



Design of closed-loop supply chain and product recovery management for fast-moving consumer goods

The case of a single-use camera

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Abstract

Purpose – The purpose of this paper is to qualitatively investigate how product recovery management (PRM) activities affected the strategic design and implementation of a closed-loop supply chain for a fast-moving consumer good.

Design/methodology/approach – The paper employs a case study approach with in-depth interviews and structured observation of PRM processes at the focal company.

Findings – The focal company was able to design an efficient and effective product recovery and recycle manufacturing system by standardizing high-quality raw materials, using a modular structure for the product and maintaining control over the entire process and bypassing the temptation to use third-party collectors and processors.

Research limitations/implications – Primary research relates to the single case study and the focal company; however, the findings may not generally apply to other fast-moving consumer goods (FMCG).

Practical implications – The comparison of the focal company's processes to an extant product recovery model provides firms with a structured way of implementing product recovery and recycling.

Originality/value – This paper adds to our knowledge of PRM and closed-loop supply chain design by investigating its practical application to a fast-moving consumer good; this topic has not previously received much attention by academics and practitioners.

Keywords Cameras, Supply chain management, Fast moving consumer goods, Manufacturing systems

Paper type Case study

Introduction

Reverse logistics forms part of closed-loop supply chain management (SCM) and has gained increased importance as an environmental, profitable, and sustainable business strategy. Both reverse logistics and closed-loop SCM are relatively new concepts with limited empirical research (Rogers and Tibben-Lembke, 2001); however, the pace of interest and research in this area has picked-up considerably.

One aspect of reverse logistics is the product recovery management (PRM) of all used and discarded products, components, and materials that a manufacturer is

