README

A guide to using the Japanese Social Capital and Vulnerability Indices
by Timothy Fraser

for Manuscript:
Japanese Social Capital and Social Vulnerability Indices:
Measuring Drivers of Community Resilience 2000-2017

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This README file describes where to find the final dataset and replication data for the Japanese Social Capital and Vulnerability Indices, and highlights any recent changes.

The original indices (**Version 1**), created and shared on April 1, 2020, are highlighted as Indices V1. This included bonding, bridging, and linking social capital indices created through averaging the mean of indicators, filling in missing data by multiple imputation. The social vulnerability index was made using principal component analysis, without rotation, using mean imputation.

Important note: The original indices were also rescaled by year; this means that the index showed *for each year*, what was the city with the highest potential (1) and lowest potential (0) social capital. *This has since changed.*

The following files are associated with **Version 1**:
- *replication_data_V1_2020_04_01.zip*
- *indices_V1_2020_04_01.csv*

This index was used in the following studies:
- *Climate Crisis at City Hall: How Japanese communities mobilize to eliminate emissions*
- *Build back better: Effects of crisis on climate change adaptation in the US and Japan*
- *The Road More Traveled: Evacuation Networks in the US and Japan*
- *Do All Roads Lead to Sapporo? The Role of Linking and Bridging Ties in Evacuation Decisions*
- *The Dual Effect of Social Ties on COVID-19 Spread in Japan*

The revised indices (**Version 2**), created and shared on November 8, 2020, are highlighted as Indices V2. After comparing with hundreds of combinations of imputation styles and methods of combining indicators, the final indices selected had the following traits: bonding, bridging, and linking social capital indices were made through averaging indicators, filling in missing data with *mean imputation*. Then, the social vulnerability index was made using principal component analysis, with a promax rotation, using mean imputation. These indices score cities in terms of highest possible (1) and lowest possible (0) social capital over 17 years. (So if Sapporo has a score of 0.5 in 2001 but a score of 0.6 in 2002, this indicates that their social capital increased between 2001 and 2002.) **Please use these files (Version 2).**

The following files are associated with Version 2:

- *replication_data_V1_2020_10_28.zip*
- *indices_V2_2020_10_28.csv*

This index was used in the following studies:

- Seawalls or Social Recovery? The role of policy networks and design in disaster recovery