

## **Households with Every Member Out-of-Home (HEMO) by Visiting Interview Survey Record on Temporary Housing: Comparison with Travel Survey Data**

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### **Abstract**

Visiting homes to deliver parcels or to conduct interview surveys have become difficult tasks in Japan because many households are often in the situation in which every member is out-of-home. To examine this issue, Takahashi et al. (2018) and Fukahori et al. (2019) explored the phenomenon of Households with Every Member Out-of-Home (HEMO) using household travel survey data. They demonstrated the increase in HEMOs and attributed this change to the increase in single households and active seniors who go out/travel during the day. revealed that the change has given by the increase of single household and active senior with many daily trips. In addition, Katahashi et al. (2018) investigated the visiting survey record conducted on temporary housing in Mashiki following the 2016 Kumamoto earthquake. The temporary housing was provided by the government for disaster victims who lost their homes. The survey record included the information on visiting time of day, the day of week, and whether or not the interviewer could contact a member of the target household. Katahashi et al. (2018) investigated HEMOs in temporary housing and found that households with many employees were more accessible in the evening. Then, we questioned whether the HEMOs in temporary housing (i.e., emergent situation) are different from the normal daily HEMOs in travel surveys. The objective of this study is to compare HEMOs according to the visiting interview survey record on temporary housing and travel survey data. We used the data of the 2012 Kumamoto Person Trip Survey and 2015 National Person Trip Survey in Japan.

The results indicate that the basic trend of HEMOs is similar, but present differences in some parts. In particular, we found that the HEMO rates for households with an elderly member in temporary housing are higher than those in travel surveys. These differences can be explained by regional characteristics, occupation of household members, and difference between normal and emergent situations. These findings will be useful for conducting efficient interview surveys of people in temporary housing in future disasters. These findings will be useful to conduct efficient interview surveys on temporary housing in future disasters. The results can also contribute toward solving the re-delivery problem and safety research in the housing district for crime prevention.