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# Why Some Don't Belong

## The Distributional Effects of Natural Disasters

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**Why Some Don't Belong—The Distributional Effects of Natural Disasters**

**Prepared by Nina Budina, Lixue Chen, and Laura Nowzohour**

Authorized for distribution by Stephan Danninger

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**ABSTRACT**

When and how do natural disasters worsen within-country income inequality? We highlight the channels through which natural disasters may have distributional effects and empirically analyze when and which type of disasters affect inequality in advanced economies (AEs) and in emerging and developing economies (EMDEs). We find that in AEs inequality increases after severe disasters. We also find that inequality increases if severe disasters are associated with growth slowdowns or there are multiple disasters in a year in AEs and in EMDEs. Descriptive evidence for the US also suggests that adverse labor market effects of disasters are likely to fall on vulnerable groups.

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## Executive Summary

When and how do natural disasters worsen within-country income inequality and how persistent are these effects? To answer this question, we first develop a conceptual framework outlining the channels through which natural disasters may have distributional effects. Next, we empirically analyze when and which type of disasters affect inequality in advanced economies (AEs) and in emerging and developing economies (EMDEs), respectively. To do so, we run a systematic search for plausible empirical associations using local projections with different disaster definitions and severity cutoffs. Our results suggest that income inequality, as proxied by the market Gini, tends to increase significantly following severe and repeated severe disasters, with such effects lasting several years. Specifically, we find that in AEs inequality increases after severe disasters. We also find that inequality increases if severe disasters are associated with growth slowdowns or if there are multiple severe disasters in a year in AEs and in EMDEs. We also find some heterogeneity in these effects across disaster types, with severe epidemics, droughts, and floods being significant events in EMDEs, and earthquakes in AEs. Experimenting with different definitions for severe disasters shows that both, individually large and a series of smaller disasters, can raise inequality. Finally, descriptive evidence for the US suggests that adverse labor market effects of disasters are likely to fall on vulnerable groups—the less educated, women, minorities as well as the young—corroborating the view that the increasing incidence of natural disasters will pose a palpable challenge to social cohesion for policy makers going forward.