

# Is Altruistic Behavior Addiction? Empirical Evidence in Japan \*

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## Abstract

This paper explores the habit formation of altruistic behavior (donations and volunteers) for natural disaster causes. To construct theoretical hypotheses, the economic model is developed, using Becker and Murphy (1988)'s rational addiction theory and Freeman (1997)'s donations and volunteer model. This economic model has two habitual behaviors: donations and volunteers. This model can predict these two behaviors are dynamically related to each other. Thus, this paper tests the effect of past volunteer activity on future donations. Moreover, this paper estimates the effect of a past volunteer on far future donations to test addiction to altruistic behavior. For the identification of habit formation, a transitory exogenous shock to the decision-making of volunteer. This variation was made by the Great East Japan Earthquake. Thus, using an instrumental variable approach, a habit formation can be identified and estimated by the effect of the volunteer in 2011 on donations after that. As a result, volunteer participation in 2011 averagely increases the probability of donation behavior in the entire future (1-6 years later). Moreover, this averagely increases the probability of donation behavior in far future (4-6 years later). This effect is stronger than the effect on the entire future, which implies that altruistic behavior for disaster is addictive. These findings are not caused by the weak instrument problem. Furthermore, These findings are almost robust even if the demand for volunteers is controlled and the sample restriction changes.

*Key Words:* Donations for disaster, Disaster volunteer, Habit formation, Altruistic capital

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