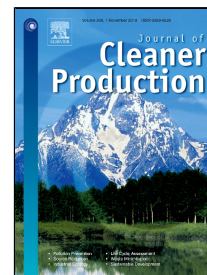


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The Economy of E-Waste Collection at the Individual Level: A Practice Oriented Approach of Categorizing Determinants of E-Waste Collection into Behavioral Costs and Motivation

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Abstract

In order to foster e-waste recycling, it is necessary to identify the factors that affect consumers' recycling of e-waste and to determine the degree to which these factors influence recycling behavior. We propose that environmental motivation and behavioral costs are the two determinants of e-waste recycling, but only behavioral costs can be manipulated effectively in the short term. We conducted two field trials and tested the effects of direct approaches (i.e., structural improvements such as curbside collection and deposit containers) and indirect approaches (i.e., material and social enticements) that were designed to reduce behavioral costs. Results showed that the direct approach led to more than a 14-fold increase in e-waste recycling compared to the control condition. This effect increased even further in the second field trial in which behavioral costs were indirectly decreased through a combination of social enticements that addressed social norms, group identity, and social commitment. These findings show that expensive structural improvements (e.g., setting up deposit containers for e-waste) can be outperformed by e-waste collection campaigns that address social motives.

Keywords: electronic waste (e-waste), recycling, environmental motivation, behavioral costs, structural interventions, social enticements

Highlights:

- In two field trials e-waste recycling was fostered by reducing behavioral costs
- Behavioral costs can be reduced both by structural and psychological interventions
- E-waste recycling rates were increased up to a factor of 14
- Social enticements were most effective to increase e-waste recycling

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