

On The Differences Between Partial Least Squares and Covariance Based Structural Equation Modeling

Wynne W. Chin

C. T. Bauer College of Business, University of Houston, Houston, TX, U.S.A

This talk will provide an intuitive introduction to the use of Partial Least Squares. The goal is to explore in detail how Partial Least Squares differs from Covariance Based SEM analyses. Rather than being competitive, it is argued that the use of PLS is often complementary to CBSEM for research endeavors and may potentially be better suited depending on the specific empirical context and objectives. For consideration with time permitting, the talk will cover the following issues:

- Degree of Emphasis on Covariance Explanation
- Determinate Scores/Indices for predictive relevance
- Exploratory in Nature – Higher Dimensional Analyses
- Eschewing the “True” Model for Prediction Focus
- High Model Complexity As Criterion – relation to sample size
- Soft Distributional Assumptions
- Modeling Formative Measurement Items
- Higher Order Molar and Molecular Models
- Accuracy of Parameter Estimation

BIO OF DR WYNNE CHIN



Wynne W. Chin is the C.T. Bauer Professor of Decision and Information Sciences in the C.T. Bauer College of Business at the University of Houston and a World Class University visiting Professor of Global Service Management at Sogang University. He received his A.B. in Biophysics from U.C. Berkeley, MS in Biomedical/Chemical Engineering from Northwestern University, and an MBA and Ph.D. in Computers and Information Systems from the University of Michigan. Wynne has taught previously at the University of Calgary, Wayne State University, and the University of Michigan and has been a visiting fellow at Queens University, City University of Hong Kong, University of Canterbury, and the University of New South Wales. Wynne's research focuses on structural equation models related to Information

technology adoption, sales force automation and electronic meeting support systems where he has developed measures for group cohesion, satisfaction, and consensus. Wynne has published in journals such as Information Systems Research, Data Base, Journal of Management Information Systems, MIS Quarterly, and Decision Sciences. Wynne is on the editorial board of Structural Equation Modeling journal, Journal of Information Technology, IEEE Transaction of Management, and previously Information Systems Research, Journal of AIS, Data Base (co-editor) and MIS Quarterly. Wynne has received best paper awards from the Journal of Personal Selling and Sales Management in 2003, the Administrative Sciences Association of Canada (IT division) in 1993 and 1998, a MIS Quarterly Reviewer of the Year in 1996, a Management Science Outstanding Reviewer award in 1996, and the First Biennial Award for Outstanding Ph.D. dissertation from the International Communication Association's Communications and Technology Division. He is one of the foremost exponent of the Partial Least Squares Path Modeling technique with his PLS-Graph software developed in 1990 used by more than 8000 researchers worldwide, ranked by two separate journal articles as one of the top 10 researchers in both IT Adoption/Acceptance and Human Computer Interaction, and recently received a World Class University (WCU) Professor designation in conjunction with Sogang University in South Korea. Wynne's research has received over 16,000 citations, a top ten most cited article in MIS Quarterly and top five most cited in Information Systems Research, a Google Scholar H index of 40 that places him among the most impactful researchers in his discipline, and ranked second overall in first authored articles published in the top two IS journals - MISQ and ISR for the two decade period from 1990 through 2009. Born and raised in San Francisco, Wynne currently resides in Houston with his wife Kelly.