

**DISASTER IMPACTS:  
ARE THESE “*AN EQUAL OPPORTUNITY MENACE*”  
TO DEVELOPMENT?**

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# Disasters, Disasters Everywhere: Economic Research on Disaster Impact

- **Potential reasons for an explosion of economic research**
  - Growing awareness of the potentially catastrophic nature
  - Increasing awareness of economic and social consequences
  - Increasing awareness of climatic change
- **Climate change and poverty**
  - The international discussions and their updates
  - The Sustainable Development Goals (SDGs)



# A Typology of Impacts

- Clarification of what we meant by “**Disaster Impacts**”
- **ECLAC definition**
  - Direct impact of sudden-onset disasters
  - Indirect impact affecting the economy in the aftermath
- **World Bank definition**
  - First-order effects
  - Second-order effects
  - Third-order (or even higher) effects

# The Frequency of Natural Disasters

Chart 1

## Calamity strikes

The frequency of natural disasters across the globe has increased steadily since 1960, dipping only in the past decade.

(number of disasters)



Sources: EM-DAT International Disaster Database; and IMF staff calculations.

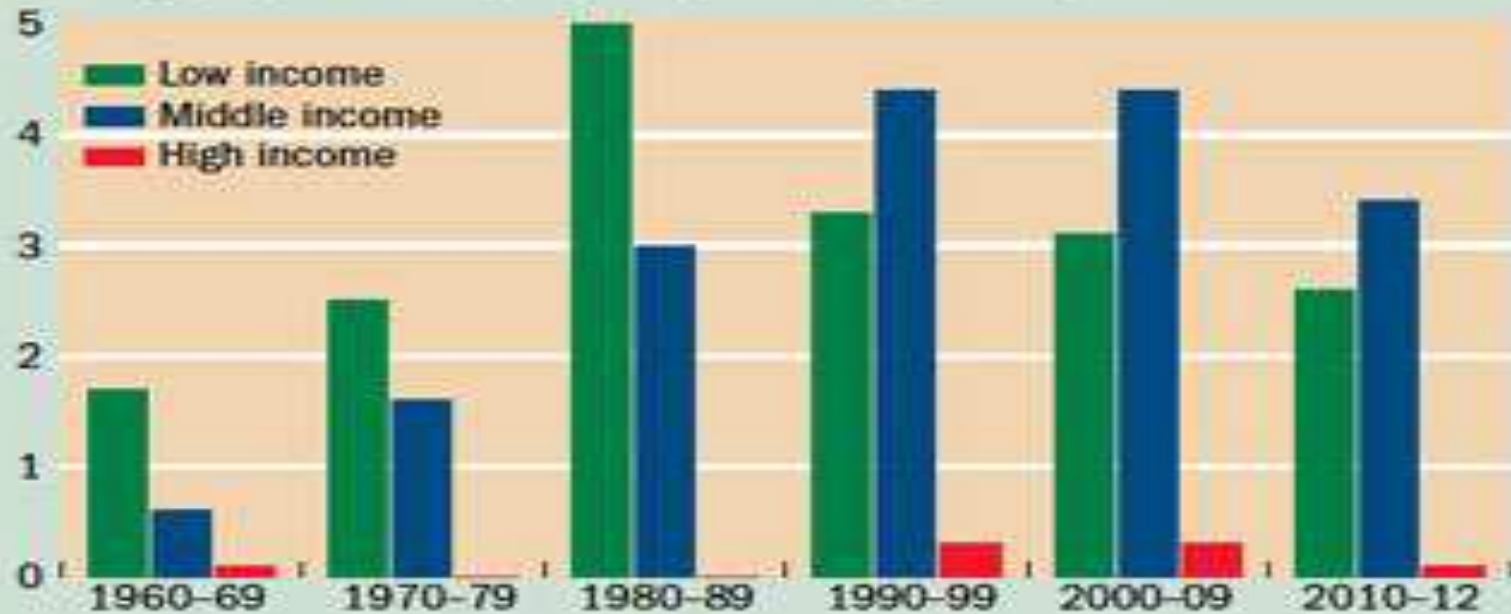
# Man versus Mother Nature: The poor more at risk

Chart 2

## Hardest hit

Disasters affect more people in developing countries than in high-income countries.

(average people affected per year, percent of population)



Sources: EM-DAT International Disaster Database; and authors' calculations.



# The Question we ask in this survey

Do Disaster Impacts ***“an equal opportunity menace”***  
to development?

# The Direct Impacts on the Poor: Sudden-Onset Events

- **Direct damages from a disaster are not evenly distributed**
  - Kahn (2005)
  - Kellenberg and Mobarak (2008)
- **Disaster risk exposure**
  - Kim (2012)
  - Baez and Santos (2008)
- **Gender differences in disaster-related mortality**
  - Neumayer and Plumper (2007)
  - World Bank (2011)

# Droughts and Rainfall Fluctuations: Overall Effects

- Differences in impacts due to **timing** and **type of disasters** (on poverty and income distribution)
- **On consumption growth, human capital accumulation, life expectancy and anthropometrics**
  - Bandyopadhyay and Skoufias (2012)
  - Maccini and Yang (2009)
  - Dercon (2004)
  - Jensen (2000)



# Droughts and Rainfall Fluctuations contd...

## ■ Impacts on Labor Market

- Mueller and Quisumbing (2011)
- Banerjee (2007)
- Mahajan (2012)

## ■ Impacts on Income

- Hou (2010)
- Asiimwe and Mpuga (2007)

# The Indirect Impacts of Sudden-Onset Events

- Rentschler (2013)
- Strobl (2012)
- Mueller and Osgood (2009)

## ■ On Migration and Remittances

- Attzs (2008)
- Halliday (2012)
- Dillon *et al.* (2011)

# The Indirect Impacts contd...

- **On pulling households into poverty trap**
  - Carter *et al.* (2007)
  - Van den Berg (2010)
- **On Population Dynamics and Fertility Response**
  - Martine and Guzman (2002); Lin (2004)
  - Finlay (2009)

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# Coping Responses of the Poor

- **Sub-optimal coping mechanism**
  - Khandker (2007)
- **Livestock sales**
  - Fafchamps *et al.* (1998)
- **Disaster microinsurance or microfinance loans**
  - Mechlar *et al.* (2006)

# Long-Term Scenarios in Disasters' Aftermath

- Limited empirical evidence
- The Case of New Orleans (Hurricane Katrina)
- Vulnerability to future poverty
- Short- to Medium-term impacts on income inequality

# Policy Concern

- I argue it is perhaps of even greater importance to determine the **long-term effects of catastrophic disasters on various income groups**, rather than only their direct and indirect short-term impacts.
  - ***Distributional impacts determined by household vulnerability characteristics.***
- One issue that may turn out to be the most important in determining post-disaster outcomes is not the degree and level of destruction, or the degree of preparedness, but the **adjustment in expectations with regard to future events** that catastrophes often prompt e.g. *Kobe, Japan*.
- Limited capacity is associated with lack of access to formal financing.
  - ***Credit constraints***
- Eventually, identifying the direct impact of disasters on the poor (in magnitude, and relative to the rich) cannot be answered by examining the cross-country distribution of costs and economic activity, since this evidence may be more related to **country-wide differences in institutional capacity and policy** that are correlated with incomes rather than dependent on incomes directly.

# Avenues for Future Research

- Designation of target-group based **risk reduction interventions**
- ***Ex ante*** Disaster Management
- Economic outcomes and potential mediating factors
- Insurance and risk-transfer instruments



# *Thank you for your kind attention!*

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## *Questions, Comments and/or Criticisms*



# Economics of Natural Disasters

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