Will Urban Migrants Formally Insure their Rural Relatives?

Harounan Kazianga
Oklahoma State University

Zaki Wahhaj
University of Kent

Accra, 10 May 2018
"Towards Agricultural Innovation in Ghana: An Evidence-Based Approach"

Motivation

- High level of vulnerability to weather-related shocks in developing countries.
- Yet, limited use of formal insurance among these populations.
- Low uptake of formal insurance due to costly insurance premiums, basis risk, reliance on informal risk-sharing, liquidity constraints, lack of trust in insurance provider.
  - Gine et al. 2008; Gaurav et al. 2011; Mobarak and Rosenzweig 2013, 2012; Binswanger-Mkhize 2012; Cole et al. 2013.

Policy Issue

- How do we improve access to formal insurance for smallholder rural farmers?
- Recent research has argued that formal insurance can complement existing informal risk-sharing arrangements.
  - Dercon et al. 2014; Mobarak and Rosenzweig 2012, 2013; Berg et al. 2009.
- Also, strong evidence on use rural-urban migration as a risk-coping and risk-management strategy.
  - Rosenzweig and Stark 1989; Kazianga, 2006; Yang and Choi 2007; Dustmann et al. 2017.
- Can demand for weather index insurance, and coverage of rural farmers, be increased by offering it to their urban migrant relatives?

Key findings

- We demonstrate that it is feasible, and cost-effective, to market weather index insurance via urban migrants:
  - 22% uptake rate among urban migrants during a 3-week subscription window following a brief marketing campaign;
  - (compared to an uptake rate of 20-35% in rural areas where insurance provider has been operating for a number of years).
  - Cost of 10-25K CFA per subscription among urban migrants vs 20-40K for rural farmers.
  - Uptake rate among urban migrants higher (by 17-22 percentage points) when randomly offered an insurance policy with payouts directly going to rural farmer rather than urban migrant.
- Thus, urban migrants can be an alternative entry point of weather index insurance in low income countries.

Context

- Study conducted with small-holder farmers in **rural Burkina Faso** and migrants from these households presently living in **Ouagadougou**.
- "*migrants … maintain close relations with their birth village even from a distance; they return to visit; they invest in housing, social activities, education, and health amenities … Traditionally, the birth village is the preferred place for eventual retirement … Most first try to find a new job in cities or towns [but] . . . If they fail (as many do) the village is their last resort*" (Beauchemin and Bocquier, 2004).

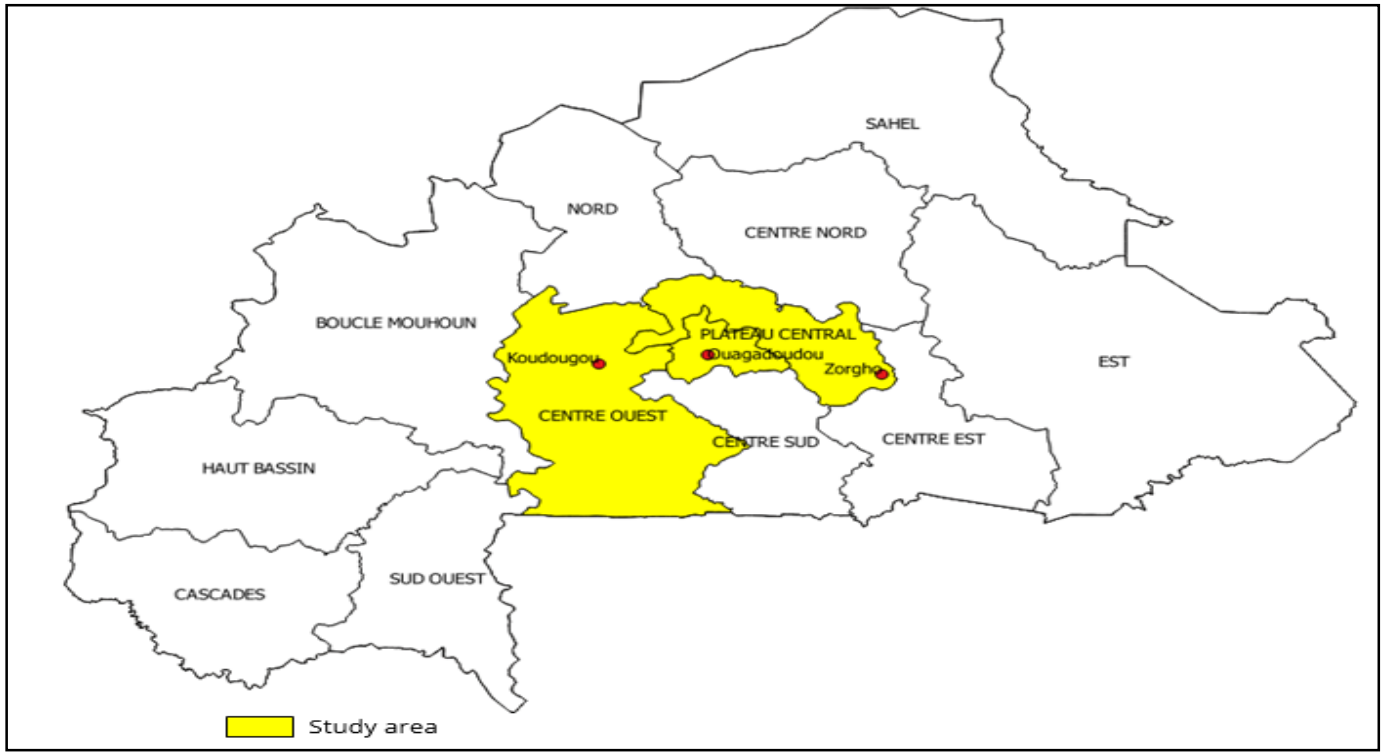
- Majority of farmers are engaged in rainfed subsistence agriculture.
- Single wet season lasting 3-5 months (May-Sept) and highly variable.
- 78% of households cope with adverse shocks through consumption of own stocks. Less than 2% rely on formal insurance.

Intervention

- Rainfall Index Insurance
- … based on PlaNet Guarantee's existing product designed for small-scale rural farmers in Burkina Faso.
- Subscribers can insure themselves against rainfall shortages in *any* specified location within the organisation's coverage area.
- Rainfall measured using satellite data at resolution of 10 sq km (high resolution reduces basis risk), payouts are a function of rainfall realisation at three stages of plant growth.

- **We marketed the same product to urban migrants in Ouagadougou who originate from villages and have relatives engaged in farming.**

Details of the Evaluation



- Random selection of 10 villages from each of 2 regions in Burkina Faso: *Plateau Central* & *Centre Ouest*.
  - Planet Guarantee not active in the selected villages (but this was not a condition for selection).
- Household census in each village, information on whether a household had migrant relatives living in Ouagadougou.

Details of the Evaluation cont'd.

- Stratified random sample (¾ with relatives in Ouagadougou) of 20 households were chosen from each village for household survey.
- Survey respondents listed all household members who have left the village.
- All successfully traced Ouagadougou migrants were invited to an hour-long presentation of Planet Guarantee's existing rainfall insurance product.
- Following presentation, subscription offers made to migrants over the phone at Planet Guarantee's existing (non-subsidised) price.
- Half the migrants randomly offered a policy in which insurance payouts would be made directly to the specified rural farmer. For the other half, payouts would go to the urban migrant.
- In phase-2 of the study, now under way, we randomise whether marketing is conducted with the rural farmer or urban migrant or both.

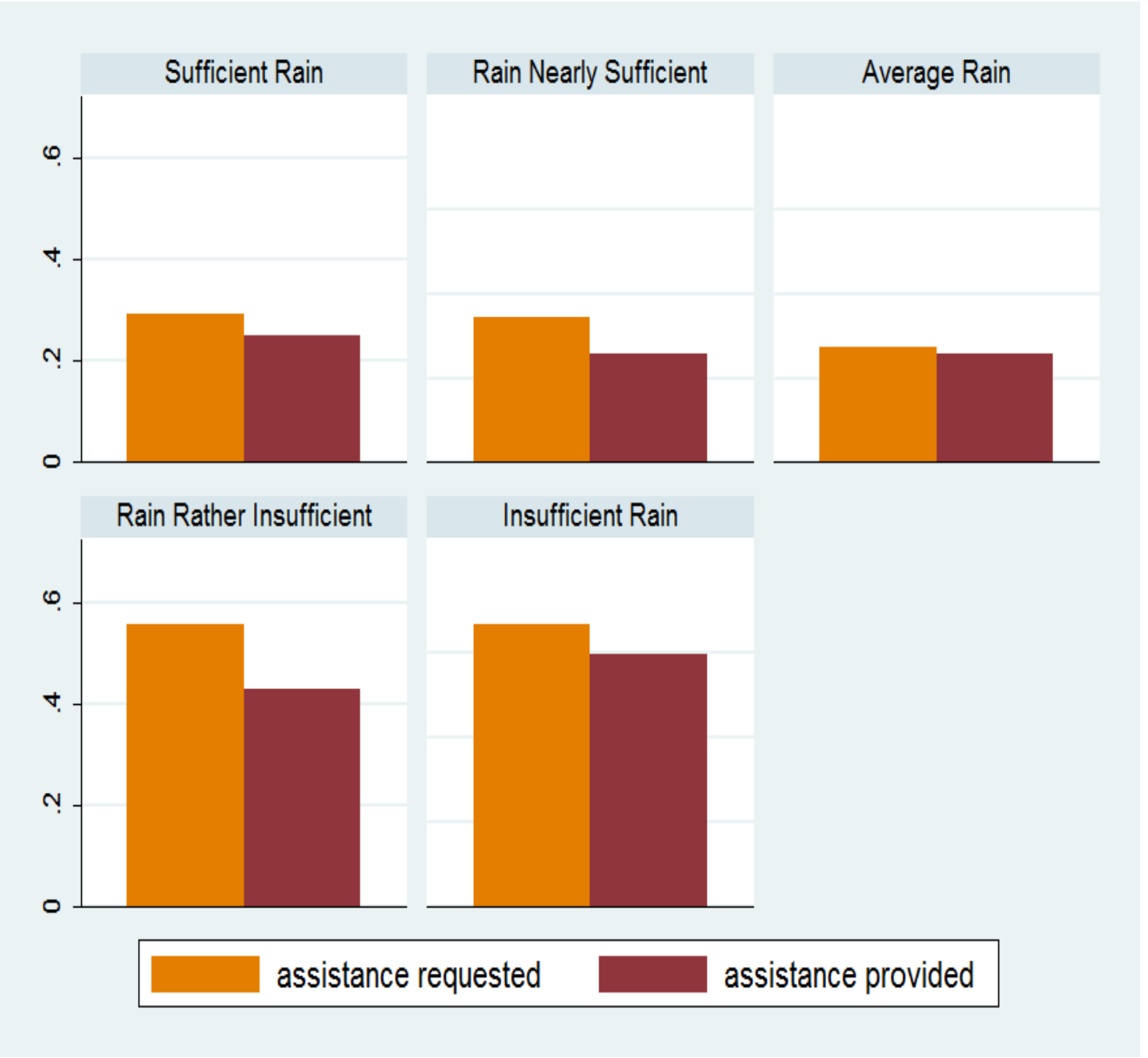
Descriptive Findings

- 56% of rural households have at least one relative living in Ouagadogou. Of those, 70% declared previously receiving transfers from their Ouaga relative.
- In urban migrant sample, average period of urban residence is 13.03 years (N=124, sd=11.25), i.e. these are permanent migrants rather than seasonal migrants.

- During 2014-16, rural respondents experienced at least one adverse shock 51.2% of the time; coped with using a transfer from a relative 16.3% of cases, asset sales 31.7% and no coping mechanism 33.1% of cases.

Risk-Coping Mechanisms for Rural Households (2014-16)	
	%
household experienced shock	51.2
household coped with shock with	
asset sales	31.7
help from relations	16.3
formal credit	0.9
other measures	26.2
nothing	33.1
N	1,128

About 30% of urban migrants receive requests for assistance from rural relatives when rainfall is sufficient, rising to nearly 60% when there is shortage of rain.



Findings on Uptake

- 22% uptake rate among urban migrants during a 3-week subscription window following a brief marketing campaign;
- Uptake rate among urban migrants higher (by 17-22 percentage points) when randomly offered an insurance policy with payouts directly going to rural farmer rather than urban migrant.
- Uptake responds to rural farmer's experience of adverse shocks, as reported by *urban migrant* but not to rural farmer's *own* reports of adverse shocks.

	Dependent Variable = 1 if migrant purchased, 0 otherwise					
	(1)	(2)	(3)	(4)	(7)	(8)
pay_to_relative	0.176*	0.186*	0.207*	0.176*	0.222**	0.176*
	(0.10)	(0.09)	(0.11)	(0.10)	(0.10)	(0.10)
duration_ouaga		0.024				
		(0.05)				
shocks_freq_mg			0.059*			
			(0.03)			
shocks_freq_hh				-0.024		
				(0.05)		
coverable_shock_mg					0.195*	
					(0.10)	
coverable_shock_hh						-0.003
						(0.07)
Observations	123	122	123	123	123	123
R-squared	0.193	0.198	0.215	0.194	0.216	0.193

Table: Determinants of take-up of rainfall index insurance by urban migrants. Constant term, relation of migrant to rural farmer, and whether migrant has previously provided financial support not shown.
Robust standard errors in parentheses, clustered at the village level.
***: significant at the 1% level, **: significant at the 5% level, *: significant at the 10% level.
Source: authors' calculations using the pilot survey.

	Dependent Variable = 1 if migrant purchased, 0 otherwise					
	(1)	(2)	(3)	(4)	(7)	(8)
pay_to_relative	0.176*	0.186*	0.207*	0.176*	0.222**	0.176*
	(0.10)	(0.09)	(0.11)	(0.10)	(0.10)	(0.10)
duration_ouaga		0.024				
		(0.05)				
shocks_freq_mg			0.059*			
			(0.03)			
shocks_freq_hh				-0.024		
				(0.05)		
coverable_shock_mg					0.195*	
					(0.10)	
coverable_shock_hh						-0.003
						(0.07)
Observations	123	122	123	123	123	123
R-squared	0.193	0.198	0.215	0.194	0.216	0.193

Table: Determinants of take-up of rainfall index insurance by urban migrants. Constant term, relation of migrant to rural farmer, and whether migrant has previously provided financial support not shown.
Robust standard errors in parentheses, clustered at the village level.
***: significant at the 1% level, **: significant at the 5% level, *: significant at the 10% level.
Source: authors' calculations using the pilot survey.

	Dependent Variable = 1 if migrant purchased, 0 otherwise					
	(1)	(2)	(3)	(4)	(7)	(8)
pay_to_relative	0.176*	0.186*	0.207*	0.176*	0.222**	0.176*
	(0.10)	(0.09)	(0.11)	(0.10)	(0.10)	(0.10)
duration_ouaga		0.024				
		(0.05)				
shocks_freq_mg			0.059*			
			(0.03)			
shocks_freq_hh				-0.024		
				(0.05)		
coverable_shock_mg					0.195*	
					(0.10)	
coverable_shock_hh						-0.003
						(0.07)
Observations	123	122	123	123	123	123
R-squared	0.193	0.198	0.215	0.194	0.216	0.193

Table: Determinants of take-up of rainfall index insurance by urban migrants. Constant term, relation of migrant to rural farmer, and whether migrant has previously provided financial support not shown.
Robust standard errors in parentheses, clustered at the village level.
***: significant at the 1% level, **: significant at the 5% level, *: significant at the 10% level.
Source: authors' calculations using the pilot survey.

Conclusions and Policy Lessons

- Evidence of strong linkages between rural households and urban migrants used for the purpose of risk-sharing.
- Evidence of significant demand for rainfall index insurance from urban migrants with relatives in rural areas.
- Urban migrants prefer policy that makes payouts directly to their rural relatives (focus group discussions suggest this is to resist temptation to use the insurance payouts for other needs).
- Migrants who know that rural relative has previously experienced an adverse shock is more likely to purchase (but shock reports of rural farmer and urban migrant do not corroborate, suggesting that weather index insurance can reduce informational asymmetry in informal risk-sharing networks).

Thank you

Lead Researchers:

Harounan Kazianga, Oklahoma State University

Zaki Wahhaj, University of Kent

Research Assistance:

Alassane Koulibaly, IPA

Oumar Sory, IPA

Intervention Implementation:

Souleymane Zaré, Planet Guarantee