

Executive Summary

Petrochemical-based plastics are used extensively in the production of shoes; however, large-scale use of plastic can cause large amounts of CO₂ emissions and environmental damage through the extensive amount of time that is needed to dissolve plastic. An alternative to the use of conventional plastics in the development of footwear is bio-based plastics. This study investigates the Indonesian consumer preferences towards bio-based plastic footwear using choice-based conjoint analysis as not much data is available on this from previous research. Information regarding trade-off can be used by brand marketing managers to develop products that are attractive to Indonesian consumers while also being environmentally sustainable. The study also analyzes the effect of eco labels on consumers' preferences when purchasing footwear, in particular, two types of labels: self-declared and government eco labels. To achieve this, a survey regarding consumer preferences of bio-based plastic footwear was distributed.

This study examines the willingness to pay for bio-based footwear of Indonesian consumers using choice based conjoint analysis. The attributes studied in this conjoint research include price, material, eco-label, and lifespan. The main research question is:

- How do price, material, eco label, and lifespan influence willingness to pay for bio-based footwear in the Indonesian market?

Segmentation analysis was implemented to investigate the differences in consumer preferences based on socio-demographic and pro-environmental behavior. To evaluate pro-environmental behavior, respondents' behavior regarding environmental behaviors were asked in the survey, specifically green self-identity, reduce, reuse, and recycle behavior. Therefore, the sub research questions are:

- To what extent are the differences in perceived value influenced by age, income level, education level, and gender?
- Does a consumer's green self-identity and behaviors to reduce, reuse, and recycle affect their perceived value?

Data was collected via a survey that was distributed in June, 2022, to people of Indonesian citizenship. The survey consisted of 3 parts, namely: 1) questions regarding socio-demographics; 2) questions regarding consumer's pro-environmental behavior; and 3)



questions of choice based conjoint experiment. 284 respondents filled in the survey with a 91% completion rate. The sample depicts the young educated urban Indonesian consumer. The conjoint analysis part of the survey consisted of 8 conjoint questions with 2 alternatives provided in each question. Thus, binary logistic regression was used for the analysis. Willingness-to-pay analysis analyzed the sample population's amount of money that they were willing to pay for a certain attribute. Finally, segmentation analysis analyzed differences in utility gained based on demographics and pro-environmental behavior.

The results of the analysis indicated young educated Indonesian consumers are willing to pay more for a government eco label (€28) than a self-declared eco label (€17), both types of labels showed an increase in willingness-to-pay compared to no eco label at all. Material is the most important attribute for the young educated urban Indonesian consumer as a 1% increase in bio-based plastic material led to an increase of willingness to pay of €0.4. 1 year increase in footwear lifespan increased the willingness-to-pay by €13.9. Insights gained from this research show that green consumers prefer footwear products with certified eco labels, such as a government or self-declared eco label, while less green consumers put less emphasis on the eco label of their footwear. However, no evidence is found that difference in socio-demographic effects the consumer preference of the sample.

The results of this study can help to promote footwear products being made from bio-based plastic as brand and marketing managers can utilize the results in their strategies. When targeting young educated urban Indonesian consumers, brand managers should put more emphasis on producing footwear with a greater percentage of bio-based plastic. In addition, obtaining a government eco label certification can attract more consumers to purchase the product, as this is a feature that provides easy evaluation of the environmental impact of the product.