# Paper Summary: Belissa et al. (2019)

# Review Structure

If the paper introduces a new method and you want to implement it, the following alterations can be made to the summary structure:

1. Introduction: Briefly introduce the new method and explain the problem it aims to solve. Mention the key features of the method, such as its advantages over existing methods.
2. Methodology: Provide a detailed description of the new method, including its steps and procedures. Emphasise the key differences between the new method and existing methods. If the paper provides any performance metrics, explain how to measure the new method's performance.
3. Results: If the paper presents any results, describe them briefly. If the results are unavailable, explain how to evaluate the new method's performance and what performance improvements can be expected.
4. Implementation: Discuss the practical aspects of implementing the new method, such as the necessary software and hardware requirements, any data preparation or preprocessing steps that need to be taken, and any challenges that may arise during implementation.
5. Evaluation: Explain the effectiveness of the new method in a real-world scenario. Describe any experiments or tests that need to be conducted and what metrics should be used to evaluate the method's performance.
6. Conclusion: Summarise the key benefits of the new method and its potential impact on the field. Discuss any limitations or future research directions.
7. References: Include a list of references cited in the paper, following the appropriate citation style.

Overall, the goal of the summary is to provide a clear and concise description of the new method and how to implement it. It should also guide evaluating its effectiveness and measuring its impact.

# Introduction

**Briefly introduce the new method and explain the problem it aims to solve. Mention the key features of the method, such as its advantages over existing methods.**

# Methodology

**Provide a detailed description of the new method, including its steps and procedures. Emphasise the key differences between the new method and existing methods. If the paper provides any performance metrics, explain how to measure the new method's performance.**

# Results

**If the paper presents any results, describe them briefly. If the results are unavailable, explain how to evaluate the new method's performance and what performance improvements can be expected.**

# Implementation

**Discuss the practical aspects of implementing the new method, such as the necessary software and hardware requirements, any data preparation or preprocessing steps, and any challenges that may arise during implementation.**

# Evaluation

**Explain how to evaluate the new method's effectiveness in a real-world scenario. Describe any experiments or tests that need to be conducted and what metrics should be used to evaluate the method's performance.**

# Conclusion

**Summarise the key benefits of the new method and its potential impact on the field. Discuss any limitations or future research directions.**

# References

**Include a list of references cited in the paper, following the appropriate citation style.**

# Abstract - Introduction - Conclusion analysis

## Abstract

### **What do we know?**

For three reasons, agricultural producers do not use index-based insurance on crop yields:

(1) Liquidity constraints prevent access.

(2) Producers do not trust insurance providers.

(3) Producers do not understand the product.

We report the results of a drought insurance experiment in Ethiopia, and examine whether uptake of index-based insurance is enhanced if we allow farmers to pay after harvest (addressing a liquidity constraint). We also test to what extent uptake can be enhanced by promoting insurance via informal risk-sharing institutions (Iddirs), to reduce trust and information problems.

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### **What don’t we know?**

Will insurance uptake increase if premium payments are aligned with producer harvest/income?

examine whether uptake of index-based insurance is enhanced if we allow farmers to pay after harvest (addressing a liquidity constraint).

Are producers more likely to take out drought insurance if provided locally?

to what extent uptake can be enhanced by promoting insurance via informal risk-sharing institutions (Iddirs), to reduce trust and information problems

Why are default rates high and concentrated in a small number of Iddirs?

default rates associated with delayed payments are relatively high and concentrated in a small number of Iddirs – potentially compromising the economic viability of the novel product.

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### **How does the author go about answering that question?**

The authors conduct an RCT to examine the uptake of indexed-based insurance for agricultural producers in Ethiopia.

We report the results of a drought insurance experiment in Ethiopia

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### **What do(es) the author(s) find?**

The authors find that aligning premium payments with harvests increase indexed-based insurance take-up (8% - 24%).

The delayed payment insurance product increases uptake substantially when compared to standard insurance, from 8% to 24%, and leveraging informal institutions results in even greater uptake (43%). We also find suggestive evidence that the delayed premium product is indeed better at targeting the liquidity constrained. However, default rates associated with delayed payments are relatively high and concentrated in a small number of Iddirs – potentially compromising the economic viability of the novel product.

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Additionally, agricultural producers were more likely to take up insurance provided by informal institutions (43%).

### **What do we learn from this paper? What is the contribution?**

Aligning premium payments with harvests improves indexed-based insurance uptake.

Default rates are high and concentrated in a small number of iddirs, jeopardising the viability of the product.

We also find suggestive evidence that the delayed premium product is indeed better at targeting the liquidity constrained. However, default rates associated with delayed payments are relatively high and concentrated in a small number of Iddirs – potentially compromising the economic viability of the novel product. We discuss how default rates can be reduced.

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## Introduction

### **What do we know? (context, details of the case study, rationale for the research)**

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The majority of the world's poor depend on agriculture.

majority of the world's poor reside in rural areas and their economic fate depends crucially on the performance of the agricultural sector

Production risks, e.g. failed harvests, encourage risk-averse behaviour, reducing investment in new technologies

Evidence is growing that downside (production) risk is an important factor impeding.1 the uptake of these technologies (e.g. Emerick et al., 2016)

Insurance products mitigate production risks and encourage agricultural producers to invest in new technologies to increase output.

Increasing the uptake of insurance against weather shocks in rain-fed production systems may therefore be an important component of strategies to modernize agriculture and lift large swaths of people out of poverty.

Index Insurance allows agricultural producers to pool risk. Payments are triggered by measures of biomass production or local rainfall

Index-insurance delinks payouts from farm-level losses, and allows farmers to purchase coverage based on an index correlated with these losses. This may be a measure of average biomass productivity or a measure of local rainfall during a certain time period variables that are–objectively quantifiable and verifiable. Payouts

Uptake of index-insurance products has been hindered by:

* Prohibitive transaction costs (Cost)
* Asymmetric information and Moral Hazard (Unequal information)
* Co-variate shock (community-wide/systemic)

experiments with index-insurance products have sought to overcome well-known problems associated with indemnity based insurance: (I) prohibitive transaction costs, (ii) asymmetric infornmation and moral hazard, and (iii) co-variate shocks that are hard to re insure.

In this paper we report on the outcomes of an RCT in rural Ethiopia that focused on two major reasons for low adoption of insurance as identified by Cole et al. (2013): (i) lack of liquidity to pay for the insurance premium, and (ii) lack of information about, or trust in, the insurance product.

### **What don’t we know? (puzzle, research question, hypothesis)**

The paper focuses on estimating two significant reasons for low adoption:

* Liquidity issues
* Lack of information or trust about the insurance product

In this paper, we report on the outcomes of an RCT in rural Ethiopia that focused on two major reasons for low adoption of insurance as identified by Cole et al. (2013): (i) lack of liquidity to pay for the insurance premium, and (ii) lack of information about, or trust in, the insurance product.

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### **How does the author go about answering that question? (methods, data sources, cases, timelines)**

Agricultural producers are randomly selected to pay insurance premiums after the harvest. This product is called IOU

To study the role of liquidity constraints during the planting season we allow (randomly selected) farmers to pay the premium after harvest. Many

IOU Properties:

* Higher costs, to account for late payment
* Contracts and Group-pressures to raise the cost of default

properties of the IOU, except for the delayed payment, are identical to those of a standard product, but the delayed premium is slightly higher to account for the opportunity cost of time (making the two premiums inter-temporally equivalent). A crucial issue for the viability of delayed payment schemes is default after production uncertainty has been resolved in case there was no payout. We probe this issue by exploring contracts and leveraging group dynamics to raise the cost of default.

Randomly vary the marketing channel:

* Leverage Iddir leaders in some cases
* Not all beneficiaries understand the product (low financial literacy)
* Smallholders unsure about insurance companies (trust)
* Training and mobilising Iddir leaders to share knowledge and build trust
* Iddirs are informal institutions created to help members with burials etc.

we randomly vary the marketing channel, and leverage support of leaders of Iddirs for the product in some experimental arms.4 Insurance products are “complex” and low levels of financial literacy among target populations imply not all potential beneficiaries understand its logic (e.g. Cole et al., 2013; Cai et al., 2015a,b). Smallholders may also be unsure about the intentions of the insurance company. The idea is that through training and mobilizing customary leaders, we can effectively share knowledge and leverage trust. Iddirs are informal social institutions in Ethiopia, originally created to help their members organize burial ceremonies, but currently engaged in a broader spectrum of activities and mutual assistance.

The disadvantage of study:

* Cannot distinguish between trust and information effects
* Iddir leaders, who are trusted to transmit information to members
* The analysis finds that improved knowledge and trust have a positive effect
* May also pick up mimicking behaviour of followers

intervention does not enable us to cleanly distinguish between trust and information effects as mediating mechanisms. The idea is that customary leaders can effectively transmit information to members and that endorsements by such leaders, who are trusted individuals, build confidence. Most of our analysis picks up an aggregate effect – improved knowledge about both the product (information) as well as the company (trust). It may also pick up an effect of group members mimicking the behavior of their leader