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Evaluating the level of best practices related with lean and green concepts of logistics service providers

A. W. Edirisuriya*, W. M. S. K. Weerabahu and R. Wickramarachchi

Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka
*edirisuriyaanuradha@gmail.com

The world is experiencing environmental problems due to the environmental pollution and degradation happening in a major scale due to the waste generated both by public and industries. Among the industrial waste generators, logistics industry plays a major role due to the wastes released in different forms in their operations. Sustainability is emerging as a main consideration throughout the industrial world to reduce and control the industrial waste. Lean management is becoming a popular management tool on minimizing wastes. Although lean and green concepts have been studied in different industrial contexts, a theoretical gap has been identified in the field of logistics. A comprehensive literature review was conducted along with the expert reviews based on interviews to address the identified research gap. The objective of the study is to examine the best practices related with lean and green concepts which are applicable to the logistics industry. A key word based search in Google scholar and Scopus was conducted for selecting the published research papers which have been proven as valid to extract the knowledge for this study. In this stage, the studies conducted on lean and sustainable practices were selected while excluding the other studies. Then the topics and abstracts of selected articles were analyzed to select the studies that have studied about the practical implementation of green and lean concepts. Finally, a full text review was conducted to identify best practices in the logistics industry while excluding the research papers in other industries. Transportation and the warehousing are the main logistics functions focused in this study. The result of the study is a best practice reference model developed by authors for logistics service providers to identify their stage in implementing lean and green best practices. Best practices were identified through a comprehensive literature review and industry based observations. The identified best practices have been categorized for five different levels which gives a clear understanding for an organization regarding the current stage while providing a clear road map for organizations to develop to the next stage. The model is validated through the reviews of experts in the logistics industry. The proposed model will be beneficial for the logistics service providers. It can be concluded that the result of the study will lead the logistics service providers to reduce their industrial wastes and provide a sustainable service if the model is used properly.

Keywords: Best practices, green concepts, lean management, logistics service providers