Performance evaluation model for reverse logistics- the case of recycled computers

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Abstract

Waste computer reverse logistics involves numerous complex factors and operating procedures that must be dealt with, and usually consumes considerable resources and time. Therefore, how to effectively deal with the growing number of discarded computers is a key concern that governments, businesses, and environmental organizations are eager to resolve. This study reviews the literature and conducts interviews to identify the key factors of the reverse process, while exploiting network-level analysis (analytical network process, ANP). The key performance indicators are relevant, and can be calculated and compared with the relative weight to construct a set of effective waste computer reverse logistics performance evaluation models. Moreover, this study uses waste computer reverse recycling-related businesses and agencies in Taiwan as the research object for improving understanding of the scrap computer recycling industry in the face of the urgent need to improve environmental awareness and understanding of rapid environmental change. Integrating reverse logistics and green supply chain can smooth the recovery process smoother and make it more effective. This performance evaluation model can also provide computer recycling waste related businesses and organizations with a means of strategic planning, and is of both academic and practical value in providing an important reference for future development.

Keywords: Reverse logistics, performance evaluation, retrieved computer traders, analytic network process (ANP)