Supply Chain Analysis of the Toyota RAV4 Braking System

Executive Summary

This report provides a comprehensive analysis of the supply chain for the Toyota RAV4 braking system, focusing on component costs, origins, and the impact of potential tariff changes. The analysis reveals a significant reliance on European suppliers, with Germany, Denmark, and the Netherlands being the top contributors. A tariff shock simulation for Japan, considering rates of 20%, 50%, and 80%, demonstrates that even at the highest tariff rate, the cost increase remains manageable at 2.1%. Recommendations are provided to enhance supply chain resilience and mitigate risks associated with tariff changes.

Introduction

The Toyota RAV4 is a popular compact SUV known for its reliability and safety features, including an advanced braking system. Understanding the supply chain dynamics of this braking system is crucial for ensuring its efficiency and cost-effectiveness. This report aims to analyze the supply chain components, assess the impact of potential tariff changes, and provide strategic recommendations for Toyota to maintain its competitive edge.

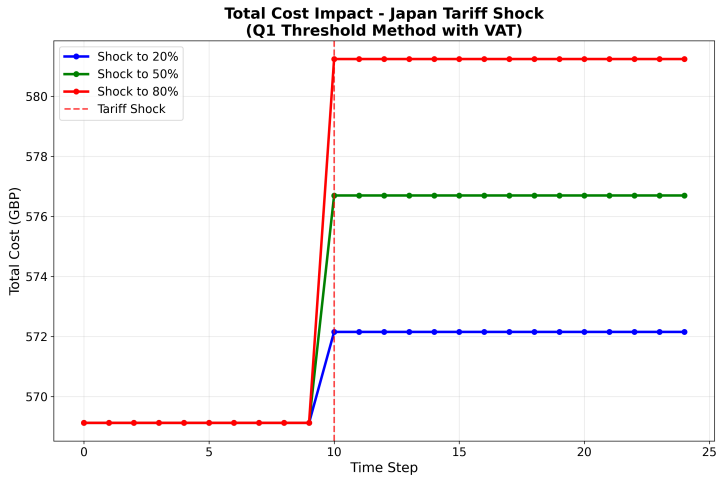
Component Analysis

The Toyota RAV4 braking system consists of several critical components sourced from various countries. The total cost of these components, excluding VAT, is £458.59, and including VAT, it amounts to £550.30. The Brake Caliper is the most expensive part, accounting for 59.38% of the total cost. The top three countries of origin for these parts are Germany, Denmark, and the Netherlands, which together supply 53 parts. This highlights a strong reliance on European suppliers.

- Top 3 parts by average price: Brake Caliper (£129.34, 59.38% of total cost), Brake Disc (£48.65, 22.34% of total cost), Brake Pad Set (£37.79, 8.68% of total cost).
- List of suppliers with the highest number of articles: Supplier1 (19 articles), Supplier2 (17 articles), Supplier3 (17 articles).

Tariff Simulation

The simulation results are illustrated in the following charts:



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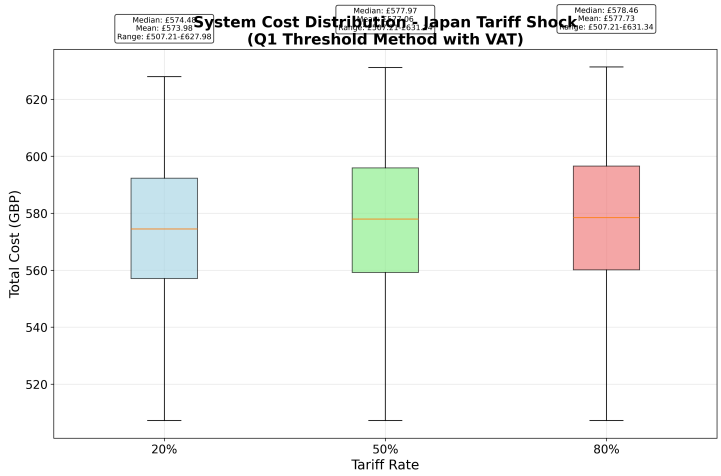

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Web Research

Toyota employs advanced supply chain strategies, such as the Toyota Production System (TPS), which emphasizes efficiency and waste reduction through methods like Kanban and Kaizen. Recent news highlights the potential impact of tariffs on Japanese automakers, with Toyota forecasting a significant profit hit due to tariff changes. These factors underscore the importance of maintaining a flexible and resilient supply chain to adapt to market changes and external pressures.

Conclusion and Recommendations

The analysis of the Toyota RAV4 braking system supply chain reveals a robust network with significant reliance on European suppliers. The tariff simulation indicates that even under high tariff scenarios, cost increases are manageable. To mitigate risks, Toyota should consider diversifying its supplier base, exploring alternative logistics routes, and enhancing digital supply chain monitoring. These measures will help maintain supply chain resilience and ensure continued competitiveness in the global market.

References

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