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異なる情報源を統合した新製品普及過程の推定

Estimating the Diffusion Process of a New Product Using Multiple Data Sources

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**Abstract:**

This study examines how to synthesize more than one data source to estimate the Bass diffusion process model involving the innovation of new products and apply this model to an empirical case. Although institutions independently conduct market surveys, as the number of samples differ for each survey, the reliabilities differ too. In this study, we use different sources that take into account each reliability. As a result, we find that estimate diffusion curve weights on reliable sources. In addition, we examine the applicability of the Markov Chain Monte Carlo (MCMC) method and propose a hierarchical model in order to estimate parameters for each source and assume a common prior structure.

**Key words:**

Bass Diffusion Model, Product Diffusion Rate, Markov Chain Monte Carlo Method