

## 10 – What Affects Chinese Households' Behavior in Sorting Municipal Solid Waste? A Case Study from Shanghai, Shenyang, and Chengdu

Yanmin He, Hideki Kitagawa, Xin Kou, Peii Tsai, Choy YeeKeong

With rapid economic growth and urbanization, issues surrounding disposal of municipal solid waste (MSW) in the cities across China have become an urgent and formidable problem related to public health and environment. In this study, we aim to examine the residents' environmental behavior in sorting MSW and to clarify factors that contribute to their waste-separation cooperation and other related environmental cooperative issues based on questionnaire survey in Shenyang, Chengdu and Shanghai. Methodologically, we apply a discrete choice model to examine whether individuals' garbage sorting behavior differs based on their characteristics, social attributes, residential circumstances, environmental awareness and, whether these factors are correlated with individuals' receptiveness to refuse charge system and to policies requiring garbage sorting. We will also examine whether individuals' garbage sorting behavior, their receptiveness to fee-based waste collection, and their receptiveness to policies requiring garbage sorting differ across areas. In this survey, we will introduce a 16-item scale of pro-environmental behavior and a nine-item scale of altruism to check how internal motivational factors affect people's environmentally conscious voluntary behavior.

The results of analysis also show that participants of the garbage sorting program tend to be the elders and employed person. These results, combined with significance of external and internal moderations, emphasize the importance of strengthen advertising and educational activities on related garbage sorting policies in each community and enterprise. In addition to this, this study also shows that to promote garbage sorting in various areas in the future, it is necessary for each community to strengthen their waste sorting rules and properly set up waste collection spots.

Residents' receptiveness to refuse charge system varies across cities, and many respondents oppose such a refuse charge program. It is found that if a fee-based system were introduced, a designated-bag system would be most supported by residents.

Overall, the present work is expected to contribute to an important understanding of the motivational forces and incentives behind human pro-environmental behavior and action.

### **Biographical note**

Yanmin He is a senior lecturer at Faculty of Economics at Otemon Gakuin University, Osaka, Japan. She received a PhD from Kyoto University. Prior to joining Otemon Gakuin University, she was a research fellow at Institute of Economic Research of Kyoto University. Her research interests lie at the intersection of environmental and energy economics, public economics.