

Modeling Variation in Brand Preference: The Roles of Objective Environment and Motivating Conditions

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Abstract

People consume products in a variety of environments. They drink beer, for example, by themselves, with close friends, on the beach, when playing cards, at tailgate parties, and while having dinner with their boss. Within these environments, an individual may prefer Schaefer beer when drinking alone, Budweiser when having a party, Corona when lying on the beach, and Heineken when dining out. Preferences change across environments because the benefits sought by the consumer change. Consumers may feel thirsty while lying on the beach, and they may want to display refined tastes while dining out. Moreover, the effect of environment may not be homogeneous, as some people enjoy meeting new people in social gatherings while others may prefer to visit with those who are more familiar. Even though consumers face the same objective environment, different motivating conditions and brand preferences may arise.

It is important for marketing managers to understand how brand preferences change across people, environments, and motivating conditions and, more importantly, which product attributes are associated with these changes. Communication and positioning decisions are more likely to be effective if the relationships among objective environment, motivating conditions, and preferences for brand attributes are known. If motivating conditions are uniquely associated with individuals across environments, or with environments across individuals, then the basis of marketing analysis is at the individual or environmental level. If, however, motivating conditions arise from the intersection of individuals and their environments, then analysis conducted at the individual or environmental level will be insufficient to understand human behavior. In such a case, firms may want to view different environments as distinct markets, each with its own pattern of heterogeneous wants and competitive environment.

In this paper, the influence of objective environments and motivating conditions on brand preference is investigated. The mathematical model is based on the economic framework of utility maximization and discrete choice, and it accommodates three challenges that arise in modeling variation in brand preference. First, consumer consideration sets and purchase histories can vary widely across individuals in a relevant universe. Because brand preferences are the dependent variables in our analysis, our method must be able to accommodate a large number of brands to avoid restricting its measured variation as the objective environment and motivating conditions change. We propose a method using partial ranking

data, combined with pairwise trade-off data, to obtain estimates of brand preference for all brands in our study. Second, the model must allow for multiple effects, leading to both within-person and across-person heterogeneity in preferences. Variation in brand preference is investigated within a hierarchical Bayes model in which motivating conditions are related to brand preference through a regression model in the random effects specification. Third, it is often counterintuitive for respondents to express preferences for attribute combinations that do not actually exist. A statistical method model is proposed for decomposing aggregate brand preferences into preferences for core and extended product attributes.

Data are collected from a national survey of consumer off-premises beer consumption. A total of 842 respondents from six different geographic markets participated. Data include preferred brand sets under different objective environments, brand choice rankings, product attributes, and motivating conditions. Effect sizes for respondent and objective environment are both large. We found that the level of explained variance in brand and attribute preference attributable to motivating conditions is greater than that accounted for by a simple interaction of respondent and environmental effects, suggesting that motivations provide a more sensitive description of variation in brand preference. Our findings indicate that 1) across individuals the objective environment is associated with heterogeneous, not homogeneous, motivating conditions; 2) within an individual, motivating conditions may change with variation in the objective environment; and 3) motivating conditions are related to preferences for specific attributes.

Our results imply that the unit of analysis for marketing is properly a person-activity occasion. Brands, for example, are used in individual instances of behavior—a brand performs well or poorly on individual occasions of use. The relevant universe is enumerated in person-activity occasions rather than in respondents. For some activities, such as doing the laundry, the occasions may typically occur in relatively unchanging environments, and it may be appropriate to allow respondents to summarize over occasions of the activity. For other activities, such as snacking or drinking beer, the activity may occur in distinct kinds of environment. In the case of such activities, it is appropriate to allow for the effect of changing environments to manifest themselves, if present. Doing so may require sampling from the relevant universe of person-activity occasions over an appropriate time frame. The design must be such as to record intraindividual variability due to changes in the environment for action.

(Extended Choice Models; Hierarchical Bayes; Unit of Analysis)