

Factors Influencing Household Waste Separation Behavior: Cases of Russia and Finland

Supplementary materials

**Anna Zaikova ^{1,*}, Ivan Deviatkin ¹, Jouni Havukainen ¹, Mika Horttanainen ¹, Thomas Fruergaard Astrup ²,
Minna Saunila ³ and Ari Happonen ⁴**

¹ Department of Sustainability Science, Lappeenranta-Lahti University of Technology LUT, Yliopistonkatu 34, 53851 Lappeenranta, Finland; ivan.deviatkin@outlook.com (I.D.); jouni.havukainen@lut.fi (J.H.); mika.horttanainen@lut.fi (M.H.)

² Department of Environmental and Resource Engineering, Technical University of Denmark, Bygningstorvet 115, 2800 Lyngby, Denmark; thas@env.dtu.dk

³ Department of Industrial Engineering and Management, Lappeenranta-Lahti University of Technology LUT, Mikkulankatu 19, 15210 Lahti, Finland; minna.saunila@lut.fi

⁴ Department of Software Engineering, Lappeenranta-Lahti University of Technology LUT, Yliopistonkatu 34, 53851 Lappeenranta, Finland; ari.happonen@lut.fi

* Correspondence: anna.zaikova@lut.fi

Table S1. Items and latent factors measured.

Factor	Code	Item
Waste source-separation behavior (BEH)		
Q: How often do you currently collect waste separately?		
Scale: (1) Never – (5) Always		
	BEH1	Currently I separate recyclable waste from my mixed waste (e.g., glass, paper, plastic, etc.)
	BEH 2	Currently I separate hazardous waste from my mixed waste (e.g., batteries, lamps, etc.)
Waste source-separation intentions (INT)		
Q: Would you participate in separate waste collection in the future?		
Scale: (1) No – (5) Yes		
	INT1	I would follow the guidelines introduced for sorting waste in the future
	INT2	I would like to sort my waste in the future
Attitude to waste separation (ATT)		
Q: Rate how you agree with the following statements		
Scale: (1) I disagree – (5) I agree		
	ATT1	Recycling of waste saves resources and makes environment cleaner
	ATT2	Waste separation is useful for preserving our environment and resources
	ATT3	Waste separation can make environment we live in better
	ATT4	We do not have a need in waste recycling
Perceived behavioral control (PBC)		
Q: Rate how you agree with the following statements		
Scale: (1) I disagree – (5) I agree		
	PBC1	The decision to sort my waste is entirely up to me
	PBC2	I decide by myself whether to sort the waste
Subjective norms (SN)		
Q: Rate how you agree with the following statements		
Scale: (1) I disagree – (5) I agree		
	SN1	I think my closest ones expect me to separate waste
	SN2	I think my neighbors expect me to separate waste
	SN3	I think the community as a whole expects me to separate waste
Inconvenience of waste collection system (SYST)		
Q: How much can the following factors prevent you from collecting waste separately?		
Scale: (1) Not at all – (5) Very much		
	SYST1	Lack of a ubiquitous waste collection system in the city
	SYST2	Lack of convenient waste collection system
	SYST3	Separate waste containers are located too far away
	SYST4	Limited space in the house for collecting waste
	SYST5	The need to spend time on waste sorting
Availability of information (INF)		
Q: Do you have information on the following aspects?		
Scale: (1) No – (5) Yes		

- INF1 Possibilities to collect waste separately in your area
- INF 2 Where you can bring the separately collected waste
- INF 3 How to sort waste
- INF 4 Where to find information about separate collection of waste

Economic incentives to waste separation (ECON)

Q: How important are the following factors to you when sorting waste?

Scale: (1) Not at all important – (5) Very important

- ECON1 Monetary benefit in waste sorting
- ECON 2 Reduced waste collection fees when I sort the waste
- ECON 3 Refund of the cost of packaging (for example, plastic bottles) if I recycle it

Distrust of waste collection system (DISTR)

Q: Rate how you agree with the following statements

Scale: (1) I disagree – (5) I agree

- DISTR1 I am not sure whether separately collected waste is treated accordingly
- I suspect sorted waste often does not get recycled and is landfilled
- DISTR2 anyway
- I want to be more confident that the separately collected waste will be
- DISTR3 recycled