FOM Research Seminar Series – Oct 26, 2022

Talk #1

Investigating the net benefits of contactless technologies in quick-service restaurants: the moderating roles of social interaction anxiety and language proficiency

Dr. Kyung Young Lee
Professor, Rowe School of Business, Dalhousie University

Abstract: This study applies the information system success model (ISSM) to examine the relationships among actual use, use continuance intention, user satisfaction and net benefits in the context of quick-service restaurant (QSR) patrons using two contactless technologies (CT): self-service kiosks (SSK) and mobile applications (MA) for food ordering. The study also investigates the moderating roles of social interaction anxiety (SIA) and language proficiency (LP) in the abovementioned relationships. Survey data from 421 QSR patrons with experience using McDonald's SSK and MA were collected and analyzed through a seemingly unrelated regressions (SUR) technique. Research findings reveal positive associations among actual use, use continuance intention and satisfaction with CT. The actual use and satisfaction with CT are positively associated with individual benefits, leading to improved patron satisfaction with QSR. Findings also reveal that, in the case of MA, SIA positively moderates relationships between actual use/satisfaction and individual benefits and between satisfaction and organizational benefit, while LP shows negative moderating effects on those relationships.

Dr. Lee is a Full Professor at the Rowe School of Business, Dalhousie University (Canada). He received his Bachelor's degree in Radio Engineering from Yonsei University (South Korea), his Master of Business Administration (MBA) degrees from Yonsei University and University of Ottawa (Canada), and his Ph.D. in Information Systems from the Desautels Faculty of Management, McGill University. His research has been published in 26 peer-reviewed journals and 15 peer-reviewed conferences, including *Information & Management*, *International Journal of Hospitality Management*, *Internet Research, Electronic Markets*, *Computers in Human Behavior*, *Information Systems Frontiers*, *Journal of Travel & Tourism Marketing*, *International Conferences on Information Systems*, and many other journals.

Talk #2

Quick Decision Making with Predictive Global Sensitivity Analysis

Dr. Chuck Munson
Professor, Carson College of Business, Washington State University

Abstract: For decades, operations researchers have developed marvellously intricate optimization models to address all sorts of industry applications. However, these programs may encompass thousands of variables and constraints. Furthermore, even after the program is written, it may be (1) onerous to populate, (2) time-consuming to solve, and/or (3) limited in its real-time sensitivity analysis capabilities. In particular, use of such models presents challenges for answering questions from customers and other managers in real time. Predictive Global Sensitivity Analysis analyzes large-scale math programs to avoid numerous details and extract the most important factors that drive results. The goal is to identify a few key summary variables that can populate spreadsheet-ready equations to provide real-time estimates of model results and perform immediate sensitivity analysis. The method is designed to represent a bridge between the underlying mathematical model and the technical capabilities of the practicing management team. In this talk, I will outline the procedure and provide a few example applications, including global network design, managing product line complexity, and developing a supply chain stress test.

Dr. Munson is a professor of operations management and Ph.D. Director of the Carson College of Business at Washington State University. Dr. Munson has served as a senior editor for the journal *Production and Operations Management*. He is a coauthor of *Operations Management: Sustainability and Supply Chain Management* (12th-14th eds.) and *Managerial Decision Modeling: Business Analytics with Spreadsheets* (4th ed.). His major awards include the WSU Sahlin Faculty Excellence Award for Instruction; Washington State University President's Teaching Academy; WSU College of Business Outstanding Teaching Award (twice), Research Award, and Service Award (twice); and WSU MBA Professor of the Year (twice).