Sustainable finances for green investments: Findings from experimental adoption of innovative index insurance in Uzbekistan

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Introduction

- Farmers' main challenge:

- **Index insurance** = promising climate adaptation
- **BUT low demand.** Barriers: basis risk, premium, distrust

Insurance **distrust**

Familiar risk solutions (e.g. savings) ←→ **Peer** influence

- <u>Research aim</u>: Better understand index insurance adoption behavior
- <u>Research questions</u>: In climate adaptations (**savings (S)** and/or **index insurance (I)**):

1) Importance of peer imitation?

If so, most influential peer?

👥👥 vs 👤👥
(bigger surrounding)   (closer surrounding)

2) Other key determinants?

Data

- 03/2019: survey,
- 04/2019: index insurance **experiments** (T=5)

Investments:
Fixed costs
(+ fertilizer)
(+ insurance)
(+ savings)

Simulated rain:
normal
few
very few

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Experimental climate adaptations:

- 16% None
- 7% Only S
- 37% Only I
- 41% Both

Empirical strategy

- Marketable S & I + T=5 (panel)
  → **pooled multinomial logit**:

$$P(Y_i = j) = \beta_{j1}PX_1 + \beta_{j2}PX_2 + \beta_{j3}PX_3 + \beta_{j4}X$$

(Manski, 1993)

PX_1: Ø Peer's climate adaptation choice,
PX_2: Ø Peer characteristics,
PX_3: Peer FEs,
X: Game, individual & farm info

→ Compare **two peer groups**

Result #1: Peer = bigger surrounding 👥👥

	S	I	Both (S+I)
Ø Peer's choice	0.031 (0.025)	-0.125*** (0.038)	0.235*** (0.032)
Ø Peer characteristics		✓*	
Peer FEs		✓***	
Realistic credit uptake (0/1)	-0.023 (0.044)	0.307*** (0.063)	-0.291*** (0.063)
Round (1-5)	-0.005 (0.009)	-0.010 (0.016)	0.036*** (0.010)
Distrust (0/1)	0.096*** (0.035)	-0.017 (0.037)	-0.110** (0.044)
Theoretical sophisticated under-standing (0/1)	0.112*** (0.014)	-0.098 (0.158)	-0.133 (0.151)
N		863 (173 farmers)	
Pseudo R^2		0.291	

NOTE: ***p<0.01, **p<0.05, *p<0.1. Peer characteristics: land, education, age, farming years. Data are weighted.

Result #2: Peer choice comparison

… bigger 👥👥   … closer surrounding 👤👥

P(I)

P(S+I)

NOTE: Data are weighted.

→ 👥👥 imitation >> 👤👥 imitation
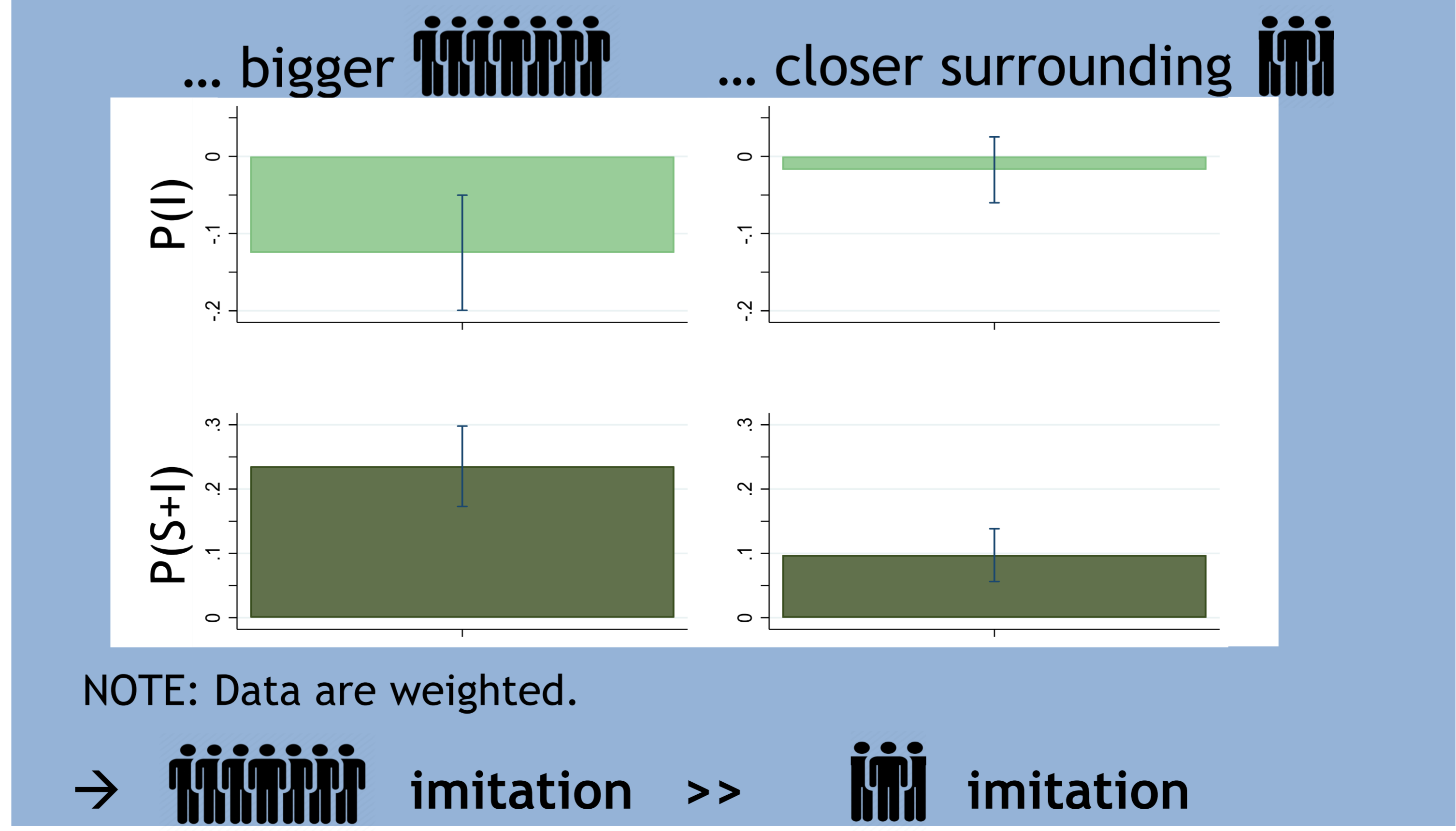
Discussion

- Farmers have superior trust in peer's perceptive skills

→ Peer's simultaneous behavior

Conclusion

- Peer imitation (+***)
- Distrust (-***),
- Practical understanding (+***),
- Theoretical understanding (-***)
- Credit uptake (+***)

→ 1. Group extension treatments: trust-building, financial literacy, peer dynamics

→ 2. Credit-bundled products

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– Experiments → real-life behavior predictions?
– No causal peer imitation effect - cannot rule out correlated effects (=FEs)

References

Manski, C. F. (1993). Identification of endogenous social effects: The reflection problem. *The Review of Economic Studies*, 60(3), 531-542.