

Study on Key Factors of Adopting Sustainable Supply Chain Management in Indonesia

Caroline Himadewi Santoso, Jinshyang Roan, and Jei-Zheng Wu*
Global Business Program, School of Business, Soochow University
56 Kueiyang St., Sec. 1, Taipei 100, Taiwan

Abstract

In a competitive business environment, sustainable supply chain management (SSCM) has received a growing interest in both academic and corporate interest. Increasingly, companies are identifying sustainability as an opportunity to overcome environmental issue while simultaneously responding to economic, operational and social factors to achieve SSCM performance. This research aims to analyze the conditions of SSCM in Indonesia, one of the developing Southeast Asian countries. The purpose of this study is to investigate factors of adoption that are most influencing Indonesian companies to conduct SSCM in their business activities, the preferred method of implementing green supply chain, and the significance of performance measurement. A questionnaire will be carried out among companies in Indonesia based on three dimensions including (1) factors of adoption SSCM, (2) implementation of green supply chain, and (3) performance measurement of SSCM and their 12 criteria. A novel multi-criterion decision making method, DEMATEL-based analytic network process (DANP), is applied to handle the importance analysis of sophisticated interdependences among multiple criteria. Both practitioners in companies and academia might find this paper useful as it provides major insights for business investors who consider implementing SSCM in Southeast Asian country like Indonesia.

Keywords

SSCM, DEMATEL, analytic network process (ANP), key successful factors

Biography

Caroline Himadewi Santoso is a graduate student of the Global Business Program, School of Business, Soochow University, Taipei, Taiwan. She received her Bachelor of Science degree major in Nanotechnology from University of New South Wales, Australia. She has worked in Intertek (Jakarta), a product testing company headquartered in London.

Dr. Jinshyang Roan is the Director of the Global Business Program and Professor of Operations Management of Department of Business Administration, School of Business, Soochow University, Taipei, Taiwan. He received a B.B.A. degree in industrial management science from National Cheng Kung University, Taiwan, an M.S. in operations research and a Ph.D. in operations management from Louisiana State University, the United States. He has contributed articles to Decision Sciences, European Journal of Operational Research, International Journal of Production Economics, Managing Service Quality and other journals. His current research interests include service operations management, inventory control, and supply chain management.

Dr. Jei-Zheng Wu is an Associate Professor at Department of Business Administration and Director of Cross-strait and International Program and Business Administration Program of School of Extension Education, Soochow University, Taipei, Taiwan. He received his PhD and MS in Industrial Engineering and Engineering Management from National Tsing Hua University. He received BS with double majors in Business Administration and Mathematics from National Taiwan University. He received APIEMS 2011 Best Paper Award and IML 2008 Young Scientist Prize. His research works have appeared in reputed international journals including OR Spectrum, Computers & Industrial Engineering, International Journal of Production Research, IEEE Transactions on Semiconductor Manufacturing, Journal of Intelligent Manufacturing, International Journal of Shipping and Transport Logistics, Flexible Services and Manufacturing Journal, INFORMATION An International Interdisciplinary Journal, Expert Systems and Applications, Industrial Engineering and Management Systems, Journal of Quality. He was Guest Editors for Flexible Services and Manufacturing Journal and Journal of Quality.