

## Completion Report

### **Determinations of Consumer Perceptions and Attitudes toward e-waste Reuse and Recycling in Japan, China and Thailand**

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The research project, entitled '*Determinations of consumer perceptions and attitudes toward e-waste reuse and recycling in Japan, China, and Thailand*', has been successfully completed. Upon the Grant being awarded, the following research activities were carried out during March 2018 – February 2019; 1) Questionnaires were developed in English, reviewed by experts, pre-tested in Thammasat University, revised, and finalized; 2) Questionnaires were further translated into Thai, Japanese, and Chinese. The translated versions were also subject to the pre-test process; 3) Local coordinators to assist in questionnaire surveys and field visits were contacted and the travel itineraries were confirmed; 4) Questionnaire surveys and field visits were conducted in Thailand in March 2018, in Japan in June 2018, and in China in October 2018; 5) Returned questionnaires were checked and confirmed their validity and then data were coded, entered, and analyzed; 6) Data analyses were performed in November 2018; and 7) Two manuscripts have been submitted to a journal for publication in January 2019 and February 2019.

The research activities conducted during the overseas trips to Japan in June 2018 and China in September 2018 and October 2018 are summarized as follows; 1) Meeting with local coordinators, authorities, and officials to facilitate the questionnaire surveys and field visits in their respective sites; 2) Conducting questionnaire surveys and interviewing residents in the study sites; 3) Participating in local events relating to environmental protection and waste management, particularly the 'Zero Waste Initiative' in Kamikatsu, Japan; and 4) Building partnerships, expanding academic networks, and exploring future collaborations in the field of waste management and environmental management with Osaka University and United Nations Environment Programme International Environmental Technology Centre in Japan and Tsinghua University in China.

This research will produce three journal publications; of which, two manuscripts have been submitted to a journal for publication. The key findings of the first manuscript, entitled '*Determinations of consumer perceptions and attitudes towards e-waste reuse and recycling in Thailand, Vietnam, Japan, and China: Part I - Consumer perceptions*', are summarized as follows; 1) Respondents from China were optimistic about its environmental conditions; 2) Respondents from Thailand were pessimistic about its environmental conditions; 3) China's villagers with e-waste practices were optimistic about environment; 4) Japan's villagers with e-waste practices were better informed of metals in e-waste; and 5) Perception gaps were found in female and older-agers towards environment and laws.

The key findings of the second manuscript, entitled '*Determinations of consumer perceptions and attitudes towards e-waste reuse and recycling in Thailand, Vietnam, Japan, and China: Part II - Consumer attitudes*', are summarized as follows; 1) Respondents from Thailand were involved most in improper e-waste dumping; 2) Respondents from Thailand had no solutions to problems of improper e-waste dumping; 3) China's villagers with

e-waste practices had solutions to improper dumping; 4) Japan's villagers with e-waste practices were least involved in improper e-waste dumping; and 5) Gender, age, education and income level were correlated with five out of six variables.

The third manuscript, entitled '*Determinations of consumer perceptions and attitudes towards e-waste reuse and recycling in Thailand, Vietnam, Japan, and China: Part III – Interactions between consumer perceptions and attitudes*', is being prepared and will be submitted for journal publication in March 2019.

The proposed research objectives of this study have been achieved. The field trips and the process of conducting the questionnaire surveys provided a very good opportunity for networking and enhancing better understanding of waste management systems in Japan, China, and Thailand. After the successful closure of this research project, a new proposal for the Sumitomo Foundation Grant, focusing on the air quality of the areas surrounding e-waste incineration facility, will be submitted. The idea for this study on the air quality is to show the importance of using incineration to disposal of e-waste while maintaining relatively clean air quality in the areas surrounding an incineration facility.

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Publication of the Results of Research Project:

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)

Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)

- Manuscript #1, entitled '*Determinations of consumer perceptions and attitudes towards e-waste reuse and recycling in Thailand, Vietnam, Japan, and China: Part I - Consumer perceptions*', has been submitted to *Waste Management* for consideration of publication on January 23, 2019;
- Manuscript #2, entitled '*Determinations of consumer perceptions and attitudes towards e-waste reuse and recycling in Thailand, Vietnam, Japan, and China: Part II - Consumer attitudes*', has been submitted to *Waste Management* for consideration of publication on February 17, 2019;
- Manuscript #3, entitled '*Determinations of consumer perceptions and attitudes towards e-waste reuse and recycling in Thailand, Vietnam, Japan, and China: Part III – Interactions between consumer perceptions and attitudes*', is currently being prepared and will be submitted for publication in a journal in March 2019.

Book (Publisher and Date of the Book, Title and Author of the Book, etc.)

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