

Assortment Management and Marketing Efforts by Customer Behaviors

Jen-Yen Lin

Department of Industrial and Information Management, National Cheng Kung University

E-mail: jylinor@gs.ncku.edu.tw

Abstract

In e-commerce, it is crucial to provide customers with customized product assortments. With the advancement of the internet, more and more consumer purchase data is being stored. Retailers can utilize this data to select customized product combinations for customers from alternative items, while leveraging market effectiveness management to enhance customers' willingness to purchase. This study proposes a robust optimization method that integrates product assortment planning and market effectiveness management, which serves as a basis for formulating sales product strategies for retailers.

In this presentation, we will discuss a mathematical model that describes how to provide customers with a robust product assortment. This mathematical model is based on a three-layer optimization problem constructed using the NML approach, and is solved using fractional programming.

Keywords Customized assortment, marketing effort, multinomial logit model, robust optimization