



Hazardous disaster aid?: The crowding-out effect of international charity

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The discussion on the climate change and the possibility of an increasing frequency of natural disasters gave rise to a wide range of both theoretical and empirical research analysing various aspects of the nexus between disasters and economic development. Contrary to expectations, poorer nations do not experience more natural disasters. However, results suggest that countries with lower GDP, higher income inequality and lower quality institutions suffer more casualties after a disaster. Due to the public good character of the majority of protective measures and the inherent imperfections on the market for catastrophe insurance, adaptation activities demand a certain level of collective action. Research suggests that apart from the level of a country's GDP, bad institutions and high income inequality are the major factors that exacerbate the implementation of collective action in natural hazard management and ultimately result in higher fatalities.

An area faded out in literature, so far, is the role of foreign aid that frequently flows in great extents after catastrophes occur. In general, one would expect that foreign aid should be able to overcome some problems by financing part of the preventive measures and making people less dependent on the within-nation distribution of income. On the other hand, based on the conclusions from the Samaritan's Dilemma, the anticipation of charity in case of a disaster event might induce individuals to diminish ex-ante protection activities.

Using a theoretical model which illustrates collective mitigation activities as a function

of a proportional tax rate, we first show that the anticipation of foreign aid reduces efforts for communal self-protection. Moreover, assuming adaptive expectations, our model implies a negative relationship between foreign aid payments experienced in the past and the level of present mitigation activities chosen by the society.

Since we believe that collective action is essential for risk-management, we test our theoretical assumptions by using this indicator. First, we analyze the effect of foreign aid dependence on a country's ex-ante risk-management activity proxied by the death toll from 335 major earthquakes occurring worldwide between 1980 and 2002. Second, we estimate the probability of epidemics to emerge with respect to foreign aid received in the past. The results of the estimates suggest that foreign aid in previous disaster years implies future ex-post charity and therefore does crowd-out risk-management activities as well as decreases the ability to cope with the immediate effects after a catastrophe. The paper concludes with suggestions on how to redesign foreign aid in general and catastrophe aid in particular in order to minimize the adverse crowding-out effects.