

# Natural Disaster and Natural Selection

## Abstract

In this paper, we investigate whether a natural selection mechanism works for firm exit. By using data of firms after a devastating earthquake, the Great Tohoku Earthquake, we examine the impact of firm efficiency on firm exit both inside and outside the earthquake-affected areas. We find evidence suggesting that more efficient firms are less likely to exit both inside and outside the affected areas, which supports the natural selection mechanism. However, we also find that the mechanism is weaker for those firms whose main banks were damaged by the earthquake, which suggests that damage to banks weakens the natural selection mechanism. We also apply the same methodology to the case of the Great Hanshin-Awaji Earthquake, and again find that the natural selection mechanism works both inside and outside the affected areas. However, no significant impact of bank damage is found on the exit probability of a firm.

Keywords: firm exit, natural selection, earthquake, natural disaster, evergreening

JEL classification codes: L10, G21