



## Consumer Preference and Willingness to Pay for Non-Plastic Food Containers in Honolulu, USA

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### ABSTRACT

Expanded polystyrene (EPS), a petroleum based plastic polystyrene, has an immense environmental impact with a degradation rate of over 500 years, and is a possible human carcinogen that may cause cancer in humans. Nonetheless, EPS is the most commonly used material to produce takeout food containers, a single use item that is quickly discarded. With growing recognition of the high environmental costs of EPS products and their pressure on landfill resources, EPS food container bans have become increasingly popular in jurisdictions across the globe. Similar legislation has been introduced in the state of Hawaii, USA. However, since EPS is currently more cost effective than its alternatives, the widespread adoption of food containers produced with biodegradable materials remains a challenge. This study employs Conjoint Choice Experiment (CCE) to determine consumer preference and willingness to pay for plant-based EPS alternative takeout food containers and their various product attributes in the urban center of Honolulu, Hawaii. Latent Class Analysis (LCA) is used to cluster respondents into four distinct classes based on their observable attributes of choice. Results show that the majority of respondents (81.0%) are in favor of a ban on EPS takeout food containers. As an alternative, the majority of respondents prefer a container constructed out of a sugarcane material (66.49%) that is microwaveable (88.94%), water resistant (100%), and locally produced (51.23%). Moreover, this study demonstrates an increase in consumer's willingness to pay for more environmentally friendly food containers, which may allow businesses to offset the costs of substituting EPS for biodegradable materials. These findings provide valuable information for farmers, manufacturers, and natural resource managers, and can help to guide decision makers when considering socially responsible and environmentally sustainable policies.

### KEYWORDS

Expanded Polystyrene (EPS), Plastic Food Containers, Conjoint Choice Experiment (CCE), Latent Class Analysis (LCA), Consumer Preference, Honolulu

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