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Waste Disposal Determinants and Disparities: Evidence from Islandwide Survey in Sri Lanka

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Abstract

Waste management is a vital aspect of economic development, human development, and environmental sustainability. Identifying the socioeconomic background behind the household behaviour toward waste disposal highlights could provide important insights towards better waste management. Therefore, this study investigates trends and the demographic and socioeconomic determinants of waste disposal methods at the household level in Sri Lanka. Data were obtained from the Sri Lanka Household Income and Expenditure Survey conducted in 2019 covering 19,838 households. Multinomial logit model is used to identify factors influencing the choice of household waste disposal mechanism. Results indicate that burning waste is the dominant household waste disposal method in Sri Lanka, accounting for 45.5% of households, while dumping within premises at 27.7% and garbage truck collection at 21.8%. Waste collection services are used by 79% of urban households. More than half of rural and estate households burn their waste, and more than a third dump of it on-premises. While 45 percent of households in the Western and Eastern provinces use the waste collection service, other provinces mostly depend on waste burning and on-premises waste dumping. Model estimates reveal that waste collection services are more likely to be used in urban areas with relatively short distances to local authorities with single housing units, and wealthier households led by more educated individuals and the presence of older household members. Composting is more likely to be used as a waste disposal method among single housing units, and wealthier households led by more educated persons and older household members. Waste burning is preferred by households located further from municipal authorities and representing various socioeconomic subgroups. Single household units and line rooms representing various socioeconomic groupings, excluding urban households, prefer on-premises waste dumping. The findings highlight the polarization of disposal methods according to the sector and suggest the importance of introducing effective and safe waste disposal methods to households, particularly in the rural and estate sectors, in order to reduce hazardous waste disposal practices.

Keywords: Waste management, Household survey, Sri Lanka, Multinomial logistic