

Navigating The Green Divide: Overcoming Transboundary Barriers to Circular Logistics in Global Businesses

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Abstract - The world economy is in the process of a fundamental shift in a linear system of take-make-dispose to a cyclical economy whereby focus is placed upon reuse, repair, remanufacturing, and recycling. Despite the fact that multinational enterprises (MNEs) have attained considerable efficiency in forward logistics, the reverse logistics systems which are crucial to a circular economy are not well developed and are limited by complicated cross-border regulatory frameworks. This paper looks into systematic legal, regulatory and operating barriers to transboundary reverse logistics, which is conceptualized as green trade barriers. The analysis of the electronics and apparel sectors is conducted on the basis of a qualitative approach based on the Institutional Theory and the Resource-Based View (RBV). The results indicate that global resource recovery is a critical issue that depends on the regulatory classification and a product value density. The article suggests a managerial model that is founded on decentralized circular hubs and digital product passports in order to facilitate scalable circular logistics.

Keywords: Circular Economy, Reverse Logistics, Transboundary Trade, Green Trade Barriers, Multinational Enterprises (MNEs), Extended Producer Responsibility (EPR), Basel Convention, Digital Product Passport, Sustainable Supply Chain Management.

INTRODUCTION

Lifecycle accountability is becoming an important measure of corporate performance in the modern stage of reglobalisation, as opposed to market share. The governments are introducing Extended Producer Responsibility (EPR) regulations which require companies to dispose of the products when they are found to have reached the end of their useful life. The policy trends mentioned above underscore reverse logistics as an MNE strategic capability.

PROBLEM STATEMENT

Although the idea of circularity is strategic, MNEs have major challenges because of the jurisdictional regulatory differences. The international law of trade usually treats used goods as waste thus making them a subject of hazardous wastes law. Administrative fees can also be raised by 30 per cent by compliance requirements like permits and inspections, which put the financial sustainability of closed-loop supply chains in jeopardy.

RESEARCH OBJECTIVES

This study aims at: (a) determining the major legal and regulatory obstacles in the context of end-of-life products; (b) comparing reverse logistics in various industries; and (c) suggesting a managerial framework to promote reverse logistics in a compliant and global context.

SCOPE OF THE STUDY

The paper is dedicated to the work of MNEs that act in various jurisdictions, and the examples are taken in the sphere of electronics and apparel. The study focuses on cross-border logistics and operation design.

LITERATURE REVIEW

The idea of the circular economy separates economic growth and resource consumption (Ghisellini et al., 2016). The studies in the field of apparel logistics point to the issues of collection and the geographical dispersion (Kozlowski et al., 2019). The OECD (2018) and the World Economic Forum (2019) policy studies highlight the economic potential of resource recovery but remind of the constant regulatory limitations.

THEORETICAL FRAMEWORK

Institutional Theory

The Institutional Theory is used to explain how the organizations react to the coercive pressures of the laws and the international agreements. MNEs engage in environmental friendly practices because they have to ensure that they stay legitimate in various jurisdictions.

Resource-Based View (RBV)

Waste is considered as a possible strategic resource in the Resource-Based View conceptualization. Cobalt and gold are some of the valuable materials found in end of life products. Companies that create an excellent reverse logistics system are capable of attaining sustainable competitive advantage.

RESEARCH METHODOLOGY

The present study employs the approach of qualitative and exploratory research that will rely on the analysis of secondary data and comparative case studies. The sources of data are academic journals, industry reports and policy documents.

CASE ANALYSIS

* Electronics Industry

The example of the Apple and Samsung can help to demonstrate the hazardous waste paradox. Lithium-ion batteries are considered as a dangerous good to be transported. To recycle defective batteries, permits which can take six to twelve months to get can be required, and this decreases the value of recovery.

* Apparel Industry

On the contrary, textiles are usually defined as non-hazardous. The Worn Wear program provides an illustration of how reverse logistics can be combined with repair at Patagonia. In fact, worldwide dispersion escalates collection expenses, which demands localized center repair facilities.

DISCUSSION

The comparison brings out the distinctions between forward and reverse logistics concerning predictability and regulatory orientation. One of the important results is that the unit cost of return is negatively correlated with the value density of the products. Electronics with high value warrant the cost of returns but have a challenge of regulation but apparel has an economic barrier.

MANAGERIAL IMPLICATIONS

Managers are expected to consider reverse logistics as a strategic activity that is combined with product design and regulation. Regional processing and digital traceability investments have the potential to convert compliance into a cost burden to competitive advantage.

STRATEGIC RECOMMENDATIONS

MNEs ought to create decentralized circular centres in trading blocs, introduce traceable digital product passports, and use modular products designs to be disassembled more readily locally.

LIMITATIONS AND FUTURE RESEARCH

This research has a weakness of using secondary data. Future studies can either use quantitative techniques or primary interviews to empirically confirm the proposed framework.

CONCLUSION

With the global business going towards a post-linear model, current logistics is optimized to one direction flows. Circularity will be achieved by evolving regulations to support circular trade agreements between resource recovery and waste dumping. The lack of these reforms would leave the initiatives of the circular economy disjointed.

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