

## **Assessment of Consumer Perceptions on Polythene Grocery Bags and Their Alternatives; A Study with Supermarket Consumers in Kurunegala**

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Plastic grocery bags can cause a variety of environmental problems. Even though a ban on using polythene with a thickness below 20 microns was imposed in 2017, the intended outcome could not be achieved due to the ignorance of consumer preferences of the authorities and the unavailability of suitable alternatives at a reasonable price. In this context this study was carried out to evaluate how people value environmentally friendly approaches against polythene grocery bags, to estimate the different trade-offs among the consumer preferences on packaging material, and to evaluate the relative importance of each attributes of packaging materials. Research design is developed based on random utility models as a discrete choice experiment. Four attributes, namely reusability, environmental friendliness, convenience & availability and price per unit use with three levels each generated 81 treatment combinations and this was reduced to 9 choice sets using Fractional factorial design. The study population was supermarket consumers in Kurunegala district. The study generated 440 observations which were analyzed through a conditional logistic regression model in STATA 14.0. Part-Worth Utilities were calculated according to coefficients of variables. Consumers are willing to pay an additional amount of money over current price for attributes and their levels of shopping bags. Consumers' Marginal willingness to pay is highest, when shopping bags are more times reusability. Consumers' Marginal willingness to pay is lowest, when shopping bags have moderate biodegradability. Consumers are willing to pay 'around Rs.9.13 for one-time use with desirable environmental characteristics including reusability, biodegradability, and convenience. Due to consumers' Marginal willingness to pay is highest, when polythene bags are more times reusability, reusable bags can be promoted and improved by banning single-use polythene bags, using technology, promoting the use of polyester reusable bags, increasing the availability and affordability of reusable bags, promoting the use of polyester reusable bag.

**Keywords:** Choice experiment, Conditional logistic model, Fractional factorial design, Part-worth utility, Supermarket consumers

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