



WORKSHOP #2

中文课程 (Chinese Course) Partial Least Squares Structural Equation Modeling (PLS-SEM)入门应用和投稿要求

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1 Instructor

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2 Course objectives

中国科学院科技战略咨询研究院、中国科学院文献情报中心与科睿唯安公司 (Clarivate Analytics) 联合研制的《2017 研究前沿》报告中,“偏最小二乘结构方程模型在商业研究中的应用”方法跻身 Top10 热点前沿。在过去几年间,由于结构方程模型(SEM)的容易上手,使得众多的研究者误用结构方程模型,研究者需要去多了解结构方程模型,才能在研究的道路上更加顺遂。

PLS-SEM 工作坊目的是介绍 SEM 基本原理简介(CB-SEM 和 PLS-SEM)、资料收集与分析、PLS-SEM 方法论之优缺点与误解、反映性和形成性指针的发展和模式的指定,可回答的研究问题及研究议题进行分享。此外,将介绍 SmartPLS 3.X 的操作以及 PLS-SEM 相关论文范例,并提醒投稿要求和写作注意事项。

3 Learning outcomes

此课程将透过软件操作,协助学习者了解:

- 1、如何操作软件(SmartPLS)来进行数据分析
- 2、CB-SEM 和 PLS-SEM 的区别
- 3、Assessment and reporting of measurement model results
- 4、Assessment and reporting of structural model results
- 5、正确的解释 SmartPLS 的结果
- 6、正确的在论文上呈现 SmartPLS 的结果
- 7、进阶议题的讨论,例如:中介和调节变量的应用

4 Teaching and learning methods

- 課程中會盡量使用範例和簡單的語言來解釋 **PLS-SEM (SmartPLS)**。在課程安排上，先是觀念與理論的講解，接著是上機操作軟體來分析資料，並練習解釋分析結果，培養學員獨立分析能力。教材參考如下：
- 蕭文龙 (2018) 统计分析入门与实用 SPSS+SmartPLS (PLS-SEM)第二版, 基峰出版, 台湾
- Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 2nd edition. Thousand Oaks, CA: Sage.
- Hair, J. F., Sarstedt, M., Ringle, C. M., and Gudergan, S. P. (2018). *Advanced Issues in Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks, CA: Sage.

5 Registration and practical issues

- 各高等院校、科研机构的学术工作者、教授、研究生等科研人员，为主要要求对象，也欢迎有兴趣学习结构方程模型的研究者（建议要先修习过多变量分析的课程）报名参加。
- 研讨会注册，请参考 <https://www.pls2020.org>
- 请学员自带笔记本电脑，并请先下载并安装 SmartPLS 3 软件，网址：PLS-SEM (<http://www.smartpls.com/>)，参加者会得到 2 个月的软体授权

6 Teaching resources

工作坊将提供上课投影片

Books:

- 蕭文龙 (2018) 统计分析入门与实用 SPSS+SmartPLS (PLS-SEM)第二版, 基峰出版, 台湾
- Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 2nd edition. Thousand Oaks, CA: Sage.
- Hair, J. F., Sarstedt, M., Ringle, C. M., and Gudergan, S. P. (2018). *Advanced Issues in Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Thousand Oaks: Sage.

Journal Articles (selection):

- Cepeda Carrión, G. and Cegarra J. G. (2019). Tips to Use Partial Least Squares Structural Equation Modelling (PLS-SEM) in Knowledge Management. *Journal of Knowledge Management*, 23(1), pp. 67-89.
- Cepeda Carrión, G., Nitzl, C. and Roldán, J. L. (2017). Mediation Analyses in Partial Least Squares Structural Equation Modeling: Guidelines and Empirical Examples. In: H. Latan and R. Noonan (Eds.), *Partial Least Squares Path Modeling: Basic Concepts, Methodological Issues and Applications* (pp. 173-195). Cham: Springer.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., and Thiele, K. O. (2017). Mirror, Mirror on the Wall: A Comparative Evaluation of Composite-based Structural Equation Modeling Methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632.
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J. J., Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common Beliefs and Reality about Partial Least Squares: Comments on Rönkkö & Evermann (2013). *Organizational Research Methods*, 17(2), 182-209.
- Nitzl, C., Roldán, J. L., and Cepeda Carrión, G. (2016). Mediation Analysis in Partial Least Squares Path Modeling: Helping Researchers Discuss More Sophisticated Models. *Industrial Management & Data Systems*, 119(9), 1849-1864.

- Rigdon, E. E. (2012). Rethinking Partial Least Squares Path Modeling: In Praise of Simple Methods. *Long Range Planning*, 45(5-6), 341-358.
- Rigdon, E. E., Sarstedt, M., and Ringle, C. M. (2017). On Comparing Results from CB-SEM and PLS-SEM. Five Perspectives and Five Recommendations. *Marketing ZFP*, 39(3), 4-16.
- Ringle, C. M. and Sarstedt M. (2016). Gain More Insight from Your PLS-SEM Results: The Importance-Performance Map Analysis. *Industrial Management & Data Systems*, 116(9), 1865-1886.
- Roldán, J. L. and Sánchez-Franco, M. J. (2012). Variance-Based Structural Equation Modeling: Guidelines for Using Partial Least Squares in Information Systems Research. In: M. Mora, O. Gelman, A. L. Steenkamp and M. Raisinghani (Eds.), *Research Methodologies, Innovations and Philosophies in Software Systems Engineering and Information Systems* (pp. 193-221). Hershey, PA: IGI Global.
- Sarstedt, M., Hair, J. F., Ringle, C. M., Thiele, K. O., and Gudergan, S. P. (2016). Estimation Issues with PLS and CBSEM: Where the Bias Lies!, *Journal of Business Research*, 69(10), 3998-4010.

7 Schedule

Location: Conference Center, Beihang University, Beijing China

Time	Topic
09:00 – 10:30	PLS-SEM 基本原理简介
10:30 – 10:45	Break
10:45 – 12:15	PLS-SEM 范例实作
12:15 – 13:15	Lunch
13:15 – 15:00	Assessment and reporting of measurement and structure model results
15:00 – 15:15	Break
15:15 – 17:00	投稿要求和写作注意事项 进阶议题的讨论

8 Instructor's short bio

萧文龙博士，现职：浙工大特聘教授

1、萧文龙教授十分擅长 SEM 之类的统计方法分析，是华人少数同时拥有 CB-SEM 和 PLS-SEM 的作者。

2、2013 SmartPLS 论坛评为中国，香港，澳门和台湾，最懂 SEM 学者之一。

3、华人中唯一多次登上 SmartPLS 官网首页介绍的学者。

4、在研究方面，发表 55 篇期刊论文，期中超过 30 篇 SCI 和 SSCI 高品质文章，目前在 Behaviour & Information Technology, Computers in Human Behavior, Scientometrics, Information Technology and People, European Journal of Information Systems, Information & Management 等知名期刊和权威期刊有所发表。

5、服务方面：包含有 Guest editor: Internet Research(SSCI), JIT(SCI) , JGIM(SSCI)。

Editor: ECR (SSCI), JOECU (SSCI)

6、讲学和工作坊于多所高校，包括国立新加坡大学(PACIS 2015)、台湾清华大学、台湾政治大学、台湾中央大学、台湾中正大学、台湾成功大学、台湾中山大学、中山大学、浙江大学、南京大学、西安电子科大、西安邮电、华中师范、北京航空航天大学、浙江工业大学等知名大学，为结构方程模型教学领域的知名学者。