

An Investigation of Challenges in Implementing Sustainable Supply Chain Management for Construction Industry in Thailand by Interpretive Structural Model Approach

Authors : Shaolan Zou, Kullapa Soratana

Abstract : Construction industry faces tremendous challenges in sustainability issue in recent years. Building materials, generally, are non-recyclable with short service life time, leading to economic loss. Building sites also cause social issues, e.g. noise, hazardous substances, and particulate matters. Sustainable supply chain management (SSCM) has been recognized as an appropriate method to balance three pillars of sustainability: environment, economy, and society. However, most of construction companies cannot successfully adopt SSCM due to numerous challenges. In this study, a list of challenges in implementing SSCM was collected from peer-reviewed literature on sustainable implementation. A building materials company in Thailand, which has successfully adopted SSCM for almost two decades and established the sustainable development committee since 1995, was used as a case study. Management-level representatives in sustainability department of the company were interviewed, mainly, to examine which challenges on the list complies with the company's condition when adopting SSCM. The interview result was analyzed by interpretive structural model (ISM) with sustainability experts' opinions to identify top 5 influential challenges. The results could assist a building construction company in assigning appropriate strategies to overcome most influential barriers, as well as in using as a reference or guidance for other construction companies adopting SSCM.

Keywords : sustainable supply chain management, challenges, construction industry, interpretive structural model

Conference Title : ICSM 2017 : International Conference on Sustainable Manufacturing

Conference Location : Bangkok, Thailand

Conference Dates : December 18-19, 2017