

An Empirical Model of Consideration through Search

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Abstract

We propose a tractable method for the estimation of a consideration set model in which consideration sets are endogenously determined through search. Products are differentiated in our model and consumers use a non-sequential search strategy to find out whether a product is a good fit. An important feature of the model is that we allow for a different weight to be put on expected utility versus search costs when making search decisions, and we show that the alternative specific consideration model is a special case in which consumers put zero weight on expected utility. Furthermore, for Type I Extreme Value distributed search costs, expressions for search and purchase probabilities can be obtained in closed form. We allow for price endogeneity when estimating the model and show how to obtain parameter estimates using a combination of aggregate market share data and individual level data on search and purchases. To deal with the dimensionality problem that typically arises in search and consideration models due to a large number of consideration sets we propose a novel Monte Carlo estimator for the consideration and purchase probabilities. Monte Carlo experiments show that our Monte Carlo estimator is accurate and computationally fast. We use several existing data sets to illustrate that our approach works well in practice and find that our method can correctly identify whether or not consideration sets are determined through optimal non-sequential search decisions.