(49)

Estimating Households' Willingness to Pay for Composting of Solid Waste: A Choice Experiment Approach

Gurupatham, W.E.S., Sivashankar, S.*, Sooriyakumar, K., Sarujan, S.

Department of Agricultural Economics, University of Jaffna, Jaffna, Sri Lanka
**ssivashankar@univ.jfn.ac.lk*

Abstract

Rapid urbanization and a growing population cause difficulties in managing household waste in Sri Lanka. Improper management of household waste adversely affects both the environment and public health. Composting is an effective practice that lessens the adverse effects of household waste. Therefore, this study employed the choice experiment approach to analyze the households' preferences and willingness to pay for solid waste composting. This study considered attributes such as composting, recycling, separation, and payment. A random sample of 331 households was selected in the Jaffna Municipal area. The random parameter logit and latent class models were used to estimate the households' preferences for attributes chosen for this study. The findings of this study revealed that households are willing to pay more for waste collection (LKR 761.40), followed by waste composting (LKR 466.47), waste recycling (LKR 367.73), and waste separation (LKR 303.99). Moreover, respondents' age and household monthly income significantly influence their preference for composting. The latent class model identified two classes. The latent class model results suggest that respondents in class one (environment-conscious households) had a significantly higher willingness to pay (WTP) for waste composting, at LKR 1,239.58, compared to class two (payment-conscious households), whose WTP for waste composting was LKR 100.29. This study's findings will help policymakers or local municipal councils design an effective service payment system for managing household solid waste and composting, which will help to address the challenges associated with household solid waste.

Keywords: *Composting, Latent class model, Random parameter logit model, Solid waste, Willingness to pay*