## Accepted Manuscript

Comparing alternatives to account for unobserved heterogeneity in direct marketing models

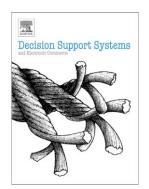
Nadine Schröder, Harald Hruschka

PII: S0167-9236(17)30155-0 DOI: doi:10.1016/j.dss.2017.08.005

Reference: DECSUP 12871

To appear in: Decision Support Systems

Received date: 14 December 2016 Revised date: 4 August 2017 Accepted date: 30 August 2017



Please cite this article as: Nadine Schröder, Harald Hruschka, Comparing alternatives to account for unobserved heterogeneity in direct marketing models, *Decision Support Systems* (2017), doi:10.1016/j.dss.2017.08.005

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

### ACCEPTED MANUSCRIPT

# Comparing alternatives to account for unobserved heterogeneity in direct marketing models

Nadine Schröder\* a, Harald Hruschka

<sup>a</sup> Universitätsstraße 31, 93040 Regensburg, Germany

#### **Abstract**

We are dealing with mailing decisions of a direct marketing company and focus on assessing three alternative approaches to model unobserved heterogeneity, which are based on finite mixtures, continuous mixtures, and a mixture of Dirichlet processes (MDP), respectively. Models are estimated by Markov Chain Monte Carlo (MCMC) simulation. Based on Pseudo Bayes factors (PsBF), we find that a finite mixture model turns out to be superior both to models based on either a MDP or a continuous mixture. Whereas the MDP finds similar estimates compared to the finite mixture approach, estimates of the continuous mixture differ for some variables. According to the finite mixture, type of mailing has an effect on purchase behavior. In addition, some customers show supersaturation effects of mailings. Due to different coefficient estimates, managerial implications differ depending on which model they relate. In particular, a continuous mixture model would recommend more mailings than a finite mixture approach.

Keywords:

unobserved heterogeneity, direct mailings, hierarchical Bayesian models, mailing effects

Email addresses: nadine.schroeder@ur.de (Nadine Schröder\*), harald.hruschka@ur.de (Harald Hruschka)

<sup>\*</sup>Corresponding author

# دريافت فورى ب

## ISIArticles مرجع مقالات تخصصی ایران

- ✔ امكان دانلود نسخه تمام متن مقالات انگليسي
  - ✓ امكان دانلود نسخه ترجمه شده مقالات
    - ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
  - ✓ امكان دانلود رايگان ۲ صفحه اول هر مقاله
  - ✔ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
    - ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات