

Chapter 5

Green Logistics in SMEs for Sustainable Development

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ABSTRACT

The environmental impacts of business operations, regardless of firm size, have become increasingly prominent in recent times. The key contribution of this chapter stems from the comprehensive analysis of green logistics adoption within SMEs in South Africa, as well as from the practical insights and recommendations for enhancing sustainability in the SME sector. It addresses the unique challenges and opportunities faced by SMEs in embracing eco-friendly logistics practices, thus filling a significant gap in the literature on sustainable supply chain operations in Africa. This chapter's novel contribution also lies in its exploration of actionable strategies and best practices tailored to the context of SMEs in South Africa, providing valuable guidance for promoting environmental stewardship and sustainable development within the SME sector in Africa.

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1. INTRODUCTION TO GREEN LOGISTICS IN SMES

This section first defines the concept of green logistics and its relevance for SMEs in achieving sustainability objectives. The section later provides an overview of the SME landscape in South Africa, highlighting the importance of addressing environmental concerns within this sector.

Green logistics has garnered significant attention from business enterprises of all sizes worldwide, including small and medium-sized enterprises (SMEs), due to its substantial impact on environmental mitigation (Nteta & Mushonga, 2021). As a contemporary response to the environmental threats prevalent in the contemporary business world, green logistics represents an evolution of traditional logistics practices, integrating more eco-friendly activities and settings aimed at conserving the environment, enhancing social and economic gain (Nteta & Mushonga, 2021). This emerging trend in logistics encompasses the greening of transportation, warehousing, and the entire distribution process, extending to reverse logistics and the eventual disposal of goods (Trivellas, Malindretos, & Reklitis, 2020; Zhou, Siddik, Zheng, & Masukujjaman, 2023).

Green logistics refers to the approaches and solutions aimed at minimising the environmental impact of logistics activities (Lazrak, & El Amrani, 2023). It involves optimising transportation, sourcing and procurement activities, material handling, warehousing, packaging, and distribution processes to reduce energy consumption, emissions, and waste (Vienažindiene, Tamuliene, & Zaleckien, 2021; Lazrak, & El Amrani, 2023; Zhou et al., 2023). By adopting these sustainable practices, industries are addressing the urgent need to mitigate their environmental footprint while maintaining operational efficiency and promoting social gain (Trivellas et al., 2020). Green logistics is particularly relevant for SMEs in achieving their sustainability objectives for several reasons:

- **Cost Savings**

Implementing green logistics can lead to significant cost reductions through energy efficiency, waste reduction, and optimised resource usage (Vienažindiene et al., 2021; Zhu, Zhang, Siddik, Zheng & Sobhani, 2023). SMEs often operate on tight budgets, so these savings can be crucial for their financial health (Trivellas et al., 2020).

- **Regulatory Compliance**

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