PhD Course

Addressing Endogeneity in Marketing

block course: July 12. and 13. 2016; 09:00 - 13:00 h

Welckerstr. 8; 2.18

Course Instructor: Prof. Dr. Harald van Heerde (Massey University, New Zealand)

Course Value: 1 SWS or 2 LP

Course Overview:
This course will focus on methods and approaches to tackle the problem of endogeneity.

Course Contents:
This course will focus on methods and approaches to tackle the problem of endogeneity. Topics include (1) Causality & Endogeneity, (2) Instrumental Variable Estimation, including (a) How IV works, (b) the Choice of Instruments, (c) Multiple endogenous regressors, Quadratic effects & Interactions, (d) Binary endogenous regressors, (e) Control function, (f) Holdout sample validation, (3) IV-Free methods
Some background in linear regression and statistics will be assumed. Individual (or two-person team, with permission) research assignments will be required.

Student evaluation will be based on class participation and performance on assignments.

Software: Please bring a laptop with your preferred statistical software: either Stata, SPSS, SAS, Gauss, Matlab or R. Stata is probably the most suitable package.

Prerequisites: Some fluency in at least one of these statistical packages and some background in regression and similar methods.

Please also study the following texts:

Papies, D., P. Ebbes, and H.J. van Heerde (2016), "Addressing Endogeneity in Marketing Models," forthcoming as Chapter 18 in *Advanced Methods in Modeling Markets*, Eds. P.S.H. Leeflang, J.E. Wieringa, T.H.A. Bijmolt, and K. H. Pauwels, Springer International Series in Quantitative Marketing.

Gopinath, Shyam, Pradeep K. Chintagunta, and Sriram Venkataraman (2013), " Blogs, Advertising, and Local-Market Movie Box Office Performance," *Management Science* 59 (12), 2635-2654

Park, Sungho and Sachin Gupta (2012), "Handling Endogenous Regressors by Joint Estimation Using Copulas," *Marketing Science*, 31 (4), 567-86.

Assessment: Assessment will be based on active participation and performance on assignments. Grading for students of University of Hamburg will be pass/fail.

Registration: Please e-mail Katharina Krüger: Katharina.Krueger@uni-hamburg.de **until 11. July 2016** (Please remember that places will be allocated in order of received registrations)

SYLLABUS

- **Day 1**:
  - Causality and Endogeneity
  - Control variables
  - Instrumental Variables
  - Control function approach
  - Endogenous interaction effects
- **Day 2**
  - Holdout sample validation
  - Binary endogenous regressors and binary dependent variables
  - Latent instrumental variables
  - Gaussian copulas
  - Summary