

THE HONG KONG POLYTECHNIC UNIVERSITY
DEPARTMENT OF MANAGEMENT & MARKETING
DEPARTMENTAL RESEARCH SEMINAR

Methodological Advances in PLS Analysis

By

Prof. Wynne Chin
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Date: Monday, 26 August 2013
Time: 2:30 p.m. - 4:00 p.m.
Venue: M802

All interested are welcome

Methodological Advances in PLS analysis

Abstract

This talk is intended to provide an overview of advances in PLS analysis with a focus on techniques that are useful in Information Systems Research. With time permitting – recent advance methodological presentations on multi-group invariance testing, common method bias, and differential impact analysis related to PLS will be covered:

- a) Multi-group invariance (MGI) testing is a technique that allows researchers to determine whether parameters of a measurement model and/or the structural model are equivalent (i.e. invariant) across two or more groups. For the measurement model, invariance testing indicates whether the items used mean the same thing to respondents from different groups or populations. If invariance cannot be established, it would be difficult to determine if the differences observed are due to true differences or to different psychometric responses to the items. For the structural model, MGI testing indicates whether the structural paths are equivalent across groups. MGI testing also provides a particularly strong test of the validity of the measurement model and replicability of the structural model across settings.
- b) Common Method Variance (CMV) continues to be an important issue for social scientists. To date, methodologists have yet to agree upon a best practice for detecting and controlling for CMV. In a recent paper, the unmeasured latent marker variable approach, a frequently employed technique, was shown to be incapable of detecting or controlling CMV in PLS analyses. Unfortunately, this was the only method to date suggested for handling CMV in PLS models. To fill this void, we introduce a measured latent marker variable (MLMV) approach and demonstrate how it is able to both detect and correct for CMV when using Partial Least Squares.

Prof. 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 PhD 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. He has published in journals such as *Information Systems Research*, *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*.