

Supply Chain Disruptions Caused by Global Geopolitical Risks in Central and Eastern Europe (CEE)

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Abstract: *New disruptions have affected global supply networks throughout recent years due to geopolitical threats between countries that involve international trade wars and domestic conflicts as well as shifting national alliances and regulatory changes. The special geopolitical importance of Central and Eastern Europe (CEE) creates this region a highly sensitive area for global manufacturing operations and logistics activities. The increasing challenges in international political relations among CEE nations stem from their position that bridges Eurasian commerce routes to Western European market access. Scientists examine the degree and operational characteristics of geopolitical dangers that target supply chain operations in Central and Eastern Europe.*

Keywords: Geopolitical risks, Central and Eastern Europe (CEE), International trade wars, Domestic conflicts, Regulatory changes, National alliances, Eurasian commerce routes

1. Introduction

Worldwide supply network growth has brought about heightened sensitivity to political changes affecting their operating areas. The various tensions involving the Russia-Ukraine conflict and Brexit and U.S.-China trade conflict generated multiple disruptions that led to widespread effects across all European territory through the impacts on trade volumes and route decision-making and delivery systems for energy resources and supplier reliability (Miroudot & Nordström, 2020). CEE countries function as manufacturing and transportation centres through which supply chain interruptions create material shortages and logistics problems thus requiring permanent redesigns of chain structures (Ivanov, 2022).

Both companies experience urgent delivery difficulties because of geopolitical risks which compels them to adopt permanent solutions regarding supplier allocation and inventory optimization and operational nearshoring decisions. Academic research has scarce information regarding specific weaknesses and strategic movements from businesses which operate across the entire CEE region. The proposed study investigates organizational adaptation approaches to answer fundamental questions that describe how geopolitical blockages affect CEE supply chains.

2. Research Questions

This research will address the following questions:

- 1) What elements of geopolitical risks have the strongest influence on supply chain operations within the CEE region?
- 2) During which period of procurement manufacturing and distribution operations do geopolitical risks cause their most impactful effects?
- 3) Multiple protective measures have been set into action by businesses to address these risks.
- 4) The institutions present with national characteristics of CEE countries determine the final resilience level of supply chains.

3. Objectives

- 1) The investigation captures essential geopolitical risks affecting supply chains based in the CEE region.
- 2) This review investigates strategic-level together with operational-level effects of identified risks.
- 3) Every firm operational in the region requires evaluation of their risk mitigation frameworks.

Researchers need to create and show a model which strengthens supply chain resilience under unpredictable geopolitical conditions.

4. Theoretical Framework

Strategic resources within firms are studied using the Resource-Based View (RBV) framework merged with Contingency Theory to understand their usage in risk protection. This research incorporates Supply Chain Risk Management (SCRM) theory to analyze risk identification and assessment as it establishes normalized risk response procedures (Christopher & Peck, 2004). The assessment of frameworks reveals how global events create weaknesses and illustrates organizations using internal resources while developing network-based approaches for resilience.

5. Literature Review Summary

Ivanov (2020) highlights the fragility of global supply chains and the need for digital and structural resilience. The rarity of geopolitical risks among natural disasters stems from their extensive delivery of multiple risk elements across multiple dimensions spanning lengthy time intervals (Hendry et al., 2019). The CEE region occupies Europe East territory while heavily depending on energy resources which makes them vulnerable because of their previous international relationships with Western states and Eastern bloc nations (Delcea et al., 2023). The research demonstrates how nearshoring and regionalization emerge as social solutions against disruptions as documented by Gereffi (2020).

Academic researchers have generated insufficient investigation about geopolitical risks affecting supply chains

and optimal organizational responses across Central European countries. The project builds strategic frameworks through specific regional and geopolitical insights from CEE so researchers can gain empirical knowledge for this context.

6. Methodology

The research uses a dual method approach of qualitative and quantitative analysis toward fulfilling its research aims.

The investigation begins with risk mapping and document assessment during its first step.

Secondary documents such as policy records together with trade reports news archives will reveal all geopolitical risks which occurred in the CEE region from 2014 to 2024.

Phase 2: Surveys and Interviews

A structured survey instrument needs deployment to evaluate specific risks in manufacturing and logistics enterprises by using supply chain professionals located in CEE territories. The research adds semi-structured interviews to its data analysis approach as this methodology provides detailed insights about adaptive methods.

Phase 3: Case Studies

Researchers will develop intensive case studies about selected businesses ranging between three to five from the automotive sector as well as electronics and pharmaceuticals to explain their customized approaches for building resilience.

Data Analysis

The research combines quantitative data assessments using SPSS and R to perform correlation and regression analyses with qualitative data analysis done through NVivo or Atlas.ti which generates thematic codes.

7. Expected Contributions

- The study introduces a validated mechanism for assessing geopolitical risks' supply chain performance impact together with geopolitical risk types which affect Central and Eastern European supply chain operations.
- Strategic insights into the effectiveness of various mitigation and resilience-building strategies.
- Policy recommendations for governments and multinational companies operating in CEE.

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