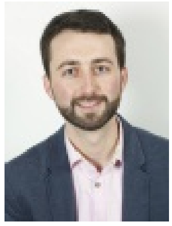
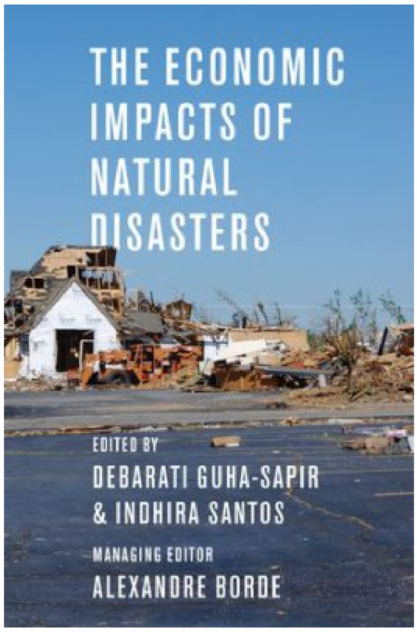
Book Review: The Economic Impacts of Natural Disasters

Blog Admin



Since the turn of the millennium, more than one million people have been killed and 2.3 billion others have been directly affected by natural disasters around the world. ***Economic Impacts*** *presents six national case studies (Bangladesh, Vietnam, India, Nicaragua, Japan and the Netherlands) and seeks to show how household surveys and country-level macroeconomic data can analyse and quantify the economic impact of disasters.* ***Tom McDermott*** *finds that this book provides a useful set of starting points both for policy debates and further research on the economics of natural disasters.*

The Economic Impacts of Natural Disasters. Edited by Debarati Guha-Sapir and Indhira Santos. Oxford Univesity Press. May 2013.



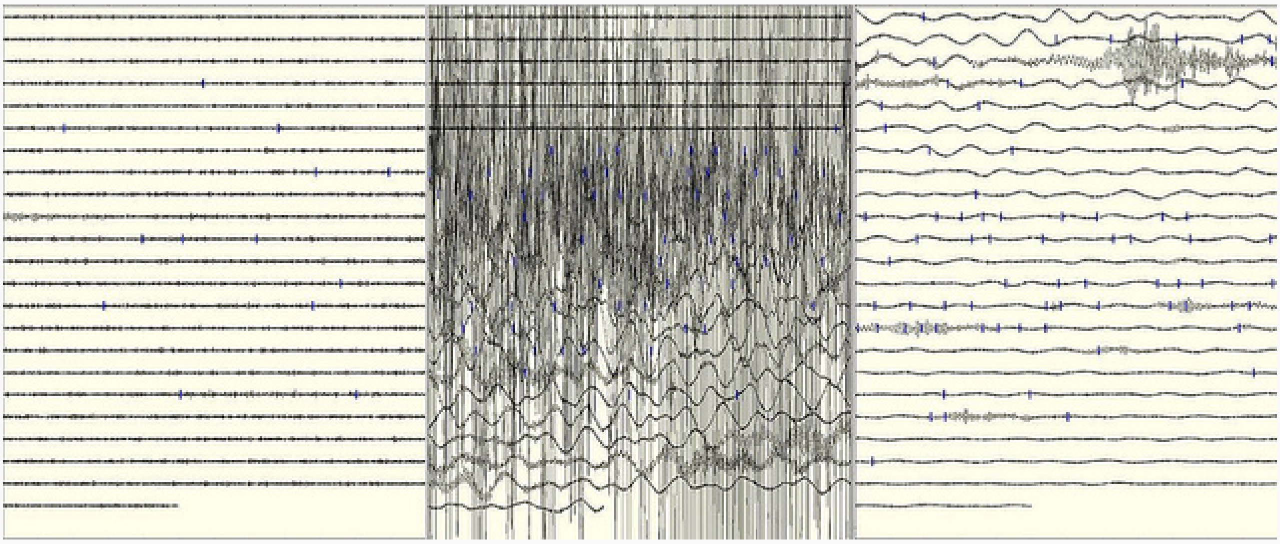
Find this book:

So-called natural disasters are defined by their impacts on society. "Nature creates hazards, but disasters are largely man-made", according to the new book *The Economic Impacts of Natural Disasters*, edited by Debarati Guha-Sapir and Indhira Santos. Indeed, natural hazards that have no impact on human society – such as a hurricane that never makes landfall – are not recorded in the standard disaster databases, such as EM-DAT. This latest collection of essays on the topic attempts both to quantify impacts, and also to illustrate the factors that turn natural hazards into human disasters.

Assessing the socio-economic effects of natural disasters is hampered by the difficulty of accurately and consistently measuring their impacts – an issue addressed in several chapters here. While the systematic recording of disaster events has improved since the Office of U.S. Foreign Disaster Assistance (OFDA) first started active data collection in 1960 and the Center for Research on the Epidemiology of Disasters (CRED) was established in 1973, estimates of economic damages are still only included for around a third of disaster events in the standard EM-DAT disaster database. Moreover, the reporting of damages also varies systematically by event type and by region, further complicating the analysis of disaster impacts on economic development. For example, we are told, of the 124 disasters that occurred in Middle Africa between 1990 and 2011, only 5 include data on damages.

As highlighted in the introduction to this volume, poverty remains the major factor determining vulnerability to disasters. However, the case studies on Vietnam and Bangladesh illustrate the paradox of development; trends such as population growth, rising incomes and urbanisation all contribute to increase societal exposure to natural phenomena. Such trends help to explain the rising cost of natural disasters over recent decades. It should also not be surprising that the costliest disasters in history – Hurricane Katrina, Superstorm Sandy, the Tohoku earthquake and tsunami – have all occurred in relatively rich countries, where there is a greater concentration of assets at risk. On the other hand, economic development generally leads to reduced reliance on agricultural output and increased resilience to disaster shocks via improvements in institutions and other risk-coping mechanisms. As a result, richer households and countries generally tend to recover more quickly from disasters. There is, therefore, a crucial distinction between monetary losses – i.e. the estimated value of (direct) economic damages – and the longer-term welfare costs of a disaster – a point which is perhaps, not sufficiently emphasised in the text.

To



Data from the seismogram archives of the The Royal Netherlands Meteorological Institute, showing the earthquake in Japan in 2011. Credit: P K (CC BY 2.0)

avoid the transient shock of a disaster having longer-term impacts, communities and individuals have developed a range of coping mechanisms, illustrated here in the case studies on Japan, Vietnam and Nicaragua. While formal insurance is the most obvious of these – indeed the oldest professional insurance company in the world is the Hamburg Feuerkasse (fire fund), established in 1676 – we are told that less than 1 per cent of losses from natural disaster are formally insured in the world's poorest countries. Even in relatively rich countries, insurance coverage against natural hazards remains sparse. For example, in the Hyogo Prefecture of Japan, where Kobe is located, only 3 per cent of households were insured prior to the 1995 earthquake. This reflects, in part, the difficulty for both insurers and households of accurately estimating the threat posed by rare and extreme events, and also the problem of diversifying that risk, given its covariant nature – disasters, when they occur, tend to affect many households in a given area simultaneously.

Other common coping strategies, from dissaving to borrowing, and various transfers, whether between households, from relatives abroad or from government, can compensate to some extent for the shock to household income and assets following disasters. However, the evidence presented here suggests that compensation often falls short of the losses incurred, and this is particularly true for poorer households, who have no savings to draw on and lack the assets required as collateral against borrowing. In such cases, the last resort of selling productive assets or withdrawing children from school, can create a vicious cycle of poverty and vulnerability.

Increasing resilience to natural hazards will require combinations of both soft and hard adaptation measures – from the pooling of risk through government-backed (or even international) insurance and credit schemes, to the more obvious construction of flood and storm defences. In both cases, however, there is the moral hazard of encouraging greater risk taking by giving people a (possibly false) sense of greater security. Recounting the sad history of flooding in New Orleans, one contributor is particularly critical of "the systematic implementation of ambitious protection upgrades after each disaster, but the absence of long-term risk management action."

The rising trend in overall disaster damages, along with a number of high profile mega-catastrophes in recent years, and concerns over how climate change is likely to alter the distribution of extreme weather events, have all led to increased attention on the socio-economic consequences of natural disasters. However, our understanding of the economic impacts of natural disasters, particularly over the longer-term, remains surprisingly limited. This book offers a timely opportunity to take stock of the state of our knowledge in this area and provides a useful set of starting points both for policy debates and further research on the economics of natural disasters.

Tom McDermott is a post-doctoral researcher at the Grantham Research Institute on Climate Change and the Environment. His research is primarily focused on the relationship between climate and economic development. He tweets @Tom_Mc_D and occasionally blogs atnottheconventionalwisdom.blogspot.com. Read more reviews by Tom.