

Identifying and Prioritizing Barriers to Adopting GSCM Practices in Sri Lankan Rubber Product Manufacturing Industry

M. P. P. L. Peiris

Department of Industrial Management
University of Kelaniya, Sri Lanka
piyumika.peiris@gmail.com

C. A. Kavirathna*

Department of Industrial Management
University of Kelaniya, Sri Lanka
chathumi@kln.ac.lk

A. N. Wijayanayake

Department of Industrial Management
University of Kelaniya, Sri Lanka
anni@kln.ac.lk

Abstract—The rubber industry is one of the leading industries contributing to the Sri Lankan economy, but it is considered an industry with high environmental pollution potential. The competition and customer pressure coming from the international market have further highlighted the need for GSCM (Green Supply Chain Management). Therefore, focusing on GSCM is crucial but, the RPMI (Rubber Product Manufacturing Industry) in Sri Lanka is struggling to adopt GSCM. This study was conducted to identify and prioritize barriers to GSCM adoption in Sri Lankan RPMI and to find out the inter-relationships among barriers and GSCM practices. Through the literature review and expert opinions, eight barriers and five GSCM practices were identified and finalized. DEMATEL (Decision-Making Trial and Evaluation Laboratory) was used to find cause and effect relationships and interrelationships among factors related to each GSCM practice. Findings showed that major existing barriers and their significant interrelationships differed depending on the GSCM practice. Lack of knowledge, skills and expertise, lack of information flow and lack of technology are the major existing barriers to adopting GSCM practices in Sri Lankan RPMI. The findings may assist managers in making better long-term decisions to successfully adopt GSCM practices in Sri Lankan RPMI.

Keywords—DEMATEL, green supply chain management, rubber product manufacturing industry