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WHEN DOES SIZE MATTER? AN EMPIRICAL STUDY OF CONSUMER DEMOGRAPHICS AND PRODUCT PACKAGE CHOICES

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The consumer packaged goods (CPG) market is one of the largest industries in the United States. In 2015, the industry recorded \$635.8 billion in sales within the United States (MNI Targeted Media). CPG products are packaged in small sizes, such as single units, or large sizes, such as multiple units, with the latter typically priced at lower price per standardized unit (e.g., ounce). Consequently, it is more beneficial for consumers to purchase large size packages if there is low inventory-holding and transportation costs. Our research explores how demographic factors may influence the package size purchase decisions made by consumers on household items. The dataset consists of five years (2011-2015) of available household purchase data from the Nielsen-Kilts Consumer Panel Dataset, which comprehensively tracks purchase information for 40,000-60,000 U.S. households, along with demographic, retailer, and product information. Our research focuses on the beer category and defines the size of a purchase as “small” or “large” based on total ounces of a given package. The demographic variables that are evaluated include income and race. In order to control for exposure to price differences, each household purchase was tracked to the store level at the week of purchase, and controlled for with an average price ratio between large and small package sizes. We hypothesize that consumers in the lowest income class will purchase smaller size packages because of the lower total prices, while the highest income class will purchase smaller size packages due to just-in-time convenience purchasing. Alternatively, we hypothesize that consumers in the middle income class have a higher probability of purchasing large package sizes in response to the low holding costs and higher transportation costs. Additionally, we anticipate store price promotions to have a greater impact on package size purchases among the lower and middle income households, in comparison to the higher income households, because the former are more price sensitive. With the effects observed in our analysis, we look at the broader applications of this knowledge in the CPG industry and draw implications for future business decisions.