Abstract

We consider revenue management models for pricing a product line with several customer segments, working under the assumption that every customer's product choice is determined entirely by their reservation price. We model the customer choice behavior by several probabilistic choice models and formulate the problems as mixed-integer programming problems. We study special properties of these formulations and compare the resulting optimal prices of the different probabilistic choice models. We also explore some heuristics and valid inequalities to improve the running time of the mixed-integer programming problems. We illustrate the computational results of our models on real and generated customer data taken from a company in the tourism sector.