

Demand Estimation of Household Food Waste in Kurunegala District

Thilakarathna G.D.S. and Weerasooriya S.A.*

Department of Agricultural Economics and Business Management,
Faculty of Agriculture, University of Peradeniya, Peradeniya, Sri Lanka

Household food waste is driven by consumer habits and behavior. It differs with various demographic, social, and economic factors. This study aims to determine whether household food waste is a luxury good or not 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, socio-economical, and expenditure controls. From 195 respondents, using an online survey, we obtained data on food habits and food waste in the Kurunegala district for October 2022. In this case, food categories were selected based on the consumption of most households in Sri Lanka, namely, rice, other kinds of cereals, pulses, fruits, vegetables, meat, fish, dairy products, eggs, and miscellaneous foods. Expenditure on the waste of each food category was calculated by multiplying expenditure on each food category with the percentage of waste, and then expenditure share on each household food waste was obtained. The demand system estimation showed that all food waste categories are normal goods i.e., expenditure elasticities were all positive. Based on the expenditure elasticities, food waste categories were demarcated as luxury goods or necessity goods. Waste of rice, other cereals, pulses, fruits, vegetables, and miscellaneous food at the household level were necessity 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: Expenditure elasticity, Household food waste, QUAIDS

*senalw@agri.pdn.ac.lk