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Pricing in Microinsurance Markets

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Outline

- **Introduction**
- **Motivation and Objective**
- **Approaches to Pricing Risks in Microinsurance Markets**
- **Implications and Future Research**

Introduction

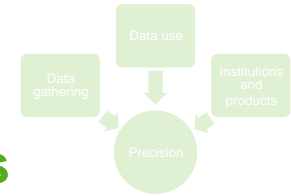
- Microinsurance:**
- Similar to insurance in developed insurance markets
 - Fundamental distinction is the protection of *low-income people*
 - Small insured sums
 - Small premiums
 - Different environment (e.g. infrastructure)
- Markets:**
- Microinsurance markets primarily in Asia, Africa, Latin America
 - High growth rates in recent years but still low market coverage

Motivation and Objective

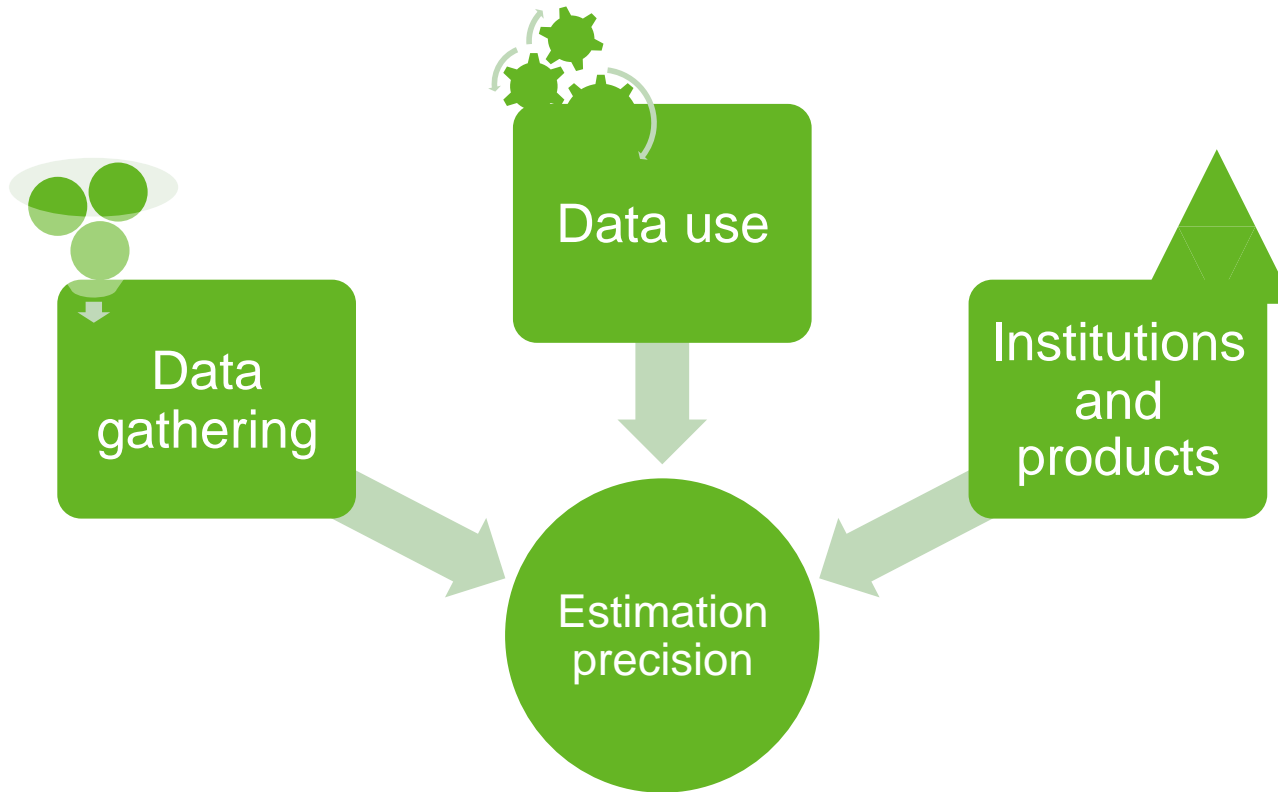
- Motivation:**
- Data restrictions challenge pricing of risks with microinsurance
 - Premium estimates biased in some unknown way
 - Two pricing schemes prevail
 - High risk loading due to uncertainty Affordability
 - Adaption to willingness to pay Solvency

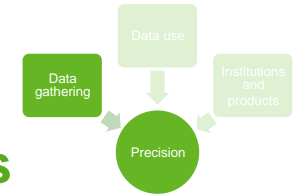
Necessity of improving precision in premium estimation

- Objective:**
- Investigation of potential approaches for more accurate microinsurance pricing



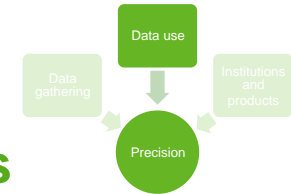
Approaches to Pricing Risks in Microinsurance Markets





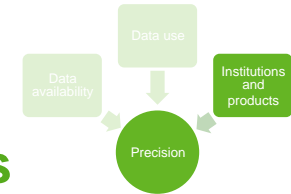
Approaches to Pricing Risks in Microinsurance Markets

- **Survey techniques**
 - Experts, household and provider surveys
- **Information technology**
 - Advances in IT increases the available data (e.g. weather data)
- **Cooperative data pools**
 - Aggregating existing data and making it publicly available



Approaches to Pricing Risks in Microinsurance Markets

- **Bayesian methodologies – credibility models**
 - Adjusting estimates over time – experience rating
 - Incorporation of multiple sources of information
- **Bootstrap methodologies**
 - More robust estimation of risk-loadings from small samples
- **Transition approaches**
 - Utilization of data from other regions
 - Adaption based on a set of parameters (e.g. mortality tables)
 - Facilitators: meso-level institutions (e.g. United Nations, actuarial associations)



Approaches to Pricing Risks in Microinsurance Markets

- **Risk capital**
 - Higher initial equity capital decreases risk-loadings (see Bühlmann, 1985)
 - Approach for supporting start-up and small microinsurers
- **Adapting products**
 - Structuring products as simple as possible
 - Limit risk exposure – amount insured, period of coverage, perils covered
 - Index insurance

Implications and Future Research

- **Implications:**
 - (1) Data restrictions limit precise pricing with microinsurance
 - (2) Increased pricing precision necessary for sustainable market development
 - (3) Approaches exist that may alleviate data restrictions

- **Future Research:**
 - (1) Empirical testing of approaches in real-world settings
 - (2) Consideration of behavioral approaches

Thank you for your attention!

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Selected References

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Bühlmann, H., 1985, Premium Calculation from Top Down, *ASTIN Bulletin*, 15(2): 89–102.