November

Dull Disasters

Stefan Dercon

Prof. of Economic Policy University of Oxford and Chief Economist DFID









Overview



The cost of risk

Poor people tell us: much hardship from shocks
 Ethiopian families: 95% affected in five year period; most common drought, illness and death (Dercon et al. 2005)

The cost of risk: risk matters

adverse shocks cause poverty:

1/3 of poverty can be associated with adverse event (Dercon et al. 2005)

Loss of assets, leading to long-term poverty (Barrett and Carter2013, Dercon, 2004)

Loss of health and human capital via stunting (Dercon and Porter, 2014)

Caution in investment decisions such as using less fertilizer (Dercon and Christiaensen, 2011)



1. The promise of insurance

A transparent market-based contractual solution....

Health indemnity insurance

Climate risk: 'index insurance'

Large number of schemes piloted and scaled across developing world...



The evidence: health insurance impact and uptake

Growing literature on SHI and CBHI Few high quality....systematic reviews... Achraya et al. 2013 (WBRO), Spaan et al 2012 (WHO Bull.), ...



- In most cases, little impact on utilisation of health services, with exceptions
- Some 'financial protection' against large out-of-pocket expenditure, but not for the poorest
- No systematic evidence of improvement in health status or of quality of care
- But also: uptake low e.g. 1/5 when offered in Kenya, with "trust" big factor

The evidence: weather index insurance impact and uptake

Attractive product –

Some systematic reviews...

Impact?

If insured, evidence of apparent sense of 'protection', with increase in farm investment (Karlan and Udry on Ghana; Carter/Elabed on Mali/)





<u>Uptake?</u> (Cole et al. 2012, systematic review) Low! 5-10% in AP/Gujarat in India; Malawi/Ethiopia

Reasons?

- Cost
- Financial literacy
- Trust
- Risk aversion (!)

The problem with index insurance....





Understanding basis risk/reliability is critical



- 1. Reduces risk
- 2. Reduces average outcome



Understanding basis risk/reliability is critical



- 1. Reduces risk
- 2. Reduces average outcome
- 1. Reduces risk when the hedge works
- 2. Increases risk when it doesn't
- 3. Reduces average outcome

The evidence: weather index insurance quality?

An empirical issue!

- Large Indian micro-insurance weather index scheme (318 products)
 - When 'catastrophic' (-30%) yield outcome, only 51% payout
 - For very \$1 in premiums, average payout in catastrophic (-30%) year only \$1.1!
- Largest scheme in Africa had to switch to area index as performance of weather index product caused lots of 'exgratia payments'
- More a risky parametric derivative than an insurance... and may help to explain why less risk averse buy more (Dercon et al. 2014)



The assessment: micro-insurance and the SDGs?

- Insurance markets development of course important but as tool to reach poorest?
 - Uptake low: "take money now with promise of something later"
 - Impact? But impact on poorest?
 - Poor products? Consumers, at times unprotected.
- Is a product with low uptake and risk of poor products right way to protect progress in Global Goals that Leaves No-one Behind?



The assessment: micro-insurance and the SDGs?

Insurance-like systems development:

- System of guaranteed inclusion of the poorest;
- Based on insurance principles;
- Understand informal systems and build on them;

THE GLOBAL GOALS

For Sustainable Development

- Potentially using insurance products to support it;
- With improving consumer **protection**, product **quality** and **risk reduction** incentives

Ň****

3 GOOD HEALTH

_^/\

4 QUALITY

Ø

17 PARTNERSI FOR THE GO

THE GLOBAL GOALS

Insurance as a Public Policy not Market Development issue...



The assessment: micro-insurance and the SDGs?

Example: HSNP

- Basis: cash transfer scheme for the poorest in Turkana, Kenya
- Scalable during crisis
 - E.g. 100,000 people received transfer within 2 weeks when drought became likely in 2015
- Clear information on who are poorest and are on scheme; others are offered index insurance products
- Underwritten by index insurance policy with ARC Ltd., and DFID underwrites basis risk of scaling.



Hunger Safety Net Programme





Example: Ebola (West Africa)



Example: Earthquake (Nepal)

Poor preparedness planning costs lives

Example: Hurricane Katrina (United States)



The experience and its causes

Cry for help and quarrels over responsibilities
The experience
Improvised politicized and fragmented response
Underfunded response





Ambiguity and failures of decision-making Inadequate preparedness Weak ex-post finance model

The Dull Disasters diagnosis: medieval financing



 Strategic delays if multiple donors (Clarke and Wren-Lewis, 2016)

 Crying Wolf
 Poor Coordination

 Poor information sharing (Bharosa et al., 2010; Stephenson, 2005)

Political incentives: benefactors

United States: presidential disaster declaration adds 1 percent to state-wide vote (Reeves, 2011) But no impact on elections from disaster preparedness spending (Healy and Malhotra, 2000) Mexico: disaster payouts pre-election plus 8 percent (Fuchs and Rodriguez-Chamussy, 2014) India: politicians punished for extreme events, but less if response near election (Cole et al.,2012) poor incentives for investing in risk reduction

Cultural shift in managing risks and crisis



3. An insurance-like system...

Clear risk ownership and a fast, evidence-based decisionmaking process

.....be clear what/whose risk is covered: e.g. targeting rules, infrastructure priority lists, ... and be clear what is not covered – what 'sovereigns' will do, what 'private agents' will need to do

....and how action is triggered

A coordinated, credible **plan** for post-disaster action agreed in advance

.... How will people be reached? e.g. a social protection scheme; a housing rebuilding scheme

... Who will manage recovery? E.g. Fonden

Financing on standby to ensure that the plan can be implemented

... credible financing arrangements



Example: FONDEN (Mexico)



Impact Evaluation

de Janvry, del Valle, and Sadoulet, 2016

2 – 4 percent increase in postdisaster local economic activity





Hunger Safety Net Programme



Principles for an insurance-like financing system



Underwriting

Terms and conditions

Manage contingent liability

Reinsurance planning

Loss adjustment

Financial architecture can solve commitment problems



The instrument set for financial planning

Goal	Ex ante instrument (arranged before disaster)	Ex post instrument (arranged after disaster)
Risk Retention (changing when/how one pays)	Contingency fund or budget allocation Line of contingent credit	Budget reallocation Tax increase Post-disaster Credit
Risk transfer (removing risk from the balance sheet)	Trad. insurance/reinsurance Index insurance, reinsurance, or derivatives Capital market instruments	Discretionary post-disaster relief (begging bowl financing)

How credible is the commitment?

Goal	Ex ante instrument (arranged before disaster)	Ex post instrument (arranged after disaster)
Risk Retention (changing when/how one pays)	<u>Requires</u> discipline	Undermines discipline
Risk transfer (removing risk from the balance sheet)	<u>Supports</u> discipline	

But: details matter for impact!

- 1. How <u>credible</u> is the commitment?
- 2. How <u>cost-effective</u> is the financing?
- 3. How <u>reliable</u> is our data and the product?
- 4. How <u>fast</u> is the decision process?
- 5. <u>What</u> is being protected? What is the plan?



How costly is the financing? Example: Jamaica

Reallocating budget expenditure on operations and maintenance to finance more timely reconstruction was three times more expensive than insurance, which was in turn slightly more expensive than raising taxes

(Bevan and Adam, 2016)



The **Opportunity** for disaster responses

The Past

Slow, politicized, tactical decision-making process

Poor preparedness planning

Begging Bowl Finance





A fast, trigger-based decision-making process A coordinated, credible **plan** agreed in advance **Financing on standby**

4. What Next?

Risk ownership: clarity of what the state will cover **The Principle:** Invest in preparedness and response

Financing on standby for contingent liabilities



The Actions

Risk assessment and dialogue with population Investment in risk reduction, response and private insurance market development **Pre-agree financing plan**

And this won't be plain sailing....

Africa Risk Capacity (ARC) – risk pool in Africa for weather risk

'ARC's covenant: A worthy insurance scheme goes awry

[...] A joint assessment by the government [of Malawi] and international agencies reckons that 6.5m people will need aid by January. Yet ARC's software, bizarrely, concluded that only 21,000 people were at risk. According to the model, there was hardly a drought at all.'

The Economist Magazine (August 27, 2016)

What can the international community do?



What can the insurance industry do?



Concessional Insurance?.

Donors are supporting insurance

- e.g. risk capital in risk pools like CCRIF or ARC (a bit like IBRD)

Should they make insurance 'concessional'?
– subsidies for products as so much underinsurance (a bit like IDA)
• e.g. V20 \$60bn assets lost in last 15 years, but only \$2.2bn insured

- Some countries may be too poor to pay, but also keep in mind massive opportunity costs (\$3bn humanitarian spent in natural disaster setting per year?)

Conclusion: Insurance and the Poor

- Not about a Market-Based Solution to SDGs or Poverty
- But a **Public Policy** issue: use **insurance principles** for a system that ensures poor people are protected
 - Systems that provide protection of the poor against health and climate risk, ensuring maximum inclusion
 - Use sovereign insurance as part of pre-arranged financing for large relative to local economy
 - Use micro-insurance to reach more people
- Role of private providers?
 - Don't just go an sell just insurance products to families
 - But use the power of insurance principles and risk transfer to develop systems to protect people





Risk, extreme events and slow onset hazards will remain but we can dull the disasters around us!

