

UTS:SHORT COURSES

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Partial Least Squares (PLS) Path Modeling - Using SmartPLS

Overview

Structural equation modeling (SEM) with latent variables has become a quasi standard in investigating complex causal relationships in many social sciences disciplines (e.g., market research). Recently, partial least squares (PLS) path modeling has encountered increasing popularity as an easy, yet powerful, estimation technique for structural equation models.

Market researchers and academics widely apply PLS path modeling to predict endogenous latent variables in their success driver studies. Moreover, PLS applications have been successfully used in the fields of strategic management, information technology management, media management and different sub-disciplines of marketing including international marketing, drivers and consequences of customer satisfaction and evolution of loyalty intentions, relationship marketing, and business-to-business marketing. Research on customer satisfaction — eg. instance the American customer satisfaction index (ACSI) and the European customer satisfaction index (ECSI) — has the longest tradition of applying PLS in empirical marketing studies.

A key advantage of the PLS method is it is the relatively unrestricted applications especially in SEM situations where it is difficult or impossible to meet the hard assumptions of more traditional multivariate statistics. For example, PLS path modeling can straightforwardly incorporate both reflective (effect) and formative (cause) measurements models of latent variables. In essence, PLS path modeling is a robust SEM technique which is flexible in handling.

The objectives of this course are to provide an in-depth methodological introduction into the PLS path modeling approach (the nature of causal modeling, analytical objectives, some statistics), (2) the evaluation of measurement results (systematic approach, key criteria), and (3) complementary analytical techniques (moderator and mediators, segmentation). Practical applications and the use of a PLS software application are an integral part of this course.

Who Will Benefit?

This seminar has been designed for practising business professionals, and for full-time faculty and students who are engaged in, or interested in, current techniques to perform SEM using the PLS path modeling approach.

Program

Participants will be introduced to the PLS path modeling methodology and the SmartPLS software application. In addition to practical exercises, the seminar will also cover advanced topics in:

- importance-performance matrix based PLS analyses
- modeling second-order constructs
- analysis of mediating effects
- investigating moderating effects
- multi-group analysis
- identification of latent segments through finite mixture PLS path modeling.

About the Presenter

Dr Christian M. Ringle is Professor and Acting Head of the Institute for Industrial Management at University of Hamburg (Germany). He holds a Master's degree in Business Administration from the University of Kansas, received his Doctor of Philosophy from the University of Hamburg, and has been Visiting Research Fellow at Georgia State University, Osaka City University (Japan) and the University of Technology Sydney. Christian's research has been published in referred journals and comprises four main areas: marketing, strategic management, networks of small and mid-sized enterprises as well as quantitative methods for business and market research. In these areas, he has had significant experience as a consultant for companies in Europe and the U.S.

Christian is Managing Director of the SmartPLS software development team, focusing on methodological expansions for PLS path modeling, their software implementation, and application in empirical business research. More info: http://www.ibl-unihh.de/tea_rin.htm. He is currently visiting the School of Marketing and the Centre for Management & Organisation Studies at the University of Technology, Sydney

Course Details

2011 Dates

Run on Demand

Course Times

Thursday 10:00am – 4:00pm
Friday 10:00am – 4:00pm

Price \$1,500 (GST-free)

Discounts

UTS Alumni
3+ from one organisation in one booking
Full-time academics
Full-time students

No combined discounts.
Alumni/staff/student numbers must be provided.

Presenter

Dr Christian M Ringle

Location

UTS Broadway campus

Max. Enrolments 40

Pre-requisites

Some knowledge of SEM techniques essential

Equipment

Participants must bring own laptop

Preliminary Agenda

Day 1: Thursday 25 February 2010

- 09:45 – 10:00 – Registration

- 10:00 – 11:00 – Typical applications of PLS path modeling
– PLS vs. LISREL
– Reflective vs. formative measurement models

Coffee break

- 11:30 – 13:00 – PLS-algorithm essentials
– Software tutorial

Lunch

- 14:00 – 15:30 – Assessment of PLS path modeling estimates:
formative and reflective measurement models (outer models), inner models,
bootstrapping, goodness of fit index

Coffee break

- 16:00 – 17:30 – Software tutorial (continued).

Day 2: Friday 26 February 2010

- 10:00 – 11:00 – Importance-performance matrix based PLS analyses
– Second order constructs
– Examples of practical application

Coffee break

- 11:30 – 13:00 – Mediating effects
– Moderating effects
– Examples of practical application

Lunch

- 14:00 – 15:30 – PLS path model based segmentation via FIMIX-PLS (finite mixture partial least squares)
– Examples of practical application.

Pre-Requisites (Presumed Knowledge)

A basic knowledge of statistics is necessary to follow all parts of the course.

Equipment

All participants must bring a laptop to enable hands-on training using the SmartPLS program. Download instructions will be emailed prior to the seminar. Participants should arrive with SmartPLS software already installed and activated. Participants should bring laptop power packs.

About SmartPLS Software Application and Technology

SmartPLS is one of the leading software applications for PLS path modeling analyses. More than 10,000 users in market research consultancies, universities and companies around the world enjoy the broad analytical functionalities and ease-of-use of this freeware. SmartPLS has become a global software tool for PLS path modeling, noted for its advanced functionalities and used as a key application by market researchers in more than 20 corporations worldwide. Moreover top marketing publications like the Journal of Marketing build on SmartPLS.

Further Information

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