Managing rainfall risks in agriculture

A case study on index based microinsurance in the rural communities of Méréto and Guinté Khaye in Senegal

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Research Problem

- Index-based microinsurance is an innovative strategy for farmers in developing countries to enhance the management of rainfall-related risks to their agricultural livelihoods
 - Covering & promoting agricultural investments
 - Enhancing resilience and food security of rural populations

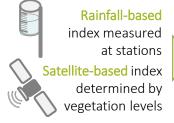
Low take-up of index insurance by individual farmers in pilot areas



How do different mechanisms of integrating aggregator organizations in index-based microinsurance provision for influence the potential for index insurance take-up?

Introduction to Index Insurance

Based on an index that correlates with farmers' losses



farmers are triggered if the index crosses a pre-determined threshold

Protection of agricultural production and investment

Advantages over "classic" insurance:

- Less expensive and
- More accessible

for smallholders

Issues:

- Basis risk
- Need for education & training
- Efficient delivery channels

Adjusted from CGIAR-CCAFS infographic: "Scaling up index insurance for smallholder farmers

Approaches to insurance provision and research on take-up

Macro-level

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Meso-level



Micro-level



Governments Financial in

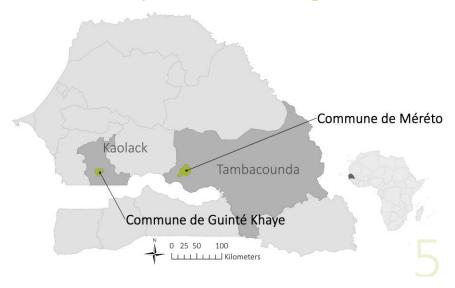
Financial institutions, Individual farmer agribusinesses, ...

Farmers' organizations can function as **aggregators** for index microinsurance provision to provide delivery channels and address education & training needs

AGGREGATOR LEVEL Institutional factors

MICRO-LEVEL Individual factors

Case Study Areas - Senegal



Methodology & Data

Sequential mixed-methods research design

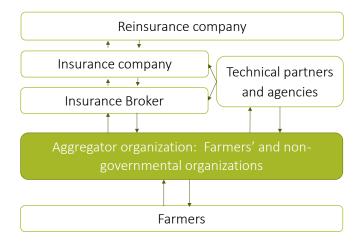


22 key informant interviews with experts in the Senegalese insurance sector & leaders in farmers' organizations

134 survey interviews with farmers

5 focus groups with 9 farmers per group on average

Insurance provision – Key findings



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Insurance provision – Key findings

Differing insurance provision mechanisms and processes, depending on:

Institutional Access

- Existence of and entry criteria to the organization
 - Insurance provision beyond membership
 - External expert support & regulations

Institutional Governance

- Contract management and negotiations
- Functioning & capacities of insitutional leadership
 - Information & Communication
 - Education & Training

Implications for take-up

- 1. Ratios and patterns of insurance adoption are closely tied to the institutional access and governance of the aggregator-organization
- 2. Take-up is based on decision by organization leadership or on individual decision-making, with the latter resulting in voluntary take-up based on relatively more informed choices
- 3. Take-up can be strong amongst the aggregator-organization's membership, but does not multiply beyond this population (yet)
- 4. Strong connection of insurance take-up with organization's interest in other financial services (credit and savings)

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Significance for practical solutions

The aggregator model can support scale-up of insurance approaches, but requires close interaction with the organizations

Context and governance of organizations need to be considered in the design of insurance provision mechanisms

Reliance on certain organizational structures may exclude vulnerable populations from access to insurance

Not all farmers are affiliated with organizations:

- → Additional measures to enhance financial inclusion (mobile solutions, input suppliers, etc.)
- → meso-level insurance in the value chain

Limitations of index insurance: "Planning for Climate Change"

- Insurance can be, but is not always a good strategy in every context:
 - may incentivize agriculture in regions or sectors where it is not sustainable because of climate change
 - Is index microinsurance suited for the poorest / subsistence farmers?
- There are risks related to climate change that can not be insured economically (extreme drought risk, slow-onset events, etc.)
- Integration into comprehensive risk management & adaptation

Insurance is an important tool to transfer risks, but not the cure for everything

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Thank you for your attention!

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