Review of: "How Social Infrastructure Saves Lives: A Quantitative Analysis of Japan’s 3/11 Disasters"

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Potential competing interests: No potential competing interests to declare.

This is an outstanding paper. It uses quantitative analysis to show that survival rates in the event of a disaster are increased by the presence of social infrastructure. Social infrastructures, such as community centers and libraries, should bring residents together and let them help one another. Although there have been studies on the Great East Japan Earthquake from various perspectives, this paper argues that the significance of social infrastructure is sufficiently high compared to gray infrastructures.

There are several points that could be improved, and I point them out below.

Vulnerable people are defined as the elderly, specifically those over 65 years old. Although there may be data limitations, I would like to see if the same results would be obtained if the age group were 75 and older, for example, as many people between 65 and 74 are still healthy and may not need much care from others.

The author should distinct clearer between green infrastructure and social infrastructure in Table 1. For example, it is a little confusing that floodable parks are considered "green infrastructure" while parks are considered "social infrastructure”. In the actual analysis in Table 2, gray infrastructure and social infrastructure are entered as variables, but green infrastructure is not, which also makes it difficult to distinguish between the two.

In Tables 2 and 3, social infrastructure is above social capital. It would be better to put social capital on top and social infrastructure on the bottom, following the order in the main text.

If the authors have any specific anecdotes or voices that support the results, please introduce them; such as examples of residents helping each other at community centers, libraries, etc.

Page 4, last paragraph

Controlling for several relevant factors, including geography, characteristics of the hazard, social ties, and economic

factors, an ordinary least squares (OLS) regression demonstrates that social infrastructure measurably and negatively correlates with reduced mortality rates. ????

Page 7,

-.23 change -> -0.23 change