurance market in Meki, Oromia, Ethiopia. By identifying the factors that are hindering the adoption of agricultural insurance among agribusinesses, these studies were providing valuable insights to policymakers, regulators, and development organizations. The findings were helping them develop effective strategies to promote the use of agricultural insurance as a risk management tool in the agricultural sector. Additionally, the study's results were be beneficial for insurance companies, reinsurers, and intermediaries operating in the market, as well as for those planning to enter it. The findings were assisting these stakeholders in understanding the barriers to successful agricultural insurance and developing appropriate strategies to increase market penetration in Meki, Oromia. Furthermore, the study was be valuable for scholars interested in insurance, particularly agricultural insurance, by providing insights and suggestions for further research in this field. Lastly, integrating agricultural insurance into national policies can contribute to poverty alleviation efforts in Ethiopia. By incorporating the study's findings into the government's policies, the agriculture sector in Meki, Oromia, and beyond can become more resilient and sustainable, better equipped to handle climate change risks and other external shocks.

## **1.6. Scope of the study**

The scope of this study is to investigate the determinants of the low uptake of agricultural insurance among agribusinesses in Meki, Oromia, Ethiopia. The researches were utilizing a mixed-methods approach, collecting both quantitative and qualitative data through surveys, interviews, and focus group discussions with agribusiness owners and managers. The studies were being conducted in Meki, a significant agricultural center in the region, over a six-month period from January to June 2023.ance among agribusinesses in Meki, Oromia, Ethiopia.

## **1.7. Organization of the Paper**

The Proposal study was be organized in to four chapters. Accordingly, the first chapter dealt with the introduction part of the study; the second chapter discusses the details of related literature of the study; the third chapter focuses on methodology, and finally in chapter four cost budget & time budget.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter reviews related theories and works of other scholars and researchers done on the area of Agricultural insurance. The chapter presents various views and perspectives of different scholars, which are based on the research objectives. The literature review looks at all the possible factors considered worldwide in different countries and over time. The literature includes discussion is made about the concepts and benefits of insurance, review of unique nature, concepts and types of Agriculture insurance and there an empirical review on the factors influencing uptake of Agriculture insurance has been undertaken leading to a conceptual framework, which is proposed to guide the study respectively. At the end there is summarization of Literature Review on their findings and knowledge Gaps in relation to the case under research which is factors influencing uptake of Agriculture insurance policy among Agro companies in Addis Ababa Ethiopia.

#### **2.2. Theoretical Related Literature Review**

##### **2.2.1.Theoretical review**

Why people need Insurance- Concerning why peoples need insurance different scholars mentioned different issues in relation to the decision making under uncertainty and here are some theories related to why consumers need to purchase insurance and there are different theories discussed based on scholars.

##### ***1. Consumer Theory***

Consumer theory assumes that if consumers are perfectly informed, they maximize their utility as a function of consuming various goods, given relative prices, their income and preferences. Changes in prices and income influence how much of different goods rational consumers will buy (Begg et al., 2000). Insurance is expected to be a normal good with a positive income elasticity of demand, implying that the poor are less likely to insure. A price increase of a substitute for insurance is expected to raise the insurance demand, as is a decrease in insurance premium. Thus, theories on decision-making under uncertainty are generally used to describe

insurance up take. Among the theories that analyze decision-making under uncertainty are expected utility, prospect theory, endowment effect, and the diffusion theory.

## ***2. Expected Utility (EU) Theory***

Under EU theory, insurance demand is a choice between an uncertain loss that occurs with a probability when uninsured and a certain loss like paying a premium (Manning & Marquis, 1996). EU theory assumes that people are risk averse and make choices between taking a risk that has different implications on wealth. At the time of insurance choice, consumers are uncertain whether there will be a loss or not and of the related financial consequences. Insurance reduces this uncertainty. Through insurance, they can level out their income over two different states, losing or not losing, which makes the aggregate outcome relatively certain. This certainty allows the insured to reach a higher utility in the event of a loss than those without insurance. Accordingly, the insurance demand reflects individuals' risk aversion and demand for certainty, implying that the more risk-averse individuals are, and the more insurance coverage they will buy (Begg et al., 2000). This theory is silent about the level of consumers' income and its impact on their insurance choices. The EU theory has been criticized. Laboratory studies have shown that the model's prediction of choice behavior is poor, and additional factors need to be included such as the societal context for prudent behavior or regret considerations (Schoemaker, 1982). Despite these critiques, EU theory is most commonly used in models of decision-making under risk (Marquis & Homer., 1996). However, other theories have emerged that aim to account for these weaknesses.

## ***3. Prospect Theory***

Prospect theory questions the assumptions made by EU theory and states that the choice is about the prospects of gains or losses, not the level of uncertainty. Individuals assume an optimal risk level for every expected gain or loss. The point from which an individual perceives gains and losses to occur may influence the choice, and gambles are judged in terms of their deviations from this optimal risk level (Kahneman & Tversky 1979). Applied to the insurance context, prospect theory suggests that people insure from a gain perspective and not because insurance reduces uncertainty. Given a premium level, people will first assess their risk level and the eventual deviation from it (for example, my health is bad and it could get worse). They may decide not to insure because of a favorable prospect: they expect to pay less for their health risk

than the deviation from it. This is a risk because the deviation may be greater than expected and cause a loss. So, prospect theory says that, with respect to losses, individuals are risk-averse. Following from this, individuals will only insure if the loss will occur with certainty and not because they are risk averse as suggested by EU theory (Kahneman & Tversky 1979). The prospect theory is silent about the association between household income and the expected deviation from health risks.

#### ***4. Endowment Effect Theory***

The endowment effect assumes that decision-making is affected by individuals' risk aversions toward something new. People perceive greater costs in giving something up than benefits in acquiring something new. Therefore, they will charge a higher selling price for a good than they are willing to pay for it. They would rather stay with the old if they do not know whether the benefits of an unknown alternative exceed the costs of giving up something well known (Kahneman et al., 1991). Under the endowment effect, poor individuals will insure if they perceive the benefits of insurance (for example, access to better quality care) as higher than the cost related to giving up being uninsured. Where illiteracy rates are high and patients are not familiar with percentage calculations, paying a co-insurance rate gives 'mathematical discretion' to providers and takes control away from the consumer, who as a consequence might mistrust providers and not insure.

#### ***5. The Diffusion Theory***

This theory was advanced by Lionberger (1960), who asserted that people process and accept information by going through five stages, which are not done impulsively. The stages include: the awareness stage, where the individual is exposed to the idea but lacks knowledge of its benefit; the interest stage, when the idea arouses the individual, who assesses the possibility of using it; the evaluation stage, where the individual must consider whether the idea is potentially useful and of benefit to him; the trial stage, when the individual tries out the idea on himself and others in order to conclude how he can benefit; and the adoption stage, which represents final acceptance of the idea and using it consistently based on continuous satisfaction (Lionberger, 1960). The theory examines how ideas are spread among groups of people. Diffusion goes beyond the two-step flow theory, focusing on the conditions that increase or decrease the

likelihood that an innovation, a new idea, product, or practice, will be adopted by members of a given culture.

### **2.2.2 Agricultural Insurance in Ethiopia an Overview**

Agricultural insurance in Ethiopia is an important tool for managing risks and protecting the livelihoods of farmers in the country. Ethiopia, with its predominantly agrarian economy and high vulnerability to various perils such as droughts, floods, pests, and diseases, recognizes the significance of agricultural insurance in ensuring the sustainability and resilience of its agricultural sector.

Agricultural insurance in Ethiopia has undergone significant developments in recent years. The government, in collaboration with international organizations and insurance providers, has taken steps to establish and promote agricultural insurance programs tailored to the needs of Ethiopian farmers.

The Ethiopian Agricultural Insurance Agency (EAI) is a key institution responsible for implementing agricultural insurance programs. Established in 2009, the EAI aims to provide affordable and accessible insurance coverage to smallholder farmers. The EAI collaborates with insurance companies to offer products such as crop insurance, weather-based insurance, and livestock insurance (World Bank, 2012).

Crop insurance in Ethiopia primarily focuses on staple crops such as maize, wheat, teff, and barley. The coverage provided includes protection against yield losses caused by factors like droughts, excess rainfall, pests, and diseases. Weather-based insurance, also known as index-based insurance, utilizes weather parameters such as rainfall and temperature as triggers for compensation (World Bank, 2012). Livestock insurance programs are designed to protect farmers against the loss of their valuable livestock due to diseases, accidents, or natural disasters.

Since the introduction of the agricultural insurance program in 2009, the program has been providing insurance protection to agricultural producers against loss of crops and livestock on account of natural calamities such as extreme weather, crop damage from pests and disease, heavy rain, and other perils. In Ethiopia, a pilot program was initiated by the World Food Program (WFP) in 2006 and received technical assistance from the Food and Agriculture Organization (FAO) and the World Bank. The premium was offered by the WFP's major donors, and the product was insured by the reinsurance company AxaRe (now ParisRe). If any indemnity

had been triggered, it would have been redistributed by the Ethiopian government to approximately 67 000 households (Barrett et al 2009) that cultivate wheat, millet, cowpea, and maize. The index was based on the cumulative rainfall, determined using a network of 26 weather stations across the country. Local IBMI pilot projects were launched in Ethiopia in 2009, where the insurance market is still developing, with 1 public and 10 private firm. One such example is the Horn of Africa Risk Transfer for Adaptation (HARITA) project in the Tigray region, designed by the International Research Institute for Climate and Society (IRI, Earth Institute, Columbia University) and launched by Oxfam America, the Rockefeller Foundation, and Swiss Re. It is based on satellite imagery data. A second one was undertaken in the Oromia region, supported by the WFP. Both projects directly target growers. There are also numerous other programs in the pilot phase, development, or discontinuation. These programs were exhaustively listed in Hazell et al. (2010). Recently, in Ethiopia, there were 10 private firms and 1 public firm in the agricultural insurance market; however, the market's development and coverage are still very small.

Agricultural insurance has the potential to enhance farmers' resilience, reduce their vulnerability to risks, and stimulate agricultural productivity and investment. It can also contribute to poverty reduction, food security, and sustainable agricultural development (Kuwornu et al., 2016.2016.). However, the implementation of agricultural insurance programs faces challenges related to affordability, accessibility, information asymmetry, and the design of appropriate risk-sharing mechanisms (Bokusheva et al., 2017).

Agricultural insurance plays a crucial role in managing risks and protecting farmers against various perils. The concept involves transferring agricultural risks from farmers to insurance providers through risk pooling and compensation mechanisms. The success of agricultural insurance programs depends on factors such as accurate risk assessment, pricing, institutional frameworks, and stakeholder participation. While challenges exist, agricultural insurance has the potential to contribute to the resilience and development of the agricultural sector.

Furthermore, the Ethiopian Insurance Corporation (EIC) is dedicated to providing adequate insurance coverage for all agricultural projects funded by financial institutions and individual farmers (commercial and small holders).

## *1. Concepts of Insurance and Benefits of Insurance*

**Insurance Concepts;** "Insurance is simply a device in which many people contribute to a pool in order for a few who suffer a loss to be compensated" (Sabiyaam, 2005). Insurance is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss. Normally, only a small percentage of policyholders suffer losses. Their losses are paid out of the premiums collected from the pool of policyholders. Thus, the entire pool compensates the unfortunate few. Each policyholder exchanges an unknown loss for the payment of a known loss called a premium (Andersson, 2005).

Insurance is a risk management tool that provides financial protection against potential losses or uncertainties. The fundamental concept of insurance involves the transfer of risk from an individual or entity to an insurance company in exchange for the payment of premiums. Here are some key concepts related to insurance:

**Risk Pooling:** Insurance operates on the principle of risk pooling, where a large number of individuals or entities contribute premiums to a common fund. This pool of funds is then used to compensate those who experience losses or damages. Risk pooling spreads the financial burden of losses across a larger group, reducing the impact on individual policyholders.

**Premiums:** Insured individuals or entities pay premiums, which are regular payments made to the insurance company. Premiums are typically determined based on factors such as the type and level of risk, the coverage amount, and the policyholder's history of claims. The premiums collected from policyholders form the basis of the insurance company's funds to cover potential claims.

**Insurable Interest:** To obtain insurance, the policyholder must have an insurable interest in the subject matter. This means they must have a financial interest or potential loss if the insured event occurs. For example, a homeowner has an insurable interest in their property because they would suffer a financial loss if it were damaged or destroyed.

**Policy Coverage and Terms:** Insurance policies outline the terms and conditions of coverage, including the events or perils covered, the coverage limits, and any exclusions or deductibles. Policyholders must understand and adhere to these terms for coverage to be valid.

**Benefits of Insurance:** presents society with various benefits. Peace of mind, indemnification, keeping families and businesses together, providing a basis for credit, stimulating savings, and providing investment capital are the most important general benefits of insurance (Dickson, 1999). Insurance promotes agricultural production through farmers' entrepreneurial activity, which seems more stable and certain. Insurance reduces the uncertainty of farmers and the need to create individual savings accounts or funds, given that the need for cash reserves has reduced (Raulston et al., 2010.2010.), and provides a basis for credit. One finds it impossible to visualize the credit economy of today without insurance. For instance, fire insurance is invariably used by mortgage lenders who loan money using real or personal property as collateral. Banks wouldn't dare grant any loans without making sure there is some institution or someone who will pay them their money if something unfortunate happens to the collateral they hold against the credit granted.

Insurance provides several benefits to individuals, businesses, and society as a whole. Here are some key benefits of insurance:

**Risk Transfer:** Insurance allows individuals or businesses to transfer the financial consequences of potential losses to an insurance company. This helps protect against significant financial burdens and provides peace of mind.

**Financial Protection:** Insurance provides financial protection against losses or damages. It can cover various aspects such as property, health, liability, or income. In the event of an insured loss, the insurance company compensates the policyholder, reducing their financial impact.

**Business Stability:** Insurance plays a crucial role in maintaining the stability and continuity of businesses. It can cover risks such as property damage, liability claims, or business interruption. By mitigating potential financial setbacks, insurance helps businesses recover and continue operations.

**Promote Investment and Lending:** Insurance provides a level of security for lenders and investors. Lenders may require borrowers to have insurance coverage to protect their investments. Similarly, investors may feel more confident supporting businesses that have appropriate insurance coverage.

**Risk Management:** Insurance encourages individuals and businesses to adopt risk management practices. By assessing risks, implementing preventive measures, and maintaining appropriate insurance coverage, individuals and businesses can better protect themselves from potential losses.

### **2.2.3. Concept of Insurance Penetration**

The insurance penetration rate indicates the level of development of the insurance sector in a country. The penetration rate is measured as the ratio of premium underwritten in a particular year to the GDP. The penetration rate is expressed as the ratio between insurance premium volume and GDP. The International Association of Insurance Supervisors (2020) has gone a step further in defining insurance penetration rate as the country's total insurance premiums expressed as a percentage of its gross domestic product (GDP), which indicates how much the insurance sector contributes to the national economy. The definition is centered on two important variables: written premiums and GDP.

insurance penetration refers to the level of insurance coverage or the percentage of the population or economy that has insurance protection in place. It is a measure used to assess the extent to which individuals, businesses, or sectors are covered by insurance. Here is an explanation of the concept of insurance penetration:

Insurance penetration can be measured at different levels, including national, regional, or sector-specific levels. It helps policymakers, insurance regulators, and industry stakeholders assess the adequacy of insurance coverage and identify areas that may require attention or improvement.

#### ***1) Factors Affecting Insurance Penetration:***

Several factors influence insurance penetration rates in a particular country or market. Some of these factors include:

**Economic Development:** Insurance penetration tends to be higher in developed economies due to higher income levels, greater awareness of risk management, and a more mature insurance market.

**Regulatory Environment:** The regulatory framework and policies governing the insurance sector can impact insurance penetration. A supportive regulatory environment can encourage market growth and consumer trust.

**Awareness and Education:** The level of awareness and understanding of insurance products and their benefits among the population can significantly impact insurance penetration. Education campaigns and financial literacy initiatives can help promote insurance understanding and adoption.

**Cultural and Social Factors:** Cultural attitudes towards risk, trust in insurance institutions, and social norms can influence insurance penetration rates. In some societies, there may be a preference for informal risk-sharing mechanisms over formal insurance.

**Product Innovation and Affordability:** The availability of innovative and affordable insurance products tailored to the needs of different segments of the population can contribute to higher insurance penetration.

## *2) Importance of Insurance Penetration:*

Insurance penetration plays a vital role in promoting financial stability, risk management, and economic growth. Here are some key reasons why insurance penetration is important:

**Financial Protection:** Insurance provides individuals and businesses with financial protection against various risks, such as property damage, liability claims, health expenses, or income loss. Higher insurance penetration means more people and businesses are protected from potential financial shocks.

**Economic Resilience:** Adequate insurance coverage enhances the resilience of individuals, businesses, and the overall economy. It helps mitigate the impact of unexpected events and facilitates quicker recovery, reducing the economic burden on affected parties and society.

**Investment and Economic Growth:** Insurance penetration can attract investment and contribute to economic growth. A well-developed insurance market signals stability, encourages investment in riskier ventures, and supports business expansion.

**Social Welfare:** Insurance penetration can contribute to social welfare by providing a safety net for vulnerable populations. Insurance coverage for health, disability, or life events can alleviate financial hardships and enhance social protection.

Measuring insurance penetration and understanding its determinants are crucial for policymakers and industry stakeholders to identify gaps and formulate strategies to promote wider insurance coverage.

## **2.2.4. Agricultural Insurance Concepts, Nature and Type**

### ***1. Concept of Agricultural Insurance***

Agricultural insurance is a risk management tool designed to protect farmers and agricultural stakeholders against financial losses caused by various perils such as crop failure, natural disasters, pests, diseases, and market fluctuations. It provides a safety net that helps farmers recover from adverse events and sustain their agricultural activities. The concept of agricultural insurance has gained significant attention in academic research and policy discussions.

According to Barnett and Mahul (2007), agricultural insurance can be defined as a financial instrument that transfers the risk of agricultural losses from farmers to insurance providers. It operates on the principle of risk pooling, where farmers pay premiums based on the assessed level of risk, and in return, they receive compensation in the event of a covered loss. This concept aligns with the broader concept of insurance, which involves the transfer of risk from individuals or businesses to insurance companies in exchange for payment of premiums.

The implementation and effectiveness of agricultural insurance programs are influenced by various factors. Skees et al. (2006) highlight the importance of accurate risk assessment, appropriate pricing of premiums, and the availability of reliable and timely data for underwriting and claims settlements. Additionally, effective institutional frameworks, government support, and the participation of insurance companies, farmers, and other stakeholders are crucial for the successful implementation of agricultural insurance programs, as emphasized by Hazell and Hess (2010).

In recent years, there has been an increasing focus on the development and improvement of agricultural insurance products and programs. Innovative approaches such as index-based insurance have gained prominence. Index-based insurance relies on predefined indices (e.g., weather parameters, yield indexes) as triggers for compensation, reducing the administrative burden and moral hazard associated with traditional indemnity-based insurance (World Bank, 2017).

Agricultural insurance has the potential to enhance farmers' resilience, reduce their vulnerability to risks, and stimulate agricultural productivity and investment. It can also contribute to poverty reduction, food security, and sustainable agricultural development (Kuwornu et al., 2016).

However, the implementation of agricultural insurance programs faces challenges related to affordability, accessibility, information asymmetry, and the design of appropriate risk-sharing mechanisms (Bokusheva et al., 2017).

Agricultural insurance plays a crucial role in managing risks and protecting farmers against various perils. The concept involves transferring agricultural risks from farmers to insurance providers through risk pooling and compensation mechanisms. The success of agricultural insurance programs depends on factors such as accurate risk assessment, pricing, institutional frameworks, and stakeholder participation. While challenges exist, agricultural insurance has the potential to contribute to the resilience and development of the agricultural sector.

Wenner, (2005) defines agriculture insurance as a financial contingency that transfers production risks from the farmer to the insurer in exchange for a premium that reflects the true long-term cost of the insurer assuming those risks. Basically, agricultural insurance is designed to provide coverage for financial losses incurred due to the reduction in the expected outputs from agricultural products (Iturrioz, 2009). Although farmers prefer insurance for production losses, many financial institutions find the assessment too tedious and subjective (Iturrioz, 2009). And it is well known that agricultural insurance is constrained by risks that are highly correlated. Quoted specific agricultural insurance comes from the specific agricultural activities related to the production and management of outdoor living organisms, plants, and animals, which makes it dependent on weather conditions, pests, and diseases (Petrovi et al., 2013).

## ***2. Nature of Agricultural Insurance***

Agricultural insurance represents a special line of insurance that falls under property insurance and is applied to agricultural firms (Petrovi et al., 2013; Iturrioz, 2009). So Petrovi et al. (2013) conclude that insurance markets work best when risks are uncorrelated, occur with high frequency, and there are a large number of insured. The agricultural insurance industry is characterized by highly correlated risks, which violate the standard insurability conditions. Agricultural production is governed by complex biological processes that must be understood by agricultural underwriters. The cause-and-effect relationships in agriculture are not always readily observable. There are many variables that affect agricultural production, not all of which are insurable. An insurer must be able to establish the link between a loss that is insurable and the cause of the loss (Iturrioz, 2009).

Agricultural insurance is a specialized form of insurance that provides financial protection to farmers and agricultural businesses against various risks and perils that can adversely impact their livelihoods. The nature of agricultural insurance encompasses several key aspects that are supported by research and industry practices.

**1. Risk Mitigation:** Agricultural insurance aims to mitigate the financial risks associated with agricultural production. It provides coverage against perils such as crop failure, yield losses, livestock diseases, natural disasters, and price fluctuations. By transferring the risk to an insurance provider, farmers can protect themselves from potential losses and stabilize their income (Clarke & Mahul, 2015).

**2. Customized Coverage:** Agricultural insurance offers coverage tailored to the specific needs of farmers and the agricultural sector. It considers the unique risks faced by different crops, livestock, and farming practices. This customization ensures that farmers receive adequate protection against risks that are most relevant to their operations (Glauber, 2015).

**3. Indemnity-Based Compensation:** Agricultural insurance typically follows the principle of indemnity, where farmers are compensated for the actual losses, they incur. The compensation is based on the value of the insured crop or livestock, taking into account factors such as market prices and deductibles. This approach ensures that farmers are adequately compensated for their losses, helping them recover from adverse events (Skees & Hazell, 2007).

**4. Data and Risk Assessment:** Agricultural insurance relies on accurate data and robust risk assessment methodologies. Historical data, satellite imagery, weather data, and other technological tools are used to assess the risk exposure of farmers, determine insurance premiums, and estimate potential losses. This data-driven approach enhances the accuracy and effectiveness of agricultural insurance products (Mendelsohn & Dinar, 2009).

**5. Public and Private Initiatives:** Agricultural insurance can be provided by both public and private entities. Governments often play a significant role in promoting and subsidizing agricultural insurance programs to make them more affordable and accessible for farmers. Private insurance companies also offer agricultural insurance products tailored to the specific needs of farmers (Dileepkumar et al., 2020).

These aspects collectively shape the nature of agricultural insurance, providing farmers with financial protection and risk management tools to safeguard their livelihoods.

### ***3. Types of Agricultural Insurance Products***

According to Iturrioz (2009), agricultural insurance products are divided into three categories based on the method of determining how claims are calculated: indemnity-based, index-based, and crop-revenue-based agricultural insurance. On the other hand, it's classified as indemnity-based insurance, which comprises perils in livestock and aquaculture, index-based insurance, which is aligned to rainfall or weather indexes, and index-based insurance products.

#### **A. Crop Insurance**

The most developed form of agriculture insurance is cropping insurance, which accounted for 90% of the premiums written in the sector in 2008. Insurers writing crop business offer all four types of cover. In this case, the indemnity-based agricultural insurance products assess the crop loss and insurance compensation on-site based on actual losses at the policyholder level (Iturrioz, 2009). According to Mahul and Stutley (2010), damage-based indemnity insurance is a crop insurance product in which the claim is calculated by measuring the percentage damage in the field soon after it occurs. The damage is measured in the field, less a deductible expressed as a percentage, which is applied to the pre-agreed sum insured. This type of insurance cover is the most suitable, especially in areas where there is a low degree of correlation between risk and geography over a given area (Roth, & McCord, 2008).

#### **B. Crop revenue insurance**

Mahul & Wright (2003) assert that crop revenue insurance is an insurance cover in which the insurer guarantees the policyholder a certain level of revenue to be obtained from the insured crop, and this type of insurance protects the policyholder from eventual shortfalls in the yield of the insured crops and adverse movements in their price. In this case, the guaranteed yield can be determined either as a percentage of the producer's past production or as a percentage of the average yield of the region where the insured farm is located. The guaranteed price can either be the future market price for the crop in the month of harvest or the strike price of a base price option. Furthermore, an indemnity is paid when the actual revenue is received by the producer, which is given if the product of the actual yield and the spot market price at the time of harvest is less than the guaranteed amount (Mahul & Wright, 2003). This type of cover is available in a few

countries that are mainly developed. Nonetheless, it has been a useful tool in smoothing the income of farmers over the years.

### **C. Index-Based Insurance**

(Iturrioz, 2009) defines index-based insurance as a financial product linked to an index highly correlated to loss experiences. Indemnifications are triggered by pre-specified patterns of the index, as opposed to actual yields, which eliminates the need for in-field assessments. In this case, contracts are written against specific perils or events. Drought, hurricane, and flood among other disasters, cause damage in some areas. The specific perils that are insured against are recorded at regional levels, for example, at a local weather station. The index insurance can be used as a handy tool for disaster relief or development as it offers a speedy response to catastrophic and highly covariate risks such as hurricanes, floods, and severe droughts. With development-focused index insurance, households pursue riskier but potentially more profitable farming strategies, thereby defending their income and consumption.

### **D. Livestock Insurance**

Roth and McCord (2008) Define livestock insurance as the cover for losses resulting from death, disease and accidental injury to livestock, there are four basic types of livestock insurance products: traditional animal accident and mortality cover, all-risk mortality insurance, epidemic disease cover, and life index mortality cover.

**Animal Accident and Mortality Cover:** Named-peril accident and mortality cover for individual animals is the most common traditional livestock insurance product for insuring livestock. It covers death against natural perils such as fire, flood, lightning, and electrocution but normally excludes diseases, specifically epidemic diseases. In this case, premiums are set based on normal mortality rates within the permitted age range plus risk and administrative margins, which makes them generally quite expensive (Mahul & Wright, 2003).

**All-Risk Mortality Insurance;** this type of cover is provided to large commercial farmers that can demonstrate high levels of animal husbandry and control over animal diseases. This product is usually offered for high-value bloodstock or for herd insurance (Mahul & Wright, 2003).

**Epidemic Disease Coverage:** Epidemic disease insurance is offered in only a few countries, and it normally excludes insurance for government-ordered slaughter or quarantine (Mahul &

Wright, 2003). In this case, epidemic disease insurance carries major and infrequent exposure to catastrophic claims, necessitating a high reliance on reinsurance for risk transfer. However, it is difficult to develop this type of insurance and to obtain support from international reinsurers due to the difficulties of modeling the spread of epidemic disease and the financial exposures associated with this type of risk (Mahul & Stutley, 2010).

**Livestock Index Mortality Cover;** Mahul and Wright (2003) contend that livestock index mortality insurance is used when livestock losses are highly correlated with an extreme weather event for which a weather index could not be built. This may be a combination of low temperatures, dry conditions, and snowfall, and thus, the farmer will insure against losses arising from changes in the mortality index.

#### **E. Farm Implements Insurance**

Farm implement insurance is viewed as an indirect form of agricultural insurance as it is not taken out on the actual crop or livestock but rather on the farm assets used in production. This type of insurance is taken out by farmers to protect their farm implements or property against theft and fire, and it may be taken out on tractors, trucks, trailers, irrigation equipment, farm buildings, and any other farm equipment (Tsikirayi et al., 2013).

#### **F. Aquaculture insurance**

Aquaculture insurance provides cover for producers involved in breeding and raising aquatic fauna and growing aquatic flora. In addition to flatfish, aquaculture encompasses mollusks', crustaceans, and commercial seaweed cultivation. Although it is a small segment of the market, with 1 percent of written premiums for the worldwide agricultural insurance market in 2008, it is expected to develop rapidly as aquaculture becomes more important in the face of dwindling natural fish supplies. Coverage is offered on a named-peril or all-risks basis. Cover is for loss of stock. Covered perils include meteorological events, acts of God, diseases, pollution, predator attacks, collisions, oxygen depletion, changes in pH and salinity, theft, and escape. Both offshore cage systems and inshore pond cultures are covered (Iturrioz, 2009).

#### **G. Forestry insurance**

Forestry insurance is also a small segment of the overall agricultural insurance market, accounting for about 1 percent of the premiums written worldwide in 2008. It protects standing

timber stocks against fire, lightning, explosions, and aircraft impact. Coverage can be extended to damage caused by wind, windstorms, volcanic eruptions, floods, hail, freezing, and the weight of ice and snow. Firefighting expenses and debris removal are also covered and are capped at an annual aggregate limit (Iturrioz, 2009).

## **H. Greenhouse insurance**

Greenhouse insurance contributed 1% to the total written premium in agricultural insurance in 2008. Greenhouse production is a very capital-intensive activity and relies heavily on the serviceability of the infrastructure that the producer has put in place. In ensuring the infrastructure, insurers typically provide comprehensive cover for material damage to structures, glass, equipment, stock, and other contents. Infrastructure is insured against damage from storm (including hailstorm), water, fire, smoke, lightning, explosion, malicious acts, aircraft impact, and earthquake. Cover may also be extended to business interruption, machinery breakdown, and electronic equipment (Iturrioz, 2009).

## **2.3. Review of Empirical Studies**

### **2.3.1. Level of Awareness & Uptake of Agricultural Insurance**

Insurance awareness is people's knowledge, opinions, thoughts, theories, and mentality about insurance. Awareness is a crucial factor that influences the demand for insurance products; the greater the awareness, the greater the demand (Ling, 2018). Studies have shown that education levels positively impact insurance awareness, with farmers with higher education levels being more aware of the benefits of insurance. However, poor publicity and complex insurance products can hinder insurance awareness and uptake (Zhao et al., 2016). A study conducted (Tom et al., 2012) in Delta State, Nigeria; found that educational level and awareness are significant determinants of farmers' decisions to purchase agricultural insurance. A study done by Rabindra (2012) showed that low awareness of the benefits of agricultural insurance is a significant reason for the limited demand for insurance products among farmers. According to Akinola (2014), if farmers are knowledgeable about agricultural insurance, they will be able to pay and understand insurance procedures and risk management mechanisms. However, access to information may also result in the non-adoption or uptake of such technology.

Generally, there are consistent findings and conclusions made across the above studies regarding how awareness affects or influences uptake of agricultural insurance. Thus, this study expects

that awareness greatly influences the uptake of agricultural insurance among agribusiness enterprises.

### **2.3.2. Trust & Uptake of Agricultural Insurance**

According to Cole et al. (2013), unlike in credit services where farmers have to earn the trust of the bank in order to receive credit from the bank, insurance services require farmers to trust the product issuing them in order to accept and take it up. Therefore, lack of trust and poor understanding are the major demand-side issues evidenced in the literature, and they find in their study that farmers' trust in the insurance service increases adoption.

Nikolov et al., (2013) indicated that the reasons for farmers not taking up insurance cover were (i) unsatisfactory insurance contract conditions, (ii) not believing in the benefit of insurance, (iii) time-consuming and delayed compensation payments, (iv) under-developed insurance products, and (v) farmers' lack of information about insurance conditions. Insurance service quality, trust in staff, and trust in insurance providers can impact the willingness of farmers to buy an insurance policy (Poor et al., 2013). Distrust of insurance companies due to delayed and incomplete indemnity, red tape, unfamiliarity with insurance products, bad personal experiences, and leakage of premium support can also decrease the likelihood of taking up agricultural insurance. Bad experiences in the past and fear of the complexity of the contract terms were identified as the main reasons for distrust of insurance companies (Nikolov et al., 2013; Poor et al., 2013).

### **2.3.3. Farm Income & Uptake of Agricultural Insurance**

Empirical evidence has suggested that there is a good relationship between income level and insurance uptake and draws the conclusion that income has a positive and significant influence on insurance premiums (Das & Shome, 2016). (Beenstock et al., 1986) claimed that the capacity to afford an insurance premium is directly connected to one's level of income.

A study conducted in Turkey by (Oguz et al., 2021), found that agricultural income was a significant factor in farmers' decisions to take out agricultural insurance. The analysis indicated that the increase in agricultural income by one unit increases the willingness to take out agricultural insurance by 1,000 times. Therefore, increasing farmers' income levels can potentially increase the uptake of agricultural insurance products.

According to Tsikirayi et al. (2013), in their study of factors determining the uptake of agricultural insurance services by the agricultural sector in Zimbabwe, they mentioned income level as a significant factor that affects the uptake of agricultural insurance. Low-income levels, especially when farmers have to pay loans, can reduce the level at which they take out crop insurance. High income levels, on the other hand, provide more opportunities to increase wealth and maintain capital reserves, allowing one to survive a bad year even if no compensation is paid. Overall, it can be concluded that "crop insurance is something that low-wealth farmers cannot afford and high-wealth farmers do not want (Tsikirayi et al., 2013)."

#### **2.3.4. Access to Credit Services & Uptake of Agricultural Insurance**

The studies by Mangaringa et al. (2018) and Ellis (2016) both highlight the importance of access to credit in the uptake of agricultural insurance. Mangaringa et al (2018), found that access to agricultural loans was a key institutional factor that influenced the uptake of agricultural insurance in Rwanda. This is because access to credit increases farmers' ability to pay insurance premiums, purchase farming tools and equipment, and improve their cash flow. Similarly, Ellis found that farmers without access to credit in eastern Ghana were less willing to purchase insurance. Lack of access to credit was also cited as a key factor influencing the low prevalence of crop insurance in developing economies, as agriculture is often regarded as a high-risk business by financial institutions. Overall, access to credit is critical for farmers to improve their financial situation and access the resources necessary to invest in their farms and purchase insurance.

Additionally, studies conducted by Manirakinga et al. (2018) and Musonda (2012) found that access to agricultural loans, information on insurance and cooperative membership were key factors influencing the adoption of crop insurance by farmers in Lusaka Province, Zambia. These studies recommend that insurers cooperate with banks or similar institutions that provide agricultural finance to make insurance more attractive to farmers. Linking insurance to credit access and new technology can enhance the production capacity of farmers, leading to higher agricultural income and increased insurance uptake. This approach can also make the marketing of insurance easier and more effective.

Access to credit is a significant factor that positively affects the uptake of agricultural insurance, according to studies by Gbigbi & Ndubuokwu (2022), Fitzgerald & Miranda (2015), and Saqib et

al. (2016). Farmers with access to credit are more likely to use insurance than those without. This is because credit is associated with the use of improved inputs, and insurance policies can facilitate access to bank loans, enhancing credit availability. Additionally, the study by Oguz and Diyanah (2021) found that the amount of debt received by farmers is positively related to their willingness to take out agricultural insurance. Farmers who receive credit are required to purchase agricultural insurance, indicating a stronger demand for more comprehensive insurance products.

### **2.3.5. Religious Beliefs & Uptake of Agricultural Insurance**

The demand for insurance in a country can be influenced by its unique culture, including religious beliefs, which affect the population's risk aversion, according to studies by Douglas & Wildavsky (1983) and Henderson & Milhouse (1987). Religious and cultural beliefs can also create barriers to the adoption of insurance policies, as highlighted by Jensen and Barrett (2017), who noted that insurance schemes that did not comply with Sharia law were initially not well accepted in northern Kenya. Fonta et al. (2018) found that religious and cultural beliefs are potential reasons for the low uptake of crop insurance in West Africa and other developing countries. Understanding the cultural and religious beliefs of a nation is crucial in promoting the adoption of insurance policies.

### **2.3.6. Premium Amount or Price & Uptake of Agricultural Insurance**

Studies have shown that demand for insurance is highly sensitive to price. Smith VH and Goodwin BK (2001) found that the insurance premium is a key factor influencing the adoption of crop insurance. Rabindra (2012) noted that limited demand for insurance is often due to high premiums charged by insurers. Gbigbi & Ndubuokwu (2022) found that a higher premium rate is associated with a lower likelihood of insurance patronage by farmers. Several studies, including Bierer and Eling (2012), Romero & Molina (2015), and Gbigbi & Ndubuokwu (2022), have reported that high premiums are a major impediment to the uptake of insurance, particularly in developing countries. Producers perceive premiums as being too expensive, reducing their interest in purchasing insurance policies. Therefore, making insurance premiums affordable and within the reach of farmers can stimulate interest in purchasing insurance policies.

The price of insurance is the most influential factor in determining farmers' decisions to have crop insurance coverage, according to a study by Ginder & Aslihan (2006). Farmers who view

insurance premiums as an investment rather than just a cost are more likely to purchase agricultural insurance, as noted by Njegomir & Demko-Rihter (2018). The sensitivity of farmers to the level of premiums and the inverse relationship between the amount of insurance demanded and the price were confirmed, consistent with the downward-sloping demand curve, according to Kislingerová and Pika (2022). Differences in prices can be explained by the types of crops insured and their underlying risks, as well as information deficiencies, transaction costs, and ambiguity aversion on the part of the insurance company, according to Romero & Molina (2015).

#### **2.4. Conceptual Framework**

Having discussed the background, defined the research question, research problem, and objective of the study, and discussed the literature for this study, this part aims at establishing the conceptual framework that frames this study. A conceptual framework is a written or visual presentation that explains either graphically or in narrative form the main things to be studied, the key factors, concepts, or variables, and the presumed relationship among them (Miles & Huberman, 1994). The following conceptual model is formulated to reveal the relationship between the dependent variable, uptake of agricultural insurance among agribusiness, and the independent variables, level awareness, trust, access to credit, farm income, religious beliefs, and premium amounts.

The conceptual framework for determining the uptake of agricultural insurance among agribusiness enterprises in Meki, Oromia, Ethiopia is based on several key determinants. These determinants are interrelated and may influence each other, leading to complex decision-making processes regarding the adoption of agricultural insurance. The following sections provide further details on each of these determinants:

1. **Risk Perception:** Farmers' perception of the likelihood and severity of different types of risks may influence their decision-making process regarding the adoption of agricultural insurance. For example, farmers who perceive climate change to be a significant risk to their crops may be more likely to take up insurance.
2. **Risk Attitude:** Farmers' willingness to take risks may affect their decision to purchase agricultural insurance. A high-risk-taking farmer may be less likely to take up insurance,

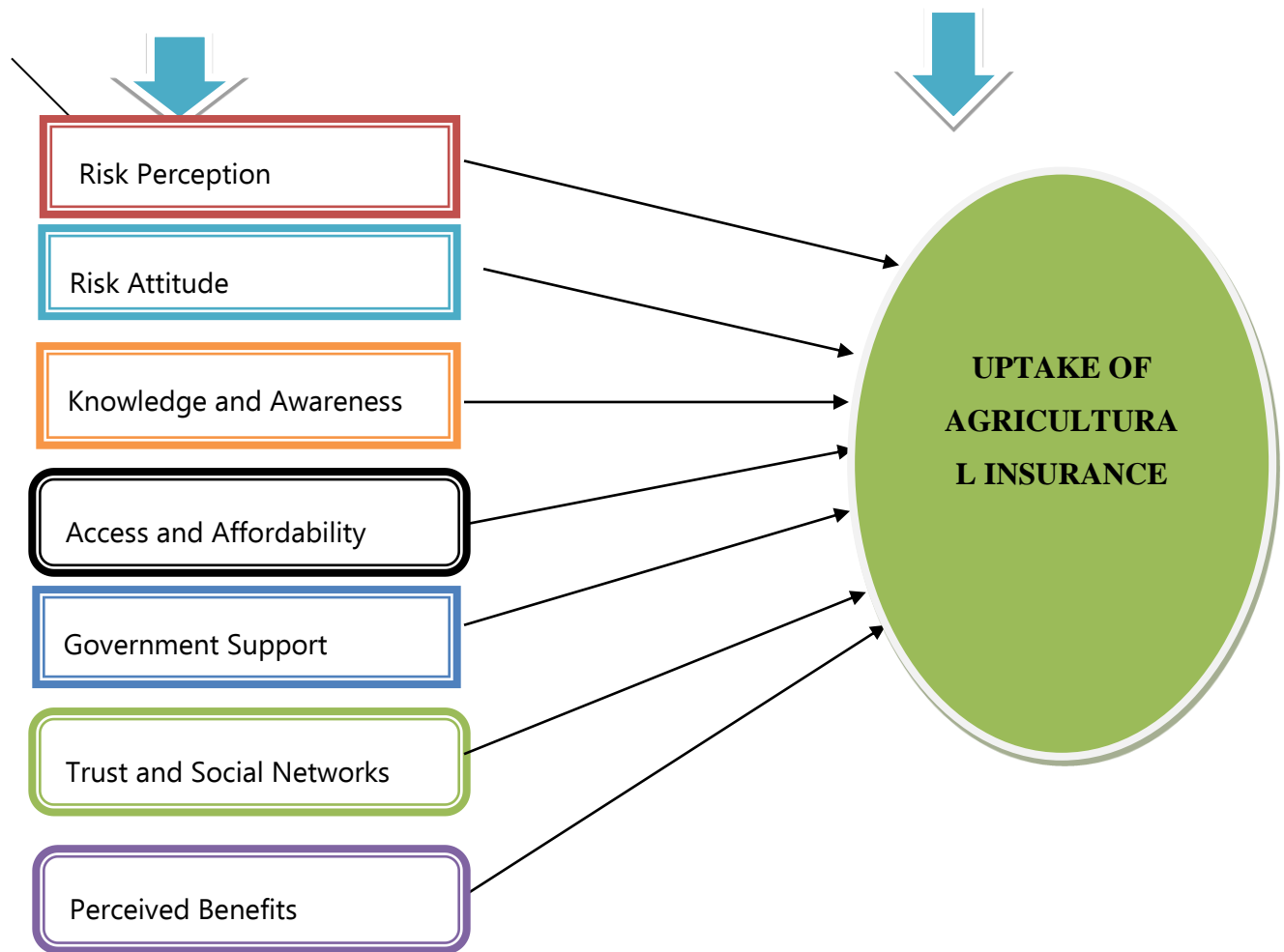
believing that they can handle the risks themselves, while a low-risk-taking farmer may be more likely to take it up.

3. ***Knowledge and Awareness:*** Farmers' knowledge and awareness of agricultural insurance may influence their decision to purchase it. Farmers who have a good understanding of the benefits and costs of insurance may be more likely to take it up.
4. ***Access and Affordability:*** Farmers access to and affordability of agricultural insurance may be a significant determinant of uptake. Farmers with limited access to insurance products or who find the premiums unaffordable may be less likely to take up insurance.
5. ***Government Support:*** The support provided by the government in promoting and subsidizing agricultural insurance products may influence the uptake. Government support may enhance farmers' awareness and affordability of insurance products.
6. ***Trust and Social Networks:*** Farmers' trust in insurance providers and the role of social networks in disseminating information about insurance may influence the uptake of insurance. Farmers who trust the insurance providers and who receive information about insurance from trusted sources may be more likely to take up insurance.
7. ***Perceived Benefits:*** Farmers' perception of the benefits of agricultural insurance may influence their decision-making process. Farmers who perceive the benefits of insurance products to outweigh the costs may be more likely to take up insurance.

The conceptual framework considers several key determinants of the uptake of agricultural insurance among agribusiness enterprises in Meki, Oromia, Ethiopia. By taking into account these determinants, policymakers and insurance providers can design appropriate policies and products to promote the uptake of agricultural insurance in the region.

**Independent variable**

**dependent variable**



**Figure 1 : Conceptual Framework of the Study**

Source: derived from the work of Nshakira-Rukundo, E. and colleagues in 2021.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

This chapter outlines the research methodology employed in the study titled "Determinants of Uptake of Agricultural Insurance among Agribusiness Enterprises in Meki, Oromia, Ethiopia". It provides a detailed description of the research design, population, sample size and sampling technique, data collection methods, data analysis techniques, and ethical considerations.

#### **3.2. Research Design**

Johnson and Smith (2010) state that a good way to look at causal relationships between variables is to use a causal study method. Chen et al. (2016) underline that this strategy entails adjusting the independent variable and monitoring its effect on the dependent variable while controlling for other variables. As suggested by Shadish et al. (2002), the study uses random assignment of participants to treatment groups to reduce selection bias. As noted by Fisher and Campbell (2015), this method makes sure that any impacts that are seen are not attributable to pre-existing disparities between groups.

The study also uses a mixed-methods approach, combining qualitative and quantitative research techniques. Quantitative data is collected through surveys to evaluate determinants such as risk perception, knowledge, and government support. Complementing this, qualitative interviews are conducted to gain a deeper understanding of the influence of trust, social networks, and perceived benefits. This comprehensive design enables a more holistic comprehension of the factors that impact insurance uptake.

By adopting this causal research design that combines quantitative and qualitative methods, the study aims to provide a robust analysis of the causal relationships between the variables of interest. It also seeks to offer valuable insights for policymakers, practitioners, and researchers in the field.

### **3.3. Research Approach**

The study adopts a mixed-methods approach, integrating both quantitative and qualitative research methods. This approach allows for a comprehensive analysis of the phenomenon under investigation and provides a more nuanced understanding of the research topic. As highlighted by Creswell and Plano Clark (2018), a mixed-methods design enables researchers to capitalize on the strengths of both quantitative and qualitative approaches.

A mixed-methods approach combines quantitative and qualitative methods to leverage the strengths of both approaches. Researchers can collect quantitative data through surveys to measure determinants and analyze patterns, while also conducting qualitative interviews or focus groups to explore the underlying reasons and contextual factors that influence insurance uptake. By integrating the two approaches, researchers can gain a more comprehensive understanding of the determinants and their interplay.

### **3.4. Data Source and Collection Method**

Data collection is the most important process in research, and it includes two types: primary and secondary data collection methods (Lim & Ting, 2012). As stated by Khan (2011), primary data collection methods help the researcher do a more efficient analysis of the research through the collection of fresh information related to the research matter, which can be qualitative or quantitative. In this study, both primary and secondary data were used. The primary data were generated through the use of self-administered survey questionnaires from those who are management members of those agribusiness companies addressed in Meki. Meki city to examine the determinants of important factors influencing the uptake of agricultural insurance policies based on the selected variables. The secondary data were used to describe the subject matter of the study, about the relation and association of the variables with the factors contributing to the low uptake of agricultural insurance, from various literature, articles, and a report of the National Bank of Ethiopia. As far as secondary data is concerned, it was collected from the sources listed below. The EIC's website, [www.eic.net.et](http://www.eic.net.et), the National Bank's website, [www.nbe.gov.et](http://www.nbe.gov.et), different magazines, reports, and documentation issued by the NBE, the EIC, and the EIC, and various links from the internet.

### **3.5. Population and Sampling Technique**

#### **3.5.1. Target Population**

According to Best and Kahn (2016), a population refers to a collection of individuals who share one or more characteristics that are of interest to the researcher. In the context of the study conducted in Meki, Oromia, Ethiopia, the target population consisted of all the agribusiness enterprises in the region. Based on information from the Oromia Bureau of Agriculture, it is estimated that there are around 341 agribusiness enterprises in Meki.

#### **3.6. Sample Size and Sampling Technique**

The researcher possesses a compilation of companies engaged in various investment activities within the domains of food and commercial crop farming, industrial commercial farming, animal feed and forage, horticulture and poultry, livestock and cattle. These agribusiness enterprises encompass activities such as poultry and dairy farming, as well as the raising, cultivation, and breeding of livestock. The researcher also has access to the addresses of these enterprises.

The process of extracting a subset from the overall population is known as sampling (Akhtar, 2016). In many studies, probability sampling, which is rooted in probability theory, is employed to create a representative sample for quantitative research (Neuman, 2014). Probability sampling ensures that each unit within the population has an equal and known chance of being selected. This enables comprehensive statistical analysis and effectively minimizes sampling bias (Crano, Brewer, & Lac, 2015).

The sample size was determined using the Yamane (1967) formula for finite populations. A 95% confidence level and a 5% margin of error were assumed. Stratified random sampling was used to select the agribusiness enterprises. The strata were based on the type of agribusiness (crop farming, livestock farming, and mixed farming). The basis of stratification in this context is the differentiation of companies based on their type of agribusiness. The three main types of agribusinesses considered for stratification are

1. Crop Farming: This includes companies that primarily focus on the cultivation and production of food and commercial crops.
2. Livestock Farming: This category comprises companies that specialize in raising and breeding livestock, such as poultry, cattle, and other animals.

3. Mixed Farming: These are companies that engage in a combination of crop farming and livestock farming activities.

The companies within each stratum differ in terms of their core activities, expertise, resources, and specific challenges they face. By stratifying the companies based on their agribusiness type, the researcher can ensure that the sample includes representatives from each category. This approach helps to capture the diversity of agribusiness enterprises in the study and allows for more accurate analysis and conclusions to be drawn within each stratum. Within each stratum, simple random sampling was used to select the enterprises.

A 95 percent confidence level, 0.05 percent precision, and  $P = 0.5$  are assumed for the equation:

$$n = N / (1 + N(e)^2)$$

Where  $n$  = is the sample size,  $N$  = is the population size,  $1$  = is a constant,  $e$  = is the level of precision.

$$n = 341 / (1 + 341(0.05)^2)$$

$$n = 184$$

**Table 1** Clustered Sample per investment activities

investment activities	No. of investment activities	Proportion split	Sample Size
Food and commercial crop farming enterprises	151	44.28% = (151/341) %	82 = (44.28%*184)
industrial commercial farming	33	9.68%	18
Horticulture enterprises	69	20.23%	37
fowl and livestock enterprises	88	25.81%	47
Total	341	100.00%	184

Source: Author's compilation based on population data

### **3.7. Method of Data Collection**

To collect data from the selected sample, structured questionnaires developed for this study are utilized. Questionnaires are particularly suitable for probability sampling and serve as an efficient tool for gathering a large amount of data within a short timeframe while minimizing resource requirements (Hair et al., 2019). In order to accurately fulfill the researcher's information objectives, self-administered closed-ended questionnaires are employed.

Likert's scale of measurement is employed to frame the questions in the questionnaires. This scale ranges from strongly disagree (1 point) to strongly agree (5 points). Likert scale questions are commonly used to assess perceptions, attitudes, behaviors, opinions, and feelings (Hair et al., 2019), making them highly suitable for achieving the objectives of this study.

### **3.8. Data Collection Procedure**

On the parts of the questionnaire that were to be distributed, the researcher fully described all the needed information on the front page of the questionnaire, like anonymity, acknowledgement of gratitude, the objective of the study, the benefit of the study, etc., to prevent respondents from assuming different purposes in their minds and also guarantee the confidentiality of their participation. The researcher also gave them enough time to complete and return the questionnaires.

### **3.8. Method of Data Analysis**

The analysis of survey data involves both quantitative and qualitative techniques. Quantitative analysis includes descriptive statistics such as frequencies and percentages for categorical variables, and measures of central tendency and dispersion for continuous variables. Inferential statistics, such as correlation analysis and regression analysis, are used to explore relationships and associations between variables.

In this study, a combination of quantitative and qualitative methods was employed to analyze the data. For quantitative analysis, a statistical package for social scientists 26 (SPSS 26) software will be utilized. SPSS enables researchers to conduct descriptive analyses and present quantitative data using measures such as frequency and percentage. The numerical information collected from the questionnaire was coded, entered into the software, and analyzed using descriptive statistics facilitated by SPSS.

### 3.9. Reliability and Validity Tests

Reliability is an indication of how consistent the findings are based on the method of data collection and analysis (Saunders, Lewis, & Thornhill, 2007). The most common method for testing reliability is the Cronbach alpha coefficient (Cronbach, 1951). The Cronbach alpha coefficient ranges from 0 to 1, with a value of 0.70 suggesting adequate levels of internal reliability (Cronbach, 1951).

To ensure the reliability and consistency of the questions, a scale reliability analysis was be conducted by utilizing the SPSS tool and using Cronbach's alpha measurement method. Reliability is fundamentally concerned with issues of consistency of measures (Bryman and Bell, 2003), and it is examined using Cronbach's alpha ( $\alpha$ ). The Cronbach's alpha is used to check whether the information obtained through a survey works well together or is reliable for analysis.

Table 2 Reliability and Validity Tests

	Cronbach's Alpha	N of Items
Risk Attitude	0.993	5
Risk Perception	0.993	5
Knowledge and Awareness	0.994	5
Access and Affordability	0.991	5
Government Support	0.994	5
Trust and Social Networks	0.991	5
Perceived Benefits	0.991	5
Agribusiness Insurance Uptake	0.995	10
total	0.986	45

Source: Own computation using SPSS of the survey, 2024

The reliability statistics, specifically Cronbach's Alpha coefficients, provide an indication of the internal consistency or reliability of the survey scales used to measure different constructs. In this case, the Cronbach's Alpha coefficients for each category of Agribusiness Insurance-related attitudes and perceptions range from 0.991 to 0.995, indicating high levels of internal consistency.

Cronbach's Alpha values above 0.7 are generally considered acceptable, while values above 0.9 indicate excellent internal consistency. The reliability coefficients reported for Risk Attitude, Risk Perception, Knowledge and Awareness, Access and Affordability, Government Support, Trust and Social Networks, Perceived Benefits, and Agribusiness Insurance Uptake all fall within the excellent range, suggesting that the survey items within each category are highly consistent in measuring the intended constructs.

These high reliability coefficients imply that the survey items used to assess participants' attitudes and perceptions related to Agribusiness Insurance are reliable and consistent measures. Researchers can have confidence in the internal consistency of the responses obtained for each category, which enhances the validity and trustworthiness of the findings.

### **3.10. Ethical Considerations**

Ethical conduct can be described as the moral values, confidentiality, and anonymity of an individual, a group, or an organization. Confidentiality and anonymity usually refer to the assurance that researchers give to participants that their identity and involvement in a research project were be kept confidential (Quinlan, 2011). All the ethical codes are followed while completing the research. The researcher tried to clearly inform all respondents that they were not required to give their name in the questionnaire and guaranteed them that the information they provided was going to be used only for the purpose of academic study and remain confidential. In addition to this, they were informed that their participation in the study was based on their consents. The researchers were also not personalizing any of the responses of the respondents during data presentations, analysis, and interpretation. It was promised that their privacy and identity would not be disclosed.

## CHAPTER 4

### DISCUSSION AND PRESENTATION

#### Introduction

The study conducted in Meki aimed to shed light on the determinants that influence agribusiness enterprises' decisions to adopt agricultural insurance. To gather data, a structured questionnaire was distributed to agribusiness enterprises in Meki, and a total of 341 responses were obtained. Out of 341 respondents, 184 or  $(184/341) * 100 = 19\%$  of the agribusiness participants were selected for sample for this study purpose. The selection of samples was based on the strata. The collected data are analyzed and described with the help of SPSS version 26. The output found from SPSS version 26 were presented and interpreted based on the analysis. Out of 184 distributed questionnaires, 167 (90%) were returned for the analysis purpose.

In this chapter, we present and discuss the findings of the study, providing insights into the determinants of agricultural insurance uptake among agribusiness enterprises in Meki. The analysis was examining the respondents' Risk Attitude, Risk Perception, Knowledge and Awareness, Access and Affordability, Government Support, Trust and Social Networks, Perceived Benefits and Agribusiness Insurance Uptake as well as the factors that influence their decision-making process regarding insurance adoption.

The discussion and presentation of the study findings were contributed to the existing literature on agricultural insurance uptake and provide valuable insights for policymakers, insurance providers, and agribusiness stakeholders in Meki. By understanding the determinants of adoption, stakeholders can develop targeted strategies to overcome barriers and promote the uptake of agricultural insurance, ultimately enhancing the resilience and sustainability of agribusiness enterprises in the region.

This chapter provides a comprehensive analysis of the factors influencing the uptake of agricultural insurance among agribusiness enterprises in Meki, based on the responses of 167 questionnaire respondents. The findings and discussions were contributed to the understanding of the current status of agricultural insurance adoption in the region and offer recommendations for promoting its uptake among agribusiness enterprises.

#### 4.1. Demographic Information of the Respondents

The demographic characteristics of survey respondents are essential for gaining insights into the specific population under study. In the context of examining participants' attitudes and perceptions related to Agribusiness Insurance, it is important to consider the demographic composition of the individuals involved. Demographic information provides valuable context and allows for a more comprehensive analysis of the survey findings. By examining these demographic factors, we can better understand the diversity within the sample and its implications for interpreting the survey results in relation to Agribusiness Insurance.

**Table 3 Primary Investment Activity in Agricultural Sectors**

What is your primary investment activity in the Agricultural Sectors?		
	Frequency	Percent
Food and commercial crop production	74	44.3
Industrial and commercial crop production	19	11.4
Horticulture production	32	19.2
Fowl and livestock farming and production	42	25.1
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table shows the frequency and percentage of different investment activities in the agricultural sectors among a sample of 167 respondents. The most common investment activity is food and commercial crop production, which accounts for 44.3 percent of the respondents. This means that nearly half of the respondents invest in growing crops that can be consumed or sold in the market, such as cereals, fruits, vegetables, and cash crops. The second most common investment activity is fowl and livestock farming and production, which accounts for 25.1 percent of the respondents. This means that one-fourth of the respondents invest in raising and processing animals, such as chickens, cows, pigs, and sheep. The third most common investment activity is horticulture production, which accounts for 19.2 percent of the respondents. This means that almost one-fifth of the respondents invest in growing ornamental plants, such as flowers, herbs, and shrubs. The least common investment activity is industrial and commercial crop production, which accounts for 11.4 percent of the respondents. This means that only a small fraction of the respondents invests in growing crops that can be used for industrial purposes, such as cotton, rubber, and tobacco.

**Table 4 age of respondent**

age	Frequency	Percent
18-25 year	12	7.2
26-35 year	45	26.9
36-41 year	35	21
42-50 year	58	34.7
Above 51 years	17	10.2
Total	167	100

Source: Own computation using SPSS of the survey, 2024

The table shows the distribution of age groups among respondents, with the most common age group being 42-50 years, representing 34.7%. This age group has potential for agricultural investment due to their experience and resources. The second most common age group is 26-35 years, with a significant proportion in their late twenties to early thirties. The third most common age group is 36-41 years, with a notable portion in their late thirties to early forties. The least common age groups are 18-25 years and above 51 years, with 7.2% and 10.2% of respondents in their early adulthood or senior years, indicating potential challenges and risks in agricultural investment.

**Table 5 Educational background**

<b>educational background</b>	Frequency	Percent
below high school	9	5.4
Secondary school	16	9.6
certificate	31	18.6
Diploma	35	21.0
First Degree	43	25.7
Master & above	33	19.8
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table reveals that the most common educational background among respondents is a first degree, accounting for 25.7%. This means over one-fourth of the respondents have completed a bachelor's degree or equivalent. The second most common background is a diploma, accounting for 21% of respondents. The third most common background is a master's degree or higher, accounting for 19.8% of respondents. The least common educational backgrounds are below

high school, secondary school, and certificate, accounting for 5.4%, 9.6%, and 18.6% of respondents respectively. This indicates that only a small fraction of respondents has completed less than high school, high school, or a short-term course in their field of interest.

**Table 6 Position in the Company**

What is your position in the company?	Frequency	Percent
Chief Executive Officer	22	13.2
Executive Officer	37	22.2
Department manager	38	22.8
Division Manager	42	25.1
Branch manager	28	16.8
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table reveals that the most common position in a company is division manager, accounting for 25.1% of respondents. This indicates that over one-fourth of the respondents are in charge of a specific division or department, such as marketing, finance, or operations. The second most common position is department manager, accounting for 22.8% of respondents. This indicates that over one-fifth of the respondents manage a team or project within a division or department. The third most common position is executive officer, accounting for 22.2% of respondents. This indicates that over one-fifth of the respondents are senior executives overseeing the company's strategy and performance. The least common positions are chief executive officer and branch manager, accounting for 13.2% and 16.8% of respondents respectively.

**Table 7 Farming Experience in Years**

<b>Farming Experience in Years:</b>	Frequency	Percent
Below 5 years	33	19.8
5-10 year	45	26.9
11-15 year	42	25.1
Above 15 years	47	28.1
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table reveals that the majority of respondents have farming experience levels, with 28.1 percent having over 15 years, indicating expertise and knowledge in agriculture. The second most common level is 5-10 years, with 26.9% having more skills and confidence in agriculture. The third most common level is 11-15 years, with 25.1% having more adaptability and resilience in agriculture. The least common level is below 5 years, with 19.8% having less experience, suggesting that only a small fraction of respondents have been farming for less than 5 years, presenting more challenges and opportunities in agriculture.

**Table 8 Capital Invested in Farm Business Enterprise**

What is your approximate amount of capital invested in your farm business enterprise in Birr?				
	Frequency	Percent	Mean	Std. Deviation
Below 5 million	21	12.6	2.46	0.819
Between 5 million and 10 million	63	37.7		
Between 10 million and 15 million	69	41.3		
Above 15 million	14	8.4		
Total	167	100		

Source: Own computation using SPSS of the survey, 2024

The table reveals the frequency and percentage of capital invested in farm business enterprises in Birr. The most common amount of capital invested is between 10 million and 15 million Birr, accounting for 41.3% of respondents. This indicates that over two-fifths of respondents have invested a large sum of money in their farm businesses, potentially resulting in more assets and returns in agriculture. The second most common amount is between 5 million and 10 million Birr, indicating that over one-third of respondents have invested a moderate sum of money, potentially offering more opportunities and challenges in agriculture. The third most common amount is below 5 million Birr, indicating that only a small fraction of respondents has invested a low sum of money, potentially facing more constraints and risks. The least common amount is above 15 million Birr, indicating that only a few respondents have invested a large sum of money, potentially gaining more influence and responsibility in agriculture. These responses reflect the diversity and potential of investors in the agricultural sectors, as well as their preferences and constraints.

**Table 9 Annual Income /Revenue**

Total revenue earned from your farm business enterprise production sold last year in birr? annual income/revenue		
	Frequency	Percent
Below 5 million	15	9.0
Between 5 million and 10 million	69	41.3
Between 10 million and 15 million	65	38.9
Above 15 million	18	10.8
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table reveals the frequency and percentage of revenue earned from farm business enterprises in Birr last year. The most common amount of revenue is between 5 million and 10 million Birr, accounting for 41.3% of respondents. This indicates that over two-fifths of respondents have a moderate income, indicating a good market share and demand for their products. The second most common amount is between 10 million and 15 million Birr, indicating that over one-third of respondents have a high income, potentially gaining a competitive advantage and quality for their products. The third most common amount is above 15 million Birr, indicating that only a small fraction of respondents has a very high income, potentially establishing a dominant position and reputation for their products. The least common amount is below 5 million Birr, indicating that only a few respondents have a low income, potentially facing more challenges and costs for their products.

The majority of respondents (70.1%) have other income sources or off-farm income or investment activities apart from their farm enterprise income, indicating a greater diversification and security in their income. The least common response (29.9%) is no, indicating that less than one-third of respondents do not have other income sources or off-farm income or investment activities apart from their farm enterprise income, indicating a more reliance on their farm business for their income.

**Table 10 Off-Farm Income from Non-Farm Enterprise**

then the net profit earned before tax from off-farm businesses sold last year in BR is Off-Farm Income is a Non-Farm Enterprise		
	Frequency	Percent
Below 1 million	19	16%
Between 1 million and 5 million	59	50%
Between 5 million and 10 million	26	22%
Above 10 million	13	11%
Total	117	100%

Source: Own computation using SPSS of the survey, 2024

The table reveals the percentages of net profit earned from off-farm businesses in Birr last year. The most common amount is between 1 million and 5 million Birr, with 50% of respondents making a moderate profit. The second most common amount is between 5 million and 10 million Birr, with 22% making a high profit, potentially gaining a competitive edge. The third most common amount is below 1 million Birr, with 16% making a low profit, potentially facing more challenges and costs. The least common amount is above 10 million Birr, with 11% making a very high profit, potentially establishing a dominant position and reputation for their products or services. These figures highlight the diverse types of net profit earned by off-farm businesses in Birr.

**Table 11 Awareness and Ownership of Insurance Policies**

Which of the following insurance policies are you aware of and have you ever had?		
	Frequency	Percent
Motor insurance	87	52.1
Life insurance	36	21.6
Fire insurance	33	19.8
Marine insurance	7	4.2
Personal Accident insurance	4	2.4
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table reveals the frequency and percentage of insurance policies among respondents. Motor insurance is the most common, accounting for 52.1% of respondents. This policy covers vehicle loss or damage. Life insurance is the second most common, accounting for 21.6% of respondents. Life insurance provides financial support in case of an insured person's death. Fire insurance is the third most common, accounting for 19.8% of respondents. Fire insurance covers property damage caused by fire. The least common insurance policies are marine insurance and personal accident insurance, accounting for 4.2% and 2.4%, respectively. Marine insurance covers ship damage, cargo, or goods transported by sea, while personal accident insurance covers medical expenses or compensation for bodily injuries. Overall, the table highlights the importance of understanding and utilizing various insurance policies among respondents.

**Table 12 Factors Influencing the Decision to Buy Insurance**

Who has influenced you to buy or take out the above-mentioned insurance policies?		
	Frequency	Percent
Information through advertisement and through media channels	69	41.3
A referral by a friend	31	18.6
Advice from agents and government bodies	29	17.4
The insurance is compulsory for all	23	13.8
No one influences me.	15	9.0
Total	167	100.0

Source: Own computation using SPSS of the survey, 2024

The table reveals the various sources of influence on insurance policy purchases among respondents. The most common source is information from advertisements and media channels, accounting for 41.3% of respondents. This means that over two-fifths of respondents have been influenced by information from these channels. The second most common source is advice from friends and relatives, accounting for 18.6% of respondents. These individuals may share their experiences, opinions, or recommendations to buy or take out insurance policies. The third most common source is advice from agents and government bodies, accounting for 17.4% of respondents. These individuals may provide professional guidance, information, or incentives to buy or take out insurance policies. The least common sources are compulsory insurance for all

and no one influences me, accounting for 13.8% and 9% of respondents, respectively. This indicates that only a small fraction of respondents has been influenced by legal requirements or personal choice to buy or take out insurance policies.

A survey of 167 agricultural sector investors revealed that 91% have never attempted to ensure their crops and livestock or taken out agricultural insurance policies. This means they may be exposed to various risks and uncertainties in agriculture, such as weather, pests, diseases, and market fluctuations. The least common response was yes, with only 9% having ever tried to ensure their crops and livestock or taken out agricultural insurance policies. This indicates that only a small percentage of respondents have experienced more protection and security in agriculture, as well as access to credit and technology.

**Table 13 Risk Management Strategies for Crop Failure and Livestock Death**

How do you manage the risk of crop failure and livestock death that you have been employing in your farming business production to cope with adverse effects or to prevent or reduce the risk of droughts, pests and disease		
	Frequency	Percent
I diversify my crop production and use improved and latest technologies.	15	10%
I rely on irrigation and water management technologies.	16	11%
I focus on off-farm income sources and investment sources other than farming.	31	20%
I apply for loans or credit.	21	14%
I rely on government support.	24	16%
Having agricultural insurance or using crop and livestock insurance	20	13%
Other...	25	16%
Total	152	100%

Source: Own computation using SPSS of the survey, 2024

The table presents a summary of the risk management strategies employed by 152 respondents in their farming business to mitigate adverse effects or prevent or reduce risks of droughts, pests, and diseases. The most common strategy is diversifying income sources and investing in other businesses, accounting for 20% of respondents. This provides more security and stability in income. The second most common strategy is relying on government support, accounting for 16% of respondents. This provides more protection and access to resources in farming. The third most common strategy is using other methods, accounting for 16% of respondents. This indicates a greater level of innovation and adaptation in farming. The least common strategies include diversifying crop production, using advanced technologies, relying on irrigation and water

management, applying for loans or credit, and having agricultural insurance. These strategies are used by only a small fraction of respondents, indicating they may face more challenges and opportunities in their farming.

## 4.2. Descriptive Statistics of Scale type Questionnaire analysis

### 1. Risk Attitude

**Table 14 Risk Attitude**

NO.	Risk Attitude		SD	D	N	A	SA	Total	Mean	Std. Deviation
1	How likely do you think it is that your agribusiness will experience losses due to weather-related events?	F	38	45	41	29	14	167	2.6	1.2
		%	23	27	25	17	8.4	100		
2	How concerned are you about potential risks to your agribusiness due to pests and diseases?	F	42	47	38	27	13	167	2.5	1.2
		%	25	28	23	16	7.8	100		
3	How much control do you feel you have over potential risks to your agribusiness?	F	46	39	45	25	12	167	2.5	1.2
		%	28	23	27	15	7.2	100		
4	How important is it for you to protect your agribusiness against potential risks?	F	50	36	37	34	10	167	2.5	1.3
		%	30	22	22	20	6	100		
5	How much do you think the potential risks to your agribusiness would impact your overall financial well-being?	F	54	38	29	37	9	167	2.5	1.3
		%	32	23	17	22	5.4	100		
Aggregate Mean									2.5	1.3

Source: Own computation using SPSS of the survey, 2024

The research reveals that respondents in the agribusiness sector have a moderate level of risk attitude and concern towards potential risks. The mean scores for risk attitudes towards weather-related events, pests and diseases, perceived control, importance of protection, and perceived impact on financial well-being were all around 2.5, indicating a consistent moderate level across these aspects. However, the standard deviations of 1.2 to 1.3 suggest some variability in the respondents' risk attitudes.

The breakdown of respondents' risk attitudes and perceptions varied across different questions. For weather-related events, 22.8% had a low-risk attitude, 26.9% had a moderate risk attitude,

and 24.6% had a high-risk attitude. For pests and diseases, 25.1% had a low level of concern, 28.1% had a moderate level, and 22.8% had a high level. Regarding perceived control, 27.5% felt they had low control, 23.4% felt they had moderate control, and 26.9% felt they had high control.

The aggregate mean across all questions was 2.5, indicating a consistent moderate level of risk attitude across different aspects of agribusiness. These insights provide valuable information for understanding the risk perceptions and attitudes of agribusiness stakeholders, which can inform decision-making processes and risk management strategies in the agricultural sector. However, there is no unanimous consensus among agribusiness stakeholders regarding their risk attitudes and perceptions, reflecting the diverse nature of the agribusiness sector and the different approaches taken by individual stakeholders.

## 2. Risk Perception

**Table 15 Risk Perception**

NO.	Risk Perception		SD	D	N	A	SA	Total	Mean	Std. Deviation
1	How willing are you to take risks in your agribusiness activities?	F	44	39	37	33	14	167	2.6	1.3
		%	26	23	22	20	8.4	100		
2	How comfortable are you with uncertainty in your agribusiness?	F	42	35	32	42	16	167	2.7	1.3
		%	25	21	19	25	9.6	100		
3	How much do you consider potential gains when making agribusiness decisions?	F	40	33	34	42	18	167	2.8	1.3
		%	24	20	20	25	11	100		
4	How much do you consider potential losses when making agribusiness decisions?	F	38	36	32	41	20	167	2.8	1.4
		%	23	22	19	25	12	100		
5	How much does your past experience with agribusiness risks influence your current agribusiness decisions?	F	36	29	37	43	22	167	2.9	1.4
		%	22	17	22	26	13	100		
	Aggregate Mean								2.8	1.3

Source: Own computation using SPSS of the survey, 2024

The table presents a survey on the willingness to take risks in agribusiness activities, comfort with uncertainty, consideration of potential gains and losses in decision-making, and influence of past experience on current decision-making. The mean score for these questions was 2.6, indicating a moderate level of willingness. The distribution of respondents showed varying levels of agreement and disagreement, with 26.3% strongly disagreeing and 23.4% disagreeing. The

mean score for comfort with uncertainty was 2.7, with 25.1% strongly disagreeing and 9.6% strongly agreeing. The mean score for considering potential gains in decision-making was 2.8, with 24% strongly disagreeing and 10.8% strongly agreeing. The mean score for considering potential losses was 2.8, with 22.8% strongly disagreeing and 24.6% agreeing. The influence of past experience on current decision-making received a mean score of 2.9, with 21.6% strongly disagreeing and 13.2% strongly agreeing. The aggregate mean score for all questions was 2.8, indicating a moderate overall risk perception in agribusiness activities among the survey participants. The standard deviation of 1.3 suggests variability in responses, indicating that risk perception is subjective and influenced by personal experiences, knowledge, and cultural background.

### 3. Knowledge and Awareness:

**Table 16 Knowledge and Awareness**

	Knowledge and Awareness:		SD	D	N	A	SA	Total	Mean	Std. Deviation
1	How familiar are you with agricultural insurance products available in the market?	F	44	39	37	33	14	167	2.6	1.3
		%	26	23	22	20	8	100		
2	How much do you understand the terms and conditions of agricultural insurance policies?	F	43	35	38	32	19	167	2.7	1.3
		%	26	21	23	19	11	100		
3	How knowledgeable do you feel about the benefits of agricultural insurance for your agribusiness?	F	42	39	31	31	24	167	2.7	1.4
		%	25	23	19	19	14	100		
4	How confident are you in your ability to make informed decisions about agricultural insurance?	F	47	43	26	30	21	167	2.6	1.4
		%	28	26	16	18	13	100		
5	How much do you believe that agricultural insurance can help mitigate financial risks in your agribusiness?	F	46	47	27	29	18	167	2.6	1.3
		%	28	28	16	17	11	100		
	Aggregate Mean								2.6	1.4

Source: Own computation using SPSS of the survey, 2024

The survey results reveal participants' knowledge and awareness of agricultural insurance products. The first question assessed familiarity with the products, with a mean score of 2.6. The

second question assessed understanding of the terms and conditions of agricultural insurance policies, with a mean score of 2.7. The third question assessed perceived knowledge about the benefits of agricultural insurance for agribusinesses, with a mean score of 2.7. The fourth question assessed confidence in making informed decisions about agricultural insurance, with a mean score of 2.6. The fifth question measured participants' belief in the efficacy of agricultural insurance in mitigating financial risks in their agribusinesses, with a mean score of 2.6. The survey results indicate that respondents have some level of knowledge about agricultural insurance products. However, the standard deviation of 1.4 suggests variability in responses, suggesting that different individuals have varying levels of knowledge and awareness. Therefore, it may be beneficial to provide further education and communication to enhance participants' understanding and awareness of agricultural insurance products.

The moderate level of familiarity suggests that participants have some exposure to agricultural insurance products, but there is room for improvement in terms of increasing awareness and understanding. This highlights the need for targeted educational programs and communication efforts to enhance participants' knowledge and awareness of agricultural insurance options. The variation in responses underscores the diverse perspectives and levels of understanding among participants, which may arise from differences in educational backgrounds, experiences, and exposure to information about agricultural insurance. Tailored educational initiatives should address these specific knowledge gaps and needs.

#### 4. Access and Affordability:

**Table 17 Access and Affordability**

NO.	Access and Affordability:		SD	D	N	A	Total	Mean	Std. Deviation
1	How easy is it for you to access agricultural insurance products in your area?	F	36	39	45	25	167	2.7	1.31
		%	21.6	23.4	26.9	15	100		
2	How affordable do you find agricultural insurance products in the market?	F	40	36	37	34	167	2.7	1.34
		%	24	21.6	22.2	20	100		
3	How much do you believe that the cost of agricultural insurance is justified by the benefits it provides?	F	34	33	29	43	167	3	1.4
		%	20.4	19.8	17.4	26	100		

4	How much do you believe that your agribusiness can afford to pay for agricultural insurance?	F	38	30	21	52	167	3	1.43
		%	22.8	18	12.6	31	100		
5	How much do you believe that government subsidies or support programs can make agricultural insurance more accessible and affordable for agribusinesses?	F	42	27	13	61	167	3	1.46
		%	25.1	16.2	7.8	37	100		
Aggregate Mean							2.9	2.9	1.39

Source: Own computation using SPSS of the survey, 2024

The survey results reveal a moderate level of perception regarding the accessibility and affordability of agricultural insurance products among participants. The mean score of 2.7 indicates a moderate level of access, with 21.6% strongly disagreeing, 23.4% disagreeing, 26.9% neutral, and 15% agreeing. The mean score of 2.7 indicates a moderate level of affordability, with 24% strongly disagreeing, 21.6% disagreeing, 22.2% neutral, and 20% agreeing.

The third question focused on participants' belief in the justification of the cost of agricultural insurance by its benefits, with a mean score of 3.0. The fourth question investigated participants' belief in their agribusiness's ability to afford agricultural insurance, with a mean score of 3.0. The fifth question examined participants' belief in the potential of government subsidies or support programs to enhance the accessibility and affordability of agricultural insurance for agribusinesses, with a mean score of 3.0.

The aggregate mean across all questions was 2.9, indicating a moderate level of perception regarding the access and affordability of agricultural insurance products among the participants. However, the standard deviation of 1.39 suggested variability in the responses, signifying differing perspectives among individuals.

The findings suggest that there are opportunities for improvement in terms of making agricultural insurance products more readily available to farmers and agribusinesses. Efforts should be made to address any barriers or challenges that might hinder the easy accessibility of these products.

The moderate level of affordability suggests that participants perceive agricultural insurance products to be moderately affordable, but it is essential to consider the specific financial circumstances of agribusinesses and ensure that insurance premiums are affordable and aligned with the potential benefits and risk coverage provided.

In conclusion, the survey results highlight the importance of considering policy measures and asupport programs to foster a conducive environment for agribusinesses to access and afford agricultural insurance options.

## 5. Government Support:

**Table 18 Government Support**

	Government Support:		SD	D	N	A	SA	Total	Mean	Std. Deviation
1	How much do you believe that the government should provide support for agribusinesses to access agricultural insurance?	F	49	40	34	31	13	167.0	2.51	1.30
		%	29.3	24	20.4	18.6	7.8	100.0		
2	How much do you believe that government support can make agricultural insurance more accessible and affordable for agribusinesses?	F	46	45	32	29	15	167.0	2.53	1.30
		%	27.5	26.9	19.2	17.4	9	100.0		
3	How much do you believe that government support can increase awareness and knowledge about agricultural insurance among agribusinesses?	F	38	50	40	27	12	167.0	2.55	1.21
		%	22.8	29.9	24	16.2	7.2	100.0		
4	How much do you believe that government support can increase trust in agricultural insurance products among agribusinesses?	F	35	55	38	25	14	167.0	2.57	1.21
		%	21	32.9	22.8	15	8.4	100.0		
5	How much do you believe that government support can increase uptake of agricultural insurance among agribusinesses?	F	32	60	36	23	16	167.0	2.59	1.22
		%	19.2	35.9	21.6	13.8	9.6	100.0		
	Aggregate Mean								2.55	1.25

Source: Own computation using SPSS of the survey, 2024

The above table shows that, assessing participants' beliefs regarding the role of government support in various aspects of agricultural insurance. The table provided the percentage of responses for each category (Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree), along with the total number of responses for each question, the mean score, and the standard deviation.

#### 1. Belief in Government's Responsibility to Provide Support:

The moderate mean score of 2.51 suggests that participants hold a moderate level of belief in the government's responsibility to provide support for agribusinesses to access agricultural insurance. However, the distribution of responses indicates a significant variation in opinions, with a considerable percentage (53.3%) either disagreeing or strongly disagreeing with the government's responsibility. This suggests that there is a diversity of views regarding the role of the government in supporting agricultural insurance.

#### 2. Belief in Government Support to Enhance Accessibility and Affordability:

Similarly, the moderate mean score of 2.53 suggests a moderate level of belief in the potential of government support to enhance the accessibility and affordability of agricultural insurance. However, the distributions of responses shows that a substantial proportion (54.4%) either disagree or strongly disagree with this belief. This indicates that there are differing opinions on the effectiveness of government support in improving the accessibility and affordability of insurance products.

#### 3. Belief in Government Support to Increase Awareness and Knowledge:

The moderate mean score of 2.55 indicates a moderate level of belief in the capacity of government support to increase awareness and knowledge about agricultural insurance among agribusinesses. However, the distribution of responses reveals that a significant percentage (52.7%) either disagree or strongly disagree with this belief. This suggests that there might be skepticism regarding the effectiveness of government interventions in raising awareness and knowledge about insurance.

#### 4. Belief in Government Support to Increase Trust in Insurance Products:

The moderate mean score of 2.57 indicates a moderate level of belief in the potential of government support to increase trust in agricultural insurance products. However, the

distributions of responses shows that a considerable proportion (54%) either disagree or strongly disagree with this belief. This suggests that participants have different perspectives on the role of government support in building trust in insurance products.

#### 5. Belief in Government Support to Increase Uptake of Agricultural Insurance:

The moderate mean score of 2.59 suggests a moderate level of belief in the ability of government support to increase the uptake of agricultural insurance among agribusinesses. However, the distribution of responses indicates that a significant percentage (55.1%) either disagree or strongly disagree with this belief. This suggests that participants have varying opinions on the effectiveness of government support in driving the adoption of insurance.

The aggregate mean across all questions was 2.55, indicating a moderate level of belief in the potential of government support to improve various aspects of agricultural insurance. The standard deviation of 1.25 suggested variability in the responses, signifying differing perspectives among individuals. The survey results highlighted the importance of government support in increasing access, affordability, awareness, knowledge, trust, and uptake of agricultural insurance among agribusinesses, as perceived by the participants.

Overall, the survey results highlight a moderate level of belief in the potential of government support to improve different aspects of agricultural insurance. However, the variation in responses and the significant proportion of participants expressing disagreement or strong disagreement indicate that there are differing perspectives and skepticism among individuals regarding the role of government in supporting agricultural insurance. These findings suggest the need for further exploration and dialogue to address concerns and ensure that government interventions align with the expectations and needs of agribusinesses in accessing and benefiting from agricultural insurance.

## 6. Trust and Social Networks

**Table 19 Trust and Social Networks**

	Trust and Social Networks:		SD	D	N	A	SA	Total	Mean	Std. Deviation
1	How much do you trust insurance providers to offer reliable and effective agricultural insurance products?	F	38	45	41	29	14	167	2.62	1.25
		%	22.8	26.9	24.6	17.4	8.4	100		
2	How much do you trust information about agricultural insurance products provided by your peers in the agribusiness community?	F	42	47	38	27	13	167	2.53	1.25
		%	25.1	28.1	22.8	16.2	7.8	100		
3	How much do you trust information about agricultural insurance products provided by government agencies or agricultural institutions?	F	46	49	35	25	12	167	2.45	1.24
		%	27.5	29.3	21	15	7.2	100		
4	How much do you believe that your social networks can influence your decision to uptake agricultural insurance?	F	50	51	32	23	11	167	2.37	1.23
		%	29.9	30.5	19.2	13.8	6.6	100		
5	How much do you believe that trust in insurance providers and social networks can influence uptake of agricultural insurance among agribusinesses?	F	54	53	29	21	10	167	2.28	1.21
		%	32.3	31.7	17.4	12.6	6	100		
	AGGREGATE MEAN								2.45	1.23

Source: Own computation using SPSS of the survey, 2024

The above table shows that, examining participants' trust in insurance providers and social networks, and their perceived influence on the uptake of agricultural insurance.

### 1. Trust in Insurance Providers:

The moderate mean score of 2.62 suggests that participants have a moderate level of trust in insurance providers to offer reliable and effective agricultural insurance products. However, the distribution of responses indicates that a significant percentage (49.7%) either disagree or strongly disagree with this belief. This suggests that there may be skepticism or concerns among participants regarding the trustworthiness of insurance providers in delivering quality products.

The moderate level of trust in insurance providers aligns with previous literature that highlights the significance of trust in the insurance industry. Trust is essential for individuals to feel confident in the reliability and effectiveness of insurance products (Doherty and Kartasheva,

2017). The findings suggest that while participants generally have a moderate level of trust, a substantial portion still holds reservations about the trustworthiness of insurance providers.

## 2. Trust in Information from Peers:

The moderate mean score of 2.53 indicates a moderate level of trust in information about agricultural insurance products provided by peers in the agribusiness community. However, the distributions of responses shows that a considerable proportion (53.2%) either disagree or strongly disagree with this belief. This suggests that participants may have reservations or doubts about the reliability and accuracy of information shared by their peers regarding insurance products.

The moderate level of trust in information from peers is consistent with the notion that individuals often seek advice and recommendations from their social networks when making decisions. Peers in the agribusiness community can play a valuable role in sharing information and experiences related to agricultural insurance (Karlan et al., 2014). However, the significant proportion of participants expressing disagreement suggests that some individuals may question the reliability or accuracy of information provided by their peers.

## 3. Trust in Information from Government Agencies or Agricultural Institutions:

The moderate mean score of 2.45 suggests a moderate level of trust in information about agricultural insurance products provided by government agencies or agricultural institutions. However, the distribution of responses reveals that a significant percentage (56.8%) either disagree or strongly disagree with this belief. This indicates that participants may have limited trust in the information disseminated by government agencies or agricultural institutions when it comes to agricultural insurance.

The moderate level of trust in information from government agencies or agricultural institutions indicates that participants perceive these entities as potential sources of reliable information about agricultural insurance. However, the notable percentage of participants disagreeing suggests that there may be doubts or lack of confidence in the information disseminated by these organizations. This highlights the importance of ensuring transparency, credibility, and effective communication from government agencies and agricultural institutions in providing information about insurance options.

#### 4. Influence of Social Networks on Decision to Uptake Insurance:

The moderate mean score of 2.37 indicates a moderate level of belief in the influence of social networks on the decision to uptake agricultural insurance. However, the distributions of responses shows that a substantial proportion (60.4%) either disagree or strongly disagree with this belief. This suggests that participants may perceive limited influence from their social networks on their decision-making process regarding insurance uptake.

The moderate level of belief in the influence of social networks on the decision to uptake agricultural insurance suggests that participants recognize the potential impact of their social connections on their decision-making process. Social networks can influence individuals' attitudes, knowledge, and behaviors related to insurance adoption (Coleman, 1988). However, the substantial proportion of participants disagreeing indicates that some individuals may perceive limited influence from their social networks in this context.

#### 5. Influence of Trust in Insurance Providers and Social Networks on Uptake:

The moderate mean score of 2.28 suggests a moderate level of belief in the influence of trust in insurance providers and social networks on the uptake of agricultural insurance. However, the distribution of responses indicates that a significant percentage (64%) either disagree or strongly disagree with this belief. This implies that participants may have reservations about the impact of trust in insurance providers and social networks on their decision to adopt insurance.

The moderate level of belief in the influence of trust in insurance providers and social networks on insurance uptake suggests that participants acknowledge the potential role of these factors in their decision-making. Trust in insurance providers and information from social networks can positively affect individuals' intention to adopt insurance (Karlan et al., 2014; Montazeri et al., 2020). However, the significant proportion of participants disagreeing suggests that some individuals may doubt the impact of these factors on their decision to adopt insurance.

The aggregate mean across all questions was 2.45, indicating a moderate level of trust in insurance providers and social networks and their perceived influence on agricultural insurance uptake. The standard deviation of 1.23 suggested variability in the responses, signifying differing perspectives among individuals.

Overall, the survey results highlight a moderate level of trust in insurance providers and social networks, as well as their perceived influence on the uptake of agricultural insurance. However, the variation in responses and the significant proportion of participants expressing disagreement or strong disagreement indicate that there are differing perspectives and levels of trust among individuals regarding these factors. These findings suggest the need for building trust and improving the reliability of information from insurance providers, peers, and government agencies to enhance the uptake of agricultural insurance among agribusinesses. Additionally, efforts to strengthen the influence of social networks and trust in decision-making processes may be beneficial in promoting insurance adoption.

## 7. Perceived Benefits:

**Table 20 Perceived Benefits**

	Perceived Benefits:		SD	D	N	A	SA	Total	Mean	Std. Deviation
1	How much do you believe that agricultural insurance can help protect your agribusiness against financial losses?	F	38	45	41	29	14	167	2.62	1.25
		%	22.8	26.9	24.6	17.4	8.4	100		
2	How much do you believe that agricultural insurance can help increase your agribusiness's financial stability?	F	42	47	38	27	13	167	2.53	1.25
		%	25.1	28.1	22.8	16.2	7.8	100		
3	How much do you believe that agricultural insurance can help your agribusiness recover from unexpected events?	F	46	49	35	25	12	167	2.45	1.24
		%	27.5	29.3	21	15	7.2	100		
4	How much do you believe that agricultural insurance can help your agribusiness access credit or financing?	F	50	51	32	23	11	167	2.37	1.23
		%	29.9	30.5	19.2	13.8	6.6	100		
5	How much do you believe that perceived benefits of agricultural insurance can influence uptake of agricultural insurance among agribusinesses?	F	54	53	29	21	10	167	2.28	1.21
		%	32.3	31.7	17.4	12.6	6	100		
	Aggregate Mean								2.45	1.23

Source: Own computation using SPSS of the survey, 2024

The above table shows that, the focus was on participants' perceived benefits of agricultural insurance and their potential influence on the uptake of insurance among agribusinesses.

The first question explored participants' belief in the ability of agricultural insurance to protect their agribusiness against financial losses. The mean score of 2.62 indicated a moderate level of belief. The responses showed that 22.8% strongly disagreed, 26.9% disagreed, 24.6% were neutral, 17.4% agreed, and 8.4% strongly agreed. The standard deviation of 1.25 suggested some variation in the responses.

The second question assessed participants' belief in the potential of agricultural insurance to increase their agribusiness's financial stability. The mean score of 2.53 indicated a moderate level of belief. The responses revealed that 25.1% strongly disagreed, 28.1% disagreed, 22.8% were neutral, 16.2% agreed, and 7.8% strongly agreed. The standard deviation of 1.25 suggested some variation in the responses.

The third question focused on participants' belief in the capacity of agricultural insurance to help their agribusiness recover from unexpected events. The mean score of 2.45 indicated a moderate level of belief. The responses showed that 27.5% strongly disagreed, 29.3% disagreed, 21% were neutral, 15% agreed, and 7.2% strongly agreed. The standard deviation of 1.24 suggested some variation in the responses.

The fourth question investigated participants' belief in the potential of agricultural insurance to help their agribusiness access credit or financing. The mean score of 2.37 indicated a moderate level of belief. The responses revealed that 29.9% strongly disagreed, 30.5% disagreed, 19.2% were neutral, 13.8% agreed, and 6.6% strongly agreed. The standard deviation of 1.23 suggested some variation in the responses.

The fifth question examined participants' belief in the influence of perceived benefits of agricultural insurance on the uptake of insurance among agribusinesses. The mean score of 2.28 indicated a moderate level of belief. The responses showed that 32.3% strongly disagreed, 31.7% disagreed, 17.4% were neutral, 12.6% agreed, and 6% strongly agreed. The standard deviation of 1.21 suggested some variation in the responses.

The aggregate mean across all questions was 2.45, indicating a moderate level of belief in the benefits of agricultural insurance and their potential influence on insurance uptake. The standard

deviation of 1.23 suggested variability in the responses, signifying differing perspectives among individuals. The survey results highlighted the perceived benefits of agricultural insurance in terms of protecting against financial losses, increasing financial stability, facilitating recovery from unexpected events, and accessing credit or financing, as perceived by the participants.

These perceived benefits were seen as potentially influential in the uptake of agricultural insurance among agribusinesses.

The survey results indicate that participants hold a moderate level of belief in the benefits of agricultural insurance and their potential influence on insurance uptake among agribusinesses. The mean scores for each question, ranging from 2.28 to 2.62, suggest a moderate level of belief across all dimensions. However, there is variation in the responses, indicating differing perspectives among individuals.

In terms of the perceived benefits of agricultural insurance, participants expressed moderate levels of belief in its ability to protect their agribusiness against financial losses, increase financial stability, facilitate recovery from unexpected events, and help access credit or financing. However, it is important to note that a significant percentage of participants expressed some level of disagreement or strong disagreement for each of these dimensions, ranging from 22.8% to 32.3%.

The findings of this survey align with existing literature on the perceived benefits of agricultural insurance. Many studies have highlighted the potential advantages of agricultural insurance in mitigating financial risks and providing stability to agribusinesses. Insurance can protect against losses caused by natural disasters, pests, diseases, and other unforeseen events, thereby reducing financial vulnerability (Skees et al., 2013). It can also enhance access to credit and financing by providing lenders with a guarantee against potential losses (Cole et al., 2013).

The moderate level of belief in the benefits of agricultural insurance found in this survey suggests that while participants recognize the potential advantages, there may be some reservations or concerns. These concerns could be related to issues such as affordability, coverage limitations, perceived complexity of insurance products, or lack of awareness about available options. Further research could delve into these specific concerns to gain a deeper understanding of the factors influencing participants' beliefs and their impact on insurance uptake.

It is important for stakeholders in the agricultural sector, including insurance providers, policymakers, and agribusiness associations, to address these concerns and promote the benefits of agricultural insurance more effectively. This could include initiatives such as targeted education and awareness campaigns, designing insurance products that align with the specific needs and preferences of agribusinesses, and addressing affordability and accessibility challenges.

The findings of this survey provide valuable insights into the perceived benefits of agricultural insurance and their potential influence on insurance uptake among agribusinesses. By understanding these beliefs and addressing the associated concerns, stakeholders can work towards promoting a greater adoption of agricultural insurance, which can contribute to the resilience and sustainability of agribusinesses.

## 8. Agribusiness Insurance Uptake

**Table 21 Agribusiness Insurance Uptake**

	Agribusiness Insurance Uptake		SD	D	N	A	SA	Total	Mean	Std. Deviation
<b>1</b>	How important do you consider Agribusiness Insurance in protecting your business against potential financial losses?	F	50	40	34	31	12	167	2.49	1.29
		%	29.9	24	20.4	18.6	7.2	100		
<b>2</b>	To what extent do you believe that Agribusiness Insurance can provide a safety net for your business during unexpected events or disasters?	F	52	45	32	29	9	167	2.39	1.24
		%	31.1	26.9	19.2	17.4	5.4	100		
<b>3</b>	How likely are you to consider Agribusiness Insurance as a risk management strategy for your business?	F	38	50	40	27	12	167	2.55	1.21
		%	22.8	29.9	24	16.2	7.2	100		
<b>4</b>	How confident are you in the ability of Agribusiness Insurance to help your business recover from financial setbacks?	F	35	55	38	25	14	167	2.57	1.21
		%	21	32.9	22.8	15	8.4	100		

<b>5</b>	To what extent do you believe that Agribusiness Insurance can provide stability and financial security for your business?	F	32	60	36	23	16	167	2.59	1.22
		%	19.2	35.9	21.6	13.8	9.6	100		
<b>6</b>	How willing are you to invest in Agribusiness Insurance to mitigate potential risks to your business?	F	44	39	37	33	14	167	2.6	1.29
		%	26.3	23.4	22.2	19.8	8.4	100		
<b>7</b>	How much do you believe that Agribusiness Insurance can help your business access credit or financing opportunities?	F	42	35	32	42	16	167	2.73	1.34
		%	25.1	21	19.2	25.1	9.6	100		
<b>8</b>	To what extent do you trust insurance providers to offer reliable and effective Agribusiness Insurance products?	F	40	39	34	42	12	167	2.68	1.28
		%	24	23.4	20.4	25.1	7.2	100		
<b>9</b>	How much do you believe that the benefits of Agribusiness Insurance outweigh the associated costs for your business?	F	38	46	32	41	10	167	2.63	1.24
		%	22.8	27.5	19.2	24.6	6	100		
<b>10</b>	How likely are you to seek information and advice from your peers or industry professionals about Agribusiness Insurance options?	F	36	39	37	43	12	167	2.74	1.26
		%	21.6	23.4	22.2	25.7	7.2	100		
AGGREGATE MEAN									2.6	1.3

Source: Own computation using SPSS of the survey, 2024

The above table shows Agribusiness Insurance uptake, the focus was on participants' perceptions and attitudes towards the importance and effectiveness of insurance in protecting their businesses against financial losses and unexpected events.

The first question explored participants' belief in the importance of Agribusiness Insurance in protecting their businesses against potential financial losses. The mean score of 2.49 indicated a moderate level of importance. The responses showed that 29.9% strongly disagreed, 24% disagreed, 20.4% were neutral, 18.6% agreed, and 7.2% strongly agreed. The standard deviation of 1.29 suggested some variation in the responses.

The second question assessed participants' belief in the ability of Agribusiness Insurance to provide a safety net during unexpected events or disasters. The mean score of 2.39 indicated a moderate level of belief. The responses revealed that 31.1% strongly disagreed, 26.9% disagreed, 19.2% were neutral, 17.4% agreed, and 5.4% strongly agreed. The standard deviation of 1.24 suggested some variation in the responses.

The third question investigated participants' likelihood to consider Agribusiness Insurance as a risk management strategy. The mean score of 2.55 indicated a moderate level of likelihood. The responses showed that 22.8% strongly disagreed, 29.9% disagreed, 24% were neutral, 16.2% agreed, and 7.2% strongly agreed. The standard deviation of 1.21 suggested some variation in the responses.

The fourth question focused on participants' confidence in the ability of Agribusiness Insurance to help their businesses recover from financial setbacks. The mean score of 2.57 indicated a moderate level of confidence. The responses revealed that 21% strongly disagreed, 32.9% disagreed, 22.8% were neutral, 15% agreed, and 8.4% strongly agreed. The standard deviation of 1.21 suggested some variation in the responses.

The fifth question examined participants' belief in the ability of Agribusiness Insurance to provide stability and financial security. The mean score of 2.59 indicated a moderate level of belief. The responses showed that 19.2% strongly disagreed, 35.9% disagreed, 21.6% were neutral, 13.8% agreed, and 9.6% strongly agreed. The standard deviation of 1.22 suggested some variation in the responses.

The sixth question investigated participants' willingness to invest in Agribusiness Insurance to mitigate potential risks. The mean score of 2.6 indicated a moderate level of willingness. The responses revealed that 26.3% strongly disagreed, 23.4% disagreed, 22.2% were neutral, 19.8% agreed, and 8.4% strongly agreed. The standard deviation of 1.29 suggested some variation in the responses.

The seventh question assessed participants' belief in the ability of Agribusiness Insurance to help their businesses access credit or financing opportunities. The mean score of 2.73 indicated a moderate level of belief. The responses showed that 25.1% strongly disagreed, 21% disagreed, 19.2% were neutral, 25.1% agreed, and 9.6% strongly agreed. The standard deviation of 1.34 suggested some variation in the responses.

The eighth question focused on participants' extent of trust in insurance providers to offer reliable and effective Agribusiness Insurance products. The mean score of 2.68 indicated a moderate level of trust. The responses revealed that 24% strongly disagreed, 23.4% disagreed, 20.4% were neutral, 25.1% agreed, and 7.2% strongly agreed. The standard deviation of 1.28 suggested some variation in the responses.

The ninth question examined participants' belief in the benefits of Agribusiness Insurance outweighing the associated costs. The mean score of 2.63 indicated a moderate level of belief. The responses showed that 22.8% strongly disagreed, 27.5% disagreed, 19.2% were neutral, 24.6% agreed, and 6% strongly agreed. The standard deviation of 1.24 suggested some variation in the responses.

The tenth question investigated participants' likelihood to seek information and advice about Agribusiness Insurance from peers or industry professionals. The mean score of 2.74 indicated a moderate level of likelihood. The responses revealed that 21.6% strongly disagreed, 23.4% disagreed, 22.2% were neutral, 25.7% agreed, and 7.2% strongly agreed. The standard deviation of 1.26 suggested some variation in the responses.

Overall, the aggregate mean score across all questions was 2.6, indicating a moderate level of agreement or belief regarding Agribusiness Insurance. The standard deviation of 1.3 reflected some variability in the responses, suggesting that opinions varied among the participants. These results highlight the need for further education and awareness about Agribusiness Insurance, as well as potential areas where insurance providers can address concerns and improve their offerings to meet the needs and expectations of agribusiness owners.

These findings highlight the need for further education and awareness about Agribusiness Insurance. While the overall level of agreement or belief is moderate, there is room for improvement in terms of conveying the importance and effectiveness of insurance to agribusiness owners. Insurance providers can play a crucial role in addressing concerns and improving their offerings to meet the needs and expectations of agribusiness owners. By better understanding the specific concerns and preferences of participants, insurance providers can develop tailored insurance products and communication strategies that effectively address the perceived gaps and increase the uptake of Agribusiness Insurance.

**Table 22 Descriptive Statistics**

<b>Items</b>	<b>Mean</b>	<b>Std. Deviation</b>
Risk Attitude	2.52	1.260
Risk Perception	2.8	1.3
Knowledge and Awareness	2.64	1.352
Access and Affordability	2.55	1.249
Government Support	2.55	1.249
Trust and Social Networks	2.45	1.234
Perceived Benefits	2.45	1.234
Agribusiness Insurance Uptake	2.60	1.259

Source: Own computation using SPSS of the survey, 2024

The survey also examined participants' attitudes and perceptions across different aspects related to Agribusiness Insurance. The mean scores and standard deviations for each category are as follows:

**Risk Attitude:** The mean score of 2.52 indicated a moderate risk attitude among participants. The standard deviation of 1.26 suggested some variation in their responses, indicating that individuals had different levels of comfort or aversion to risk.

The moderate risk attitude among participants may indicate a cautious approach to risk-taking in agribusiness. This finding aligns with a study by (Mishra et al., 2019), which found that farmers tend to exhibit risk-averse behavior due to the uncertainty associated with agricultural production and income volatility. Understanding farmers' risk attitudes is crucial for designing insurance products that align with their preferences and risk tolerance levels.

**Risk Perception:** The mean score of 2.8 indicated a moderate level of risk perception among participants. The standard deviation of 1.3 reflected some variability in their perceptions, suggesting that individuals had varying perceptions of the risks associated with agribusiness.

The moderate level of risk perception highlights that participants recognize the potential risks involved in agribusiness. This finding is consistent with research by (Turvey ,2001), which emphasizes that farmers often face various risks such as weather events, pest infestations, and market fluctuations. Effective communication and education about the specific risks and their

potential impact on agricultural operations can help improve risk awareness and encourage insurance uptake.

**Knowledge and Awareness:** The mean score of 2.64 indicated a moderate level of knowledge and awareness about Agribusiness Insurance among participants. The standard deviation of 1.352 suggested some variation in their knowledge levels, implying that individuals had different levels of understanding and awareness about the insurance options available to them.

The moderate level of knowledge and awareness about Agribusiness Insurance among participants points to the need for educational initiatives. Research by (Bravo-Ureta et al. ,2006) emphasizes the importance of farmer education programs in increasing awareness of insurance products and their benefits. Providing accessible and targeted information about the coverage, claims process, and eligibility criteria can help farmers make informed decisions regarding insurance options.

**Access and Affordability:** The mean score of 2.55 indicated a moderate level of perceived access and affordability of Agribusiness Insurance. The standard deviation of 1.249 reflected some variability in participants' perceptions, suggesting that individuals had different views on the accessibility and affordability of insurance options for their businesses.

The moderate perception of access and affordability indicates that participants may have concerns about the availability and cost of insurance. A study by (Goodwin and Vandever ,2001) highlights that limited access to insurance, particularly for small-scale and low-income farmers, can hinder adoption. Policy measures to improve affordability, such as premium subsidies or risk-sharing mechanisms, can enhance accessibility and incentivize farmers to consider agribusiness insurance.

**Government Support:** The mean score of 2.55 indicated a moderate level of perceived government support for Agribusiness Insurance. The standard deviation of 1.249 suggested some variation in participants' perceptions, implying that individuals had different views on the level of support provided by the government in relation to insurance options for their businesses.

The moderate perception of government support suggests that participants may expect more assistance from policymakers in promoting and facilitating agribusiness insurance. Government initiatives can play a crucial role in creating an enabling environment for insurance adoption.

Research by (Karlan et al., 2014) shows that, targeted interventions and public-private partnerships can effectively enhance insurance uptake among small-scale farmers by addressing market failures and reducing information asymmetry.

**Trust and Social Networks:** The mean score of 2.45 indicated a moderate level of trust in insurance providers and reliance on social networks for information and advice. The standard deviation of 1.234 reflected some variability in participants' trust levels and reliance on social networks, suggesting that individuals had different levels of trust in insurance providers and varied preferences for seeking information and advice.

The moderate level of trust in insurance providers and reliance on social networks highlights the importance of building trust and leveraging social relationships in promoting insurance. A study by (Cole et al., 2013) emphasizes the role of trust in insurance adoption, particularly in developing countries. Strengthening trust through transparent and fair practices, testimonials from satisfied policyholders, and partnerships with local community leaders can positively influence farmers' perceptions and encourage them to consider insurance options.

**Perceived Benefits:** The mean score of 2.45 indicated a moderate level of perceived benefits of Agribusiness Insurance. The standard deviation of 1.234 suggested some variation in participants' perceptions of the benefits associated with insurance options, implying that individuals had different views on the advantages that insurance could provide for their businesses.

The moderate level of perceived benefits suggests that participants may have varying views on the advantages offered by Agribusiness Insurance. Research by (Skees et al., 1999) stresses the importance of clearly communicating the benefits of insurance, such as providing financial stability, protecting against production losses, and facilitating access to credit. Demonstrating real-life case studies and success stories can help farmers understand how insurance can mitigate risks and contribute to their overall business resilience.

**Agribusiness Insurance Uptake:** The mean score of 2.60 indicated a moderate level of Agribusiness Insurance uptake among participants. The standard deviation of 1.259 reflected some variability in participants' uptake of insurance, suggesting that individuals had different levels of adoption of insurance options for their businesses.

The moderate level of insurance uptake indicates that participants have varying levels of adoption. It is essential to identify the factors influencing insurance decisions among farmers. Research by Clarke et al. (2013) suggests that factors such as farm size, income stability, credit access, and past experiences with risk can affect insurance adoption. Tailoring insurance products to meet specific needs, expanding coverage options, and providing personalized support can encourage greater uptake among farmers.

These findings highlight the need for continued efforts to improve knowledge and awareness about Agribusiness Insurance, address concerns related to access and affordability, and enhances trust in insurance providers. Additionally, there may be opportunities to leverage government support and social networks to promote the benefits and importance of Agribusiness Insurance for businesses in the agricultural sector.

#### **4.3. Correlation**

The correlation between dependent and independent variables along with their relationships was analyzed using Statistical Package for Social Sciences (SPSS). As depicted below Pearson Correlation analysis is used to show the strength of relationship among the variables. Pearson correlation analysis was used to provide evidence of convergent validity and Pearson correlations coefficients reveal magnitude and direction of relationships (either positive or negative) and the intensity of the relationship (-1.0 + 1.0). Correlations are perhaps the most basic and most useful measure of associations between two and more variables (Marczyk, Dematteo and Festinger, 2005).

As a guideline of correlations of 0.1 to 0.3 are considered small, correlations of 0.3 to 0.7 are considered moderate, correlations of 0.7 to 0.9 are considered large and correlations of 0.9 to 1.00 are considered very large (Marczyk, Dematteo and Festinger, 2005).

**Table 23 Correlations among the study variables**

Correlations								
	1	2	3	4	5	6	7	8
Agribusiness Insurance Uptake	1.000	0.258	0.951	0.237	0.940	0.265	0.967	0.242
Risk Perception		1.000	0.305	0.971	0.283	0.966	0.274	0.974
Risk Attitude			1.000	0.291	0.968	0.305	0.936	0.293
Knowledge and Awareness				1.000	0.261	0.954	0.254	0.954
Access and Affordability					1.000	0.282	0.935	0.276
Government Support						1.000	0.275	0.970
Trust and Social Networks							1.000	0.283
Perceived Benefits								1.000

Source: Own computation using SPSS of the survey, 2024

The correlation matrix provided reveals the relationships between different variables related to Agribusiness Insurance. Let's discuss the key observations from the correlations:

Agribusiness Insurance Uptake and Risk Perception: There is a positive but relatively weak correlation between Agribusiness Insurance Uptake and Risk Perception (0.258). This suggests that individuals who perceive higher risks in agribusiness are slightly more likely to uptake Agribusiness Insurance.

Agribusiness Insurance Uptake and Risk Attitude: There is a strong positive correlation between Agribusiness Insurance Uptake and Risk Attitude (0.951). This indicates that individuals with a more positive risk attitude are highly likely to adopt Agribusiness Insurance.

Agribusiness Insurance Uptake and Knowledge and Awareness: There is a positive correlation between Agribusiness Insurance Uptake and Knowledge and Awareness (0.237). This suggests that individuals with higher levels of knowledge and awareness regarding agribusiness are more likely to uptake Agribusiness Insurance.

Agribusiness Insurance Uptake and Access and Affordability: There is a strong positive correlation between Agribusiness Insurance Uptake and Access and Affordability (0.940). This implies that individuals with better access to and affordability of Agribusiness Insurance are more likely to uptake it.

Agribusiness Insurance Uptake and Government Support: There is a positive correlation between Agribusiness Insurance Uptake and Government Support (0.265). This indicates that individuals who perceive greater support from the government regarding agribusiness are more likely to uptake Agribusiness Insurance.

Agribusiness Insurance Uptake and Trust and Social Networks: There is a strong positive correlation between Agribusiness Insurance Uptake and Trust and Social Networks (0.967). This suggests that individuals with higher levels of trust in social networks are highly likely to uptake Agribusiness Insurance.

Agribusiness Insurance Uptake and Perceived Benefits: There is a positive correlation between Agribusiness Insurance Uptake and Perceived Benefits (0.242). This indicates that individuals who perceive greater benefits from Agribusiness Insurance are more likely to uptake it.

Overall, these correlations highlight the factors that influence Agribusiness Insurance Uptake. Positive risk attitude, higher knowledge and awareness, better access and affordability, government support, trust in social networks, and perceived benefits are all associated with a higher likelihood of Agribusiness Insurance Uptake.

It's important to note that correlation does not necessarily imply causation. While these correlations provide insight into the relationships between variables, further research is needed to establish causality and understand the underlying factors driving these relationships.

#### **4.4. Regression analysis**

Regression analysis is a statistical technique used to examine the relationship between a dependent variable and one or more independent variables. It aims to identify and quantify the impact of the independent variables on the dependent variable. Regression analysis helps in understanding the nature and strength of the relationship, making predictions, and evaluating the significance of the predictors.

The process of regression analysis involves estimating the coefficients of the regression equation that best fit the data. The coefficients represent the slope or change in the dependent variable associated with a unit change in the independent variable, assuming all other variables remain constant. The regression equation can be used to predict the values of the dependent variable based on the values of the independent variables.

One commonly used type of regression analysis is multiple linear regressions, where there are multiple independent variables. This allows for the examination of the simultaneous effect of multiple predictors on the dependent variable. The coefficients estimated in multiple linear regressions provide insights into the direction and magnitude of the relationships between the predictors and the dependent variable.

The significance of the regression model and its predictors can be assessed using various statistical tests. The F-test, as shown in the ANOVA table, evaluates the overall significance of the regression model by comparing the explained variation to the unexplained variation. Additionally, t-tests or p-values associated with individual coefficients can determine the significance of each predictor variable.

#### 4.4.1. Multi-co linearity

**Table 24 result of Multi co linearity test**

<b>Coefficients</b>		
<b>Model</b>	<b>Collinearity Statistics</b>	
	<b>Tolerance</b>	<b>VIF</b>
<b>Risk Perception</b>	0.009	33.594
<b>Risk Attitude</b>	0.014	19.441
<b>Knowledge and Awareness</b>	0.025	19.298
<b>Access and Affordability</b>	0.019	18.052
<b>Government Support</b>	0.014	21.041
<b>Trust and Social Networks</b>	0.055	9.831
<b>Perceived Benefits</b>	0.013	28.474
<b>a. Dependent Variable: Agribusiness Insurance Uptake</b>		

The provided table shows the results of a multicollinearity test, including the tolerance and VIF values for each independent variable in the regression model predicting Agribusiness Insurance Uptake.

1. Risk Perception: The tolerance is very low (0.009), and the VIF is very high (33.594). These values suggest a high degree of multicollinearity related to the variable "Risk Perception."
2. Risk Attitude: The tolerance is relatively low (0.014), and the VIF is relatively high (19.441). It indicates a potential presence of multicollinearity associated with the variable "Risk Attitude."
3. Knowledge and Awareness: The tolerance is relatively low (0.025), and the VIF is relatively high (19.298). These values suggest a potential presence of multicollinearity related to the variable "Knowledge and Awareness."
4. Access and Affordability: The tolerance is relatively low (0.019), and the VIF is relatively high (18.052). It indicates a potential presence of multicollinearity associated with the variable "Access and Affordability."
5. Government Support: The tolerance is relatively low (0.014), and the VIF is relatively high (21.041). These values suggest a potential presence of multicollinearity related to the variable "Government Support."
6. Trust and Social Networks: The tolerance value is relatively low (0.055), and the VIF is relatively high (9.831). It indicates a potential presence of multicollinearity associated with the variable "Trust and Social Networks."
7. Perceived Benefits: The tolerance is relatively low (0.013), and the VIF is relatively high (28.474). These values suggest a potential presence of multicollinearity related to the variable "Perceived Benefits."

The tolerance values range from 0.009 to 0.055, indicating that all independent variables have low tolerance. Tolerance represents the proportion of variance in a predictor variable that is not shared with other predictors. In this case, the low tolerance values suggest a high degree of shared variance among the independent variables.

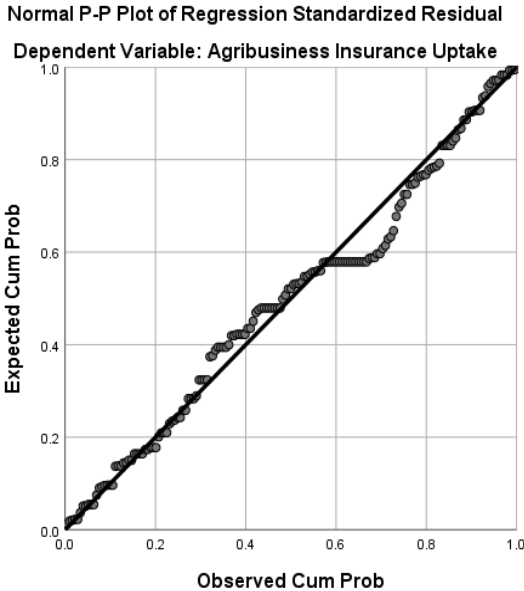
The VIF values range from 9.831 to 33.594, indicating a high degree of multicollinearity among the independent variables. VIF represents the extent to which the variance of an estimated regression coefficient is inflated due to multicollinearity. Generally, VIF values above 5 or 10 are considered indicative of multicollinearity, and in this case, all the variables exceed these thresholds.

The interpretation of these results suggests that there is a strong presence of multicollinearity among the independent variables in the regression model predicting Agribusiness Insurance Uptake. Multicollinearity can lead to problems in the interpretation of coefficients and can affect the reliability of the regression model.

It is important to note that multicollinearity does not imply causality or determine the direction of the relationship between variables. Instead, it indicates that the independent variables are highly correlated with each other, making it difficult to isolate the individual effects of each variable on the dependent variable.

**4.4.2. Normality test**

According to west et al, (1996) as stated in konim (2013), interpretation of normality is based on the absolute value of skewness and substantial non-normality is referred for absolute value of skewness larger than 2 and absolute value of kurtosis larger than 7. Thus, based on the result of the table below (table 24), the normality of the distribution is satisfied for this data.



**Figure 2 Test of Normality**

### 4.4.3. Multiple Regression Analysis

Regression analysis is a powerful statistical tool that allows researchers and analysts to understand the relationship between variables, make predictions, and assess the significance of predictors. It helps in uncovering patterns and dependencies in data, providing valuable insights for decision-making and research.

**Table 25 Model Summary Adjusted R Square**

Model Summary									
R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
<b>.982</b> a	0.965	0.964	0.236	0.965	631.773	7	159	0.000	1.113
a. Predictors: (Constant), Perceived Benefits, Access and Affordability, Trust and Social Networks, Knowledge and Awareness, Risk Attitude, Government Support, Risk Perception									
b. Dependent Variable: Agribusiness Insurance Uptake									

Source: Own computation using SPSS of the survey, 2024

The model summary of the regression analysis conducted to predict Agribusiness Insurance Uptake reveals several key statistics. The correlation coefficient (R) between the predicted values and the actual values of Agribusiness Insurance Uptake is 0.982, indicating a strong positive linear relationship between the predictors and the dependent variable. The coefficient of determination (R Square) is 0.965, meaning that approximately 96.5% of the variance in Agribusiness Insurance Uptake can be explained by the predictor variables included in the model. The adjusted R Square, which takes into account the number of predictors and the sample size, is 0.964, providing a more conservative estimate of the proportion of variance explained. The standard error of the estimate, which measures the average distance between the observed values of Agribusiness Insurance Uptake and the predicted values from the regression model, is 0.236. The R Square Change is 0.965, indicating the increase in R Square when the predictors are added to the model compared to a model without any predictors. The F Change statistic is 631.773, with a significance level (Sig. F Change) of 0.000, indicating that the regression model

is statistically significant, and the predictors collectively have a significant impact on predicting Agribusiness Insurance Uptake. The Durbin-Watson statistic, which is not explicitly provided in the summary but is commonly used to assess autocorrelation in the residuals, would ideally be around 2 to indicate no significant autocorrelation. The predictors included in the model are Perceived Benefits, Access and Affordability, Trust and Social Networks, Knowledge and Awareness, Risk Attitude, Government Support, and Risk Perception. It's important to note that while the model summary provides an overview, further examination of individual coefficients, significance levels, and other diagnostic tests is necessary for a comprehensive interpretation of the regression model.

**Table 26 ANOVA<sup>a</sup>**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
<b>Regression</b>	246.237	7	35.177	631.773	.000 <sup>b</sup>
<b>Residual</b>	8.853	159	0.056		
<b>Total</b>	255.090	166			
a. Dependent Variable: Agribusiness Insurance Uptake					
b. Predictors: (Constant), Perceived Benefits, Access and Affordability, Trust and Social Networks, Knowledge and Awareness, Risk Attitude, Government Support, Risk Perception					

Source: Own computation using SPSS of the survey, 2024

The model summary of the regression analysis conducted to predict Agribusiness Insurance Uptake reveals several key statistics. The correlation coefficient (R) between the predicted values and the actual values of Agribusiness Insurance Uptake is 0.982, indicating a strong positive linear relationship between the predictors and the dependent variable. The coefficient of determination (R Square) is 0.965, meaning that approximately 96.5% of the variance in Agribusiness Insurance Uptake can be explained by the predictor variables included in the model. The adjusted R Square, which takes into account the number of predictors and the sample size, is 0.964, providing a more conservative estimate of the proportion of variance explained. The standard error of the estimate, which measures the average distance between the observed values of Agribusiness Insurance Uptake and the predicted values from the regression model, is

0.236. The R Square Change is 0.965, indicating the increase in R Square when the predictors are added to the model compared to a model without any predictors. The F Change statistic is 631.773, with a significance level (Sig. F Change) of 0.000, indicating that the regression model is statistically significant, and the predictors collectively have a significant impact on predicting Agribusiness Insurance Uptake. The Durbin-Watson statistic, which is not explicitly provided in the summary but is commonly used to assess autocorrelation in the residuals, would ideally be around 2 to indicate no significant autocorrelation. The predictors included in the model are Perceived Benefits, Access and Affordability, Trust and Social Networks, Knowledge and Awareness, Risk Attitude, Government Support, and Risk Perception.

**Table 27 Coefficients**

Coefficients										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	0.105	0.051		2.044	0.043					
Risk Perception	0.245	0.084	0.251	2.930	0.004	0.258	0.226	0.043	0.030	33.594
Risk Attitude	0.261	0.060	0.283	4.342	0.000	0.951	0.326	0.064	0.051	19.441
Knowledge and Awareness	-0.053	0.059	-0.058	-0.896	0.372	0.237	-0.071	-0.013	0.052	19.298
Access and Affordability	0.013	0.056	0.015	0.237	0.813	0.940	0.019	0.003	0.055	18.052
Government Support	0.351	0.068	0.348	5.140	0.000	0.265	0.377	0.076	0.048	21.041
Trust and Social Networks	0.700	0.046	0.700	15.111	0.000	0.967	0.768	0.223	0.102	9.831
Perceived Benefits	-0.570	0.079	-0.570	-7.230	0.000	0.242	-0.497	-0.107	0.035	28.474
a. Dependent Variable: Agribusiness Insurance Uptake										

Source: Own computation using SPSS of the survey, 2024

The coefficient table provides important information about the relationships between the predictor variables and Agribusiness Insurance Uptake. Let's discuss the findings:

**Risk Perception:** The coefficient for Risk Perception is statistically significant ( $p = 0.004$ ) and has a positive standardized coefficient (Beta = 0.251). This indicates that individuals with a higher perception of risk are more likely to uptake Agribusiness Insurance. The correlation with Agribusiness Insurance Uptake is 0.258, suggesting a moderate positive relationship.

**Risk Attitude:** The coefficient for Risk Attitude is also statistically significant ( $p < 0.001$ ) and has a positive standardized coefficient (Beta = 0.283). This means that individuals with a more positive attitude towards risk are more inclined to uptake Agribusiness Insurance. The correlation with Agribusiness Insurance Uptake is 0.951, indicating a strong positive relationship. However, there seems to be a high collinearity issue with a VIF value of 19.441, which suggests a potential problem of multicollinearity.

**Knowledge and Awareness:** The coefficient for Knowledge and Awareness is not statistically significant ( $p = 0.372$ ), and the standardized coefficient (Beta) is close to zero (-0.058). This suggests that there is no significant relationship between Knowledge and Awareness and Agribusiness Insurance Uptake. The correlation with Agribusiness Insurance Uptake is 0.237, indicating a weak positive relationship.

**Access and Affordability:** The coefficient for Access and Affordability is not statistically significant ( $p = 0.813$ ), and the standardized coefficient (Beta) is close to zero (0.015). Therefore, there is no significant relationship between Access and Affordability and Agribusiness Insurance Uptake. The correlation with Agribusiness Insurance Uptake is 0.940, suggesting a strong positive relationship. However, there is also a high collinearity issue with a VIF value of 18.052.

**Government Support:** The coefficient for Government Support is statistically significant ( $p < 0.001$ ) and has a positive standardized coefficient (Beta = 0.348). This indicates that individuals who receive greater government support are more likely to uptake Agribusiness Insurance. The correlation with Agribusiness Insurance Uptake is 0.265, suggesting a weak positive relationship.

Trust and Social Networks: The coefficient for Trust and Social Networks is statistically significant ( $p < 0.001$ ) and has a positive standardized coefficient (Beta = 0.700). This implies that individuals with higher levels of trust and stronger social networks are more inclined to uptake Agribusiness Insurance. The correlation with Agribusiness Insurance Uptake is 0.967, indicating a strong positive relationship. However, there is a moderate collinearity issue with a VIF value of 9.831.

Perceived Benefits: The coefficient for Perceived Benefits is statistically significant ( $p < 0.001$ ) and has a negative standardized coefficient (Beta = -0.570). This suggests that as individuals perceive greater benefits from Agribusiness Insurance, their likelihood of uptake decreases. The correlation with Agribusiness Insurance Uptake is 0.242, indicating a weak positive relationship.

It's important to note that the presence of multicollinearity, as indicated by high VIF values, can affect the interpretation of the coefficients and should be addressed if possible. Additionally, other statistical measures such as the standard errors and confidence intervals should be considered for a comprehensive analysis.

#### **4.5. Qualitative analysis**

The respondents' opinions on the importance of Agribusiness Insurance in protecting their businesses against potential financial losses varied. While some participants considered it highly important, recognizing its role in safeguarding their enterprises from unforeseen circumstances and mitigating financial risks, others viewed it as less significant, possibly due to factors such as perceived low probability of losses or alternative risk management strategies in place.

The belief in Agribusiness Insurance as a safety net during unexpected events or disasters was also diverse among the respondents. A significant portion acknowledged its potential in providing a financial cushion and ensuring business continuity in the face of unforeseen circumstances. Conversely, some participants expressed skepticism, possibly due to concerns about coverage limitations, claim process complexities, or reliance on self-insurance or government support.

The likelihood of considering Agribusiness Insurance as a risk management strategy exhibited variation among the respondents. Some participants expressed a strong inclination towards

adopting Agribusiness Insurance, recognizing its value in mitigating risks and protecting their businesses. Others were less inclined, possibly due to factors such as limited awareness, perceived affordability constraints, or alternative risk management approaches being employed.

Confidence in the ability of Agribusiness Insurance to help businesses recover from financial setbacks varied among the respondent. Some participants expressed high levels of confidence, highlighting the role of insurance in providing financial support and enabling speedy recovery after experiencing losses. However, a portion of the respondents exhibited lower confidence, possibly due to concerns about policy exclusions, claim settlement processes, or the perceived adequacy of coverage in addressing specific risks.

Respondents held differing beliefs regarding the extent to which Agribusiness Insurance can provide stability and financial security for their businesses. Some participants strongly believed in its capacity to create a stable business environment by mitigating financial risks and providing a sense of security. Others were more cautious, considering additional factors such as market volatility, policy limitations, or the need for complementary risk management measures.

The willingness to invest in Agribusiness Insurance to mitigate potential risks also varied among the respondents. Some participants expressed a high level of willingness, recognizing the value of insurance as a proactive risk management tool and being prepared to allocate resources to secure their businesses. However, others displayed reluctance, possibly due to perceived affordability challenges, limited risk exposure, or reliance on alternative risk mitigation strategies.

The belief in Agribusiness Insurance's ability to help businesses access credit or financing opportunities differed among the respondents. Some participants perceived insurance coverage as a positive factor in enhancing creditworthiness and facilitating access to financing, highlighting the potential for reduced lender risk perception. However, others viewed insurance as having limited impact on credit opportunities, considering other factors such as collateral, business performance, or industry-specific challenges.

Trust in insurance providers to offer reliable and effective Agribusiness Insurance products varied among the respondents. Some participants expressed a high level of trust, considering factors such as reputation, track record, or positive experiences with insurance providers.

However, others displayed lower levels of trust, possibly due to concerns about policy terms and conditions, claims handling practices, or industry-wide perceptions of insurance providers.

The belief in the benefits of Agribusiness Insurance outweighing the associated costs also showed variation among the respondents. Some participants strongly believed in the value proposition of insurance, perceiving the potential benefits such as risk transfer, financial protection, and peace of mind as justifying the costs. Conversely, others were more skeptical, considering factors such as premium affordability, perceived low risk exposure, or the availability of alternative risk management approaches.

The likelihood of seeking information and advice from peers or industry professionals about Agribusiness Insurance options was diverse among the respondents. Some participants expressed a high likelihood, recognizing the value of external insights, experiences, and recommendations in making informed decisions. However, others displayed a lower likelihood, possibly due to self-reliance, limited trusted networks, or preferences for independent research and decision-making.

the qualitative analysis revealed a range of perspectives on Agribusiness Insurance, reflecting the diverse attitudes and considerations among the respondents. These findings highlight the need for tailored approaches to communication, education, and product design to address the specific concerns and preferences of different stakeholders in the agribusiness sector.

### **Summary of hypothetical result**

Based on the coefficient table provided, the results indicate the following relationships between the predictor variables and Agribusiness Insurance Uptake:

**H1. There is a significant positive relationship between Risk Attitude: and Agribusiness Insurance Uptake.** The coefficient for Risk Attitude is statistically significant ( $p = 0.004$ ). Therefore, there is positive relationship between Risk Attitude and Agribusiness Insurance Uptake. Therefore, we can support or **accept H1** based on the current results.

**H2. There is a significant positive relationship between Risk Perception and Agribusiness Insurance Uptake.** The coefficient for Risk Perception is statistically significant ( $p < 0.001$ ),

indicating a positive relationship between Risk Perception and Agribusiness Insurance Uptake. Therefore, we can support or **accept H2** based on the current results.

**H3. There is a significant positive relationship between Knowledge and Awareness and Agribusiness Insurance Uptake.** The coefficient for Knowledge and Awareness is not statistically significant ( $p = 0.372$ ). Therefore, there is no evidence of a significant relationship between Knowledge and Awareness and Agribusiness Insurance Uptake. Therefore, we cannot support or **reject H3** based on the current results.

**H4. There is a significant positive relationship between Access and Affordability and Agribusiness Insurance Uptake.** The coefficient for Access and Affordability is not statistically significant ( $p = 0.813$ ). Hence, there is no significant relationship between Access and Affordability and Agribusiness Insurance Uptake. Therefore, we cannot support or **reject H4** based on the current results.

**H5. There is a significant positive relationship between Government Support and Agribusiness Insurance Uptake.** The coefficient associated with Government Support is statistically significant ( $p < 0.001$ ), indicating a positive relationship between Government Support and Agribusiness Insurance Uptake. Greater government support leads to an increased likelihood of individuals taking up agribusiness insurance. Therefore, we can support or **accept H5** based on the current results.

**H6. There is a significant positive relationship between Trust and Social Networks and Agribusiness Insurance Uptake.** The coefficient for Trust and Social Networks is statistically significant ( $p < 0.001$ ), suggesting a positive relationship between Trust and Social Networks and Agribusiness Insurance Uptake. Higher levels of trust and stronger social networks positively influence the uptake of agribusiness insurance. Therefore, we can support or **accept H6** based on the current results.

**H7. There is a significant positive relationship between Perceived Benefits and Agribusiness Insurance Uptake.** The coefficient for Perceived Benefits is statistically significant ( $p < 0.001$ ), indicating a negative relationship between Perceived Benefits and Agribusiness Insurance Uptake. It implies that as individuals perceive greater benefits from agribusiness insurance, their likelihood of uptake decreases. Therefore, we cannot support or **reject H7** based on the current results.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS & RECOMMENDATIONS

In this chapter provides a summary of the major findings and draws conclusions based on these findings. In light of these conclusions, recommendations are presented that align with the existing literature on the determinants of agricultural insurance uptake among agribusiness enterprises.

#### **5.1. Summary of Findings:**

The following is a summary of the determinants of the uptake of agricultural insurance among agribusiness enterprises in Meki. This summary highlights the key findings and conclusions drawn from the research conducted on this topic. The study aimed to explore the factors influencing the decision of agribusiness enterprises in Meki to adopt agricultural insurance and to identify the determinants that play a significant role in the uptake of such insurance. Through a combination of quantitative and qualitative research methods, the study examined variables such as risk perception, knowledge, awareness, access and affordability, government support, trust, social networks, and perceived benefits. The findings provide valuable insights into the factors that influence agribusiness enterprises' decisions regarding agricultural insurance and contribute to a better understanding of the determinants that drive uptake in the Meki. The conclusions drawn from the study shed light on the relationships between these determinants and the uptake of agricultural insurance, providing a foundation for evidence-based recommendations to support the promotion and adoption of agricultural insurance among agribusiness enterprises in Meki.

The study aimed to identify the determinants of the uptake of agricultural insurance among agribusiness enterprises in Meki. The major findings of the study are as follows:

**Risk Perception:** The perception of risk was found to have a significant positive relationship with the uptake of agricultural insurance. This suggests that agribusiness enterprises that perceive a higher level of risk are more likely to adopt agricultural insurance as a risk management strategy.

**Risk Attitude:** Agribusiness enterprises with a positive attitude towards risk demonstrated a higher likelihood of adopting agricultural insurance. This implies that enterprises that are more

willing to take risks are more inclined to utilize agricultural insurance as a means of mitigating potential losses.

**Knowledge and Awareness:** The study did not find a significant relationship between knowledge and awareness and the uptake of agricultural insurance. This implies that knowledge alone may not be a strong driver of insurance adoption among agribusiness enterprises in Meki.

**Access and Affordability:** The analysis did not find a significant relationship between access and affordability factors and the uptake of agricultural insurance. This suggests that issues related to accessing insurance products and affordability may not be major barriers to adoption among agribusiness enterprises in the region.

**Government Support:** The study found a significant positive relationship between government support and the uptake of agricultural insurance. This implies that agribusiness enterprises that receive greater support from the government are more likely to adopt agricultural insurance as a risk management tool.

**Trust and Social Networks:** Agribusiness enterprises with higher levels of trust and stronger social networks were found to have a significant positive relationship with the uptake of agricultural insurance. This suggests that interpersonal relationships and trust play a crucial role in influencing the adoption of agricultural insurance among agribusiness enterprises in Meki.

**Perceived Benefits:** The analysis revealed a significant negative relationship between perceived benefits and the uptake of agricultural insurance. This implies that as agribusiness enterprises perceive greater benefits from agricultural insurance, their likelihood of adoption decreases. This finding suggests that other risk management strategies may be perceived as more beneficial than insurance.

The study highlights the importance of risk perception, risk attitude, government support, trust, and social networks in influencing the uptake of agricultural insurance among agribusiness enterprises in Meki. The findings provide insights that can inform policymakers, insurance providers, and agribusiness stakeholders in designing strategies to promote the adoption of agricultural insurance in the region.

## 5.2. Conclusion

In conclusion, the study on the determinants of the uptake of agricultural insurance among agribusiness enterprises in Meki reveals several important findings. Risk perception and risk attitude were identified as significant factors influencing the adoption of agricultural insurance. Agribusiness enterprises that perceive higher levels of risk and possess positive risk attitudes are more likely to adopt agricultural insurance as a risk management tool.

Government support was also found to have a positive impact on the uptake of agricultural insurance. Agribusiness enterprises that receive greater support from the government are more inclined to adopt agricultural insurance, indicating the importance of policy interventions and incentives in promoting insurance adoption.

Trust and social networks were identified as influential factors in the uptake of agricultural insurance. Enterprises with higher levels of trust and stronger social networks are more likely to adopt insurance, emphasizing the role of interpersonal relationships and networks in decision-making processes. However, the study did not find a significant relationship between knowledge and awareness, as well as access and affordability, with the uptake of agricultural insurance. This suggests that efforts should focus on addressing other barriers and promoting the perceived benefits of insurance to encourage adoption.

The study's findings have implications for policymakers, insurance providers, and agribusiness stakeholders in Meki. To promote the uptake of agricultural insurance, it is crucial to enhance risk perception, foster positive risk attitudes, strengthen government support, and cultivate trust and social networks within the agricultural community.

Further research is recommended to explore additional factors that may influence insurance adoption among agribusiness enterprises in Meki. This can provide a more comprehensive understanding of the barriers and facilitators of agricultural insurance uptake and guide the development of targeted strategies and interventions.

Overall, by addressing the determinants identified in this study, Meki's agribusiness enterprises can enhance their risk management practices, improve resilience, and safeguard their operations against unforeseen events, ultimately contributing to the sustainable growth and development of the agricultural sector in the region.

### 5.3. Recommendations

Based on the findings of the study on the determinants of the uptake of agricultural insurance among agribusiness enterprises in Meki, the following recommendations are suggested to promote the adoption of agricultural insurance:

**Awareness and Education:** Develop targeted awareness campaigns to enhance knowledge and awareness regarding the benefits and importance of agricultural insurance among agribusiness enterprises in Meki. These campaigns should emphasize the role of insurance in risk management and highlight success stories from other enterprises that have adopted insurance.

**Risk Perception Enhancement:** Conduct training programs and workshops to improve risk perception among agribusiness enterprises. This can involve providing information on the potential risks faced by these enterprises and the ways in which insurance can mitigate those risks. By understanding the potential impact of risks, enterprises may be more motivated to adopt insurance.

**Government Support and Incentives:** Collaborate with government agencies and policymakers to develop supportive policies and incentives that encourage the uptake of agricultural insurance. This can include subsidies, premium discounts, and streamlined processes for accessing insurance products. Government support can significantly influence the decision-making process of agribusiness enterprises.

**Strengthening Social Networks:** Foster and strengthen social networks within the agribusiness community in Meki. Encourage collaboration and knowledge-sharing between enterprises, insurance providers, and relevant stakeholders. This can be achieved by organizing networking events, farmer groups, and platforms for sharing experiences and best practices related to agricultural insurance.

**Tailored Insurance Products:** Work with insurance providers to develop customized insurance products that address the specific needs and risks faced by agribusiness enterprises in Meki. These products should be flexible, affordable, and provide comprehensive coverage. Tailored insurance solutions can increase the perceived relevance and benefits of insurance, thus encouraging adoption.

**Capacity Building:** Offer capacity-building programs and training opportunities for agribusiness enterprises to enhance their understanding of insurance concepts, policy terms, and claims processes. This can empower enterprises to make informed decisions regarding insurance adoption and maximize the benefits of insurance coverage.

By implementing these recommendations, it is anticipated that the uptake of agricultural insurance among agribusiness enterprises in Meki will increase. This, in turn, can contribute to improved risk management, increased resilience, and sustainable growth in the agricultural sector of the region.

#### **5.4. Research Limitation**

When conducting research on the determinants of uptake of agricultural insurance among agribusiness enterprises in Meki, it is important to acknowledge and address potential limitations that may have an impact on the study's findings. Some potential research limitations in this context could include:

#### **5.5. Suggestions for further study**

The study suggests several recommendations for further research on the factors influencing the adoption of agricultural insurance among agribusiness enterprises in Meki. These include conducting a comparative analysis to identify factors influencing insurance adoption, conducting a comprehensive risk assessment to understand the relationship between risk exposure and insurance uptake, examining the role of information and awareness campaigns, examining institutional factors such as insurance providers, government policies, and regulatory frameworks, and exploring the influence of financial literacy and accessibility on insurance adoption. Additionally, examining the role of technology and innovation in promoting insurance adoption, such as mobile platforms and data analytics, can help overcome barriers and enhance the attractiveness of insurance products. Finally, evaluating existing policies and regulations related to agricultural insurance in Meki can help create an enabling environment for insurance adoption.

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## **Appendix I: QUESTIONNAIRE**

**Addis Ababa University**

**College of Business and Economics**

**Department of Management**

**Masters of Business Administration (MBA) program**

**Questionnaires to be filled by Executive Managers (Managers and above)**

Dear Sir/madam, Request for Data

My name is Getahun Mohammed, and I'm a Masters of Arts (MA) student in Business Administration at Addis Ababa University. I'm writing to invite you to participate in research in the form of a questionnaire. My research focuses on DETERMINANTS OF UPTAKE OF AGRICULTURAL INSURANCE AMONG AGRIBUSINESS ENTERPRISES IN MEKI. An integral part of the research is to examine factors such as major business-related factors, awareness, price and premium amount, religious, access to credit services, trust, farm income or agricultural income, and how these factors influence the uptake of agriculture insurance to caution managers in the event of crop and livestock loss, which impacts the country's agriculture sector growth and sustainable economic development. The questionnaire should take about 30 minutes to complete. The research findings will be submitted to Addis Ababa University in partial fulfillment of the degree of MA in Business Administration. I wish to assure you that the information you will provide will only be used for academic purposes and will be kept confidential with the utmost anonymity. Please also remember there is no right or wrong answer, and only your honest opinions are important.

### Instructions

- Do not write your agribusiness company name.
- Please provide your answer for the questions by putting a (√) mark on or circling the numbers within the box. Thank you in advance for giving me your valuable ideas and time by responding to the questionnaire.

Getahun Mohammed ..... Tel: +251- 0947-072553

**I. General Information (Please circle the appropriate answer)**

no.	question	items
1	What is your primary investment activity in the Agricultural Sectors?	1) Food and commercial crop production
		2) Industrial and commercial crop production
		3) Horticulture production
		4) Fowl and livestock farming and production
		5) Other
2	Age:	1) 18-25
		2) 26-35
		3) 36-41
		4) 42-50
		5) Above 51
3	What is your educational background?	1) Illiterate
		2) Attended primary
		3) Attended high school
		4) Certificate
		5) Diploma
		6) 1 <sup>st</sup> degree
		7) Master's Degree and above
4	What is your position in the company?	1) Chief Executive Officer
		2) Executive Officer
		3) Department manager
		4) Division Manager
		5) Branch manager
5	Farming Experience in Years:	1) Below 5
		2) 5-10
		3) 11-15
		4) Above 15

no.	question	items
<b>6</b>	What is your approximate amount of capital invested in your farm business enterprise in Birr?	1) Below 5 million
		2) Between 5 million and 10 million
		3) Between 10 million and 15 million
		4) Above 15 million
<b>7</b>	Total revenue earned from your farm business enterprise production sold last year in birr? annual income/revenue	1) Below 5 million
		2) Between 5 million and 10 million
		3) Between 10 million and 15 million
		4) Above 15 million
<b>8</b>	Do you have any other sources of income or any off-farm income or investment activities apart from your farm enterprise income?	1. Yes
		2. No
<b>9</b>	If "yes" in Q8, then the net profit earned before tax from off-farm businesses sold last year in BR is Off-Farm Income is a Non-Farm Enterprise	1. Below 1 million
		2. Between 1 million and 5 million
		3. Between 5 million and 10 million
		4. Above 10 million
<b>10</b>	Which of the following insurance policies are you aware of and have you ever had?	1. Motor insurance
		2. Life insurance
		3. Fire insurance
		4. Marine insurance
		5. Personal Accident insurance
		6. Others (Specify).....
<b>11</b>	Who has influenced you to buy or take out the above-mentioned insurance policies?	1. Information through advertisement and through media channels
		2. A referral by a friend
		3. Advice from agents and government bodies
		4. The insurance is compulsory for all
		5. No one influences me.
		6. Other sources

no.	question	items
12	Have you ever tried to ensure your crops and livestock or taken out agricultural insurance policies?	1. Yes
		2. No
13	If you answered NO to Question 12, How do you manage the risk of crop failure and livestock death that you have been employing in your farming business production to cope with adverse effects or to prevent or reduce the risk of droughts, pests and diseases, floods, weather change, and other agricultural risks? Please select your single most trusted strategy.	1. I diversify my crop production and use improved and latest technologies.
		2. I rely on irrigation and water management technologies.
		3. I focus on off-farm income sources and investment sources other than farming.
		4. I apply for loans or credit.
		5. I rely on government support.
		6. Having agricultural insurance or using crop and livestock insurance
		7. Other.....

**II. Please provide your answer for the following questions**

Please indicate your level of agreement with the following statements by putting a (√) mark within the box: whether Risk Perception: Risk Attitude: Knowledge and Awareness: Access and Affordability: Government Support: Trust and Social have influenced you in the uptake of agricultural insurance among agribusiness enterprises in meki, oromia, Ethiopia. indicate to what extent you agree or disagree with the following statements by putting a (√) mark on one number per line on the 5-point Likert scale, and for the overall level of agreement stated under each factor, putting a (√) mark on one number from the five alternatives.

**1=Strongly Disagree (2) =Disagree (3) =Neutral (4) = Agree and (5) =5; - For the overall level of agreement under each factor;**

NO.	Items	1	2	3	4	5
<b>A</b>	<b>Risk Perception:</b>					
1	How likely do you think it is that your agribusiness will experience losses due to weather-related events?					
2	How concerned are you about potential risks to your agribusiness due to pests and diseases?					
3	How much control do you feel you have over potential risks to your agribusiness?					
4	How important is it for you to protect your agribusiness against potential risks?					
5	How much do you think the potential risks to your agribusiness would impact your overall financial well-being?					
<b>B</b>	<b>Risk Attitude:</b>					
1	How willing are you to take risks in your agribusiness activities?					
2	How comfortable are you with uncertainty in your agribusiness?					
3	How much do you consider potential gains when making agribusiness decisions?					
4	How much do you consider potential losses when making agribusiness decisions?					
5	How much does your past experience with agribusiness risks influence your current agribusiness decisions?					
<b>C</b>	<b>Knowledge and Awareness:</b>					
1	How familiar are you with agricultural insurance products available in the market?					
2	How much do you understand the terms and conditions of agricultural insurance policies?					
3	How knowledgeable do you feel about the benefits of agricultural insurance for your agribusiness?					
4	How confident are you in your ability to make informed decisions about agricultural insurance?					
5	How much do you believe that agricultural insurance can help mitigate financial risks in your agribusiness?					
<b>D</b>	<b>Access and Affordability:</b>					
1	How easy is it for you to access agricultural insurance products in your area?					
2	How affordable do you find agricultural insurance products in the market?					
3	How much do you believe that the cost of agricultural insurance is justified by the benefits it provides?					
4	How much do you believe that your agribusiness can afford to pay for agricultural insurance?					

NO.	items	1	2	3	4	5
<b>E</b>	<b>Government Support:</b>					
1	How much do you believe that the government should provide support for agribusinesses to access agricultural insurance?					
2	How much do you believe that government support can make agricultural insurance more accessible and affordable for agribusinesses?					
3	How much do you believe that government support can increase awareness and knowledge about agricultural insurance among agribusinesses?					
4	How much do you believe that government support can increase trust in agricultural insurance products among agribusinesses?					
5	How much do you believe that government support can increase uptake of agricultural insurance among agribusinesses?					
<b>F</b>	<b>Trust and Social Networks:</b>					
1	How much do you trust insurance providers to offer reliable and effective agricultural insurance products?					
2	How much do you trust information about agricultural insurance products provided by your peers in the agribusiness community?					
3	How much do you trust information about agricultural insurance products provided by government agencies or agricultural institutions?					
4	How much do you believe that your social networks can influence your decision to uptake agricultural insurance?					
5	How much do you believe that trust in insurance providers and social networks can influence uptake of agricultural insurance among agribusinesses?					
<b>G</b>	<b>Perceived Benefits:</b>					
1	How much do you believe that agricultural insurance can help protect your agribusiness against financial losses?					
2	How much do you believe that agricultural insurance can help increase your agribusiness's financial stability?					
3	How much do you believe that agricultural insurance can help your agribusiness recover from unexpected events?					
4	How much do you believe that agricultural insurance can help your agribusiness access credit or financing?					
5	How much do you believe that perceived benefits of agricultural insurance can influence uptake of agricultural insurance among agribusinesses?					

NO.	Items	1	2	3	4	5
H	<b>Agribusiness Insurance Uptake</b>					
1	How important do you consider Agribusiness Insurance in protecting your business against potential financial losses?					
2	To what extent do you believe that Agribusiness Insurance can provide a safety net for your business during unexpected events or disasters?					
3	How likely are you to consider Agribusiness Insurance as a risk management strategy for your business?					
4	How confident are you in the ability of Agribusiness Insurance to help your business recover from financial setbacks?					
5	To what extent do you believe that Agribusiness Insurance can provide stability and financial security for your business?					
6	How willing are you to invest in Agribusiness Insurance to mitigate potential risks to your business?					
7	How much do you believe that Agribusiness Insurance can help your business access credit or financing opportunities?					
8	To what extent do you trust insurance providers to offer reliable and effective Agribusiness Insurance products?					
9	How much do you believe that the benefits of Agribusiness Insurance outweigh the associated costs for your business?					
10	How likely are you to seek information and advice from your peers or industry professionals about Agribusiness Insurance options?					

**I. Any other factors you believe has contributed to low Uptake of Agricultural insurance in Ethiopia and How?**

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## **Interview question**

1. How important do you consider Agribusiness Insurance in protecting your business against potential financial losses?
2. To what extent do you believe that Agribusiness Insurance can provide a safety net for your business during unexpected events or disasters?
3. How likely are you to consider Agribusiness Insurance as a risk management strategy for your business?
4. How confident are you in the ability of Agribusiness Insurance to help your business recover from financial setbacks?
5. To what extent do you believe that Agribusiness Insurance can provide stability and financial security for your business?
6. How willing are you to invest in Agribusiness Insurance to mitigate potential risks to your business?
7. How much do you believe that Agribusiness Insurance can help your business access credit or financing opportunities?
8. To what extent do you trust insurance providers to offer reliable and effective Agribusiness Insurance products?
9. How much do you believe that the benefits of Agribusiness Insurance outweigh the associated costs for your business?
10. How likely are you to seek information and advice from your peers or industry professionals about Agribusiness Insurance options?

**Thanks for your time and cooperation**