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## Sustainable Finances for Green Investments: Findings from Experimental Adoption of Innovative Index Insurance in Uzbekistan

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### Abstract

In times of climate change farmers in the Global South need an incentive to invest in a healthy and sustainable agriculture. Innovative index insurance is an often discussed climate change adaptation that improves farmers' climate resilience. By smoothing agricultural incomes over time, index insurance delivers an economic incentive to think sustainably and thus plays a fundamental role in green agriculture debates. However, index insurance still lacks global and voluntary demand, in particular among the most climate-vulnerable smallholders that often lack the financial reserves to compensate yield losses. Yet, previous research has mainly focused on economic adoption determinants (product attributes as well as farmers' income, land size and risk attitude) but these alone can barely explain farmers' insufficient risk management behaviour.

Our study is the first to also explore the influence of provider trust, product understanding, distinct peer effects, and precautionary savings as an alternative and more familiar ex-ante risk instrument. We present results from experiments with 199 Uzbek farmers in 2019. Located in the insurance pilot region, they approximate local farm conditions and offer marketable index insurance as well as a realistic savings option prior to real product launch. Applying multinomial logit models, results indicate significant and stronger peer group imitation effects (bigger surrounding) compared to peer neighbour imitation (closer surrounding). While this signals superior trust in other's perceptive skills, it requires a critical mass to establish credible innovation strategies. Further, credit uptake, provider trust and practical product understanding boost index insurance adoption. Although farmers' preference for precautionary savings seems inferior to the one of index insurance, our findings assume a slightly complementary relationship between the two. In addition, results suggest community-based extension interventions that can fully exploit peer interactions, and offering credit-bundled products to increase widescale and resilience-enhancing innovation diffusion. This is one prerequisite for financial stability vital to think about (green) future investments in times of uncertain climate change impacts in the first place.

**Keywords:** Agricultural index insurance, climate adaptations, precautionary Savings, rural development, Uzbekistan