

# Latent Models for Brand Equity Metrics

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## **Abstract**

Brand metrics like awareness, consideration, preference and purchase have a long tradition in marketing and play an important role in measuring and enhancing brand equity. Most of these brand variables have the form of texts (bag of words/brands), and natural methodologies for the analysis of these data structures are topic modeling and the popular Latent Dirichlet Allocation (LDA) model used in text analytics. In documents, words are repeated multiple times and the natural probability distribution for their representation is the Multinomial distribution. This paper proposes an extension/modification of the Latent Dirichlet Allocation (LDA) model for brand metrics that incorporates Bernoulli and Binomial distributions to model observations that have such structure, including awareness and consideration sets, among others. The proposed model assumes that, in consumers' minds, brands are grouped into clusters which can enhance managerial insight, beyond the usual descriptive analysis. A simulation exercise shows the relevance of the model's extension, and an application shows the gains from the proposed methodology.

**Keywords:** *Brand Metrics; Latent Allocation Models; Cluster Analysis*

**Track:** Methods, Modelling & Marketing Analytics