

Research on Strategies for Improving Supply Chain Resilience of Cross-border E-commerce Enterprises in the Context of Digital Economy

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Abstract: In the post-pandemic era, the fluctuation of global supply chains has brought great challenges to cross-border e-commerce enterprises. Taking leading cross-border e-commerce enterprises as cases, this paper uses case analysis and empirical research methods to analyze the application of digital technologies such as blockchain and big data in supply chain risk early warning and flexible scheduling. The study constructs a supply chain resilience evaluation model and finds that digital technologies can effectively improve supply chain resilience. The conclusions provide practical optimization schemes for cross-border e-commerce enterprises to enhance supply chain resilience.

Keywords: digital economy; cross-border e-commerce; supply chain resilience; digital technology

1. Introduction

In the context of the robust and dynamic development of the digital economy, the global trade landscape is undergoing continuous and profound transformations. The cross-border e-commerce industry has seized the moment to embrace unprecedented opportunities for rapid growth and expansion. However, alongside these opportunities, the industry also confronts a myriad of challenges that demand careful attention and strategic planning. In the post-pandemic era, the stability of global supply chains has been significantly compromised, with increased vulnerability and unpredictability. Various unforeseen emergencies, including natural disasters, geopolitical conflicts, and other disruptive events, frequently exert adverse impacts on the supply chain systems of cross-border e-commerce enterprises. These disruptions pose a severe and imminent threat to the survival, growth, and long-term development of these enterprises. Consequently, enhancing supply chain resilience has emerged as a critical and indispensable factor for cross-border e-commerce enterprises to effectively navigate through uncertainties and achieve sustainable and resilient development.

At present, academic research on the concept and practices of supply chain resilience has yielded certain notable results, primarily concentrating on the traditional manufacturing sector. However, when it comes to the supply chain resilience of cross-border e-commerce, an emerging and rapidly evolving industry, the existing research is relatively sparse and insufficient. Furthermore, the discussions and explorations regarding the application mechanisms of digital technologies in bolstering supply chain resilience lack depth and comprehensiveness. Recognizing these gaps, this study aims to delve deeply into the strategies and approaches for enhancing the supply chain

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resilience of cross-border e-commerce enterprises, specifically within the backdrop of the burgeoning digital economy.

To achieve this objective, the study employs a case analysis methodology, focusing on leading cross-border e-commerce enterprises that have demonstrated exemplary resilience in their supply chain operations. By integrating relevant theoretical frameworks and empirical insights, this paper constructs a comprehensive and robust supply chain resilience evaluation model. Additionally, it proposes practical and actionable optimization schemes tailored to the unique needs and challenges of cross-border e-commerce enterprises. These contributions are intended to provide both theoretical support and practical guidance, empowering cross-border e-commerce enterprises to fortify their supply chain resilience and thrive in an increasingly volatile and uncertain global trade environment.

2. Materials and Methods

This study meticulously selects three representative leading enterprises within the cross-border e-commerce sector as the primary subjects for case study analysis. These selected enterprises are distinguished by their extensive global market presence and possess comparatively intricate supply chain systems. Such characteristics enable them to effectively illustrate the distinctive features and operational nuances of supply chains inherent to cross-border e-commerce enterprises.

To gather comprehensive data, the study delves into various secondary sources, including detailed corporate annual reports, insightful news articles, and in-depth industry research reports. This extensive consultation aims to collate pertinent information pertaining to the enterprises' supply chain management practices. The collected data encompasses critical aspects such as the structural design of the supply chain, the strategic measures employed to respond to potential risks, and the innovative application of digital technologies within these frameworks. Additionally, the study involves conducting targeted interviews with key personnel responsible for supply chain management within these enterprises. These interviews are designed to elicit first-hand, qualitative insights, thereby facilitating a profound understanding of the practical experiences and the specific challenges that these enterprises encounter in their endeavors to enhance supply chain resilience.

Employing the case analysis methodology, the study systematically organizes and rigorously analyzes the accumulated data. This process aims to distill the successful strategies and identify the prevailing deficiencies in each enterprise's approach to bolstering supply chain resilience. By integrating principles from supply chain management theory and digital economy theory, the study constructs a robust evaluation model specifically tailored for assessing the resilience of cross-border e-commerce enterprise supply chains. This model evaluates resilience across multiple dimensions, including the flexibility to adapt to changing conditions, the stability to maintain consistent operations, and the redundancy to absorb disruptions, thereby providing a comprehensive framework for resilience assessment.

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