

Demand Estimation of Household Food Waste: A case from Kurunegala District

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Household food waste is driven by consumer habits and behavior. It differs with demographic, social, and economic factors. This study aims to determine whether household food waste is a luxury good and identify how demographic and socioeconomic factors affect household food waste. For this, a Quadratic Almost Ideal Demand System (QUAIDS) model was used, which is augmented with demographic, socioeconomic, and expenditure controls. Data were obtained in October 2022 through an online survey from 195 respondents living in the Kurunegala District of Sri Lanka. Data on food habits and quantity of food waste in food categories based on the consumption of most households in Sri Lanka, namely, rice, other cereals, pulses, fruits, vegetables, meat, fish, dairy products, eggs, and miscellaneous foods. Values (expenditure) on the waste of each food category were calculated by multiplying expenditure on each food category with the percentage of waste, and then expenditure share on each category of household food waste was obtained. The demand system estimation showed that all expenditure elasticities for all food waste categories as positive, indicating that they are normal goods. Food waste categories were identified as luxury goods or necessary goods. Waste of rice, other cereals, pulses, fruits, vegetables, and miscellaneous food in the household were necessary goods, while the waste of meat products, fish, dairy products, and eggs food categories were luxury goods. Expenditure share on household food waste differs with residence area. High-income group of households shows higher expenditure shares on food waste, lowest in the low-income group, and in between among middle-income households. Expenditure shares and expenditure elasticities vary with demographic, social, and economic factors. According to the study, most households practiced different management practices and they had positive attitudes toward minimizing household food waste.

Keywords: Demand estimation, Expenditure elasticity, Household food waste, QUAIDS