

# Measuring Environmental Logistics Practices

Seong-Tae KIM\* · Chul-Hwan HAN\*\*

## Contents

I . Introduction	IV. Results
II . Literature review	V . Discussion and Implications
III. Methodology	VI. Conclusions

## Abstract

Current scales do not reflect the multi-dimensional nature of environmental logistics practices (ELPs), and thus cannot adequately measure the entire domain of its practices in the supply chain. In an attempt to fill this gap, the purpose of this study is to develop a valid and reliable scale for measuring ELPs. Based on the relevant literature together with the previous exploratory research, ELPs are proposed as three a priori dimensions: internal environmental management (IEM), environmental sourcing and packaging (ESP), and environmental process design (EPD). With data collected from 129 Korean logistics companies, two measurement models of ELPs were systemically analyzed by using confirmatory factor analysis (CFA). The results show that the validity and reliability of the scale for measuring ELPs are adequately established. Specifically, three basic dimensions (i.e. IEM, ESP, and EPD) are well suited for evaluating ELPs, and the proposed second-order structure is adequately supported with the systematic and scientific procedures. These indicate that ELPs can be conceptualized as a multi-dimensional measure comprising IEM, ESP, and EPD.

Key words : Environmental logistics, Practice measurement, Korea

\* Graduate Student of Inha University, Korea, Email: kimnalda@naver.com, First Author

\*\* Professor of Dongseo University, Korea, Email: chhan16@dongseo.ac.kr, Corresponding Author

## **I. Introduction**

As public awareness of environmental issues has dramatically increased in recent years, corporate environmental strategy has emerged as an important organizational philosophy to respond to environmental impacts, which may create serious constraints on corporate sustainability.<sup>1)</sup> In this way, such environmental strategies have generally been assumed to create a competitive edge for a firm, and to have a positive impact on environmental performance.<sup>2)</sup> As a result, integrating natural environment into business strategy has become increasingly important for firms to gain and maintain sustainable competitive advantage.

OECD/ITF has shown that logistics is one of the significant sectors that contribute to overall greenhouse gas (GHG) emissions in the world (23.3% in 2005). Conversely, it would mean that this area has great potential opportunities for firms to mitigate environmental impact.<sup>3)</sup> Nonetheless, there has been less attention paid to the environmental issues in the logistics area. Moreover, there has been no systematic attempt to measure corporate environmental logistics practices (ELPs). To measure ELPs in a highly effective way, some useful and testable multi-item measurement scales are needed. Many of past studies on environmental logistics, however, have regarded ELPs as a sole indicator<sup>4)</sup> or have simply regarded it as an element of the dimensions that constitute green supply chain management (GSCM).<sup>5)</sup> In this regard, it would be assumed that there might be no specific guidance for especially logistics managers to address environmental issues and to proactively respond to these issues.

Therefore, appropriate measurement scales for evaluating ELPs are clearly needed to complete the robust research as well as to advance the body of knowledge. Based on the literature in logistics and environmental management, we attempt to introduce multi-item ELPs scales that

---

1) Miles and Munilla(1993), pp. 43-50; Hart and Dowell(2010), p.2.

2) Porter and van der Linde(1995), pp.119-134.

3) Wu and Dunn(1995), pp. 20-38; González-Benito and González-Benito(2006), p.1353.

4) e.g. González-Benito and González-Benito(2006).

5) e.g. Holt and Ghobadian(2009).

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات