

RISK and VULNERABILITY
a micro-perspective

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Purpose?

- Develop the **conceptual** and **empirical** links between downside risk, growth and poverty
- Explore its **implications** for mainstreaming social protection in the context of poverty alleviation **policy**
- **Inspire a little...**

Conclusions?

- Risk is a **cause** of low growth and poverty.
- The economic and social **return** to social protection is very **high**.
- With its impact defined not just in terms of social policy and equality, but also in **growth and poverty reduction**.
- Much more attention should be given to risk in order to **innovate, rethink or complement interventions**.

Approach taken

Here:

- “Growth” analysed from its micro-level economic foundations,
- Starting from people’s livelihoods, and
- with a focus on the poor and the poorer countries,
- to understand the role of risk in holding them back.

Risk and livelihoods

- Risk affects:
 - Ability to sustain assets/endowments
 - The transformation of assets into incomes (activities)
 - The transformation of incomes into welfare outcomes
- Risky events are 'exogenous' to people
- People don't passively undergo risk and shocks, but use risk strategies to shape outcomes.

Sources?

Sources: *Insurance against Poverty*, Oxford University Press, 2004.

Supplemented with newer evidence on Ethiopia

All to be found on

<http://www.economics.ox.ac.uk/members/stefan.dercon/research.HTM>

Social Protection and Risk

Note:

- In analysis and policy discussion, my focus is on RISK-RELATED VULNERABILITY and the policies to reduce it
= a narrow set of social protection policies
- Term '**vulnerability**' is used as meaning 'risk-related vulnerability', whereby risk is constituting a 'threat' to well-being;
- Not to be confused by other common meaning of vulnerability as "state of being helpless or weak", as in '**vulnerable groups**'.

Vulnerable Groups

- **Vulnerable groups** as specifically 'helpless', 'weak' or 'excluded' groups, liable to serious hardship and poverty
 - Unable to take advantage of opportunities
 - Limited defences if shocks occur.
- Disabled, orphans, HIV infected, elderly, female headed households, SC/ST (caste) groups, ...
- **NOT today's focus**

Outline

1. Risk, Growth and Poverty Dynamics
2. Risk as a Cause of Poverty and Low Growth
3. Conceptual Implications
4. Policy Implications and the Way ahead

1. Risk and Poverty Dynamics

- Shocks are central to life of many poor
e.g. Rural Ethiopia, five year period
(1999-2004): any 'serious' shocks that
gave hardship? 95% listed at least one.

Table 1: The incidence of serious shocks 1999-2004

Type of shocks reported	%
Drought	47
Death of head, spouse or another person	43
Illness of head, spouse or another person	28
Inability to sell outputs or decreases in output prices	15
Pests or diseases that affected crops	14
Crime	13
Policy/political shocks (land redistribution, resettlement, arbitrary taxation)	7

Household actively try to manage risk...

- Ex-ante strategies: before the risk occurs, trying to *prevent* risk affecting the household or to *mitigate* the impact of risk
- Ex-post strategies: after the risky event occurs, reducing its impact (*coping*) (while ex-ante preparing for this)

Risk strategies:

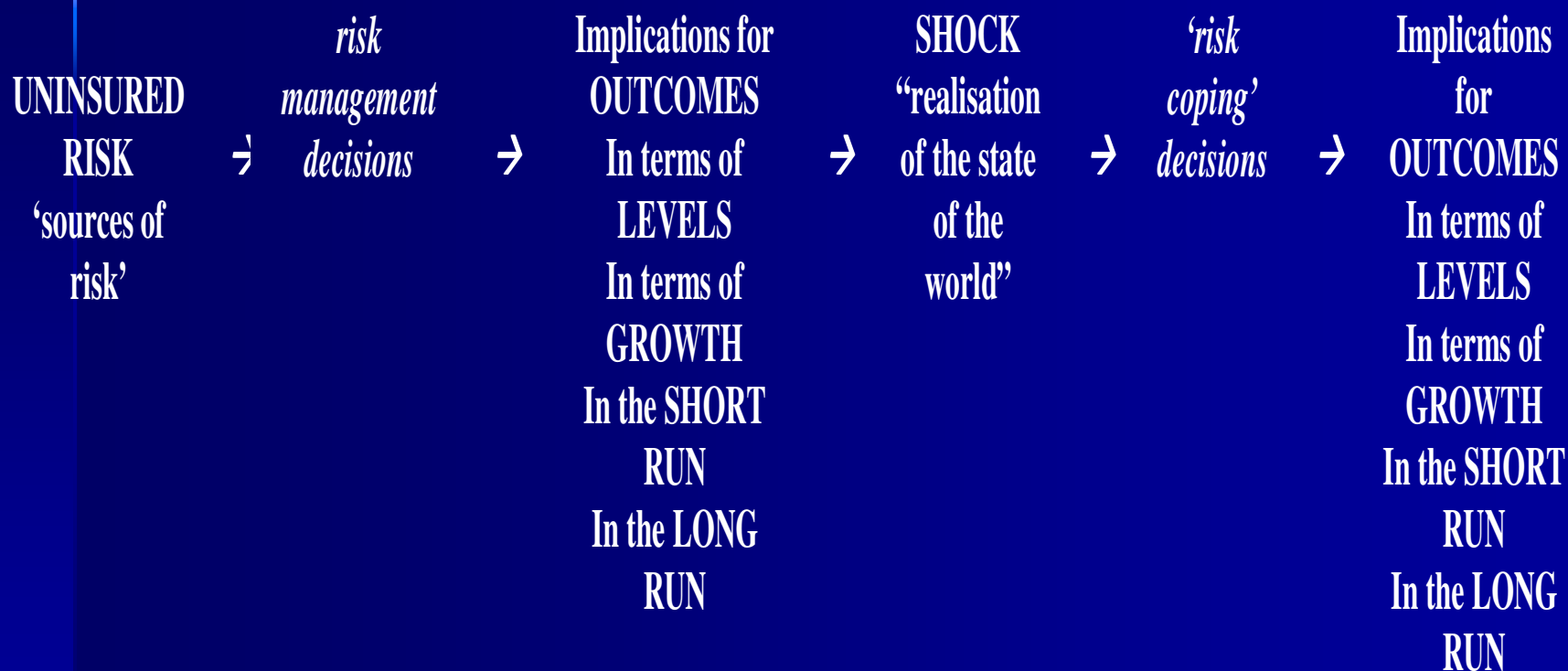
to mitigate and reduce risk ex-ante:

- Diversification, Low risk activities
- Marriage/migration patterns

to cope ex-post:

- Savings as a Precaution (grain storage, livestock)
- Informal arrangements to share risk (mutual support; credit arrangements, insurance groups)
- Family Labour adjustments (incl. children)

Understanding the chain



Impact of shocks?

- These strategies provide some protection against risk and shocks, but all evidence suggests that some shocks still matter significantly:

e.g. in rural Ethiopia shocks related to 1999-2004 (as before), strong impact on consumption in 2004?

Drought? -13 to 16%

Output price collapse? -19%

Demand for non-agricultural prod? -20%

Serious illness episode in family? -15%

Impact of shocks?

- Overall contribution to poverty is high!
 - Actual Poverty (=with shocks): **44%**
 - Counterfactual poverty without shocks, or the '**chronically**' poor: **29%**
 - OR '**transient**' poverty as proportion of total poverty: share is **33%**

Policy conclusion?

Behind much of the *safety net* thinking:

“there is a rightful place for appropriately targeted safety nets for humanitarian reasons to help these ‘temporarily’ poor”

“but they are a bit of a luxury and they are not near the core of activities to reduce poverty and stimulate shared growth”

Policy conclusion, ignoring the link between risk and poverty

- Not just: risk causes 'welfare fluctuations' but:
- Principle: "Uninsured risk is costly and may have **persistent (=long-lasting) or permanent effects** on
 - Growth
 - Poverty
 - Broad human development"

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2. Risk as a cause of poverty and low growth

- Two ways in which **risk causes poverty and failing growth**:
 - **ex-post** impact of risk
 - **ex-ante** or behavioral impact of risk
- 'Risk' may cause ex-ante and ex-post serious losses in terms of growth and poverty reduction, since it may lead to **poverty persistence and traps**

Risk as a cause of poverty/low growth: the ex-ante impact

Uninsured risk implies that it may be optimal to avoid profitable opportunities. So,
lower risk at the expense of lower returns

E.g. Diversification, low risk activities, low risk assets;

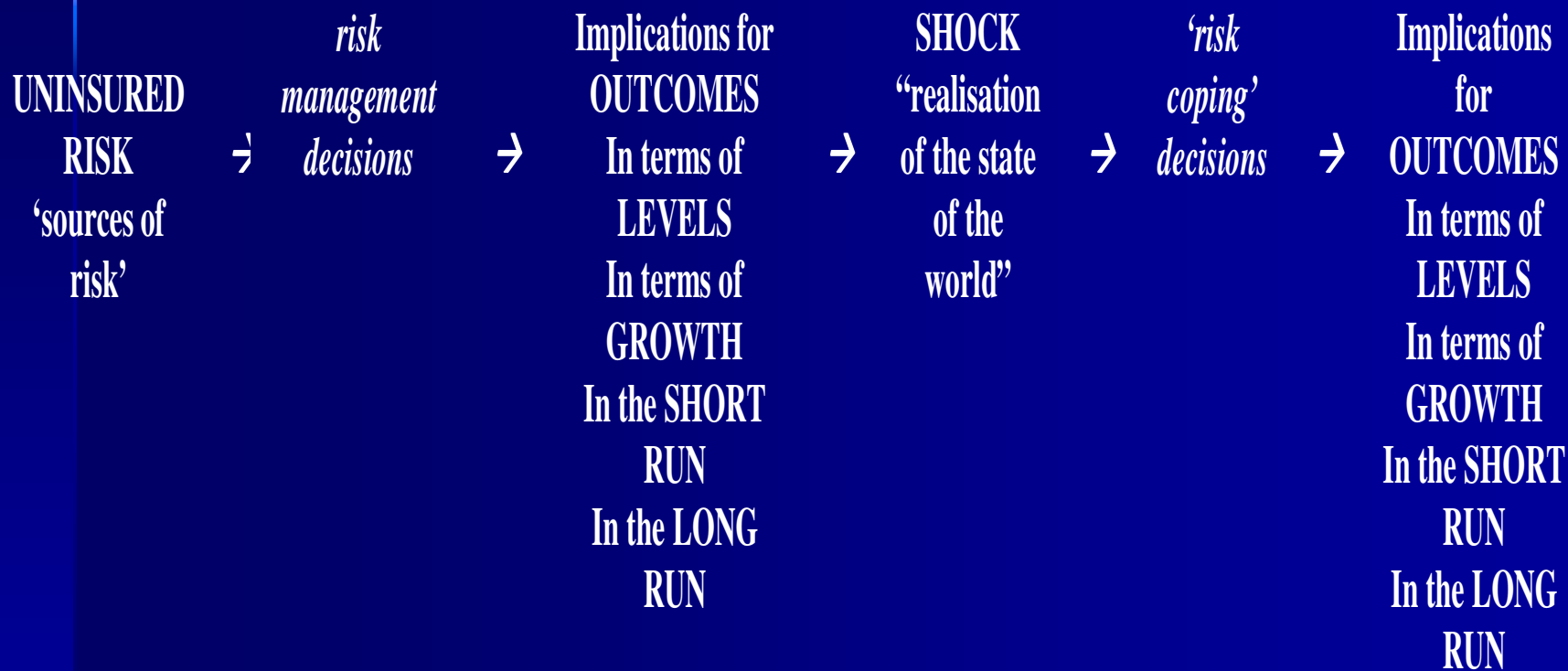
- NOT due to 'risk averse preferences' but driven by lack of insurance (**constraints**)
- even possibly '**choosing**' to be poor by lack of options...

Risk as a cause of poverty/low poverty: the ex-post impact

Shocks resulting in **lost ASSETS**, in terms of **human, physical or social capital**. This **loss of the productive asset base** reduce access to profitable opportunities in the future.

- examples: loss of livestock/assets;
stunting and lower educational attainment from poor health and nutrition; breakdown of social networks; etc.

Understanding the chain



Examples: (1) ex-post impact of shocks

-**Nutrition**: temporary 'hunger' leading to stunting, lower school attainment, earnings

E.g. **Zimbabwe**, impact 82/83/84 drought/war

Shock on children, 16 years later 7 percent loss of lifetime earnings

-Impact of **HIV-AIDS shocks** on orphans: in **Tanzania**, we find strong impact of the death of a father on **educational attainment** 10 years later, suggesting permanent impact of shock.

-**Assets**: loss of cattle below some minimal level during drought is leading to the impossibility to recover (**Kenya**, pastoralists) (a poverty trap)

Examples: (1) ex-post impact of shocks

- in **Ethiopia** also observed in consumption and nutrition:

persistent impact of drought in 84/85: those seriously affected then, experienced significantly lower growth (minus 10-15%) in 1990s

- in **Indonesia**: impact 98 crisis – recent study showed in some localities no or limited recovery, despite overall recovery

- recurring theme in many life histories across developing world

Examples: (2) ex-ante impact of risk

- YES: many studies find significant effects, few quantify this fully
- studies in **rural South India and Tanzania**: providing the lowest wealth groups the same 'protection' as the highest wealth groups, results in 25-50% higher return per \$ assets, due to portfolio effects
- **Zimbabwe**: in rural panel sample, quantified micro 'growth' effect, suggesting 40% lower capital stock, substantially due to 'ex-ante' effects.
- Fertiliser uptake in **Ethiopia**: application rates substantially lower because farmers' fear of drought and its consequences, so NOT done by those with limited protection..

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'Vulnerability' measures?

- Policy research puts increased emphasis on 'multidimensional achieved outcomes' in thinking about poverty and wellbeing
- BUT, these are EX-POST, devoid of the ex-ante uncertainty surrounding these outcomes.
- Should we try to 'measure' vulnerability, as a 'threat to poverty', focusing on downside risk 'ex-ante'?

- E.g. decisions about interventions:
which one will be 'more effective' in
reducing poverty will require considering
potential outcomes in different 'states of
the world'
 - poverty is EX-POST measurement
 - here: introducing an explicit 'normative'
calculus of weighing different outcomes,
focusing on downside risk and outcomes
relative to a norm

Vulnerability measurement

1st issue?

Can we **design** a 'measure' with 'desirable' and 'reasonable' properties?

- a valuation ex-ante of possible welfare levels, taking into account a poverty norm and risk sensitivity
- a measure of the 'threat' of poverty or of ruin, focusing on downside risk
- 'reasonable' and intuitive measures have been designed

Vulnerability measurement?

2nd issue?

- Can we **use it** for policy-relevant analysis? [empirical application]
- Needs a 'forecast' model of possible welfare outcomes
- Exploiting as effectively as possible increased panel data or repeated cross section
- Exciting and potentially important research area

Outline

1. Risk, Growth and Poverty Dynamics
2. Risk as a Cause of Poverty and Low Growth
3. Conceptual Implications: thinking about growth and poverty
4. Policy Implications and the Way ahead

4. Policy and the Way Ahead?

- If 'risk' is a cause of low growth and high poverty, then reducing or providing protection against risk and the impact of shocks has a **high return** as a policy objective;
- With the impact defined also in **growth and poverty reduction**.
- Currently much policy-advice and intervention **as if there is no risk**.
- There is much scope for specifically focusing on 'risk' in order to innovate, rethink or complement interventions.

Insurance against poverty

1. **Strengthen the productive asset base** (including human, physical and social capital).

2. **Support the protection of the asset base.**

= crucial role of social protection

= an additional and integrated focus on “ex-ante” strategies plus **credible** “ex-post” systems.

“Insurance” against poverty

- > provide ways of ‘insuring’ people and their small asset base
- > so they do not need to go to extreme risk-avoidance,
- > or be pushed into even deeper poverty if ‘shock’ occurs,
- > but allow them to take advantage of any opportunities that may emerge to escape.

Menu of 'interventions'

■ Insurance and protection

- Simple products (e.g. rainfall insurance, health insurance);
- Self-insurance (savings and other products);
- Strengthening/building onto existing **indigenous/informal risk-sharing arrangements**;
- Introduce **'insurance' elements in asset building programs.**

■ **Credible** ex-post transfer system, responsive to shocks

- Employment **guarantee** schemes
- **Improved 'risk-sensitive'** conditional cash transfer schemes

Example: rainfall insurance

- “Rainfall insurance”
 - Offering products to farmers in rain-fed agriculture, with transfer if rainfall measure at ‘official’ station is below threshold (observable trigger)
 - Not suffering from moral hazard, adverse selection, etc.
 - Could contain subsidy
 - Same principle could apply to other support

Example: improved cash transfer schemes (CCT)

- Asset transfer/creation schemes but with clear insurance element
 - E.g. Conditional cash transfer, conditional on school enrolment, as in Progresa: no insurance
 - Issue still is: if shock large, children taken out of school, so human capital growth affected.
 - Could contain 'insurance' element, whereby transfer is increased if large (observable) shock occurs.
 - Pre-announced, transparent, full commitment.

Example: workfare with insurance

Food-for-work or Cash-for-work: contributing labour for public works

- Typically: fixed wage and rationed number of jobs
- Ideally:
 - Unrationed number of jobs (so self-targeting possible)
 - Increased wage when crisis strikes (especially if FFW is a supplementary earnings source, beyond farming or other usual activities)

Example: input provision

- Agricultural credit: e.g. Ethiopia
 - Easy access credit for fertiliser (non collateralised)
 - But harsh repayment enforcement
 - and entirely uninsured
 - Evidence that this results in those with low liquid asset base not daring to take on fertiliser.
 - Build in insurance element! -

Example: building on funeral insurance

- Funeral groups in e.g. Ethiopia
 - Inclusive institutions
 - Often remarkably formalised (with accounts, monthly contributions)
 - Very democratic
 - Often trying to offer more insurance than just funerals, but difficult (moral hazard, covariant risk)
 - Scope for building on them, e.g. with covariant risk product

Example: insuring aid flows

- Usually: additional 'relief' to supplement funding for standard FFW schemes requires recurring 'appeals' with delays and political confrontation
- WFP/WB assisting Ethiopia to take out '**rainfall insurance**' against drought in each district
- Based on calculations of needs per district for different levels of rainfall, expressed as **weather vulnerability index**.
- This index is a '**weather derivative**', a financial product that can be sold to international (re-) insurance markets
 - Rather than paying for appeals, **donors are asked to pay insurance premium**;
 - Insurance company pays out if index reaches particular values;
 - Provides **guaranteed, credible flows of funds** if needs arise.

Example: credible support

- If we want to offer 'protection' not just for 'humanitarian' reasons, but to support 'efficiency' and the ability of the poor to respond to opportunities and incentives, then system has to be CREDIBLE:
 - Households must have full trust that support ex-post will materialize
 - So that ex-ante they do not have to engage in costly risk avoidance
 - How to create 'credibility' in social protection and poverty policy???

Conclusion

- Risk is a **cause** of low growth and poverty.
- The economic and social **return** to social protection is very **high**.
- With its impact defined not just in terms of social policy and equality, but also in **growth and poverty reduction**.
- But much **policy advice is devoid of risk** consideration.
- Time for **gaining more understanding**: explore role of risk on growth and poverty.
- Time for **more experimenting**: try out schemes.