

NATURAL DISASTERS AS CREATIVE DESTRUCTION? EVIDENCE FROM DEVELOPING COUNTRIES

JESÚS CRESPO CUARESMA, JAROSLAVA HLOUSKOVA, MICHAEL OBERSTEINER

First published: 11 June 2007

<https://doi.org/10.1111/j.1465-7295.2007.00063.x>

Citations: 205

Abstract

Recent studies found a robust positive correlation between the frequency of natural disasters and the long-run economic growth after conditioning for other determinants. This result is interpreted as evidence that disasters provide opportunities to update the capital stock and adopt new technologies, thus acting as some type of Schumpeterian creative destruction. The results of cross-country and panel data regressions indicate that the degree of catastrophic risk tends to have a negative effect on the volume of knowledge spillovers between industrialized and developing countries. Only countries with relatively high levels of development benefit from capital upgrading through trade after a natural catastrophe. (JEL O13, O30, F18)

References

Aghion, P., and P. Howitt. "A Model of Growth through Creative Destruction." *Econometrica*, 60, 1992, 323–51.

[Web of Science®](#) | [Google Scholar](#)

Aghion, P., and P. Howitt. *Endogenous Growth Theory*. Cambridge, MA: MIT Press, 1998.

[Web of Science®](#) | [Google Scholar](#)

Albala-Bertrand, J. "Natural Disaster Situations and Growth: A Macroeconomic Model for Sudden Disaster Impacts." *World Development*, 21, 1993a, 1417–34.

[Web of Science®](#) | [Google Scholar](#)

Albala-Bertrand, J.. *Political Economy of Large Natural Disasters*. Oxford: Clarendon Press, 1993b.

[Google Scholar](#)

Coe, D. T., and E. Helpman. "International R&D Spillovers." *European Economic Review*, 39, 1995, 859–87.

[Web of Science®](#) | [Google Scholar](#)

Coe, D. T., E. Helpman, and A. W. Hoffmaister. "North-South R&D Spillovers." *Economic Journal*, **107**, 1997, 134-50.

[Web of Science®](#) | [Google Scholar](#) |

Coe, D. T., and A. W. Hoffmaister. "Are there International R&D Spillovers among Randomly Matched Trade Partners? A Response to Keller." International Monetary Fund Working Paper WP/99/18, 1999.

[Google Scholar](#) |

Dacy, D. C., and H. C. Kunreuther. *The Economics of Natural Disasters*. New York: Free Press, 1969.

[Google Scholar](#) |

Eaton, J., and S. Kortum. "Measuring Technology Diffusion and the International Sources of Growth." *Eastern Economic Journal*, **22**, 1996, 401-10.

[Google Scholar](#) |

Falvey, R., N. Foster, and D. Greenaway. "North-South Trade, Knowledge Spillovers and Growth." *Journal of Economic Integration*, **17**, 2002, 650-70.

[Google Scholar](#) |

Fidrmuc, J. "The Core and Periphery of the World Economy." *Journal of International Trade and Economic Development*, **13**, 2004, 89-107.

[Google Scholar](#) |

Grossman, G., and E. Helpman. *Innovation and Growth in the Global Economy*. Cambridge, MA: MIT Press, 1991.

[Google Scholar](#) |

Keller, W. "Are International R&D Spillovers Trade-Related? Analyzing Spillovers among Randomly Matched Trade Partners." *European Economic Review*, **42**, 1998, 1469-81.

[Web of Science®](#) | [Google Scholar](#) |

Keller, W. "International Technology Diffusion." *Journal of Economic Literature*, **XLII**, 2004, 752-82.

[Web of Science®](#) | [Google Scholar](#) |

Koubi, V. "War and Economic Performance." *Journal of Peace Research*, **42**, 2005, 67-82.

[Web of Science®](#) | [Google Scholar](#) |

Lichtenberg, F. R., and B. Van Pottelsberghe de la Potterie. "International R&D Spillovers: A Comment." *European Economic Review*, **82**, 1998, 942–63.

[Google Scholar](#)

Linder, S. *An Essay on Trade and Transformation*. Uppsala, Sweden: Almqvist and Wiksells, 1961.

[Google Scholar](#)

Linnemann, H. *An Econometric Study of International Trade Flows*. Amsterdam, The Netherlands: North-Holland, 1966.

[Google Scholar](#)

Okuyama, Y. "Economics of Natural Disasters: A Critical Review." Research Paper 2003-12, Regional Research Institute, West Virginia University, 2003.

[Google Scholar](#)

Okuyama, Y., G. J. D. Hewings, and M. Sonis. "Measuring Economic Impacts of Disasters: Interregional Input-Output Analysis using Sequential Interindustry Model," in *Modeling the Spatial and Economic Effects of Disasters*, edited by Y. Okuyama and S. E. Chang. New York: Springer, 2004, 77–101.

[Google Scholar](#)

Organski, A. F. K., and J. Kugler. "The Cost of Major Wars: The Phoenix Factor." *American Political Science Review*, **71**, 1977, 1347–66.

[Web of Science®](#) | [Google Scholar](#)

Parente, S. L., and E. Prescott. "Barriers to Technology Adoption and Development." *Journal of Political Economy*, **102**, 1994, 298–321.

[Web of Science®](#) | [Google Scholar](#)

Parente, S. L., and E. Prescott. "Monopoly Rights: A Barrier to Riches." *American Economic Review*, **89**, 1999, 1216–33.

[Web of Science®](#) | [Google Scholar](#)

Parente, S. L., and E. Prescott. *Barriers to Riches*. Cambridge, MA: MIT Press, 2003.

[Google Scholar](#)

Romer, P. "Increasing Returns and Long-Run Growth." *Journal of Political Economy*, **94**, 1986, 1002–37.

[Web of Science®](#) | [Google Scholar](#)

Schumpeter, J. A. *Capitalism, Socialism and Democracy*. New York: Harper, 1950.

[Google Scholar](#)

Skidmore, M. "Risk, Natural Disasters, and Household Saving in a Life Cycle Model." *Japan and the World Economy*, **13**, 2001, 15–34.

[Web of Science®](#) | [Google Scholar](#)

Skidmore, M., and H. Toya. "Do Natural Disasters Promote Long-Run Growth?" *Economic Inquiry*, **40**, 2002, 664–87.

[Web of Science®](#) | [Google Scholar](#)

Tol, R., and F. Leek. "Economic Analysis of Natural Disasters," in *Climate, Change and Risk*, edited by T. E. Downing, A. J. Olsthoorn, and R. S. T. Tol. London: Routledge, 1999, 308–27.

[Google Scholar](#)

United Nations Development Programme. *Reducing Disaster Risk: A Challenge for Development*. New York: Bureau for Crisis Prevention and Recovery, United Nations, 2004.

[Web of Science®](#) | [Google Scholar](#)

Citing Literature



[Download PDF](#)

ABOUT WILEY ONLINE LIBRARY

[Privacy Policy](#)

[Terms of Use](#)

[About Cookies](#)

[Manage Cookies](#)

[Accessibility](#)

[Wiley Research DE&I Statement and Publishing Policies](#)

[Developing World Access](#)

HELP & SUPPORT

[Contact Us](#)

[Training and Support](#)

[DMCA & Reporting Piracy](#)

OPPORTUNITIES

Subscription Agents
Advertisers & Corporate Partners

CONNECT WITH WILEY

The Wiley Network
Wiley Press Room

Copyright © 1999-2024 John Wiley & Sons, Inc or related companies. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies.

WILEY