

School of Management and Marketing
Seminar Notice

TITLE : **Modelling Profitability Dynamics of Customer-Firm Relationships using Transaction Data**

SPEAKER : **Dr Thomas Reutterer**
Vienna University of Economics and Business Administration
Austria

BIOGRAPHY

Dr Thomas Reutterer holds a Ph.D. and a postdoctoral degree ('Habilitation'; *venia docendi*). He is an Associate Professor at the Institute of Retailing and Marketing from the Vienna University of Economics and Business Administration (VUEBA). He was a Visiting Professor at the University of Sydney, prior business experience are including a one-year commitment as a consultant with Simon-Kucher & Partners, Marketing & Strategy Consultants. His current research interests are including retail pricing and category management, market basket analysis and cross-category effects, customer relationship management (CRM) as well as dynamic customer segmentation. Dr. Reutterer authored and co-authored numerous articles in leading international journals such as *Marketing Science*, the *European Journal of Operational Research (EJOR)*, *Computers & Operations Research*, the *Journal of Interactive Marketing*, *Lecture Notes in Computer Science*, the *Journal of Retailing and Consumer Services*, and *Industrial Marketing Management*. His research was awarded with several prizes; among others, he was member of one of the 2005 finalist teams for the, [INFORMS Society of Marketing Science Practice Prize](#), which is awarded for outstanding implementation of marketing science concepts and methods. [\[more information\]](#)

Major Research Interests include

- Customer Relationship Management (CRM)
- Marketing Models and Adaptive Methodology (Participant of a former [SFB, Initiative #3](#))
- Market Basket Analysis and Assortment Management
- Market Segmentation and Product Positioning
- Retail-Marketing and Retail Revenue Management

DAY/DATE : Thursday, **14 February 2008**

TIME : 12.30-1.30p.m.

VENUE : **40A.G81**

ABSTRACT

Many firms collect tremendous amounts of personalized transaction data and integrate them in their customer databases to analyse the profitability of their customers. Prior research shows that focusing on those customers with high estimated lifetime value can result in higher profitability and thus in a more efficient investment of scarce marketing resources. However, in spite of their forward looking properties, such metrics ignore the dynamic nature of evolving customer relationships. This paper develops a modelling framework for studying the profitability dynamics of noncontractual customer-firm relationships. Our approach is based on the building blocks of the customer lifetime value concept, but explicitly respects the evolution of customer profitability over time. We classify each customer's period-wise profitability contributions to the firm into profitability tiers and model period-to-period transitions between these tiers as a Markov process with unknown transition matrix. Unsupervised heterogeneity is captured by assuming a finite mixture of Markov chains. The model parameters are estimated using empirical Bayesian methodology. We demonstrate that the presented Markov chain clustering model enables loyalty managers to detect customer segments which differ significantly in terms of the profitability evolution of their respective members. The approach is empirically illustrated using transaction data of a customer cohort acquired by an

apparel retailer. We conclude with a discussion of managerial insights gained from the study and outline some extensions of the proposed approach as an agenda for future research.

Keywords

Customer relationship management, Markov chain models, relationship dynamics, clustering, segmentation

Lunch will be provided. **RSVP** thanks.

SMM Research Seminar Series Convenor,

Joshua Chang