Insurance

14.73 Lecture 16

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Quick recap…

- Last time we saw that risk was very costly for the poor
- And the strategies they employ to avoid risk are very costly
- This begs two questions:
  - Why aren’t they helping each other?
  - Why isn’t a market for insurance emerging?

Informal insurance

- The scope for insurance:
  - Two farmers Ahmad and Bijou grow crops, their income can be either HIGH or LOW
  - Both with probability 0.5
  - When Ahmad has HIGH and BIJOU has low, or vice versa, they agree to share
  - With probability 0.5, they now have the average income, with probability 0.25,LOW, with probability 0.25: HIGH
  - Does that increase their welfare?

Mutual insurance through loans in Nigeria

- Chris Udry spent one year in Nigeria and recorded the terms of the loans that villagers give to each other
- He found evidence of this behavior:
  - When the borrowers has an adverse shock, the pays less
  - When the lender has an adverse shock, the borrower pays more

Informal insurance in Nigeria

Table 5. *Realized Terms versus Borrower and Lender Shocks Received*

Adverse shock to:[a]	*Sample means*		
	Monthly interest rate (percent)	*Simple interest rate (percent)*	*Repayment period (days)*
Borrower			
No shock	0.5	20.4	67
Shock	−4.0	−0.6	72
Impact of shock on mean	Lower	Lower	Longer
t-statistic[b]	(1.58)	(2.20)	(1.03)
Lender			
No shock	−7.5	−5.0	89
Shock	2.6	11.8	80
Impact of shock on mean	Higher	Higher	Shorter
t-statistic[b]	(4.56)	(3.06)	(1.89)

a. The definition of adverse shock is that of table 4, broadened to include lenders.

b. The impact of the shocks is judged by a two-sided t-test of equal means ($\mu_{\text{noshock}} - \mu_{\text{shock}}$). The absolute value of the t-statistic is in parentheses.

Source: Survey data, available at a nominal reproduction charge upon written request to the author.

The limits of insurance

- Moral Hazard:
  - What if income depends on effort on the farm, but others cannot observe it?
  - What will a farmer who is insured do?
  - What is the solution?
  - Will insurance be complete?

The limits of insurance

- Limited commitment
  - When you have a high income realization, do you need to pay to your friend, or do you get money from your friend?
  - What is the temptation?
  - What prevents you to yield to this temptation?
  - Is insurance potentially fragile?
  - What may be the effect of banks? Of migration?

The limits of informal insurance

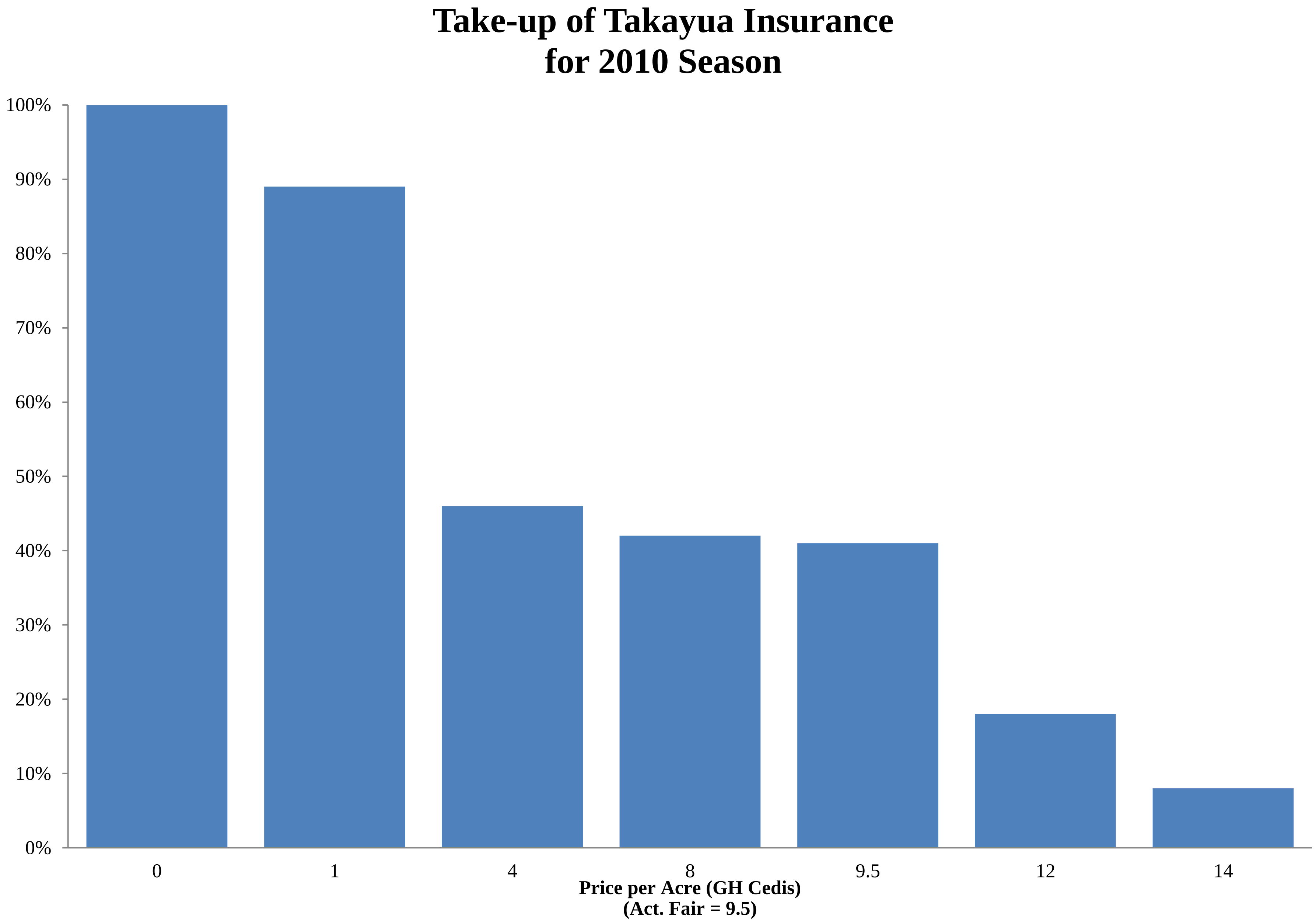
- Aggregate shocks:
  - Farmers can only insure each other if they know themselves relatively well (close together, relatives). It means that they only have limited scope for insurance
- Limited size of the arrangement
  - In practice most insurance seems limited to bilateral relationship, not a pool: not very well designed to deal with large shock such as illness.

How about formal insurance ?

- Forbes called microinsurance an "unpenetrated natural market"
  - The poor need insurance
  - They cannot pay much but there are many of them
  - There should be money to be made!!

Where are the insurance companies?

- And yet the attempts have been disappointing
  - Very low demand at actuarially fair price
  - And the insurance company charge more than a fair price!! (administration cost)


Take-up of Takayua Insurance
for 2010 Season
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0
1
4
8
9.5
12
14
Price per Acre (GH Cedis)
(Act. Fair = 9.5)

Why is it so difficult?

- Insurance is inherently difficult
  - Moral hazard:
  - Adverse selection : when the insured person knows something the insurer does not know
  - Risk of Outright fraud

Example: Health Insurance

- Moral hazard:
  - Too much curative care expenditures already! What if they had insurance
  - Too little preventive care already
- Adverse selection:
  - People who know to be sick may sign up: if insurer does not know
- Fraud:
  - How to prevent doctors for charging for services they do not perform?

The solution: Simple products

- To avoid moral hazard and fraud:
  - Offer only catastrophic health insurance : hospitalization insurance, usually in a networked hospital which has been vetted
- To avoid adverse selection
  - Make the insurance compulsory for a pre-selected group of people (e.g. clients of a microcredit organization)

Another example: crop insurance

- Crop insurance is subject to moral hazard and adverse selection:
  - Taking care of your crop
  - Choosing insurance for a field that you know prone to disaster
- Offer weather insurance instead:
  - Based on an rainfall index at a nearby weather station
  - People can buy as much or as little as they can
  - No fraud, little administrative cost, no adverse selection, no moral hazard!

An offer in search of a demand

- But the poor have little interest in these products
  - Lack of understanding (?)
  - Mistrust: how to explain the rules when they are at the advantage of the insurer?
  - The product is not what they actually need or want:
  - Difficult to think ahead about a negative event:
    - few young people have burial insurance in South Africa, even though burial is a major cost for their surviving relatives!

Catch 22

- The market is limited in what it can offer…
- And it limited precisely in ways that makes what it can offer relatively unattractive to the poor
- A very different situation then for microcredit, where the market is also very limited in what it can offer, but what it can offer suits at least some people

What role for public policy?

- This opens an obvious role for public policy: step in to complement the market to insure social protection.
- But this could take several forms:
  - Food aid
  - Cash transfers
  - Free primary health care
  - Offer publicly provided insurance
  - Subsidize insurance offered by the market: perhaps people will learn

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