# Chapter 12
# Enhancing Environmental Performance Through Green Supply Chain Management Practices:
## An Empirical Study From Morocco

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## ABSTRACT

*The ecological impact of supply chains, especially greenhouse gas emissions and resource waste, is a growing concern for companies (Sanders, 2011). Global warming and pollution from supply chain activities pose risks to human health and the environment. As a result, companies are encouraged to adopt green supply chain management (GSCM) practices to meet regulations and improve performance. This study evaluates the role of GSCM in enhancing the environmental performance of industrial firms in Morocco. Based on data from 95 companies in the northern region and using structural equation modeling, the findings show that GSCM practices positively influence environmental performance. These practices go beyond compliance, acting as strategic tools to reduce ecological impact and increase competitiveness in environmentally aware markets.*

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## 1. INTRODUCTION

In today's world, marked by urgent environmental challenges such as climate change, biodiversity loss, and the depletion of natural resources, companies face increasing pressure to adopt sustainable and environmentally responsible strategies. The supply chain plays a pivotal role in this transition toward sustainability, as organizations strive to implement "green" management practices that reduce their environmental impact while sustaining competitiveness.

This study aims to investigate the contribution of green supply chain management (GSCM) practices to enhancing the environmental performance of industrial companies in Morocco. Specifically, it seeks to identify the key drivers and barriers influencing the adoption of these practices. While the benefits of green supply chains have been widely acknowledged, their practical application remains limited, especially in emerging economies. This leads to the central research question: To what extent do green supply chain practices improve the environmental performance of Moroccan industrial firms, and what challenges hinder their effective implementation?

Focusing on six fundamental GSCM practices: eco-design, green purchasing, green manufacturing, waste management, reverse logistics, and green distribution. This research draws on survey data collected from industrial companies in northern Morocco to explore the relationships between these practices and various indicators of environmental performance.

The chapter is structured as follows: The first section presents the theoretical framework, synthesizing key literature on green supply chains and environmental performance. The second section details the research methodology, including questionnaire design and data collection procedures. The third section reports and analyzes the empirical findings. Finally, the chapter concludes with a discussion of the results, study limitations, and suggestions for future research.

## 2. CONCEPTUAL FRAMEWORK

### 2.1 Supply Chain

The supply chain is a complex and ever-evolving system that covers every stage in transforming raw materials into finished products for end customers. It begins with the extraction or sourcing of raw materials and moves through various stages, including production, assembly, storage, transportation, and ultimately, distribution. Thus, it involves a wide range of interconnected processes and actors whose coordination is essential to ensure efficiency and customer satisfaction. According to Teng and Jaramillo (2006), the supply chain can be seen as a set of upstream