

Title: Does fMRI Data Improve Predictions of Product Adoption by Store Managers and Sales to Consumers for Consumer-Packaged Goods?

Abstract:

This paper investigates the value of adding functional magnetic resonance imaging (fMRI) data to predict success of consumer-packaged goods, as captured in (1) store manager adoption and (2) store sales. Our approach combines fMRI data from a relatively small sample of individuals with in-house observable market data such as price and promotional level, customer attitudes based on a representative survey, and incentive-aligned purchasing behavior. Using a regression tree model, we show that fMRI data can significantly enhance predictions of consumer choice as captured in sales per store. We also show that the fMRI data is the most valuable to predict sales of more innovative products. However, more traditional measures such as representative surveys are more valuable in improving forecasts of product adoption rates by store managers. We quantified the benefits of the improved predictive power of each data type and compared it with its costs. Our findings help managers to evaluate the benefits of collecting fMRI data, beyond traditional data sources, to predict the future market success of their products.